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Teacher's Implementation of Engaging Activities in Online High School Courses

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Walden University
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Abstract

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MS, Central Missouri State University, 2002

BS, Eastern Michigan University, 1999

Project Study Submitted in Partial Fulfillment

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Abstract

Student engagement is critical to student success, graduation rates, and retention in both face-to-face and online learning environments. In an online environment, the teacher is responsible for implementing engaging instructional activities. The problem examined in this qualitative case study was the inconsistent teacher implementation of engaging instructional strategies in online courses at a school serving U.S. military-connected students. The purpose of the study was to investigate the motivation of teachers to support student engagement opportunities. Self-determination theory (SDT), which has autonomy, competence, and relatedness as main constructs, was used as the conceptual framework and the basis for the research questions. The research questions focused on influence of teacher's motivation on implementation of engaging instructional activities. Seven online high school teachers were selected as participants. Data sources consisted of interviews with participants and assessments of the courses. Data was analyzed using open and axial coding based on SDT. Findings showed that motivation to implement the activities was positively influenced by autonomy, competence of content knowledge, and relationships. Motivation was negatively influenced by a lack of competence in technical skills in the online environment. As a result of the findings, a professional development workshop was developed to increase teacher's understanding of student engagement and provide the instructors with an opportunity to collaborate with colleagues to create a resource toolbox for future use. The findings promote positive social change by adding to the body of knowledge on online learning in secondary schools and providing online high school teachers with insight about online course development and student engagement strategies they can use to positively affect student learning.

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Dedication

I dedicate this project to my Dad. Although he is not here to witness the beginning or end of this journey, he was with me in spirit. He instilled in me the confidence and motivation to persist through any and all obstacles. I am grateful that he taught me to try my best in all that I do and to never give up.

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I want to thank my colleagues, especially Lynda, Terri, and Keith, for your words of wisdom and encouragement.

To my classmates, we have reached the top and I am overjoyed to have been on this journey with you.

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Section 1: The Problem

Roughly 80,000 military-connected students attend a public school system located around the world on U.S. military bases (Department of Defense Education Activity [DoDEA], 2016). Military-connected students are children or dependents of military personnel or civilians living overseas working to support military operations (Risberg, Curtis, & Shivers, 2014). This public school system for military-connected students, as noted in this research, is one of two, federally funded school systems whose purpose is to support the academic needs of military-connected students only (DoDEA, 2016).

In 2005, the distance education program grew into an online high school (known as Online High School, going forward). Course offerings were expanded by administrators to provide students with a variety of courses beyond advanced placement. As the school continued to grow, school administrators initiated the process for the school to become a fully accredited, diploma granting, comprehensive online high school in 2010. The institution continued to provide supplemental courses for eligible students and a variety of online courses comparable to those being offered in the local brick and mortar schools. In 2015, Online High School received full-accreditation by AdvancED. Online High School offered 76 different courses during school year 2015–2016 with over 1,000 students enrolled. The Online High School students take one, online class in addition to face-to-face courses at a brick and mortar school; however, the number of students taking multiple online classes is increasing each year. One notable effect of this change is that teachers in this type of learning environment are now required to adapt their teaching strategies to the online format.

The Local Problem

Courses at Online High School are created by teachers or purchased from vendors. The two types of courses require teachers to utilize different instructional strategies to keep students engaged in the courses. The problem is inconsistent teacher implementation of engaging instructional activities in all courses at the high school.

The Online High School data reports revealed a lack of reliability in Advanced Placement (AP) scores and percentage growth from pre to posttest in vendor-created versus teacher-created courses. For example, the Online High School mean score compared to the National mean score in AP world language courses was almost one point higher in the teacher-created courses than the vendor-created courses. Table 1 shows the mean score for all students who completed the AP exam in the world language courses offered at Online High School compared to the average score of students who took the AP exam nationally.

Table 1

Comparison of AP World Languages Mean Scores

	Online High School mean score	National mean score
Vendor-created courses	3	3.5
Teacher-created courses	4.23	3.31

The pre and posttest common assessments administered in all Online High School courses also show a discrepancy between vendor-created and teacher-created courses. The percentage growth from pre to posttest in social studies vendor-created courses was about 10% whereas in the teacher-created course the percentage growth was approximately 45%. The opposite trend occurred in math courses. The percentage

growth from pre to posttest in a vendor-created course was 47% whereas in the teacher-created math course the percentage growth was 41%. These statistics indicate that students are not achieving consistently in vendor-created versus teacher-created courses.

The percentage growth between the math and social studies courses shows opposite trends in the vendor-created versus teacher-created courses which could be caused by several reasons. The math department in 2015 began to collaborate weekly to investigate the implementation of the common core state standards in the online courses. Together, the teachers took an online course about the new standards and began the process of determining alignment between the standards and the courses. The math department was the only group of teachers provided this opportunity by the Online High School administrators in 2015. The remainder of the teachers, including the social studies teachers, began to investigate the common core standards later in the school year with a focus on the literacy standards only. Math teachers received different guidance for adapting courses to align with the new standards than compared to all other teachers in the school. This may have affected the motivation and skills (i.e., competency) of the teachers to implement new instructional strategies, which was the core focus of all professional development at the school regarding the common core state standards.

During the accreditation visit in 2015 at Online High School, the assessment officials conducted a focus group with various constituencies such as students, teachers, administrators, and instructional designers. The accreditation team documented the need for the school's online courses to be more engaging and to offer students additional opportunities to interact with their classmates located throughout the world (AdvanceED,

2015). Details of the accreditors' underlying concerns and assessment as to why the online courses needed to be more engaging were not published in the accreditation report. In making their determinations, the reporting team drew on feedback from teachers, students, and administrators.

After release of the accreditation report, Online High School administrators took note of the need to increase instructional engagement activities in all courses and created a committee of 10 Online High School teachers to address this need. After three committee meetings, the teachers concluded that the type of course, referring to vendor-created or teacher-created, might cause an inconsistency in implementing engaging activities, based on the teacher's personal experience with Online High School. The Assistant Principal agreed with the committee that the design of the course, vendor-created or teacher-created, may cause a difference in how teachers implement instructional activities to engage students in the online environments. She shared that many of the Online High School courses are flat, meaning the primary delivery mode of content is text-based, where students just read the content. She stated that students need more ways to engage with the content, such as audio or video files; to interact with classmates through projects or discussions; and to demonstrate their learning in meaningful ways by having teachers vary the assignment choices and assessment allowing students opportunities to choose the best way to show their understanding. She offered examples of courses where student engagement is supported and can be viewed as exemplars. The exemplar courses the Assistant Principal mentioned all fall into the category of teacher-created courses.

Online High School administrators and instructional designers regularly seek teacher input on the courses as related to content, delivery, standards alignment, instructional activities, assessments, and student engagement according to the Online High School Assistant Principal. Understanding the design and elements of the vendor-created course can be challenging for the teachers. Online High School has a team of instructional designers who create or modify 58 of the school's 76 online courses. The instructional designers seek teacher input on course design including assignment, discussions, or assessment choices; however, some of the online courses are purchased or rented from a vendor.

If a course is vendor-created, the teachers have minimal input on assignments, discussions, or assessment choices as the course is already created. Each vendor-created course is unique and has intricate nuances. For example, a vendor-created course may have a specific sequence of assignments that cannot be altered by the teacher without input from the vendor, an instructional designer, and Online High School administrators. When a new vendor-created course is used, the teacher is expected to instruct the course as-is for the duration of the entire course (one year or semester). According to the Online High School Assistant Principal, this helps the teacher and administrators understand the intricacies of the course, as well as identify any gaps in content or opportunities for student engagement. After one complete rotation of the course, a teacher may offer suggestions to modify the course, and, based on those suggestions, the vendor may make the suggested changes. If the vendor chooses not to make the changes, the teacher must seek alternate ways to implement engaging instructional activities or add content to the

course under the guidance of an instructional designer, such as creating new discussion questions, assessments, or instructional videos using other technology tools like Google applications for education, according to the Online High School Assistant Principal.

Because of the higher student enrollment over the last 5 years at Online High School, administrators are increasingly purchasing and using vendor-created courses to save time and money at Online High School. Eighteen of the 76 total courses offered by Online High School are vendor-created courses. A list of the courses noting course design, content focus, and length of course can be viewed in Appendix A. The Online High School Assistant Principal notes that the vendor-created courses can be delivered relatively quickly compared to teacher-created courses because the vendor-created courses are prepackaged with assignments, discussions, and assessments.

AdvancED, the accrediting organization, charged Online High School teachers with the task of creating an action plan to improve the engagement level of students within 2 years of the April 2015 visit (AdvancED, 2015). The administration expects all teachers to explore ways to increase engaging instructional activities in all online courses. Online High School administrators encourage and expect teachers to discuss instructional strategies to increase student engagement using discussion boards, group activities, and multimedia tools in all the courses, according to the Online High School Assistant Principal. If student engagement activities are not in place in the vendor-created courses, it is the administrators' expectation that teachers will add such activities under the guidance of the instructional designers or administrators. This expectation is outlined in

the new teacher orientation and reiterated throughout the year during monthly faculty meetings.

During the teacher's annual evaluation, the topic of implementing engaging activities may arise, and the teacher will discuss the topic with an administrator. There is not a specific formalized process for monitoring implementation of student engagement activities. The teacher's abilities, knowledge, skills (i.e., competency), and motivation may influence the implementation of engaging activities offered in the course, which is why Deci and Ryan's (2000; see, also, Marshall, 2013) motivational theory of SDT, which is focused on autonomy (i.e., choice), competency (i.e., skills) and relatedness (i.e., connectedness to the content and/or coworkers), was the conceptual framework used in this study. I investigated teacher's implementation of engaging instructional activities in both vendor and teacher-created courses.

Rationale

The problem with the lack of student engagement instructional strategies at Online High School is not unique. Student engagement is a critical factor in learning online and is measured by the extent to which "students actively engage in thinking, talking, and interacting with the content of the course, the other students in the course, and the instructor" (Dixson, 2015, p. 2). An increase in student engagement instructional strategies can lead to improved end-of-course student grades in online courses and ultimately high school graduation rates (Yates, Brindley-Richards, & Thistoll, 2014). Research on student engagement is prevalent in face-to-face and in higher education settings, but there are fewer studies on student engagement in online courses, particularly

in the K-12 system (Dixson, 2015; Hampfel & Pleines, 2013; Huss, Sela, & Eastep, 2015; Louwrens & Harnett, 2015; Mokoena, 2013).

Studies on student engagement show similar issues in a variety of settings. Louwrens and Hartnett (2015) gathered teacher's and student's perspectives of engagement in an online middle school using interviews, online discussion transcripts, and data from a learning management system and concluded that more research is needed in the K-12 setting on how teachers can support student engagement in online courses. Similarly, Yates et al. (2014) conducted a case study with students taking online vocational courses to investigate student engagement and course completion rates. The findings revealed that the teachers are a critical factor in increasing student engagement and that an increase in student engagement increases completion rates. The amount of synchronous interactions and the relationship between student and teacher worked as a support or hindrance for student engagement and completion depending on the teacher's motivation, time, and skill (Yates et al.2014). Furthermore, Hampfel and Pleines (2013) stated a need for further investigation into student engagement in online courses. Research on student engagement in online courses is prevalent in higher education but is often lacking in a K-12 setting (Louwrens & Hartnett, 2015). Online activities, such as surveys and discussion forums that are incorporated into the course, show greater involvement by students and a higher level of engagement measured both quantitatively and qualitatively (Hampfel & Pleines, 2013). For example, a student commented during an interview "the activities helped to engage my imagination" (Hampfel & Pleines, 2013, p. 353).

An Online High School teacher may want to add activities or assignments based on a student's learning style or engagement level to the online course he or she teaches, but the teacher may need additional support, knowledge, and time to enhance the course. Gaining insight into the extent to which teachers feel motivated to implement engaging instructional activities may provide a foundation for improved development of courses, implementation of student engagement strategies, higher end-of-course grades in online courses, and ultimately an increase in student graduation rates (Andrade, 2015; Louwrens & Hartnett 2015; Yates et al., 2014).

A lack of engaging instructional activities may hinder a students' motivation to succeed in a course and the program overall (Annamalai & Tan, 2015). Technology provides various ways for students to interact in online courses, such as activities, polls, blogs, and discussion forums. However, the design and type of student engagement opportunities influences a student's motivation and potential to learn (Hampfel & Pleines, 2013; Hartnett, 2015). If the design or type of instructional activity is not engaging, interesting, or relevant a student's motivation will likely not increase simply because the opportunity exists.

Definition of Terms

Asynchronous learning: A description of learning when the learning does not occur at the same time or place. A general term used in online courses where students complete tasks at their pace and learning does happen in real time or in person because students and teachers are separated geographically (Hidden Curriculum, 2014).

Digital Immigrant: A person who was born prior to the 1980s, attended school during the time without technology, and has adopted the use of technology into his or her personal and professional environments. (Ionitâ, Pâstae, & Stoica, 2014).

Digital Native: A term referring to a person who was born after 2001 and has lived in the technology age (Rosli, Saleh, Aris, Ahmad, & Salleh, 2016).

Distance education: A term used to denote instruction because the instructor and student are separated by physical space during the length of the course, also referred to as *correspondence teaching* (Courtney & Wilhoite-Mathews, 2015).

Engaging activities: Academic or instructionally related activities that provide students opportunities to interact with peers, teachers, and content in a variety of ways through an active learning process. Activities exhibiting higher levels of engagement allow the student to interact behaviorally (socially), cognitively, and emotionally (Dixson, 2015).

Instructional designers: Personnel who support online course development in Online High School by creating and supporting the infrastructure for the online course to be delivered to the student more efficiently and effectively (Marshall, 2013).

Interaction: A term used in distance or online learning environments to describe the exchange between the learner and content, learner and instructor, and learner and learner. It can also be used to explain social connections between students in an online course. Examples may include instant messages and online discussion boards (Roblyer & Wiencke, 2003).

Interactivity: Related to interaction, this term is also used in distance or online learning to explain how the online delivery system enables interactions between participants in the course. The terms interaction and interactivity are used interchangeably unless a person is trying to distinguish which online learning component enables a connection between students, content, and teacher (Roblyer & Wiencke, 2003).

Military-connected: A term used to describe approximately two million students and families of U.S. military service members (Risberg, Curtis, & Shivers, 2014).

Online learning: *S*ynchronous or asynchronous instruction between a teacher and a student through the internet (LaFrance & Beck, 2014).

Online course: A learning experience where content is delivered to the student through the use of the Internet (Caruth & Caruth, 2013).

Student engagement: *T*he quality of students' efforts to meet the educational outcomes of the course (Günüc & Kuzu, 2014, 2015).

Synchronous learning: A type of learning occurring between teacher and students or peer-to-peer at the same time. In an online course this type of learning may happen through an instant message program, videoconference, or interactive webinar (Hidden Curriculum, 2014).

Vendor: A company or organization where online courses are developed, including content, technology support, delivery, and implementation (iNACOL, 2015).

Virtual school: A full-time online school where students are not located in one physical space. Students and teachers are geographically separated and interact through an online component (iNACOL, 2015).

Vendor-created courses: An online course developed and delivered by a vendor company or organization. Courses are pre-packaged to be administered without changes or adaptions based on individual student needs. The courses are purchased or rented from the vendor (Marshall, 2013).

Teacher-created courses: Content, including activities, assessments, and discussions for online courses needed for the virtual school that were developed by teachers. The courses are owned by Online High School and can be altered by teachers and instructional designers to meet the needs of the students (Marshall, 2013).

Significance of the Study

The results of this study may be significant at the local level. Examining teacher's implementation of engaging instructional strategies in courses may improve future development of online material such as offering professional development strategies to help teachers understand how to increase student engagement in a digital environment.

Requests for additional resources are increasing for the Online High School in order to adequately support military-connected students while the burdens of these military families also increase due to numerous deployments (Cozza & Lerner, 2013). Many military-connected students transition school every two to three years and typically attend six different schools between kindergarten and twelfth grade (Risberg, Curtis, & Shivers, 2014).

The various transitions and adjustments from school to school can influence a student's level of engagement both positively and negatively. The student may have had

a difficult time, academically or behaviorally, in a previous school and is using the move to a new school to start over and redefine his or her school experience. Conversely, a military-connected student may become disengaged in all aspects of school due to leaving behind a close group of friends, quitting a sports team, and navigating a new community (Risberg, Curtis, & Shivers, 2014). The teacher's role in providing a supportive and engaging learning environment for military-connected students is pivotal since students often change of schools and teachers (Arnold, Garner, & Nunnery, 2014).

The goal of this study was to examine teachers' motivation to implement engaging instructional activities in all online high school courses. The anticipated findings promote positive social change by adding to the body of knowledge on consistently implementing engaging instructional activities for online high school teachers. Because the literature is mostly focused on university online courses, there is a need for more research on engagement in online high school courses (Hampfel & Pleines, 2013; Yates, Brindley-Richards, & Thistoll, 2014). The findings may provide a clearer understanding of the needs of teachers to support student engagement.

Research Questions

The problem is inconsistent teacher implementation of engaging instructional strategies in all online courses at Online High School. The research questions focused on understanding how teachers' motivation influences providing engaging instructional activities in Online High School courses. Self-determination theory (SDT; Ryan & Deci, 2000) served as the conceptual framework for this study because this motivation theory focuses on constructs that promote motivation to perform a behavior (e.g., teachers

implementing engaging instructional activities in online courses). SDT includes three constructs to understand motivation: autonomy, competence, and relatedness (Ryan & Deci, 2000). Autonomy is a person's ability to make choices about an experience; people feel autonomous when time and energy is eagerly devoted to the experience (Ryan & Deci, 2000). Competency complements autonomy because a person feels competent when he or she has the knowledge and skills necessary to meet the challenge of the experience (Ryan & Deci, 2000). Ryan and Deci (2000) stated that autonomy and competence increase motivation and further explained that relatedness, as a third factor, also has an influence. Relatedness is the need to connect to the experience or people involved (Ryan & Deci, 2000).

I drew from SDT (Ryan & Deci, 2000) in composing each research question. The aim of the research questions was to further understand how teacher's motivation as related to autonomy, competence, and relatedness supports providing engaging instructional activities in online high school courses. SDT constructs informed the operationalization of the research questions. That is, I focused on the motivation of teachers to provide engaging instructional activities in online courses through the theory's three constructs (i.e., autonomy, competence, and relatedness).

Overall question: How does a teacher's motivation (i.e., autonomy, competence, and relatedness) influence the extent to which engaging instructional activities are implemented in online high school courses?

RQ 1: How does autonomy influence teacher's implementation of student engagement opportunities between teacher-created vs. vendor-created courses at an online high school?

RQ 2: How does competency influence teacher's implementation of student engagement opportunities between teacher-created vs. vendor-created courses at an online high school?

RQ 3: How does relatedness influence teacher's implementation of student engagement opportunities between teacher-created vs. vendor-created courses at an online high school?

RQ 4: What differences exist between teacher's implementation of student engagement opportunities between teacher-created vs. vendor-created courses at an online high school?

Review of the Literature

Online learning is primarily emphasized in higher education. Since the millennium, student enrollment in K-12 online learning has increased (Watson, Pape, Murin, Gemin, & Vashaw, 2014). The research on K-12 online learning is lacking and recommendations to further this area is emphasized by Hampfel and Pleines (2013); Louwrens and Hartnett (2015); Malinovski, Vasileva, Vasileva-Stojanovski, and Trajkovik (2014). A review of pertinent literature about online learning, student engagement, and motivation establishes a foundation to explore the research questions in this study.

Search Strategy

The literature review focused on topics associated with online learning, student engagement, and motivation. A review of the literature was conducted using Walden University's online databases such as Educational Resources Information Center, SAGE Journals, Google Scholar, Academic Search Complete, and Education Source. A saturation of literature was reached by reading peer-reviewed articles. Boolean search terms included, but not limited to: *online learning, virtual schools, student engagement, self-determination theory, teacher perceptions, teacher motivation, change, student motivation, growth of online learning, behavioral engagement, cognitive engagement, social engagement, measuring engagement, high school online courses, distance education, synchronous,* and *asynchronous.*

Conceptual Framework

Given the motivation needed by teachers to provide opportunities for student engagement, Self-determination Theory (SDT) will serve as the conceptual framework for this study. SDT states that people are naturally drawn to environments that promote learning and choice, while simultaneously investigating factors that diminish motivation, such as environmental or social factors (Ryan & Deci, 2000). Ryan and Deci (2000) highlighted teaching as a profession where high levels of motivation are necessary. They contend extrinsic consequences for our actions are ultimately less motivating than the pleasure and value the actions bring us, also known as intrinsic motivation. Intrinsic motivation is described as a person's natural inclination to investigate, question, and learn from various opportunities that promote growth (Oga-Baldwin, Nakata, Parker, & Ryan,

2017; Ryan & Deci, 2000). Extrinsic motivation is engaging in an opportunity for a specific outcome, such as, recognition, compliance, or material gains (Nguyen & Deci, 2016; Ryan & Deci, 2000). In order to promote intrinsic motivation, SDT claims a person's actions must satisfy three fundamental needs: autonomy, competence, and relatedness (Ryan & Deci, 2000). Satisfying these three needs is foundational to personal growth and welfare. Oga-Baldwin et al. (2017) used learning a foreign language as an example of how increasing intrinsic motivation through supporting student behavior, interests, and attitudes leads to increased student engagement and academic success. The research question for this study focuses on understanding how teacher's motivation influences providing engaging instructional activities in Online High School courses through the constructs of teacher's autonomy, competence, and relatedness.

Autonomy is a person's ability to make choices about an experience and people feel autonomous when time and energy is eagerly devoted to the experience (Ryan & Deci, 2000). Teachers can create an autonomously supportive environment and increase intrinsic motivation through interesting instructional activities, a respectful environment, and encouraging choice in learning. Conversely, teachers can also influence students' autonomy by creating a learning environment focused on rewards and punishments, which relies on extrinsic motivation (Oga-Baldwin et al., 2017). If a teacher increases autonomy during instruction, then he or she will notice a positive effect on student engagement and learning (Jang, Reeve, & Halusic, 2016). A teacher can increase autonomy by communicating statements such as "I am your ally; I am here to support you" (Reeve, 2015, p. 409). Beyond the interpersonal messages, creating an autonomous

learning environment is done through the instructional process. For example, giving students opportunities to makes choices in learning activities, providing thorough and rational explanations for the assignment or project, building opportunities for students to make decisions during an assignment, or supporting student's feeling during a negative or failing experience (Jang, Reeve, & Halusic, 2016). Essentially, a teacher looking at a course, assignment, or project through a student's perspective and finding ways to adapt it to a student's needs, preferences, or interests enhances an autonomously supportive learning environment. The changes in a lesson, unit, or activity do not need to be sweeping, but instead minor modifications may influence a student's motivation (Perlman, 2015). When a teacher focuses only on his or her needs in delivering instruction, the autonomy of the student will be minimal.

Competency complements autonomy because a person feels competent when he or she has the knowledge and skills necessary to meet the challenge of the experience (Ryan & Deci, 2000). Competency can be explained by the "need to feel capable of influencing the surrounding environment in a meaningful way" (Oga-Baldwin et al., 2017, p. 142) or the need of "feeling effective" (Silva, Marques, & Teixeira, 2014, p. 172). Setting realistic goals and expectations supports the development of competency, along with providing constructive feedback (Silva et al., 2014). For example, a teacher in a classroom setting supports competency by differentiating instruction to meet the needs of students. Through differentiation a student will learn at the rate or pace suited for his or her learning style. The design of the learning activity must be appropriately challenging to the learner (Hartnett, George, & Dron, 2014). Competence in learners is

built by explicit and detailed expectations. The instructor must be able to provide feedback and directions that encourage the learner to feel capable of learning new and complex information (Hartnett et al., 2014). In an online learning environment, this type of competence building can be displayed in online discussions through specific and detailed feedback to the learner. Ryan and Deci (2000) stated clearly that autonomy and competence increase intrinsic motivation and further explain that relatedness, as a third factor, influences intrinsic motivation.

Relatedness is the need to connect to the experience (Ryan & Deci, 2000). Relatedness can also be about the relationships between those involved in the situation. By developing a relationship built on understanding and support between the teacher and student, the student can be more independent and a self-regulated learner (Jang, Reeve, & Halusic, 2016). Allocating enough resources, both material and human, displaying empathy for people and situations, and being dependable with time and energy are important ways to support relatedness (Silva, Marques, & Teixeira, 2014).

Teachers provide a critical link to increasing student engagement in coursework. Supportive instructional practices, such as feedback, choice, and understanding, influence the development of competency, autonomy, and relatedness for students (Carreira, Ozaki, & Maeda, 2013). Research connects intrinsic motivation, specifically autonomy, to student engagement and success (Carreira et al., 2013; McEown, Noels, & Saumure, 2014; Noels, 2013). Early, Berg, Alicea, Aber, Ryan, and Deci (2016) explain high school students' level of engagement is most directly affected by how and what teachers teach. Teachers who are enthusiastic about the students and the content tend to have

students more engaged in the learning process and students will have a richer conceptual understanding of the material (Early et al., 2016). Early et al. (2016) also examined motivation as it relates to content areas and concluded the method of teaching mathematics is the greatest shortfall for student success, compared to language arts where the shortfall is noted as content. Teachers are pivotal in creating a supportive environment for students to be more engaged in the learning process and be more successful. The motivation needed by teachers in enhancing courses requires their own level of motivation and development of autonomy, competence, and relatedness. Due to this reason, SDT will serve as the conceptual framework of this study and guides the research questions to further understand how teacher's motivation as related to autonomy, competence, and relatedness influences providing engaging instructional activities in online high school courses. This will help to build the body of knowledge on supporting student engagement in online high school courses.

History of Distance Education

Online learning was originally referred to as distance education in the 19th century and first seen in the United States at the University of Chicago in the 1890s. The mail system was the original platform to deliver books, assignments, and other information between teacher and student (Caruth, & Caruth, 2013; Sun & Chen, 2016). Courses taught through this process were also noted as correspondence courses and the early 1900s saw an increase in vocational correspondence courses. "Educators believed that correspondence courses would be better than face-to- face courses because correspondence courses could be designed according to individual students" (Caruth &

Caruth, 2013, p. 122). Professors would mail the course syllabi and materials to the students and in return the students would mail assignments to be graded. A shift in delivery of instruction came in the 1920s with the radio. Pennsylvania State College was the first institution to use the radio to deliver courses to a distant audience; however, the instruction was strictly from teacher to student. Radio distance education was short-lived and not very popular. Teachers and students still relied on the mail system for delivery of supplemental materials and submitting assignments. The radio version of distance education became an augmented correspondence course (Saqlain, 2016; Sun, & Chen, 2016). The next shift in distance education came with a change in delivery of the content. The invention of the television improved the delivery of distance education in the 1960s to students located in various locations. Students at the University of Houston were the first to benefit from the use of the television as a distance education platform. Students were able to visually see information being presented by the teacher through the screen. Materials to supplement the instruction still had to be delivered through the mail. The communication continued to be single-sided. Students were not able to share comments or ideas in real-time. Two-way communication became a reality in the 1980s, when satellite television and fiber optic systems were developed. Finally, teachers and students were able to communicate in real-time with each other (Sun & Chen, 2016). Distance education allows learning to occur despite the space and time between student and instructor.

The development of the World Wide Web in the 1990s made distance education more interactive and accessible to a broader audience. The advances in technology

closed the communication gap between teacher and instruction with different pedagogical and technological tools, such as email and interactive learning programs (Allen & Seaman, 2014; Sun & Chen, 2016). The University of Phoenix was one of the first to offer a range of online courses for adult learners with Walden, Strayer and others following closely behind. Two decades later, the concept of distance education is now referred to as online learning.

Online learning is referred to by a variety of terms such as distance education, web-facilitated, blended, virtual, and distance learning (LaFrance & Beck, 2014). A web-facilitated course uses web-based technology and web pages to conduct instruction (LaFrance & Beck, 2014). Blended learning, also called hybrid learning, combines the best components of online learning with face-to-face learning. Students learn online while simultaneously learning in a traditional face-to-face environment to best fit their personal needs (iNACOL, 2015). Courtney and Wilhoite-Mathews (2015) defined distance learning as a form of instruction occurring between an instructor and student that are separated by physical space during the length of the course, also referred to as correspondence teaching. LaFrance and Beck (2014) define online learning as synchronous or asynchronous instruction between a teacher and a student through the Internet. This definition will be used for the purposes of this study.

Online learning, as used in this study and defined by LaFrance and Beck (2014) indicated the teacher and students are separated geographically. This definition is closely aligned with the model of the Online High School where learning is both asynchronous and asynchronous. Asynchronous Learning is a general term used in online courses

where students complete tasks at their own pace and learning does happen in real time or in person because students and teachers are separated geographically, such as a discussion boards or collaboration on Google documents (Hidden Curriculum, 2014). Synchronous learning is a type of learning occurring between teacher and students or peer-to-peer at the same time (Hidden Curriculum, 2014). Synchronous learning could occur through video conferences or instant message programs.

The growth in online learning in higher education versus K-12 is more notable with 90% of current universities offer online courses and online degree programs with a 33% increase in online enrollments each year (Allen & Seaman, 2014). K-12 online learning is growing, but it is estimated that only 50% on K-12 schools offer an online component. The flexibility to learn at his or her own pace and on his or her own time was appealing more in higher education than K-12 online learning, but the cost effectiveness is attractive to both (Sun & Chen, 2016).

Growth of Online Learning in Higher Education

The quick rise in higher education online learning in the last decade is due to several general factors. First, access to the Internet increased tremendously due to the advancements in technology and students can access online courses through smart phones, tablets, and computer at numerous locations (Saqlain, 2016). Along with this increased access is a decrease in the costs for computer hardware. Computers and other devices are more affordable; therefore, more students can use devices as needed for online courses. Saqlain (2016) indicates a compelling reason for the growth of online courses, programs, and virtual schools are the diverse needs of learners. Adult learners

seek flexibility in their learning due to balancing work and continuing their education. Another reason for an increase in online learning is over 30% of professional training is conducted online so professionals are seeing online learning to meet educational goals as a common way to learn (Means, Toyama, Murphy, & Baki, 2013). Internationally, online learning in higher education shows an even more profound increase in enrollments. The reasons stated are due to be able to reach learners who previously did not have access to advanced learning (Means et al., 2013).

The perception of online learning has also evolved with the growth of the various programs and courses. Allen and Seamen (2013) explain instructors of online learning had mixed feelings about its effectiveness, mostly due to unknowns with technology, connectivity, and a lack of experience. Students in a university setting were also concerned about technology issues and being able to seek appropriate assistance when needed (Carter, Hanna, & Warry, 2016; Fedynich, Bradley, & Bradley, 2015; Gok, 2015). However, this perception has changed in the last decade. The familiarity with online learning is increasing due to the integration of technology in educational, professional, and personal settings (Barbour, Grzebyk, & Eye, 2014; Gok, 2015). Graduate students noted convenience and flexibility as a strength of online learning, but the ability to continuously reflect on the learning influenced their perception the most. The students noted the discussion boards provided a continuous opportunity to reflect on other students' learning and reflection (Fedynich et al., 2015). A different research report focused on how online learning influences professional practice, a study participant noted her positive experience with online learning as a single-mother living in an isolated area

(Carter et al., 2016). The online learning experience gave her access and opportunity to a personalized learning experience that supported her critical thinking and reflective practice as a professional (Carter et al., 2016).

The overall growth rate in higher education online learning now exceeds enrollments in traditional higher education brick and mortar institutions according to the 2016 Online Report Card, previously named Sloan Consortium (Allen & Seaman, 2016; Caruth & Caruth, 2013). In 2016, it is estimated that one in four students is taking at least one distance education course (Allen & Seaman, 2016). Considering the development of online learning, the growth in the last few decades is tremendous. It wasn't until the 1970s when universities with no physical campus began to develop. Coastline Community College located in the United States offered all of it courses online from the beginning (1976). In Europe, American Intercontinental University was also founded in the 19070s and wanted to challenge the premise of traditional face-to-face learning. Other online universities have grown in the last few decades. Walden, Strayer, and Phoenix University are three of the largest online universities with over 450,000 students combined (Caruth & Caruth, 2013). Allen and Seaman (2007) reported 3.5 million students were taking at least one online course and noted a 10% increase in online enrollments over a four-year period from 2002 - 2006. More notably is a 25% increase in associate level online courses and a 20% increase in masters and doctoral level online courses during the same four-year period (Allen & Seaman, 2007). To boost further growth in online learning institutions of higher education were encouraged to partner

with K-12 schools to expand opportunities for online learning and requires online course for high school graduation (LaFrance & Beck, 2014).

Growth of Online Learning in K-12 Schools

The reasons for the growth in online learning for K-12 students are like the reasons for that of higher education. Saqlain (2016) says access to the Internet, lower costs in hardware, and advancements in technology are viable reasons for the increase in K-12 online learning. A different reason for growth in K-12 online learning as opposed to online higher education is due to the dissatisfaction with traditional school options. Harris-Packer and Ségol (2015) report the No Child Left Behind (NCLB) Act signed by George W. Bush in 2002 is the primary cause for the dramatic increase in K-12 online learning. NCLB required schools to show adequate yearly progress (AYP) in mathematics, science, and reading with the goal of 100% of students in all subgroups show proficiency by 2014 (Harris-Packer & Ségol, 2015). When a school did not show adequate AYP growth for two consecutive years, the parents were able to transfer their student to a different school. One of the choices offered by states was an online learning option which caused a major growth in various online K-12 schools. The primary audience for K-12 online learning was noted as homebound students or providing vocational courses (iNACOL, 2015). The current population of K-12 online learning reaches beyond this limited group of students. Specific reasons for a student to take an online course in K-12 schools may be the course not being available, student needs a specific credit for graduation due to previously failing the class, scheduling conflict, or student wants to earn credits to graduate earlier than expected (iNACOL, 2015). In

special circumstances, such as the ones previously listed, a student may be attending a face-to-face school and enroll in a supplemental online course to meet state graduation requirements. The student is responsible for completing the online coursework outside the school day.

Accurate numbers of K-12 online learning is difficult to report due the various types of classifications and types. International Association for K-12 Online Learning (iNACOL) estimates 98,000 public K-12 schools offer some form of online learning to current students (iNACOL, 2015). The content areas of math and language arts comprise the highest percentage of online courses in K-12 schools at 23% each with science and social studies making 14% each. Students in grades nine through 12 make up 84% of students taking supplemental online courses compared to 46% of high school students are full-time online students (iNACOL, 2015). The United States and Canada lead the development of online learning in elementary and secondary schools in the 1990s (iNACOL, 2015; Saqlain, 2016).

Enrollments in K-12 are estimated at 4 million compared to the 7 million in Higher education the numbers in K-12 are much lower (Allen & Seaman, 2014). Enrollments do not equate to number of students taking courses. Other ways to compare K-12 to higher education is to look at the number of schools offering online options. Approximately, 90% of universities offer some form of online learning compared to only 50% in K-12 (Allen & Seaman, 2014; Means et al., 2013). Due to the continued advancements in technology instructors and students can communicate synchronously using video chats or instant message programs. However, most K-12 online learning

programs predominantly employ asynchronous interactions such as discussion boards, feedback on assignments, or email communication (Malinovski et al., 2014). The perception of online learning for K-12 students has remained mostly positive over the last decade. This may be due to the integration of technology throughout all K-12 schools. Students in K-12 online courses have distinct opinions about the tools used for the online courses, for example, usability on mobile devices or web applications (Barbour et al., 2014).

In 2009, 45 states and Washington DC reported offering at least one K-12 online programs. This type of online learning for elementary and secondary students came in various forms, such as a Florida Virtual School, which offers courses throughout the state. Michigan, Idaho, Alabama, and Florida are a few of the states requiring an online course to obtain a high school diploma (Means, Toyama, Murphy, & Baki, 2013; Saqlain, 2016). Like the various terms for online learning, there are also various types of virtual schools.

Types of Virtual Schools

A virtual school is defined by the iNACOL as a full-time school where students are not located in one physical space and connect through an online component to learn (iNACOL, 2015). LaFrance and Beck (2014) confirm there is some form of K-12 online learning in all 50 states, including the District of Columbia. Various classifications of the types of virtual schools can be found in the literature. Cavanaugh, Barbour, and Clark (2009) identify six types of virtual schools: state-sanctioned, college or university based, consortium and regionally based, local education agency based, virtual charter schools;

private charter schools, and for-profit providers or curricula, content, tools and infrastructure.

The largest and most recognized virtual school is the Florida Virtual School as an example of a state-sanctioned school (Barbour, 2013; iNACOL, 2015). The school opened in 1997 and had over 200,000 students enrolled part-time in K-12 courses and about 6,000 students enrolled full-time in school year 2014 – 2015 (Barbour, 2013; iNACOL, 2015). An example of an online consortium program is the Wisconsin eSchool Network (WEN). It was founded in 2002 as membership organization and had over 20,000 enrollments in 2015 compared to less than 5,000 in 2011(Wisconsin eSchool Network, 2017). Another notable virtual school is Wichita eSchool in Kansas, which enrolls students in grades K-12 at no-cost to the student. The teachers meet with students online or the students may go to the physical school building for onsite instruction with their teacher. LaFrance and Beck (2014) note this type of virtual school to be the fastest growing type of K-12 online learning.

Online charter schools are developing throughout the United States with Guided Online Academic Learning (GOAL) Academy in Colorado, Oregon's Connection Academy, and PAVirtual in Pennsylvania to name a few (Barbour, 2013; Cavanaugh & Clark, 2007). K12 International Academy and the Keystone school are private online schools and espouse to offer a personalized learning plan for students. Students pay tuition upon acceptance to the school. The teachers and students are located at various locations throughout the United States and all contact happens via email, web conferencing, or other online programs. The public information available was limited

(K12, 2017). For-profit providers, such as Apex Learning, Edgenuity, Florida Virtual School, Fuel Education, create courses for distribution in all types of virtual schools. The providers may also help with technical infrastructure and professional development for teachers (Barbour, 2013; Cavanaugh & Clark, 2007).

The Online High School referred to throughout this study is a combination of a state sanctioned and private virtual school. The school system to which the Online High School belongs is the equivalent of a state-level system operating worldwide for military-connected students. The requirements for teachers at a state sanctioned level virtual school, such as Florida Virtual School, are like the requirements for teachers at the Online High School. For example, teachers work Monday- Friday with flexible hours and are required to hold a state teaching certification. Similarities to a private virtual school are due to the select student population. Students enrolled in the Online High School must be dependents of military service members in order to attend the school for free. If the student is not a dependent of a military service member, the student will be required to a pay a fee.

Benefits of Online Learning

The benefits of online learning, in higher education and K-12, range from personal growth to the ease of implementation. Barbour (2010; 2013) along with Cavanaugh, Barbour, and Clark (2009) categorized the benefits to online learners as follows: higher levels of motivation, expanding education access, providing high-quality learning opportunities, improving student outcomes and skills, allowing for educational choice, and administrative efficiency. LaFrance and Beck (2014) add another benefit to

the list by saying the draw to online learning for an individual user is the personalization of instruction. The online course may be adapted to meet the learning needs of an individual, such as selecting specific lessons of interest, personalizing assessments, or creating a project for one student. Other notable benefits include not driving to campus, flexibility in completing coursework or study time, and balancing personal responsibilities with academic goals (Gok, 2015). The benefits of online learning are mostly based in the realm of higher education due to the limited research on K-12 online learning. However, the overarching themes of personalized learning, access, opportunity, and choice in the learning process are applicable to learners in all grade levels.

Parents of secondary learners influence a student's perception of their experience and Borup (2016) found this to be especially true in secondary online learning. Most parents of current secondary online learners attended a brick and mortar school during their school years. Due to this fact, most parents find it difficult to understand how to support their student in an online setting (Borup, 2016; Archambault, Kennedy, & Bender, 2013). However, the increasing presence of online learning in the professional setting helps parents to understand the benefits of online learning. Parents are seeking advice from online teachers on ways to support their students' learning needs (Borup, West, Graham, & Davies, 2014). Special populations of parents and students, for example, parents who were homeschooled and now have children who are homeschooled, perceive online learning to be a great benefit to their lifestyle and family needs. The same is true for parents who have a professional career that is mobile and requires frequent geographic relocations (Borup, 2016).

Every student deserves an individual education, which focuses on his or her individual strengths, needs and interests. In an online environment, students can gain skills, knowledge, and confidence to help them succeed academically as well in life, in general. Students also learn self-advocacy skills and time management skills. Students who possess some of these skills prior to taking online courses tend to enjoy learning via online. According to You and Kang (2014) students who are self-regulated learners favor online learning. Self-regulated learners can use multiple strategies to achieve an academic goal. Examples of strategies used by successful online learners include reviewing content regularly, seeking help from instructors by asking questions or setting up one-on-one tutoring session, and meeting deadlines (You & Kang, 2014). Students who are self-regulated learners may also be called independent learners, meaning the student is highly motivated to complete the work and uses his or her time effectively to manage the amount of work required for the course. The self-regulated student is not considered a procrastinator (Cavanaugh et al., 2009). These characteristics are more typical of adult learners than K-12 learners and are one of the motivational factors for more research in the K-12 online areas. The research specific to K-12 online learning is limited.

Challenges of Online Learning

Online learning is not devoid of challenges. Like the benefits of online learning, the focus is based on patterns of all online learners not a specific grade level, such as higher education versus K-12 students. Barbour (2013) and Cavanaugh et al., (2009) outline the challenges to be high start-up costs, issues with access to the Internet,

accreditation of virtual schools, and student readiness and retention issues. Accessibility was listed as a primary reason for the growth of online learning but is also a main challenge for online learners. Access to technology creates an issue for populations that have limited or no support to technology resources (Oswal & Meloncon, 2014). Technology to support online learning creates a "have" versus "have-not" divide. This divide is most visible in low socioeconomic areas. The ratio of computers or electronic devices to students can vary greatly in low versus high economic areas. The effect of this divide on a global scale becomes more prominent due to access to the Internet (Oswal & Meloncon, 2014). Another challenge related to limited access is a student's ability to login to the course. If access is limited due to infrequent access to a computer, the student's access to the course is also limited. Expansion of Internet to remote areas geographically and ongoing support for everyday use of the Internet is in demand (Oswal & Meloncon, 2014). The challenge to provide infrastructure technical support coincides with high-start-up costs.

Bowen, Chingos, Lack, and Nygren (2014) claim academic integrity and rigor is continuously challenged in online learning. Cheating in online courses is at the forefront of challenges for teachers and designers. All assignments, discussion boards, and content of online courses are constantly being adapted to protect the integrity of the course, so it is not copied and reproduced in another way. Designers of online courses must be aware of copyright laws and use software such as turn-it-in to boost the academic integrity of the course (Bowen et al., 2014). The growth in student population, variety of courses, and numerous delivery formats causes the content to be called into questions for being

less rigorous than face-to-face courses (Bowen et al., 2014). As the population of online learners grows, so do the diverse needs of the learners. The range of student needs causes a dynamic process of adapting and adjusting online courses to ensure it is engaging to the learner. A lack of student engagement in online courses predicts lower completion rates and end-of-course grades (Ramesh, Goldwasser, Huang, Daumé, & Getoor, 2014). Online instructors should continuously reflect on how to increase student engagement, but first it is critical to understand the types.

Student Engagement

Teachers in all grade levels and types of schools are continuously striving for ideas or strategies to engage students in the learning process. Louwrens and Hartnett (2015) note student engagement as a critical component of teaching due to its direct link with student achievement. Student engagement is used a predictor of academic achievement and promotes academic, behavioral, and emotional success in school (Guvenc, 2015; Harbour, Evanovich, Sweigart, & Hughes, 2015).

Student engagement is a term used frequently in literature yet, researchers seldom agree on a single definition. Günüc and Kuzu (2014) define student engagement by participation in instructional activities that result in a positive outcome. Kahu (2013) says student engagement is both sociological and psychological. Engagement is measured both in and out of the classroom with academic and non-academic activities (Gebre Saroyan, & Bracewell, 2014). Günüc and Kuzu (2014) expound upon this idea and define student engagement as "the quality and quantity of students' psychological,

cognitive, emotional, and behavioral reactions to the learning process as well as to in-class/out-of-class academic and social activities to achieve successful outcomes" (p. 88).

For the purpose of this research, student engagement is defined by the quality of effort, made by the student, to meet the educational outcomes of the course (Günüc & Kuzu, 2015; Günüc & Kuzu, 2014). Student engagement, as noted in this study, will focus on academic activities only. The varied definitions of student engagement also cause dispute on the types of student engagement. The terms interactions, elements, components, or dimensions of student engagement are also used when dissecting features of student engagement. For purposes of this study, student engagement will be investigated through three types: behavioral, cognitive, and social. An observational rubric will be used to measure engagement using Roblyer and Wiencke's (2003) Rubric for Assessing Interactive Qualities of Distance Courses (RAIQDC). Dixson (2015) recommends the RAIQDC to measure student engagement specific to online courses. The term interaction can be exchanged with engagement in an online environment due to the definition. The rubric contains five aspects of engagement: social/rapport, instructional design for interaction, interactivity of technology, learning engagement, and instructor engagement.

Types of engagement. Student engagement can be categorized as behavioral, cognitive, or emotional (Daniels, 2016; Günüc & Kuzu, 2015; Harbour et al., 2015). The categorization of student engagement in face-to-face and online classrooms will be the same, but specific examples will vary. All three types are linked to student success (Lawson & Lawson, 2013). Ramesh et al., (2014) says, "student engagement is known to

be a significant factor of student learning" (p. 1273). Increased engagement in an online course is associated with greater motivation, improved learning, and determination to be successful and develop an in-depth understanding of the content (Wang, Chen, & Anderson, 2014). Even with a clear list of influencing factors, it is still unclear if engagement in face-to-face courses translates directly to online learning (Pazzaglia, Clements, Lavigne, & Stafford, 2016).

Behavioral engagement. Behavioral engagement is the amount of time a student spends working on a specific course. Attendance, participation, or hours spent on the course are indicators of behavioral engagement (Günüc & Kuzu, 2015; Harbour et al., 2015). In a face-to-face classroom, this type of engagement is positively noticed when students who are engaged actively listen, meaning the student makes eye contact, leans forward, and makes appropriate facial expressions depending on the content topic (Lane & Harris, 2015). Students engaged in a course ask questions to the instructor and classmates, take notes, and discuss material relative to the course (Günüc & Kuzu, 2015; Lane & Harris, 2015).

Behavioral engagement in an online course may be viewed by analyzing the number of clicks on assignments or link. It could also be viewed as the number of hours a student is logged into the course (Pazzaglia et al., 2016). Dixson (2015) states a successful online course allows for frequent and quality interactions with the instructor and is easy to navigate. This supports an increase in behavioral engagement by providing the student with easy and direct access to the course content, the instructor, and to other students. Another example of positive behavioral engagement in both online and face-to-

face classrooms is following the rules (Louwrens & Hartnett, 2015). Meeting assignment deadlines, showing required parts of an assignment or project, and logging in during mandatory time frames are examples of rules in an online course. Roblyer and Wiencke's (2003) rubric for engagement focuses on five aspects of engagement. Elements one (social/rapport) and two (instructional designs for interaction) will focus on the interactions between students and between students and the instructor.

Cognitive engagement. Cognitive engagement is how much the student learns. Goldspink and Foster (2013) explain cognitive engagement by examining how the student understands, thinks, and makes choices about how to best learn the content being presented. Cognitive engagement refers to "investment in learning, valuing learning, learning motivation, learning goals, self-regulation and planning" (Günüc and Kuzu, 2015, p. 590). Louwrens and Hartnett (2015) say cognitive engagement is displayed when students ask higher levels of questions and show critical thinking, such as creativity and problem solving. A student showing higher levels of cognitive engagement plans, organizes, and monitors academic progress regularly (Louwrens & Hartnett, 2015).

Cognitive engagement in online classrooms is like a face-to-face classroom. Students asking higher levels of questions and using critical thinking to problem solve are clear examples of a cognitively engaged student. Collaboration is another aspect of higher cognitive engagement, meaning the more a student works with peers the higher the engagement (Louwrens & Hartnett, 2015). A discussion board in an online course provides students an opportunity to connect with other students outside of their local area (Ramesh et al., 2014). The student can read and comment on another student's post in

the discussion forum by asking questions, making comments, or probing an idea further. By reading a student's post, a teacher assesses the student's cognitive engagement through the quality of the discussion post. Based on the level of thought the teacher can gauge the level of understanding on a topic or idea. A discussion board can be a significant feature for engagement in an online course (Ramesh et al., 2014). An observational rubric will be used to gather data on this aspect of engagement. Roblyer and Wiencke's (2003) rubric for engagement focuses on five aspects of engagement. Elements four (learner engagement) and five (instructor engagement) will focus on amount of interactions and timeliness of feedback.

Emotional engagement. Emotional engagement, also referred to as affective, uncovers a student's motivation for learning (Goldspink & Foster, 2013). Students need to feel connected to each other, to the teacher, and to the content to enhance the emotional engagement (Louwrens & Hartnett, 2015). Günüc and Kuzu (2015) explain that emotional engagement is noticed in students' attitudes, interests, and their relationship to the teacher, content, and other students. A student who feels connected or a sense of belonging to the group (i.e., class) may display higher levels of engagement (Günüc & Kuzu, 2015). The opposite of positive emotional engagement would be a student who displays high levels of anxiety or boredom in a class (Goldspink & Foster, 2013; Günüc & Kuzu, 2015). This type of anxiety or boredom in an online course may translate to a lack of interactions or logging into the course. The student may become absent from discussions or other activities. An online instructor may describe this student

as having minimal communication or no communication and turning in assignments late or not at all.

An online class may view emotional engagement as social presence. Relationships between the students (and other students) and between the student and teacher in online courses are key components of emotional student engagement or social presence (Barbour & Bennett, 2013). Being connected to other students in the course is needed to increase levels of emotional engagement (Louwrens & Hartnett, 2015). Discussion boards or live chat sessions are possible ways for students to interact with others in the classroom.

Dixson (2015) refers to Vygotsky and Bandura's social constructivist theories to explain why social interaction is critical to online student engagement. Social constructivist theories explain that students need to construct knowledge in a meaningful way and students will perform better when provided the opportunity to collaborate with others (Dixson, 2015; Lane & Harris, 2015). In an online discussion, students can fill in the gaps of learning, which Dixson (2015) associates with Vygotsky's "zone of proximal development." Similarly, when students observe each other in an online discussion or group chat, learning becomes active. Dixson (2015) posits that geographic distance or asynchronous learning becomes a non-issue because students use the interactions to enhance the learning process. For this reason, "social presence, community, and meaningful interactions" (Dixson, 2015, p. 3) are three critical characteristics of online courses in order to ensure high levels of student engagement.

The design of the online course may support or inhibit the interaction and engagement level of students based on opportunities embedded in the course (Croxton, 2014; Paquette, 2016). This study will use an observation protocol created by Roblyer and Wiencke (2003) to measure student engagement based on five elements: social/rapport building designs for interaction, instructional designs for interaction, interactivity of technology resources, evidence of learner engagement, and evidence of instructor engagement.

Measuring Engagement. Research indicates students who are engaged in the learning process, behaviorally, cognitively, and emotionally, are shown to be more successful in both face-to-face and online classrooms (Dixson, 2015; Günüc & Kuzu, 2015; Lane & Harris, 2015; Louwrens & Hartnett, 2015). However, it is difficult to know how student engagement is best measured due to a lack of a clear and agreed upon definition (Louwrens & Hartnett, 2015); yet, it is critical for teachers to understand how to promote student engagement in the classroom (Dixson, 2015).

The National Survey of Student Engagement (NSSE) outlines five benchmarks of engagement: level of academic challenge, supportive campus environment, enriching educational experiences, student-faculty interaction, and active and collaborative learning (Dixson, 2015). Colleges and universities to gain knowledge about the student experience, specifically for first-year and senior level students, use NSSE. The survey results help administrators identify areas for improvement in programs and policies at the college or university (National Survey of Student Engagement, 2017).

The NSSE measures engagement through a holistic experience, both in and out of the classroom; whereas, another method only looks inside the classroom experience through four components: skills, participation, performance, and emotional (Dixson, 2015). Skills engagement is measured by the student's effort toward completing the assignments or required work. Participation is measured by how much the student participates or adds to a discussion through online comments or posts. A student also shows participation by actively joining collaborative or group sessions. Participation and skills can be classified as behavioral engagement, which is the most visible and easiest to measure (Günüc & Kuzu, 2015). Making a connection between the content and a student's life helps indicate emotional engagement (Dixson, 2015). Finally, performance engagement is quantified as high achievement on a test, project, or end of course grade.

Roblyer and Wiencke's (2003) RAIQDC measures student engagement through the interactions in an online environment (Dixson, 2015). Student engagement in a face-to-face classroom can be measured through various tools. However, gauging student engagement in an online setting is more appropriately referred to as interactions or interactivity. For the purpose of this study, the term interaction will be interchanged with engagement. The RAIQDC investigates five elements of student engagement: social/rapport building designs for interaction, instructional designs for interaction, interactivity of technology resources, evidence of learner engagement, evidence of instructor engagement. The RAIQDC will be used as an observational protocol for the courses of the participants in this study. Participants will use the RAIQDC to self-assess

the teacher and vendor-created courses after the semi-structured interview. The researcher will also assess the participant's courses using the RAIQDC.

Behavioral and emotional engagement are two dimensions of engagement visible in students' daily classroom experience. A student who shows effort, thoughtfulness, and attentiveness during the activity is motivated to behaviorally engage in the learning. Emotional engagement is displayed through students' enthusiasm, willingness, and interest (Skinner & Belmont, 2009). A research study investigating online learning or social presence, also referred to as emotional engagement, was a key motivating factor for student learning. However, the researchers argue that teachers are not prepared or skilled at knowing when and how to increase social presence in an online learning environment (Paguette, 2016). The design of the course and support from administrators and colleagues is essential to building an effective online course (Lehman & Conceicão, 2014).

A student's motivation to cognitively engage relates to the competence element of SDT. A school setting creates an opportunity for a student to understand a task or directions. The course structure or design influences a student's ability to gain competence in the course. For example, if expectations of work including deadlines and the structure for asking for clarification are clearly defined and consistent, then a student will gain competence in his or her understanding and engage in the learning tasks more (Guvenc, 2015).

Implications

This research study seeks to investigate why teachers may differ in their implementation of engaging instructional activities in online high school courses with a focus on teacher motivation (i.e., autonomy, competence, and relatedness). The results from this study will provide a foundation of understanding for professional development for all teachers at the Online High School. The Online High School administrators required all teachers to find ways to increase engaging instructional activities in their courses during school year 2016 – 2017 and beyond based on the accreditation requirement. The research in this study provides a knowledge base for teachers to understand the importance of implementing student engagement opportunities in online courses despite the design of the courses.

The results of this study were used to create a professional development plan to increase understanding of student engagement in online courses, learning how specific technologies can support pedagogical strategies, share communication and feedback strategies used in online courses, and create practical activities to engage students in their online courses. The teacher's content knowledge could enhance the overall experience for the teachers and ultimately the students.

Summary

A qualitative case study design was used to understand teacher's implementation of engaging instructional activities in online high school courses. Participants were interviewed and observed to collect data to inform the research questions about how a teacher's motivation (i.e., autonomy, competence, and relatedness) influence the extent to

which engaging instructional activities are provided in their online high school courses. Self-determination theory (SDT) was used as the conceptual framework and the three main constructs of autonomy, competence, and relatedness are embedded throughout the review of literature. The problem investigated was inconsistent teacher implementation of engaging instructional activities in online courses.

The literature shared in section one examines the history of distance education, growth of online learning in both higher education and K-12 schools, benefits and challenges of online learning and then shifts to student engagement. Most research in the area of student engagement in online courses focuses on university-level online courses so this study may help fill a gap in literature about student engagement in online high schools (Hampfel & Pleines, 2013; Yates et al., 2014). The complexities of engagement and motivation for both teachers and students indicate a need for information to inform teacher practice in an online environment.

The methodology in Section 2 showcases the research design and approach for this study. Teachers at the Online High School were purposefully sampled with the goal of up to nine participants from a variety of content areas in grades 9-12. Data were collected through interviews and observations using a rubric for engagement. The data analysis consisted of using autonomy, competence, and relatedness according to SDT as a guide for discovering emerging themes and making final conclusions. The conclusions helped to guide the creation of professional development focused on offering student engagement in online high school courses.

Section 2: The Methodology

Introduction

The purpose of this study was to investigate teachers' motivation to implement engaging instructional activities in online high school courses. The qualitative nature of this study aligned with the recommendations made by other scholars for future research to examine how to support student engagement in online courses (Hampfel & Pleines, 2013; Hartnett, 2015; Louwrens & Hartnett, 2015; Yates et al., 2014). In this section, I outline my rationale for using a case-study design and describe the procedures I used to select participants and collect and analyze data.

Qualitative Research Design and Approach

The purpose of the study was to investigate teachers' motivation to implement engaging activities in online high school courses using a case-study design in a bounded system. Qualitative researchers focus on the experiences of the participants (Yin, 2014). My focus in this study was on ascertaining the experiences of teachers of online high school courses, thus I opted to use a qualitative research approach for my investigation. Yin (2014) explained that use of a case-study design could add to knowledge about an individual, group, or organization in a contemporary situation. A researcher using a case-study design "investigates a contemporary phenomenon (the case) in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident" (Yin, 2014, p. 16). By using an exploratory qualitative case study, the researcher can interview participants to gain a full and in-depth understanding of the participant's experience specific to the learning environment (Merriam, 2009). A

case-study researcher focuses on a small group of individuals, ranging from one to 30 participants, in their setting to be able to understand their experience (Creswell, 2012). A case is determined by the research questions and can be an individual, group, program, or specific event (Yin, 2014). A case study with more than one case is referred to as a collective case study (Creswell, 2012) or as a multiple-case study (Yin, 2014). In this study, I viewed it as necessary to learn from the participants' experiences to understand the support needed to further implement engaging instructional activities in the online environment and make recommendations for course improvements.

Participants

The participants selected for this study came from a virtual high school serving a world-wide student population and employing 37 teachers located in three places: the United States, Germany, and Japan. The participants all work for an organization serving military-connected children attending schools on military bases overseas and stateside. I selected up to nine participants from the available population using specified criteria (Yin, 2014). Participants had to meet two criteria to be eligible for the study. Participants must be a current full-time teacher for Online High School during the academic school year and taught at least one vendor-created course.

Organization

The organization employing study participants directly provides education to military-connected children through a network of locally operated, American diploma granting schools. The organization is responsible for planning, directing, coordinating, and managing prekindergarten through 12th grade educational programs. The

organization is globally positioned, operating 172 accredited schools in eight districts located in 11 foreign countries, seven U.S. states, Guam, and Puerto Rico. The organization employs approximately 15,000 employees who serve more than 74,000 children of active duty military and DoD civilian families. In 2010, the organization established Online High School, with a goal of offering online options for students and to supplement local courses. Online High School is "committed to ensuring that all school-aged children of military families are provided a world-class education that prepares them for postsecondary education and/or career success and to be leading contributors in their communities as well as in our 21st century globalized society" (DoDEA, 2016, para. 3).

Site

AdvancED North Central Association Commission on Accreditation and School Improvement (NCA CASI) accredited Online High School in 2015. According to school records, the school has three physical school buildings located in the United States, Germany, and Japan. Teachers, counselors, instructional designers, support staff, and administrators work at all three locations, with the largest number of employees (29) reporting to the hub in the United States, followed by 17 in Germany and six in Japan. Online High School offers 73 courses with a mixture of yearlong and semester courses.

Population

The purpose of this study was to understand teachers' motivation to implement engaging instructional activities in online high school courses; therefore, all Online High School teachers were eligible to participate in this study. After receiving Institutional Review Board (IRB) approval number 10-19-17-0460784 from Walden University, I

used personal contact information to ask participants to be a part of the study. The principal of the school requested only personal e-mail addresses, not official school e-mail addresses, be used due to DoD regulations. When necessary, I sought assistance from the Online High School administrative assistant to gather personal e-mail addresses of all teachers. Then, I used my personal e-mail account to send an e-mail to all Online High School teachers requesting volunteer participation. Then, I implemented a screening process as recommended by Yin (2014) to select the best candidates. I informed administrators and above school-level leadership of the purpose of study and showed them the Walden University's approved IRB consent form and other requested documentation. My doing so was in line with Creswell's (2012) recommendation that researchers identify and communicate with potential gatekeepers, such as administrators.

I used purposeful sampling to select up to nine participants from the 37 Online High School teachers. The goal of purposeful sampling is to select a group of participants to provide descriptive data from a spectrum of experiences (Creswell, 2012; Lodico, Spaulding, & Voegtle, 2010). Utilizing purposeful sampling required me to rely on a specific set of criteria to select participants reflective of the goals of the study (Merriam, 2009).

As teachers volunteered, I ensured that there was representation based on grade level and content area as much as possible. Online High School teachers vary in terms of their experience in the teaching profession, as online teachers, and in instructing students in Grades 9–12. The school's 37 teachers are in the following content areas: math (5), science (5), career and technical education (CTE; 5), fine arts (1), health and physical

education (2), English language arts (3), world languages (5), and social studies (6). Educational technologists (2), counseling staff (2), and special education staff (1) are classified as teachers on personnel documents, but do not have direct instructional contact with students or facilitate online courses and, thus, were not be eligible for this study. Courses are not grade-specific; therefore, the sample of teachers from each content area included all grade levels.

Eligibility criteria used in selecting participants for the study included the following: (a) participant was a current full-time teacher for Online High School during the academic school year and (b) participant taught at least one vendor-created course. Appendix A provides a list of vendor-created versus teacher-created courses. Of the school's 37 teachers, 18 showed initial interest in participating, and eight met the eligibility criteria. After the interview, I eliminated one participant from the data because the teacher-participant did not meet the criteria of having taught at least one, vendor-created course. Table 2 shows the participants' demographics in terms of race, gender, age, and experience of the school's population.

Table 2

Participant Demographics

Participant code	Grade levels	Subject area	Total years teaching	Years teaching online
T1	9, 10, 11, 12	Social Studies *	17	8
T2	7, 8, 9, 10, 11, 12	Math	11	7
T3	9, 10, 11, 12	Math *	18	4
T4	9, 10, 11, 12	Math *	40	15
T5	9, 10, 11, 12	Social Studies, World Language	34	6
T6	7, 8, 9, 10, 11, 12	Math *	19	4
T7	9, 10, 11, 12	Language Arts	14	6

* Advanced Placement Course.

Through this study, I examined teachers' motivation to implement engaging instructional activities in online high school courses using semi-structured interviews and an observation protocol to gather data on engaging activities currently provided in existing courses. Yin (2014) recommends using case study protocol to ensure the validity of the data collection process where the first part is to provide an overview of the study to participants. Participants of this study consented to an interview and a virtual observation. The semi-structured interviews were conducted virtually and were recorded. The purpose of the interviews was to understand why teachers differ in motivation, specifically autonomy, competence, and relatedness, to support student engagement. The virtual observation consisted of teachers self-assessing their courses and the researcher viewing the teachers' course using Roblyer and Wiencke's rubric to look for student engagement activities.

Researcher-Participant Relationship

The relationship between the participant and research must be clearly established. Creswell (2012) and Yin (2014) advise the researcher to clearly detail the purpose of the study and how participating in the study will benefit the participant. In this study, the participants benefited from participating by helping to provide their reasons for motivation to implement engaging instructional activities in online high school courses. The literature highlighted a gap in research on student engagement in online high school courses. This study highlighted the experiences of high school online teachers and how teacher's motivation for implementing engaging instructional activities varies.

Participants were invited to participate in a member checking process, which consisted of meeting with individual participants and verification of the findings (Creswell, 2012).

Protection of Participants

The rights and protection of the participants was also a critical factor of this study. Yin (2014) states protecting human subjects in a case study are an ethical duty and include the following: "gaining informed consent, avoid deception of the study, protecting privacy and confidentiality, taking special precautions if needed for vulnerable groups, and selecting participants equitably" (p. 78). A detailed written outline of the study's procedures and potential risks was distributed to all participants. The names of the participants were not disclosed, and pseudonyms are used to identify participants and their courses.

Data Collection

Data collection for a case study is done using a variety of methods. Using multiple ways to collect data is recommended to improve the overall quality of information collected (Creswell, 2012; Merriam 2009; Yin, 2014). Semi-structured interviews and virtual observations were used to collect data for this study. The data collected helped to answer the research questions being asked in this study, specifically to understand how a teacher's motivation (i.e., autonomy, competence, and relatedness) influence the extent to which engaging instructional activities are provided in online high school courses.

Table 3

Alignment of Data Collection Tools to Research Questions

Questions	Tool
Research Question 1	Interview Questions 12 - 15
Research Question 2	Interview Questions 16 - 17
Research Question 3	Interview Questions 18 - 20
Research Question 4	Interview Questions 21 – 22 and observation protocol

Interviews

I interviewed all participants prior to conducting the observations. All the semi-structured interviews were conducted virtually through a video chat session due to participants being in various locations: United States (4) and Germany (4). Participants located in the United States were also interviewed through a video chat to maintain consistency. Collecting data for a case study requires a procedural protocol as well as flexibility due to the nature of investigating a real-world phenomenon with human subjects (Yin, 2014). The researcher adapted the interview time and date based on the needs of the participants. I reviewed the purpose and IRB approval through a scripted document prior to starting each interview, as recommended by Yin (2014). Interviews were done individually, and the sessions were recorded with permission from the participant. The recordings were kept with the researcher and not shared with other individuals. The recorded videos were transcribed, coded, and analyzed for themes. The

researcher will keep the recordings electronically on a password-protected computer for five years after completion of this research.

The researcher asked questions developed by the researcher relating to motivation (i.e., autonomy, competence, and relatedness) student engagement, and course design to implement engaging instructional activities in the course. A complete list of questions can be viewed in Appendix B. The interviews were conversational, as recommended by Yin (2014) and other questions may be added to the interview based on the participant's answers. The researcher asked the participant to view the RAIQDC and self-assess at least two courses taught by the teacher (i.e., one teacher-created course and one vendor-created course). There was a place for the participant to provide examples or a rationale for rating. At the conclusion of the interview, the researcher clearly explained the observation process.

Observations

The researcher conducted virtual observations of participants' courses that agreed to participate in the study. Participants may teach one course that is from a vendor-created course and one from a teacher-created course within the same content area. Creswell (2012) defines an observation as a data collection method to gather unrestricted and personal evidence about participants in their setting. In this study, the setting was online, and the researcher viewed the participant's course online for the observation. Roblyer and Wiencke (2003) developed a rubric (see Appendix C) to measure interactivity in distance courses. The five elements of the rubric were developed after extensive analysis of the literature and field observations. Roblyer and Wiencke (2003)

identified discernible indicators essential in online courses to encourage more interaction and engagement. The elements are as follows:

1. Social and rapport – Building designs for interaction.
2. Instructional designs for interaction.
3. Interactivity of technology resources.
4. Evidence of learner engagement.
5. Evidence of instructor engagement.

The five elements in the Roblyer and Wiencke provided insight into answering RQ4 posed in this study. Elements one and two are meant to measure variables the instructor may have control of during the design and implementation of the course (Roblyer & Wiencke, 2003). The data gathered from element one will gage the autonomy and competence of teachers to build social engagement within their course. Element two will also gage the autonomy and competence found in SDT through observing what types of instructional activities are available in the courses. For example, if a vendor-created course does not allow opportunities for small group work, does the teacher have the necessary motivation and knowledge (i.e., competency) to add those elements on his or her own? Element three focuses on the capability to interact within the course, both synchronously and asynchronously (Roblyer & Wiencke, 2003). Observations in this element will also support the SDT framework and focus on the needed motivation to integrated technology. Specifically, gathering data on teachers' competence. The final two elements assess the communication between the instructor and student and between the students in the course (Roblyer & Wiencke, 2003). The last two elements will

provide the most insight into the relatedness component of SDT and into the posed research question. The promptness of replies, details of feedback, and amount of communication are a few examples of the observable parts of these two elements and what motivates the teachers to increase this type of engagement. The recommended use of the rubric is for a meaningful examination of online courses to highlight areas of need to help increase student achievement and satisfaction (Roblyer & Wiencke, 2003).

Role of Researcher

As the researcher of this study, I recruited participants, gained consent from the site and participants, conducted virtual observations, interviewed participants and maintained confidentiality of all participants. Merriam (2009) explains the role of the researcher is a critical component to detail because it helps the participants value the study's purpose. The researcher must determine the relationship with the participants and create a respectful environment. A qualitative researcher will have proximity to the participants due to the nature of the research design (Lodico et al., 2010). It is important to note, along with being the researcher of this study I am also a teacher in the site and a colleague of the participants. I am in a non-supervisory role and have been teaching at the research site for two years. This study is important to me personally and professionally. Engaging students in the learning process is of utmost importance to me as a practicing teacher and I want to support my colleagues in developing the best way possible to engage the students in an online environment. I am also a military spouse and believe that providing the students of our military members the best education possible is a top priority.

Data Analysis

The goal of qualitative data analysis is to answer the research questions with support from themes that emerge from the participants to allow for transferability to other areas (Merriam, 2009; Miles & Huberman, 1994). The strength of collecting qualitative data is the richness of the participant's experiences that can be analyzed for meaning in a real-world context. Data analysis consists of three main components: data reduction, display, and conclusion drawing and verification (Miles & Huberman, 1994).

Data reduction is an ongoing process that occurs after field notes are collected. The goal is to transform field notes or transcripts using the conceptual framework as a guide to find themes, write summaries, and make clusters to provide answers to the research questions. In this study, the main constructs of SDT: autonomy, competence, and relatedness, were used as the initial themes and clusters during this part of the analysis. The researcher made decisions during this phase to code phrases and to discard others. "Data reduction is a form of analysis that sharpens, sorts, focuses, discards, and organizes data in such a way that final conclusions can be drawn and verified" (Miles & Huberman, 1994, p. 11). Data Display is a second major part of data analysis and is a way to assemble the information to draw conclusions. Matrices, charts, and graphs are a few examples of data displays that are manageable and help the researcher to not become burdened by the amount of data. Autonomy, competence, and relatedness were used as guides to organize and display the data accordingly (Miles & Huberman, 1994).

Audio files of the interviews were uploaded to an online program where transcripts were generated in Microsoft word documents. The researcher also took notes

during the interview as a secondary reference of the interviews. The researcher reviewed the transcripts and the audio files to reconcile any discrepancies. A folder was created for each participant with the observation protocol and the transcripts from the interview. A Microsoft excel file was generated by the researcher to display the data according to the interview questions. The excel file helped to organize the data and code by themes. Dedoose, an online coding program, was also used during the data display to better facilitate placing the data into themes.

Creswell (2012) explains through the analysis process the researcher will discover between five and seven themes. Finally, conclusion drawing and verification is a phase for the researcher to review and check the emerging themes, patterns, and clusters discovered through the reduction and display process. Verification is an important step to confirm the emerging data are aligned to the conceptual framework. Miles and Huberman (1994) state that if verification does not occur the researcher will have stories of unknown truth.

Evidence of Quality

The member checking process, peer debriefer, and triangulation of data were used to ensure quality of evidence and accuracy of the data. The researcher met with participants individually as part of the member checking process. All seven participants reviewed their findings and verified the accuracy of my interpretation of the data. A colleague also verified the findings as a peer debriefer. This colleague is currently pursuing her doctoral degree and is using a similar process to analyze her qualitative data. The colleague and I met to review three of the participant transcripts and discuss the

coding process and various interpretations. The colleague pointed out potential bias and assumptions in the findings.

Data reduction, display, and conclusion drawing and verification are interwoven phases occurring along with data collection and the documentation of the process is a critical role of the researcher. Triangulations of the data gathered in this study occurred through the interviews, the rubric scores from the participant's self-assessment, and the rubric scores from the researcher's virtual observation. The observation protocol was analyzed using the scoring guide (see top of observation protocol Appendix C) to place each course into the categories of "low, medium, or high" interactivity. These results were used to compare teacher-created and vendor-created interactivity (engagement) between the course types. Comments were used to add rich-description to the results of the scoring guide results.

Discrepant Cases

Through the data analysis process, the researcher actively looked for discrepant cases where the data did not match the patterns discovered through the coding process. Searching for discrepant cases helps the researcher to achieve saturation of the data and gain understanding of the themes found within the data (Merriam, 2009). After continued analysis of the data, the patterns in the coding were consistent and no discrepant cases were found.

Limitations

Limitations of this study are potential weaknesses observed by the researcher (Creswell, 2012). First, the sample size of this study is small. Since the population of the

study used teachers working for the Department of Defense (DoD), approval through the DoD IRB board was required and no more than nine participants were allowed. Researcher subjectivity or bias was considered a second limitation. The researcher is a colleague of the participants in a non-supervisory role. The participants were comfortable during the interviews and shared their unique perspectives, but it was a challenge to have them thoroughly explain their answers, so no assumptions were made. The member checking process, peer reviewer, and triangulation of the data were implemented to assist with this challenge. Regardless of the limitations, this study added to the body of knowledge for online learning in secondary schools along with gaining insight into future online course development and student engagement strategies for online high school courses.

Data Analysis Results

The purpose of this study was to investigate teachers' motivation to implement engaging activities in online high school courses. Autonomy (i.e., choice), competence (i.e., knowledge and skills), and relatedness (i.e., connectedness to content or colleagues) are the constructs of Self-Determination Theory (SDT) and served as the conceptual framework for this study (Deci & Ryan, 2000). The data results aligned to the conceptual framework and research questions used in this study. The research questions aligned to SDT and were used to guide this study and to find themes in the data. The research questions are as follows:

Overall question: How does a teacher's motivation (i.e., autonomy, competence, and relatedness) influence the extent to which engaging instructional activities are implemented in online high school courses?

RQ 1: How does autonomy influence teacher's implementation of student engagement opportunities between teacher-created vs. vendor-created courses at an online high school?

RQ 2: How does competency influence teacher's implementation of student engagement opportunities between teacher-created vs. vendor-created courses at an online high school?

RQ 3: How does relatedness influence teacher's implementation of student engagement opportunities between teacher-created vs. vendor-created courses at an online high school?

RQ 4: What differences exist between teacher's implementation of student engagement opportunities between teacher-created vs. vendor-created courses at an online high school?

First, the data from the interview questions were analyzed, and then the data from the observation rubric was reviewed. The data were coded appropriately to the conceptual framework and research questions. Interview questions 1-7 asked for demographic information about the participants shown in table 2 previously. Interview questions 8-11 are general questions about student engagement and grounded the interview on the topic of student engagement as well as made the participants more comfortable with the interview process. The data from questions 8-11 provided evidence

for the themes and inform the development of the project. The data collected from participants in questions 8-11 were coded appropriately to the constructs of autonomy, competence, relatedness, and differences. The data analysis of questions 8-11 is displayed later in this section in Table 9 since the questions did not align to research questions 1-4, instead the results helped to inform the overall research question and the development of the project.

Interview questions 12-15 aligned to research question 1 (autonomy), questions 16-17 aligned to research question 2 (competence), questions 18-20 aligned to research question 3 (relatedness), and questions 21-22 and the observation rubric aligned to research question 4 (differences). Codes specific to autonomy, competence, and relatedness were found in the interview questions and the observation rubrics. Specific interview questions aligned to the research questions as explained previously, however, there were items coded for autonomy, competence, relatedness, and differences throughout all the questions and the observations. The data collected and analyzed is displayed below in the tables outlined by the interview questions and the observation rubric elements.

Research Question 1

The first research question asked how autonomy influences teachers' implementation of student engagement opportunities between teacher-created vs. vendor-created courses at an online high school. Autonomy is the ability to have the freedom to make choices about an experience and is the first construct of SDT (Ryan & Deci, 2000). The data were analyzed looking for similarities and differences in the two types of

courses and the participants provided evidence that communication, teacher presence, and administrator support were the three main influences on feeling autonomous in their role as online teachers. In this study, teachers were motivated through autonomy to implement engaging activities in online courses and the similarities in the two types of courses were extremely high due to the fact the areas noted for high student engagement were not contained within the courses. Rather, the areas the participants described as being engaging are in the online platform used by all courses in the Online High School as well as the larger school system. Evidence from the participants' interviews is displayed in table 4.

The Online High School in this project study has two types of courses: teacher-created and vendor-created. The designation of the type of course is conducted by the administrators of the school and is shown in Appendix A. In teacher-created courses teachers develop the content, including activities, assignments, assessments, and discussions with the support of instructional designers. The teacher-created courses are owned by the school and can be adapted or altered at any time by the teachers and instructional designers (Marshall, 2013). The vendor-created courses are rented as a pre-packaged course from an online vendor (Marshall, 2013).

Table 4

RQ 1 Results: How does autonomy influence teacher's implementation of student engagement opportunities between teacher-created vs. vendor-created courses at an online high school?

Interview questions	Teacher-created courses	Vendor-created courses
Interview Question 12: What do you do to foster (encourage) student engagement in your courses?	• Connecting with students • Building relationships • Creating a rapport with students • Using humor with videos	• Get to know the students • Finding ways to communicate regularly • Consistent updates and emails • Use common language
Interview Question 13: Do you feel you have the ability to offer additional engagement opportunities in your teacher-created course? Why or why not?	• Using personalized videos to help with instruction • Create notes in a Google document for each lesson • Google documents used to help with continuous feedback	• Make videos for each lesson or for specific students • Instructional videos on how to use formulas or introduce a new concept
Interview Question 14: How do you encourage students to interact in online activities?	• Create personalized videos for students to help with assignments and concepts • Weekly reminders and updates • Assignment schedules	• Assignment Schedules for all schools and seniors • Updates/announcements weekly • Discussion boards for students to ask questions • Chat messages
Interview Question 15: Do you feel you have the freedom to change course assignments and other course elements to better support student learning and engagement? Why or why not?	• Experience in the face-to-face classroom translates to online on how to keep students engaged • AP course teachers go to administrators and ask for ability to change or add assignments. Use the data to support changes.	• Vendor-courses can only add assignments. Assignments cannot be adapted within the courses • Non-advanced placement courses. They are scripted and set. Multiple teachers have the same course or teach it throughout the year

Research Question 2

The second research question asked how competency influences teachers' implementation of student engagement opportunities between teacher-created vs. vendor-created courses at an online high school. The knowledge and skills a person needs to complete a task is known as competency (Ryan & Deci, 2000). The data from the interviews were analyzed looking for similarities and differences in two types of courses and the participants provided evidence to support feeling competent in content knowledge in their role as online teachers but did not show evidence of competence in technical skills. This deficiency in feeling competent in technical skills, especially with the vendor-created courses reduced the participant's motivation to implement engaging activities. Evidence from the participants' interviews is displayed in table 5.

Table 5

RQ 2 Results: How does competency influence teacher's implementation of student engagement opportunities between teacher-created vs. vendor-created courses at an online high school?

Interview questions	Teacher-created courses	Vendor-created courses
Interview Question 16: Do you feel you have the knowledge to design or create engaging activities in your course? Why or why not?	• Yes, teaching experience in face-to-face courses translated to the online environment • Content has not changed. Process of engaging students has changed. • Knowledge and skills are the same for assignments, quizzes and tests as it is for the face-to-face courses	• Teaching experience in face-to-face courses translated to the online environment • Questions on skills and knowledge are the same for assignments, quizzes and tests as it is for the face-to-face courses
Interview Question 17: Can you describe an area of engagement in online courses that you would like to learn more about?	• Building community with students virtually • Collaborative student projects and discussions • Student Engagement • Managing time zone differences	• Need to know more on how to design or create an activity that can fit into the vendor course • Unclear if the student sees the work how it was intended • Students would engage more if teachers could help with technical issues

Research Question 3

The third research question examined how relatedness influences teachers' implementation of student engagement opportunities between teacher-created vs. vendor-created courses at an online high school. Deci and Ryan (2000) explains the third construct of SDT as relatedness, which is the need to make connections to an experience through relationships. The participants provided evidence to support the importance of

relatedness as a motivational factor for implementing engaging activities. Evidence from the participants' interviews and observations is displayed in table 6.

Table 6

RQ 3 Results: How does relatedness influence teacher's implementation of student engagement opportunities between teacher-created vs. vendor-created courses at an online high school?

Interview questions	Teacher-created courses	Vendor-created courses
Interview Question 18: Do you seek opportunities to discuss implementing engaging activities with your colleagues? Why or why not.	• Content departments • PLC Teams • Informal discussions • Advanced Placement teams	• Content departments • PLC Teams • Informal discussions
Interview Question 19: With whom do you discuss implementing engaging activities in your courses? Why?	• Colleagues • Instructional Designers • Administrators	• Colleagues • Colleagues not in virtual setting – math teachers • Instructional Designers • Administrators
Interview Question 20: How often do you and your colleagues discuss student engagement in the course?	• Frequently and depends on time of year • Weekly collaboration is mandatory • Quarterly content training	• Frequently and depends on time of year • Weekly collaboration is mandatory • Quarterly content training

Research Question 4

The fourth research question asked what differences exist between teachers' implementation of student engagement opportunities between teacher-created vs. vendor-created courses at an online high school. During the data analysis process, the difference between the teacher-created and vendor-created course was evident under the construct of

competence, specifically in relation to technical skills. This research question used the interviews and the observation rubric to analyze the differences.

Table 7

RQ 4 Results: What differences exist between teacher's implementation of student engagement opportunities between teacher-created vs. vendor-created courses at an online high school?

Interview questions	Teacher-created courses	Vendor-created courses
Interview Question 21: Does the design of the course influence the implementation of student engagement opportunities? Why or why not?	• Teacher has ability to make changes as needed AP courses • Changes are easy to make due to familiarity with the courses and platforms	• Teacher lacks ability to make changes as needed and needs help of instructional designers • Additional requests must be made to make changes • Course must run "as-is" for one year before changes are requested
Interview Question 22: Do you notice a difference in student engagement activities in a vendor-created vs. a teacher-created course? Explain.	• Yes, the course is easy to adjust, and items can be added or deleted. • Course is easy to follow.	• Yes, vendor courses are meant to run without a teacher. Engagement is low. Students tend to get lost in the set-up of the course. It is not easy to follow • Assignments can only be added.

After the interview participants were asked to use the observation rubric (Appendix C) to self-assess their course according to the scale for interactivity. The researcher also assessed the course using the same rubric. The rubric rated interaction of the online courses in five elements: social/rapport, instructional design, interactivity of technology, learner engagement, and teacher engagement.

The average rating scores of low (1) to high (5) are displayed in table 8.

Table 8

Observation Rubric Results

Elements	Teacher-created courses	Vendor-created courses
1: Social/rapport building designs for interaction – ability of students to get to know one another on a social or personal basis.	Participant self-assessment: 4.43 Researcher assessment: 3.29	Participant self-assessment: 1.86 Researcher assessment: 1.71
2: Instructional Designs for Interaction - Interaction moves from one-way communication at the low level (1) to working cooperatively at the high level (5).	Participant self-assessment: 3.00 Researcher assessment: 3.14	Participant self-assessment: 2.14 Researcher assessment: 2.14
3: Interactivity of Technology Resources – examines how technology supports one-way communication (low) to supporting two-way communication (high).	Participant self-assessment: 4.43 Researcher assessment: 5.00	Participant self-assessment: 4.00 Researcher assessment: 5.00
4: Evidence of Learner Engagement – interactions are rated by how frequently a student replies to messages (50 -75%) is low compared to 90 – 100% (high) and students are initiating messages.	Participant self-assessment: 4.00 Researcher assessment: 4.00	Participant self-assessment: 2.86 Researcher assessment: 3.71
5: Evidence of Teacher Engagement – interactions are measured by how frequently a teacher responds to students. Low rating is a response time of 48 hours and little analysis. A high rating is a response within 24 hours and feedback is detailed.	Participant self-assessment: 4.14 Researcher assessment: 4.43	Participant self-assessment: 4.29 Researcher assessment: 4.29

There were differences and similarities in the ratings of the elements between the participant and the researcher. Element 1 focused on social rapport which is explained as the student's ability to get to know one another on a personal basis and the instructor getting to know the students personally. The participants' self-assessment score was more than a point higher than the researcher. The reason for this difference may be due to the structure of the course. Participants' view the tools for building social rapport, such as, instant messaging, email, and video messages, as part of the course. However, the researcher was not able to see those same tools as evidence of building social rapport, which made the score lower for the teacher-created courses. There was evidence of getting to know students in the initial discussion boards and in the feedback, which aligned to the evidence provided during interview questions 12-15. The ratings on element 1 for the vendor-created courses were both low and similar. There was minimal evidence to show opportunities for the teacher or students to get to know one another.

Element 2 focused on the instructional design of the courses and the teacher-created and vendor-created courses showed similar scored between the participant and the researcher. The teacher-created courses showed a moderate rating due to the discussion groups displayed in the courses. The vendor-created courses had a minimal rating due to the one-way interaction between instructor and student. The instructor posts questions and the students respond to the instructor.

Element 3 assessed the interactivity of technology resources. A low score of 1 is for one-way delivery of information with simple text and graphics. A high score has opportunities for two-way interactions between students and the instructor. The

researcher and participants gave ratings of above average to high for both the teacher and vendor-created courses. The researcher's score was a 5 on both because the opportunities within the course are visible, such as, discussions, group projects, video messaging, audio feedback, and other synchronous tools; however, as explained by the participants those tools are not used. The participants acknowledged the capability in the vendor-created courses for two-way communication, but their use has not been encouraged. Specific features in the vendor-created courses are turned off, such as, email or video conferencing. The two-way communication tools like Google Chat, email, and video conferences are embedded in the platform where the teacher-created courses are housed. The scores are high because the capability of two-way communication is available however; it was not visible to the researcher that those features are turned off. Therefore, the researcher score was a 5 for both courses.

Element 4 rated evidence of learner engagement by looking at the percentage of students replying or initiating messages to other students and the instructor. The participants and researcher had a score of above average with the teacher-created courses. The teacher-created courses displayed evidence of more than half of the students posting messages and replying to messages through discussion groups, chat messages, and on assignments. The vendor-created courses had a lower rating with the participants and the researcher. The researcher gave a higher rating because of the word "voluntarily" in the rubric description. The participants expressed concerns about what makes a message voluntary and if there were enough details provided in student responses. Participants did

not feel the teacher-created courses had enough opportunity for learner engagement and gave lower ratings.

Element 5 looked at the evidence of the instructor engagement. Overall, this element was the easiest for participants to rate. The ratings for both the teacher and vendor-created courses were above average. Participants and the researcher agreed that there was evidence to show prompt replies due to the time stamps on all messages and the user logs that are found in both types of courses. Participants did not want to give a high rating because they felt there was always room to improve.

The observation rubric outlined the ratings from 1 (low) to 5 (above average) for the five elements. The data collected from the rubric was used throughout the analysis process to help with data reduction and display. The ratings confirmed the data displayed from the interviews and helped to formulate the themes to complete the analysis process. The method of triangulating the data with the interview data, the self-assessment data, and the researcher observation data helped to reduce the data over a period and formulate the emerging themes. Miles and Huberman (1994) state triangulation is a way to substantiate the date findings. Triangulating the data is part of the verification process and allows for grouping of the findings (Miles & Huberman, 1994).

During the data analysis process open and axial coding was used to find themes. The themes are: communication, teacher presence, administrator support, content knowledge, connecting with colleagues, connecting with students, technical skills in the teacher-created courses and vendor-created courses. Further explanations of the themes are described below with supporting details.

Theme 1: Communicating with students. The semi-structured interviews and observation rubric showcased variety and consistency as the two main areas of communication to surface during the coding process. The participants provided answers and specific examples to demonstrate their ability to be autonomous on the types of communication used (variety) and the frequency of communication (consistency). All seven participants spoke about the choices they can make on how and when to communicate with students to help support them best. No matter the course content or design of the course (teacher-created or vendor-created), teachers communicate with the students in various ways. Overall examples of communication provided by participants were Google Chat (instant messages), Hangouts (video conference), Google documents, audio and video recordings, email, phone calls, discussion boards, notes, course announcements, and assignment schedules.

The choice in communication style is based on the student's needs not the content or type of class. Students enter the course with varied abilities and knowledge, like any classroom environment. Students have individual education plans (IEP), behavior plans, English as a Second Language designation, or may have missed critical content due to moving in the middle of a school year as a military-connected child. However, as participant T4 explained "I have the ability to personalize the way I approach every student." Participants T1, T2, and T5 gave examples of using videos along with typed notes for students who are English as Second Language learners. The videos can be saved and replayed multiple times to help the student learn the content. The student can also play it with the support of another teacher to help translate or with a family member.

The written notes allow the student the opportunity to ask for the meanings of various words using their own virtual tools, such as Google translator. T6 said some students in the online class only use the instant message program and she feels it is because it is most like texting on a cell phone. She feels like the students are comfortable communicating in short messages and she tries to adapt to the students' preference.

Although the participants were asked how the teacher-created courses differ from the vendor-created courses, the theme of communicating with students in various ways was found to be the same in both types of courses. The reason for this finding is because often, the synchronous and asynchronous communication occurs outside of the online course structure. For example, the instant message program used for synchronous communication is done through Google chats, which is a separate program, connected to the students' email not the online course. When participants were asked to give examples of an actively engaged student, ideas such as, checks in with me regularly, ask questions, helps other students, or the class is more than a grade was provided by the participants. These ideas about an actively engaged student focus on his or her ability to communicate with the teacher and classmates, which validates the theme of teachers using communication as an important tool for student engagement.

Variety. All seven participants emphasized using a variety of communication methods to keep students engaged in the courses. Synchronous communication examples included, Google chat (instant messages), hangouts (video conference), or phone calls. However, most of the examples of communication provided by participants were

asynchronous, such as Google documents, audio and video recordings, email, grade reports, discussion boards, notes, course announcements, and assignment schedules.

All seven participants use the same type of synchronous communication in the teacher-created courses and vendor-created courses because the tools are not housed within the course itself, but rather in the learning management system that all students log into. T6 and T7 explained the importance of using Google hangouts for video chats and Google chat for instant messages due to the various time zone differences. Synchronous communication is not always possible due to the time zone differences because the students' class time and teacher's office hours may not match.

Asynchronous communication examples are also used in both the teacher-created and vendor-created courses because the tools are not within the course itself. T3 used a published assignment schedule to pace the students with their coursework. The assignment schedules are created according to the students' unique school calendar and are emailed and posted within the online classroom. Students enrolled in the Online High School follow the local school calendar because the student typically takes only one online course with the Online High School. The other the high school courses are taken at a local high school on the military base.

The local school calendars consist of various start dates in August and September, professional development days with no students, and local country holidays. T5 said she has created up to 8 different assignment schedules to accommodate the variances in the local school calendars. All seven of the participants said email was a primary form of asynchronous communication for students, parents, facilitators, and other stakeholders,

such as counselors or administrators. T2, T3, T4 and T6 create videos to send to individual students to demonstrate how to solve a problem or use a formula in each of their math courses. Course announcements are another useful tool to communicate to students about upcoming assignments and were noted by all seven participants. The announcements are published to all students and administrators require at least one announcement per week. Participants T2, T3, T5, T6 and T7 said they try to post an announcement twice a week. Grade reports are another example of how participants communicate with students and parents. Progress reports are emailed to parents weekly through the grade program used at the Online High School.

The observation rubric also showed evidence to support the theme of communicating with students. Element 3 of the observation rubric focused on interactivity of technology resources and all participants scored this element the highest with an average score of 4.5 (vendor-created) and 4.71(teacher-created). The rubric scores ranged from one to five using the following indicators: one (low), two (minimum), three (moderate), four (above average), and five (high). Participants said the availability of resources is extremely high in all courses for both synchronous and asynchronous interactions. The use of Google Chat, Hangouts, Google documents, audio and video feedback, laptops, webcams, and the multiple communication methods were all examples provided by the participants as available technology.

Consistency. All seven participants mentioned consistent communication in engaging students in their online courses. Examples provided by the participants of asynchronous communication methods were posting weekly announcements on the first

or last day of the week, email weekly grade reports with a list of completed and missing assignments and send individual or group chat messages daily. Synchronous communication tools were not mentioned to provide consistent communication because the video chats or instant messages are used on an individual student level. Two participants, T4 and T5, attempted to do weekly group video chats, but only one or two students would participate at a time due to the time zone differences. T4 and T5 stopped conducting them because it was not worth the effort or time and moved to doing video chats with students as requested.

The two middle school teachers emphasized the importance of consistency with communication for the 7th and 8th grade students. T2 believed the middle school students need more messages than students in the upper grades. She said, "If I forget to do a weekly announcement in my course with the middle school students, I get messages from them asking what to do or the students do nothing." T2 expressed frustration with constantly having to remind the middle school students on what to do next in each lesson because every lesson has the same elements: warm-up, video, assignment, and quiz. T6 shared the weekly announcements emphasize a topic or add a reminder for an upcoming assignment. A link to a specific document or lesson can be added to the announcement to make it readily available to the student. T6 uses a group chat for all the students in the class using an instant message program. Students can ask questions to the whole class and the teacher can see what they are discussing. T2 said she tried to do a group chat with her students but due to online bullying with a specific group of students at one school she decided to stop using the group chat and messages students individually.

Element 4 of the observation rubric, evidence of learner engagement, shows a spectrum of students showing high levels of engagement when students respond to 90-100% of messages and are both replying to and initiating messages. During the self-assessment and the researcher-assessment of the courses, the rubric showed a connection to teachers being consistent with their communication. The teacher-created courses scored an average of 4.0 out of 5.0 (above average) on the rubric in the self and researcher assessment. The vendor-created courses scored lower with an average score of 2.86 (self-assessment) and 3.71 (researcher-assessment). The lower score of 2.86 in the vendor-created course, according to the rubric, makes the distinction between moderate and above average by saying student's only reply to messages in the moderate range instead of replying and initiating.

Theme 2: Teacher presence. Like communication, all seven participants explained, through their answers and examples, their autonomy to showcase their own presence in the classroom. Personalized videos and feedback were two examples of how participants choose to showcase their presence in the online class.

In school year 2016-2017 a theme of teacher presence was emphasized by administration in the yearly training and monthly faculty meetings. Teachers at the Online High School were taught how to make videos to post online to increase teacher presence. Administrators' required all Online High School teachers to create a welcome video to introduce him or her to the students. T3 said she used the same welcome video this past school year, 2017- 2018, in her course instead of creating a new one. Participant T5 explained she has the most choice in how she interacts with the students, "It doesn't

matter what course I am teaching, and I am the most important factor." The welcome video can be a PowerPoint presentation that is made into a video recording offering personal information about the teacher, such as their hometown, personal hobbies, or pictures of family members. Participant T6 takes a video of herself talking to the students as a welcome message, similar to what she would do on the first day of school. It is up to each teacher to create a welcome video to post in his or her online course.

Another example provided by participants on how to showcase their presence in the classroom is through feedback on assignments. The autonomy is felt through choosing the best way to give the feedback according to the students' needs or the type of assignment. Feedback can occur synchronously through a one-on-one video chat or phone call. The teacher can also give feedback asynchronously through written form (email or typed notes on the assignment), audio recording, or a video message. A small difference in the teacher-created and vendor-created courses was noted about feedback specific to a student's work. T7 said "the feedback needs to be specific and personal" and went on to explain that the teacher-created course allows for more opportunities to provide feedback, meaning the comments can be attached directly on the submitted assignment or in a message program built in the course. The student or teacher can record audio or video messages back and forth to create a conversational experience even though the messages are asynchronous. A vendor-created course does not offer the same opportunities. Participant T1 and T6 use Google documents for student assignments to provide feedback in the vendor-created course. A similar type of feedback can be

implemented on a Google document and the teacher and student can have a back-and-forth interaction about the content in a timelier manner.

Element 1 (social/rapport – building designs for interaction) and element 5 (evidence of teacher engagement) in the observation rubric align to the concept of teacher presence to engage students in online courses. The rubric scores ranged from one to five using the following indicators: one (low), two (minimum), three (moderate), four (above average), and five (high). The vendor courses scored less than a 2 (minimum) in both the self and researcher assessment on the observation rubric which is a whole point less than the teacher-created courses. The average score on the self-assessment for element 1 rated a 3 (moderate) and the researcher-assessment showed an average score of 3.29. Element 1 had the lowest average score in the vendor-created courses of all the rubric elements.

Element 5 looked at instructor engagement in terms of how the teacher responds to students and provides feedback. The vendor-created courses showed an average of 4.29, above average, in both the self and researcher assessment. The teacher-created courses also scored above average with the self-assessment at 4.14 and the researcher-assessment at 4.43.

Theme 3: Administrator support. Participants were split four to three saying they feel supported or not supported by school administrators on implementing student engagement activities. Four of participants who teach an advanced placement (AP) course, T1, T3, T4, and T6, spoke positively about the autonomy felt when teaching AP courses. T1, T3, T4, T6 shared that the AP courses must meet the guidelines issued by the College Board. The administrators ask the teachers to be informed of any issues or

concerns with the course, but typically rely on the teachers to make the appropriate changes. T4 said, "Administrators are supportive of our efforts to make things better for students if we can show and explain it to them." T4 mentioned the administrators might not understand all the requirements of the AP courses making it easy to make a case to implement a new activity. The AP courses are offered cross all content areas and require a high-level of content knowledge to understand all the information. The administrators do not have the broad knowledge base needed to know the best instructional practices to engage students in all the AP courses. T4 gave the specific example of his high-level math course, AP Calculus, and although one of the administrators is a former math teacher, she does not know the specifics of each lesson. The teacher said he feels like the administrators trust him to make the best decisions for his students to learn the course content due to the training and collaboration with his colleagues. The AP teachers are the only one to teach their specific class. All four of the participants who teach AP courses said they are required to attend regular training, which focuses on content specific instructional strategies. The training is not for teaching AP courses online; therefore, the AP teachers at the Online High School meet regularly with other teachers to discuss instructional strategies. The administrators require the teachers of AP courses to meet at the beginning of the year to review the testing data from the previous year and develop a plan on how to improve student achievement through increasing engagement in the courses. The example of the training shows a consistent and on-going development of knowledge and skills (competence) on teaching AP courses. The AP teachers in this study also feel connected (relatedness) to their AP colleagues. This foundation of

established competence and relatedness may enhance the feeling the trust and support (autonomy) from the administrators.

T2, T5, T7 do not teach AP courses and expressed they do not feel supported from administrators about making decisions to implement engaging activities in either the teacher-created or vendor-created courses. The participants did not make any negative statements about administrator support, but instead spoke about the difficulty in getting administrator approval to implement engaging activities. T7 explained when a teacher wants to add an activity to a course, both teacher or vendor-created, the teacher must collaborate with a colleague about the idea, present the activity to the administration for approval, and then seek help from the instructional designers to create it. T7 said "Each person has an idea or opinion on how to make it the most engaging activity and it is time consuming." Comments such as, "I can't assume I know if the students see what I want them to see," "I have the ideas I just need to know how it can be presented online," or "I don't know all of the technology parts, but we have instructional designers to help us" were prevalent during the interviews. T5 said, "I am sure my administrator would support my ideas, but I don't want to go to the trouble of designing something and then present it for approval and then be told to change it. I just want to be able to make it and put it in to my course."

Theme 4: Content knowledge. Differences in the teacher-created and vendor-created courses weren't found during the coding process with the theme of content knowledge and could be due to the participants' backgrounds as face-to-face teachers. Only one participant, T4 had a significant amount of time teaching online (15 years)

compared to the other participants who had a range of four to eight years. Participants range in overall teaching experience (both face-to-face and online) from 11 to 40 years with 21.86 as the average years of teaching. The total number of years teaching included online teaching. The average number of years teaching online was 7.14 with a range of teaching online from 4 years to 15 years.

Participant T4, who has the most overall teaching experience and online experience expressed confidence in his ability make engaging activities for students in the online math courses and seek approval from administration. T4 also spoke about teaching online for a different state system and how it prepared him for the online interactions. The other remaining six participants have only taught online with the Online High School, which limits their experience to only one school and one system. Participant T4 can communicate with colleagues from his previous online schools and ask questions, seek out ideas, and utilize resources previously developed. Participants T3 and T6 have less than 5 years of online teaching experience and more than 15 years total teaching experience.

Both participants commented that the content expertise gained from their face-to-face teaching experience provided a strong foundation of content knowledge and helped them create engaging activities in the teacher-created courses. T1, T2, T5, and T7 have between five- and 10-years total teaching online. T5 said, “I have the content expertise to be able to create the content.” Similarly, T1 said “I have been teaching for 20 years and I keep up with professional development by taking more history classes.” Three participants shared that collaborating with their colleagues increases their content

expertise and helps them to create engaging activities in both teacher and vendor-created courses. This collaboration is also an example of relatedness but fit more closely with competency.

Theme 5: Connecting with colleagues. All seven participants spoke about the importance of connecting with their colleagues to find ways to make the teacher or vendor courses more engaging. Participants referred to weekly collaboration time where teachers are required by administration to meet for 45 minutes with department colleagues. The department chair or a colleague facilitating the meeting chooses the topics of the discussions. Discussion topics mentioned were aligning courses to new standards, developing pre-assessments, and sharing instructional ideas. T2 and T3 explained that the meetings are frustrating due to being the only person teaching the course. T5 teaches courses in two different departments which create a time conflict as the meetings are typically at the same time. T2 also mentioned the collaboration time is meant to be weekly but is twice a month due to faculty meetings, trainings, and other required meetings.

All participants said informal discussions occur within their hub or office during the school day. T4, with the most teaching experience (40 years) and online teaching experience (15 years), said, “One of my philosophies is that I am not the best teacher and I don’t know everything. I can always learn from everyone.” T1, T3, T4, and T6 also mentioned meeting with other advanced placement colleagues to strategize on implementing engaging activities in their courses. T2 and T6 teach middle school students taking an accelerated math courses, such as Algebra I or Geometry instead of a

traditional seventh or eighth grade math course and stated that meeting with other middle school colleagues from the face-to-face schools offered a great perspective on the students' daily classroom experiences. T2 said "The most beneficial information comes from the teachers at the middle school because I learn what they taught in the courses before students get to mine." It is an opportunity for the virtual teachers to discuss the layering of math content within courses taught both virtually and face-to-face to enhance their understanding of the content.

Theme 6: Connecting with students. Building a rapport with students at the start of course is critical to engaging students online and creating an online community. Using discussion boards, humorous and friendly language are ways the participants build relationships with students. Participant T1 said, "The students need to know they are not alone." Creating a community online is challenging at the Online High School due to the students being in schools located around the world. T4 uses a discussion board at the beginning of the course where students can get to know each other. Students can share what school they attend or share activities they are involved in at their local school. This helps to create a community among the students in the course. However, the opening discussion board is a one-time assignment and three of the participants explained that building a community amongst the students is extremely challenging.

T1, T3, T4, and T6 emphasized the importance of an online community with each other and with the teacher due to the rigor of the advanced placement courses. During preparation for the advanced placement exams, T4 uses group discussions and regular video chats to review material for the exam. T4 also said only a few students attend the

video chats at a time due to the time of their class and the time zones. The teacher is responsible to host several video chats during various times in order to accommodate the students' needs. Since the discussion boards and video chats are not part of the course content, all participants did not distinguish a difference in connecting with students in the teacher or vendor-created advanced placement courses. T2 and T5 said the teacher-created courses appear easier to connect with students because the learning management system does not change when the student accesses the course content. In the vendor-create courses the student goes to a different site when accessing the lessons, assignments, quizzes, and tests. The students tend to get confused, especially in the lower grades like middle school. Both T2 and T6 agreed that making a connection with students is helpful for the middle school students and is difficult to manage in the vendor-created courses.

Using humor and friendly language in messages was a point that five of the seven participants made during the interview to connect with students and engage them in the learning process. T1 gave examples of messages used in a chat message, such as, "What are you doing in class today?" and "How can I help you?" She explained she wants to keep the messages short and concise as to not overwhelm the students. The participant explained this can be done in both the vendor and teacher-created courses.

Building a relationship with the student was important to the participant so the student does not feel like he or she is alone. T4 and T7 said reaching out to students who are struggling with the content or the pace of the course was critical to keeping students engaged. Both participants, T4 and T7, said the vendor courses isolate students more due

to less student collaboration in the course assignments. T5 also mentioned a similar issue about student isolation and therefore it was the teacher's responsibility to build a relationship with each student. This can be a challenge with the number of students in the course. The vendor-created courses allowed more opportunities for students to "fall through the cracks", according to T6, compared to the teacher course.

Theme 7: Technical skills.

The technical skills needed to implement student engagement activities showed a clear difference between the teacher-created and vendor-created courses. The participants provided a variety of examples of how the technical skills needed in the two types of courses were different. This distinction between the two courses displayed the least amount of motivation and the participants showed the most frustration when discussing this area of competence.

Teacher-created courses. Participants appeared at ease when sharing how to implement student engagement activities in the teacher-created courses. In the teacher-created course, if the activity is like one already in the course and the teacher wants to adapt or modify it, the teacher can complete the task individually if he or she chooses. Participant T6 explained the activity is copied to her personal resource folder in the learning management system, and then she downloads it to her computer desktop, converts the file if needed from a pdf to a word document, and then adjusts it as needed. The file can then be added back into any class. For example, T3 used a note-taking guide from her Geometry course and adapted it to fit an algebraic modeling course. Both T3 and T6 expressed having the technical knowledge to be able to make the changes for the

courses without seeking input from the instructional designers. T1 shared that last year a course was provided by the educational technologists on how to create videos as instructional support for the students on specific topics. The videos were created using resources available in the office hub and then she was able to add the videos to her courses as needed or email them to students individually. T5 also commented on the use of videos in her language class to support students and it was easy to do in her teacher-created course. The video was simply added as a file and the students accessed it with ease. An assessment example was provided by T5. "I am able to change, enhance, delete, or add test questions to any quiz or test in my teacher-created course. I can simply delete questions, change the answer choices, or adapt the question to make it more challenging. The process is like editing a word document and it is simple to do." The teacher-created courses use technical skills the teachers already have in their skillset to implement student engagement activities.

Vendor-created courses. The process for adding or modifying student engagement activities in the vendor-created courses is a different scenario. Adapting or modifying an activity in the vendor-created course is not as easy to do and most of the time nearly impossible. The vendor-courses require a different set of permissions due to the regulations placed on the course by the vendor. All seven participants agreed that activities can be added or deleted from courses, but modifying an existing activity is nearly impossible. The vendor owns the right to modify or revise an assignment, test, or activity the process for approval takes an extensive amount of time. T2 has been teaching the same vendor-created course for three years and changes she has requested have never

been fulfilled. She was not able to say why the request was fulfilled because she has not been given a reason. She also explained that she discusses the request with her department colleagues, and then makes the request to an instructional designer, who seeks input from an administrator, and then the request is given to the vendor representative. Most of the time, the vendor representative is not able to provide a direct answer, so the request gets put into their queue and responds on their own time.

In order to add items to a vendor-created course a teacher must have knowledge and skills on alternative ways to create the activity outside of the course. The vendor-created courses link to a separate website where the students access the course content. The teachers are not able to add directly to the course. Any activity must be added to the online high school's learning management system. T3 used the knowledge and skills gained from the course she took on Google applications to create items to enhance student engagement in her course. Even with the knowledge and skills gained from the course, she had to seek input from the instructional designers on how to best add the item to the course.

The participants indicated being able to request items to be deleted from the course. All seven participants indicated having to run the course "as-is" for the first year in order to gain an overall picture of the course. After the first run of the course, the teacher can place a request to the instructional designer for items to be deleted. The teacher is not able to delete the items because he or she is not given the appropriate rights in the course to delete an item. The instructional designer or education technologist will delete the assignment or activity after being approved by an administrator. This process

shares characteristics found in the SDT relatedness construct, however it fits more closely in competence because the teachers are not provided the skills necessary to delete items in the vendor-created courses. It is not part of their role and is the responsibility of the instructional designers. The teachers will run the course as-is even if errors are noticed in the content. A request will be submitted to the instructional designers and they will contact the vendor to report the error. It is up to the teacher how to tell the students to ignore the mistake or correct it in a different format, such as, an update or discussion board.

Overall Research Question

The overall research question of this study asked, "How does a teacher's motivation (i.e., autonomy, competence, and relatedness) influence the extent to which engaging instructional activities are implemented in online high school courses?" A teacher's motivation at an online high school was influenced positively by autonomy and relatedness. In the area of competence, participants provided evidence to support feeling motivated when competent in their content area and showed a lack of motivation in the competency area of technical skills. Overall, participants showed a wide-ranging view of student engagement and had various answers to support how it is perceived.

The data analysis process was a continuous process of reading the data, coding, reducing, and displaying the data in a variety of ways till the research questions were answered. The researcher analyzed all the interview and rubric data to gain a full understanding of the data to answer the overall research question. Four of the interview questions, 8-11, helped to ground the participants on the topic of student engagement and

to provide a foundation of understanding for the researcher to create a project aligned to the research. Table 9 displays participants' responses from the general questions asked about student engagement. In questions 8 and 9, participants were not asked to separate their answers into teacher vs. vendor-created courses. The data displayed for questions 8 and 9 is for both types of courses. Questions 10 and 11 are separated into teacher and vendor-created courses (as the participants were asked to do so).

Table 9

General Questions About Student Engagement

Interview questions	Teacher-created courses	Vendor-created courses
8. How do you define student engagement?	• Student-centered activities (meaningful and relevant) • Asks questions about the content to the teacher and other students • Actively involved and shows a desire to want to do more than earn a grade • Student is an independent worker, self-advocate, and interested in the course	
9. What is your idea of an actively engaged student?	• Looks different for every student and every class • Communicates regularly and asks questions about the content • Goes above and beyond and owns the learning • Student does not procrastinate, asks for help, and if a class is missed meets with the teacher	
10. Describe ways students are engaged in your courses?	• Personality test or introduction discussion post • Retakes on assignments, quizzes, and tests • Communication through instant message, email, messages, updates, discussion boards	• Communication through instant message, email, video chats, messages, and updates • Limited on assignments, quizzes, and tests due to multiple choice questions

	• Watch videos and post comments • Peer editing of documents	• Course was meant to run without a teacher • Short writing assignments
11. What opportunities are available for students to be engaged in your courses?	• Discussion boards • Activities and assignments • Open response test questions • Google hangouts and instant message • Peer editing • Students read a lot of the material • Individual tutoring	• Watch videos and read power point slides • Communication with me in email and instant messages • Discussion boards • Minimal since it is the first year of the course • Reading text

The data collected in interview questions 8-11 were reiterated by participants throughout the other interview questions and provided an opportunity for the researcher to clarify statements made by the participants. For example, a participant mentioned discussion boards in the vendor-created courses in question 11. But when asked in question 17 about areas to learn more about, the participant mentioned discussion boards again. The researcher was able to use this opportunity during the semi-structured interview to ask clarifying questions to help the researcher properly interpret statements and reduce bias in the data analysis process.

The development of the project described in detail in section 3 was informed by questions 8-11, specifically, the participants' answers showed the need for differentiation of the professional development. The participants provided a variety of evidence to show the teachers perceived student engagement in multiple ways from students, such as attitude, work ethic, follow-up, and ability to ask questions. Although questions 8-11

were not aligned to a specific research question, the data were used to confirm and clarify participant responses and develop the professional development project.

Outcomes

The problem addressed in this study was the inconsistent teacher implementation of student engagement activities in courses at an online high school. As a result of the findings a professional development project was created to help teachers better understand how to create and implement engaging activities in online high school courses. The professional development provides an overall understanding of student engagement. Participants in the study shared their perspectives on the challenges of teaching online courses and the need for professional development on various topics centered on student engagement. Professional development for teachers at the Online High School could provide a more robust understanding of student engagement and help to inform the development of future courses at the school. For my project, I created a professional development workshop to enhance the overall understanding of student engagement and for teachers to collaborate and share online instructional practices in content and grade level areas.

Conclusion

The case study explored teachers' motivation to implement engaging activities in online high school courses. The researcher collected qualitative data through semi-structured interviews and observations using a rubric for interactivity. The data were analyzed to answer the following overall research question: How does a teacher's motivation (i.e., autonomy, competence, and relatedness) influence the extent to which

engaging instructional activities are implemented in online high school courses? The seven participants teach at an online high school in grades seven through 12 and teach a variety of courses, such as math, social studies, humanities, and advanced placement courses.

The results of this study were used to develop a project to effect positive social change within the local setting by adding to the body of knowledge on implementing engaging instructional activities for online high school teachers. The research in this study can be used to provide a knowledge base for teachers to understand the importance of implementing student engagement opportunities in online courses despite the design of the courses. The project will be explained in detail in Section 3.

Section 3: The Project

Introduction

In this study, I investigated teachers' motivation to implement student engagement opportunities in an online high school. The study's findings indicated a need for professional development for online high school teachers related to implementing student engagement activities. The themes discovered during the data analysis process showed a need for a more robust understanding of student engagement and how to implement engaging activities online. During the interviews, participants expressed a need for time to collaborate and share online instructional practices in content and grade level areas specifically about group projects, discussions, synchronous student collaboration, and technical knowledge on implementing engaging activities online. In this project study, I incorporated the topics and ideas gathered from the data analysis process into a 3-day professional development training for online high school teachers.

Purpose and Goals of the Project

My doctoral study project is a 3-day professional development training on student engagement in online classes. Invited participants will be teachers, administrators, and support staff of online middle or high school courses. The goals of the professional development training are to increase understanding of student engagement in online courses, discuss how technology can enhance pedagogical strategies, share communication and feedback strategies used in online courses, and create practical activities to engage students in their online courses. Participants will work in small groups of content areas, advanced placement, and interdisciplinary to share and discuss a

variety of strategies for online learning. Teachers will collaboratively create an online toolbox of instructional strategies to increase engagement, both synchronously and asynchronously, in all aspects of the courses, such as: welcome videos, discussion boards, formative assessments, and group projects.

Rationale

The purpose of this study was to investigate teachers' motivation to implement engaging activities in online courses through the constructs (autonomy, competence, and relatedness) of SDT (Deci & Ryan, 2000). In the semi-structured interviews and assessments of online courses I conducted, participants shared the need for time to collaborate on various components of their online courses. A more thorough understanding is needed in: (a) student engagement in online courses, (b) how specific technologies can support pedagogical strategies, (c) communication and feedback strategies used in online courses, and (d) how to create practical activities to engage students in their online courses. A 3-day professional development workshop consisting of synchronous and asynchronous components addresses the focus of this study. A blended learning approach to the professional development models outline best practices while also giving participants the opportunity to gain insight as an online learner. Teachers, administrators, and support staff are expected to work together to build collegial relationships within the school.

The content of the professional development program will give participants a more in-depth understanding of the types of student engagement and the strategies they can use to increase engagement in online courses. It will also explore how embedding

reflective practice into teaching may improve student engagement. Participants will explore how technology can support the development of activities, discussion boards, and group projects. Teachers will collaborate with administrators, special education staff, educational technologists, and instructional designers to gain understanding of best practices in online learning and how to adapt these practices to their specific courses.

Review of the Literature

A review of literature included peer-reviewed scholarly journals within the last 5 years from 2013-2018. The literature aligned with the professional development goals of the project and the data findings outlined in Section 2. I used the following search engines through the Walden University Library: Education Resources Information Center, SAGE Journals, Google Scholar, and Academic Search Complete. Boolean search terms included, but were not limited to *online teaching, professional development, teacher training, online teaching competencies, student engagement, online learning environments, online instruction,* and *technology for online courses.*

The literature review provides a foundation to understand the trends in professional development for online teachers. The literature review consists of areas aligned to the data analysis findings. The topics include motivation of teachers, change, and students, along with collaboration and professional development.

Engagement in a classroom, online or face-to-face, is a complex process involving high levels of motivation for teachers and students and affects all aspects of teaching and learning (Nordgren, 2013). Increased demands in education, such as attendance, graduation, retention, and higher test scores, have caused educational leaders

to micromanage teachers who in turn micromanage students, according to researchers (Kim, Park, & Cozart, 2014). This micromanagement of students promotes mediocrity in the learning process and leads to a decrease in engagement, in the view of Nodgren (2013). Average students meet the demands of the minute-by-minute schedule with no opportunity for creativity or personal interests. A mindset and drive for continuous learning is intrinsically motivated, yet a typical classroom is filled with extrinsic motivational factors (Nordgren, 2013).

Online teachers need to address anxiety issues associated with online learning to increase overall student achievement (Kim, Park, & Cozart, 2014). Students in an online environment need to feel emotional and cognitive support, which will increase their motivation to learn (Kim, Park, & Cozart, 2014). Technology can be used to provide the support students need when facilitated and used appropriately by a teacher, researchers have found. Online feedback and assessments are two components in online courses that provide meaningful learning opportunities for students (Vonderwell & Boboc, 2013). Engaging students in learning, both online and face-to-face, has been found to be essential to student achievement (Jaggars, Edgecombe, & Stacey, 2013). In this project study, I investigated the motivation of teachers to implement engaging activities in online courses; therefore, it is important to consider various perspectives of motivation.

Teacher Motivation

Several elements can influence motivation for teachers and students, such as morale, relationships, perceptions of work, and school climate to name a few (Daniels, 2016). Researchers have focused on the many aspects of motivation and its effect on

instruction and learning. I used SDT (Deci & Ryan, 2000) as the conceptual framework for this study because it provided a foundation for my examination of motivation through its constructs of autonomy, competence, and relatedness. Satisfying these needs creates ideal conditions for high-levels of motivation, both professionally and personally (Deci & Ryan, 2000). Intrinsic motivation is the ability to explore and engage in opportunities leading to growth (Deci & Ryan, 2000). An example of this growth in teaching can be observed through integrating a new form of technology, incorporating a different instructional strategy, or changing the physical classroom space. Behaviors associated with extrinsic motivation will subside when the external factors are removed from the setting, according to the theory. Amotivation, or the lack of motivation, produces feelings of inadequacy, low expectations, and mediocrity (Ryan & Deci, 2000). In a classroom or educational setting, a decrease in teacher motivation, low expectations, and mediocrity may ultimately affect the students' overall learning experience (Jaggars, Edgecombe, & Stacey, 2013).

Students, content, standards, instruction, administrators, colleagues, and intellectual challenges influence motivation (Daniels, 2016). In a study examining logistical factors influencing teachers' motivation found a school's schedule to be a primary factor. One participant explained his lack of motivation due to lower energy after the lunch hour. He had a remedial class scheduled in the class period right after lunch and explained he used more energy in this class to manage behavior than to teach content. This high level of energy needed for one class diminished his motivation for his other classes. An online learning environment allows for more flexibility in a teacher's

schedule creating more freedom in how a teacher approaches his or her schedule. In this same study, Daniels (2016) noted administrators could increase motivation by protecting time for teachers to grade assignments and give thoughtful feedback, develop engaging and differentiated lessons, communicate with families and colleagues. An online teacher's motivation is increased by collaboration with colleagues and personal reflection. On-going collaboration builds a social network between colleagues and dedicates time to share instructional practices (Romeu, Guitert, & Sangrà, 2016). Collaboration will be explored in more detail, as it was a theme discovered in the data analysis.

Teacher motivation, in both face-to-face and online classrooms, is increased through creating an autonomous environment. Gillard, Gillard, and Pratt (2015) used Daniel Pink's motivational theory to conduct an experiment to find out if K-12 classroom teachers were giving the opportunity to be autonomous would a positive outcome result. The results of the experiment showed the productivity, investment in mastering content knowledge, and overall professional growth was increased in an autonomous environment.

A teacher's motivation to adapt or change their behavior is critical to increasing student engagement and academic achievement (Daniels, 2016; Harbour et al., 2015). Examples of teaching behaviors linked to increasing student engagement include development of lessons, presentation of instruction, promoting active participation, and creating a positive learning environment. A teacher who effectively maximizes instructional time will provide students opportunities to increase engagement with other

students, teacher, and content. A lack of teacher presence, social interactions, isolation, and feeling disconnected from the teacher and students as main reasons students withdraw from an online course (Kim et al., 2014; Lehman & Conceicão, 2014). Guvenc (2015) concluded many high school teachers feel a student's motivation is out of their control and scope of work. This study claimed high school teachers perceive external factors, such as previous school experiences and family, as elements that influenced a student's motivation negatively (Guvenc, 2015). However, Deci and Ryan (2000) claim this is not the case. The process to increase motivation is concrete and manageable and SDT provides a framework for teachers to increase their efforts in order to increase the motivation and engagement of students.

Change Motivation

The act of implementing change or the mere mention of change often ignites negative feelings among teachers in any school setting. Change can be viewed positively, but typically the words innovation or creativity are used instead (Henning, Rice, Dani, Weade, & McKeny, 2014). Trust, job satisfaction and workload perception are a few factors that influence a teacher's attitude and willingness to initiate or implement change (Kondakci, Beycioglu, Sincar, & Ugurlu, 2017). A teacher's attitude toward change is often disconnected to the purpose or reason for implementing any type of change (Hallinger & Bryant, 2013). Chow (2013) specifically notes the source for change affects the success of implementation. A top-down change in an educational setting is more often unsuccessful due to a lack of ownership by the teachers who must

implement the change, whether it is an instructional strategy, behavior policy, or a grading system.

The source or reason for implementing change comes from a variety of areas including administrator directed, self-initiated, school or district initiatives, collaborative effort with colleagues, adoption of a new curriculum, or integration of new technology. Successful change in a school setting occurs over time and involves on-going teacher support (Henning et al., 2014). However, this type of change that receives on-going support is also most likely to come from a district or school initiative. Teacher initiated change tends to receive little to no support and is overlooked by administrators. A lack of support for teacher change ought to be overshadowed by the needs of the students, who are the central focus of any educational setting.

Student Motivation

Students play a major role in the classroom environment and are also motivated to learn in various ways. Teachers should recognize that no students are the same and learning needs to be individualized to help students achieve personal success (Gillard et al., 2015; Jaggers et al., 2013). "Teachers must become motivators of purpose" and move away from the mindset of facilitators of learning (Gillard et al., 2015, p. 3). Pulfrey, Darnon and Butera (2013) conducted a study comparing two motivational factors: grades versus autonomy in a K-12 school setting. The results concluded that perceived autonomy of a task significantly affected interest and motivation to complete the task and do well on the task more than the grade. Two students may be motivated by different means, one intrinsic and one extrinsic, but the end action is the same.

Motivation is displayed differently from student to student due to the complexities of motivation (Ryan & Deci, 2000). Motivation is viewed as a product of engagement can be measured by a students' participation in activities and in the overall learning process (Guvenc, 2015). Exploring the facets of motivation can be done during professional development time where teachers have time to reflect on their learning around their role as an online teacher.

Professional Development for Online Teachers

Professional development is common in the education setting and provides support for teachers to shift teaching practices, change attitudes about learning, and improve content knowledge (Althauser, 2015; Hung & Yang, 2015). The rise of online education has shown in higher education and K-12 learning environments has revealed concern about the quality of support offered to online teachers (Baran & Correia, 2014). Additional support is needed for online teachers due to the many demands and competencies required as an online teacher (González-Sanmamed, Muñoz-Carril, & Sangrà, 2014; Sangrà, González-Sanmamed, & Guàrdia, 2014). Many factors contribute to successful online learning, such as time invested in the course and organization. The emphasis of this study was on teacher's motivation to implement engaging activities; therefore, the focus will be on the competencies of the teachers to facilitate a successful online course. Seven practices for effective online teachers are: "(1) knowing and creating course content, (2) designing and structuring the online course, (3) knowing the students, (4) enhancing teacher-student relationships, (5) guiding student learning, (6) evaluating online courses, and (7) maintaining teacher presence" (Baran, Correia, &

Thompson, 2013, p. 58). These competencies align with the data findings, specifically designing the course (theme 7 and 8), enhancing teacher-student relationships (theme 6) and maintaining teacher presence (theme 2). During the three-day professional development workshop, time will be allotted to explore these competencies further and investigate areas for improvement. Special considerations for professional development for online teachers are to provide opportunities for teachers to share instructional practices in a supportive and collaborative setting.

Adult Learning

In designing and creating professional development for adults, it is important to understand the needs of adult learners. Andragogy is the study of adult learners and their specific needs. Knowles (1980) Adult Learning Theory focuses on the broad needs of adult learners by recognizing their personal experiences and learning occurs through solving real-world problems. Because this project was developed to assist teachers in understanding and implementing student engagement activities, Knowles's theory offered guidance on the development of the project. The project is designed with a variety of activities to adapt to the needs of the participants and the need for teachers to collaborate during the learning process. Teachers will be able to use what is created in the workshop in their own classrooms immediately, which is a valuable component of adult learning (Knowles, 1980; Vrchota, 2015).

Consistent with Knowles (1980) Adult Learning Theory is Deci and Ryan's (2000) Self-Determination Theory (SDT) stating adults need an autonomously supportive environment to learn. The three constructs of SDT were used as the conceptual

framework for this study and guided the research questions to understand the motivation teachers need to implement engaging activities. Motivation is a spectrum where a complete lack of motivation is at one extreme and intrinsic motivation at the opposite extreme. Individuals have more self-determination to increase motivation on a specific task or learning a new concept when the social environment is supportive (Kálmán & Eugenio, 2015). The work of Deci and Ryan revealed motivation as a multi-dimensional and complex concept. The example of learning a foreign language was used to show how adult learners need sustained learning to move beyond learning something for enjoyment or interest. Adult learners need to understand how new learning is important in everyday situations in order to continuously increase motivation (Kálmán & Eugenio, 2015).

Competence in self-determination theory is more than knowing and understanding how to complete a task or acquire knowledge about a topic. Competence includes increasing confidence to complete a task successfully. This confidence would be displayed through more engagement, less anxiety, persistence, and flexibility to apply the concept to a variety of tasks. However, "competence by itself is not enough (McCarthy, 2015, p. 312). The development of technical skills increases competence and adults may be more motivated for a period. Autonomy is the variable critical to continued motivation for learning, therefore it is important for supervisors to focus on creating a supportive environment along with building competency (McCarthy, 2015). Adults can use a self-assessment to find areas of need or opportunities for learning. Ongoing training and support for online teachers is important to the overall success of online education programs (Rhode, Richter, & Miller, 2017). A self-assessment helps to

determine a personalized path for developing competence and best-practices in online programs (Meyer, 2013 and Piña, 2016). Online teachers choose self-assessments over other methods because it is less intrusive on their time. The self-assessment is viewed as a starting point to professional development not an end goal (Rhode, et al., 2017, and Ragan & Schroeder 2014).

Collaboration

Teaching in an online environment can be isolating, create a feeling of unpreparedness, and a lack of confidence (Baran & Correia, 2014). Spending time with your colleagues helps to create products, share viewpoints, improve instructional practices, and enhance content knowledge (Althauser, 2015; Romeu, et al., 2016). Sharing similar and contrasting viewpoints builds connections between the content and the teacher's colleagues, which helps the teacher to develop his or her own engagement with the online course. The time spent collaborating with colleagues who teach online helps to shape teaching practices due to an increase in reflective practice (Althauser, 2015; Romeu et al., 2016). Online teachers need to feel supported by their colleagues by learning with them. The collaboration also helps to build their confidence as an online teacher (Baran & Correia, 2014; Romeu et al., 2016). Connecting with colleagues (theme 5) was prevalent in the data from all seven participants and is an area that was highly valued in both teacher-created and vendor-created courses.

Technology

Online environments are continuously changing due to advancements in technology. However, online teaching requires a balance of strategies to help students

learn content using technology. Teachers tend to feel under-prepared to use new types of learning management systems, technology tools for video conferencing, or to create innovative activities using computer programs (Alexiou-Ray & Bentley, 2016; Jaggars et al., 2013). A collaborative professional development session helps teachers to build confidence with technology use in the online classroom from sharing strategies. If teachers are not trained effectively, then students feel disengaged with the content and the teacher (Alexiou-Ray & Bentley, 2016; Baran & Correia, 2014).

The online competencies mention designing and structuring the course which consists of the organization, navigation, communication, and having multiple ways for students to engage with the content, teachers, and peers (Alexiou-Ray & Bentley, 2016; Baran et al., 2013). During the data analysis teachers expressed different perspectives on the ease of implementing engaging activities in the teacher-created courses versus vendor-created courses. The teacher-created courses are easier to design and structure activities to engage students in the content and with other students through discussion boards, group activities, and a variety of assessments. The opposite is true for the vendor-created courses.

A best practice in learning new technology is to be in a position of the learner, meaning learn and reflect on how to use the technology tool or platform from the student's perspective (Alexiou-Ray & Bentley, 2016; Rooney, 2015). A framework to support online teachers learn the use of new technology aligned to the content and pedagogy is the framework Technological Pedagogical Content Knowledge (TPCK) (Kennedy, 2015). The goal of TPCK is to provide teachers an instrument to critically

reflect on practices involving online tools or to "provide a knowledge based as applied to distance learning" (Kennedy, 2015, p. 148). The TPCK framework can be viewed as a series of knowledge constructs where the components are paired, such as PK focuses on knowledge of teaching methods; CK looks at knowledge of the subject; or TCK helps teachers reflect on knowledge on using the technology to best present the content (Kennedy, 2015). This framework as well as a few others will be utilized in the three-day professional development workshop for the Online High School teacher to reflect, discuss, and develop ideas on how to improve their online courses.

Project Description

The project is a three-day professional development training for middle and high school teachers, administrators, and support staff of online courses. The training will explore various aspects of student engagement in online learning, examine how various types of technology support pedagogical strategies, dedicate time for participants to share successful communication and feedback practices, and allow participants to collaborate on creating engaging activities for their specific online courses. The professional development training materials included PowerPoint presentation slides with notes, agendas for the 3-day training, and an evaluation plan (see Appendix D).

Potential Resources and Existing Supports

Resources needed to complete the three-day professional development training are a classroom or meeting room with ample space for participants to move from large to small groups and display work on the walls. Participants will need space for training handouts and laptops. The Online High School administrators will designate a date, time,

and provide a location for the training that has internet connectivity and a projector for the presentation slides. I will provide the miscellaneous items needed for the training, such as, nametags, markers, post-it notes, and index cards.

Potential Barriers

Designating a date and time for the professional development is a potential barrier to implementation. The Online High School has flexibility to dedicate a school day to professional development throughout the school year due to the online nature of the school. Substitute teachers are not required to cover classes. Teachers would explain to students they are not available on the day of the training and students would work asynchronously on assignments. Another barrier would be having all the Online High School teachers in one location. The staff is in three hubs (USA, Germany, and Japan) and only come together as a staff every two years in the same location due to travel costs. The training consists of both synchronous and asynchronous learning and could easily be adapted for participants to join virtually along with participants in a face-to-face setting.

Proposal for Implementation and Timetable

The three-day professional development workshop contains daily agendas with an hourly timeline. The dates, times, and location will be set by the school administrators and I will work with them to inform participants. I will be the main presenter of the workshop and ask for assistance by the instructional designers for specific components. The participants will receive the professional development goals and the daily agendas prior to the start of the workshop. In the following section, I will outline the project.

Day 1 agenda. The first day of the workshop will begin by welcoming participants, introducing myself as the presenter, giving general housekeeping announcements, outlining the goals of the workshop and breakfast. The goals of the workshop are to

- improve understanding of student engagement in online courses
- develop ideas for increasing teacher presence in the online setting
- share communication and feedback strategies used in online courses
- align technology to best support pedagogical strategies
- create practical activities to engage students in online courses, and
- build a community among the Online High School staff.

After breakfast is complete, participants will do an introduction or icebreaker activity to help participants feel comfortable and safe in the learning space. Participants will then complete a self-assessment using the Roblyer and Wiencke (2003) Rubric for Assessing Interactive Qualities of Distance Courses (RAIQDC). Teachers will be able to look at the five elements in the rubric in relation to all their courses and identify areas of success and improvement. The support staff, administrators, and instructional designers can look at the rubric for overall course development. Participants will get a short break before thoroughly investigating types of student engagement. The goal is to look at the various definitions of student engagement and then discuss how the three types of engagement are evident in their courses. This will be followed up with a one-hour lunch.

A brief presentation on the various strategies for student engagement will occur before participants work with a peer to review their courses. The goal of this activity will

be to look for evidence of student engagement activities in various parts of the course, such as, orientation assignments, group projects, assessments, or discussions. Each pair will be asked to share an example with another group asynchronously in order to begin building a toolbox of engagement strategies. The afternoon will conclude with a short break and a presentation on building teacher presence. Then, participants will be asked to participate in an online discussion on ideas for increasing student engagement. The final task of the first day is completing a formative evaluation reflecting on the learning. I will use the results of the formative assessments to guide improvements or areas of need for the next two days. The Day 1 agenda is included in Table 10.

Table 10

Day 1 Agenda

Timeline	Topic
8:00 am – 9:00 am	Introductions, Expectations, and Breakfast
9:00 am – 9:30 am	Quote Activity
9:30 am – 10:00 am	Self-Assessment Activity
10:00 am – 10:15 am	Break
10:15 am – 11:30 am	Types of Student Engagement
11:30 am – 12:30 pm	Lunch
12:30 pm – 1:15 pm	Strategies for Student Engagement
1:15 pm – 2:00 pm	Peer Review of Courses
2:00 pm – 2:15 pm	Break
2:15 pm – 3:00 pm	Building Teacher Presence
3:00 pm – 3:30 pm	Discuss and Share Ideas on Engagement
3:30 pm – 4:00 pm	Wrap-up, Formative Evaluation, and Dismissal

Note. The timelines may change based on discussions during the actual training.

Day 2 agenda. The next day of training will begin with a review of the expectations from day one. The morning will consist of investigating communication and feedback strategies used in online learning environments. Then, participants will work in collaborative groups, specifically teachers of Advanced Placement (AP) courses and teachers of non-AP courses, to discuss and share best practices on communication and feedback in their courses. After lunch participants will learn from the instructional designers about how to create an engaging activity using the available online elements. The afternoon will provide time for the participants to learn about various types of technology and how it aligns to pedagogical strategies. Collaborative groups will be divided by content for the afternoon of Day 2. Participants will continue to work together to create engaging activities in their courses and share with colleagues to receive critical feedback. A formative evaluation will be distributed at the end of the day and

participants will wrap-up with any questions. The agenda for Day 2 is included in Table 11.

Table 11

Day 2 Agenda

Timeline	Topic
8:00 am – 9:00 am	Review, Expectations, and Breakfast
9:00 am – 10:00 am	Communication and Feedback Strategies
10:00 am – 10:15 am	Break
10:15 am – 11:30 am	Collaboration Groups (Advanced Placement vs. non-AP)
11:30 am – 12:30 pm	Lunch
12:30 pm – 1:30 pm	Design Elements of Engaging Activities
1:30 pm – 2:00 pm	Discuss and Share Ideas on Technology Aligned to Pedagogy
2:00 pm – 2:15 pm	Break
2:15 pm – 3:30 pm	Collaboration Groups (Content Specific)
3:30 pm – 4:00 pm	Wrap-up, Formative Evaluation, and Dismissal

Note: The timelines may change based on discussions during the actual training.

Day 3 agenda. The third day will focus on creating engaging activities and receiving feedback on the activities. Participants will be asked to create a discussion, orientation video, a lesson activity, and an assessment to share with a peer. Participants may choose to work with a peer who teaches the same content or who has a similar teaching philosophy. The goal is to work collaboratively through a critical friend protocol and then share it with the whole group. A gallery walk will occur after the morning break and before lunch. The participants will look at the activities asynchronously and provide feedback with online tools demonstrated on Day 2.

After lunch, participants will be challenged to work with a different peer and use the feedback from the morning to revise the activities. Participants will then share with the whole group one activity as an exemplar to be placed in the toolbox as a resource.

The last activity before concluding the workshop will focus on future professional development needs. Administrators will be able to hear first-hand ideas for what teachers want and need to implement engaging activities in their online courses.

The closing summative evaluation will ask participants to reflect on the goals of the workshop and submit answers anonymously. The results will be used to improve the workshop for future implementations. The agenda for Day 3 is included in Table 12.

Table 12

Day 3 Agenda

Timeline	Topic
8:00 am – 9:00 am	Review, Expectations, and Breakfast
9:00 am – 10:00 am	Create Engaging Activities with a Peer
10:00 am – 10:15 am	Break
10:15 am – 11:30 am	Feedback Gallery Walk
11:30 am – 12:30 pm	Lunch
12:30 pm – 1:15 pm	Revise Activities in Collaboration Groups
1:15 pm – 2:15 pm	Share Activities
2:15 pm – 2:30 pm	Break
2:30 pm – 3:30 pm	Next Steps for Professional Learning
3:30 pm – 4:00 pm	Wrap-up, Summative Evaluation, and Dismissal

Note: The timelines may change based on discussions during the actual training.

Roles and Responsibilities of Others

I will act as the presenter and facilitator of the workshop. I will ask the instructional designers and support staff to contribute to components of the workshop where their expertise fits. The roles and responsibilities of the participants will be to engage fully in the learning process with an open mind and positive attitude. Participants will be asked to work collaboratively with their peers and share best practices in their online courses. One of the main goals of the workshop is to create engaging activities to

build a resource toolbox for teachers to utilize in the future. Participants will be expected to contribute the activities developed to the toolbox by uploading the activity or a description of the activity. This will allow teachers to have a resource library of various engaging activities that can be adapted to fit their specific course.

Project Evaluation Plan

Type of Evaluation

Formative and summative evaluations will be given to participants to offer feedback on the success of the sessions and the overall workshop. Participants will use the formative evaluation to reflect on their learning at the end of the first and second day. Participants will use an 8 ½ by 11" sheet of paper divided into four quadrants and answer the following questions in each of the quadrants:

1. What did you hear?
2. How can you use what you learned today to increase student engagement in your courses?
3. How can you support your colleagues in implementing student engagement activities?
4. What area of the workshop could be changed to support an increase in student engagement in your online courses? Explain.

There will also be a large piece of chart paper labeled the "parking lot" for participants to post questions throughout the workshop. I will check the parking lot frequently throughout the day to answer the questions in a timely manner.

On the final day, a summative evaluation will be distributed. The evaluation form can be found in the project materials in Appendix D. The evaluation will consist of Likert scale questions and open-ended questions.

Justification for Evaluation

The formative evaluations using open-ended questions give participants the opportunity to reflect on their learning and share personal perspectives on the areas of the workshop that influenced their thinking and learning (Alsofyani, Aris, & Eynon, 2013). The parking lot and the formative evaluations gives the participants the chance to share their opinion about the content or design of the workshop. From this information I will be able to adapt or adjust the agendas and timeline for the activities as needed. The summative evaluation will be used to measure the overall success of the workshop. This information will help me to revise the three-day workshop for future implementations.

Outcomes of the Project

On the final day of the professional development workshop, participants will complete and submit a summative evaluation. Upon completion of the workshop, participants from the online high school will understand the types of student engagement in online courses, have an ample amount of ideas for increasing teacher presence in the online setting**, s**hared communication and feedback strategies used in online courses, aligned technology to best support pedagogical strategies**, c**reated practical activities to engage students in online courses**,** and built a community among the Online High School staff. The participants will have collaborated across grade levels and content areas. At the end of the workshop, the staff will have built an online toolbox on various aspects of

their online courses and added exemplar activities for student engagement, such as, group projects, assessments, discussion boards, and instructional activities. Teachers and instructional designers will be able to use this toolbox as a resource for future course development and for enhancing current courses.

Project Implications

Social Change

This project can effect positive social change within the local setting by adding to the body of knowledge on how to implement engaging activities for online high school teachers. Teachers will gain knowledge and understanding on the design elements of engaging activities as well as be able to align technology to pedagogical strategies. Working collaboratively throughout the project will build a stronger community and teachers will be more motivated to enhance their teaching practice.

Local Stakeholders

Administrators and instructional designers within the local setting can use the results of this study for future course development and procurement. The results of this study could use the project for continued professional development on implementing engaging activities in all courses for students. The ideas of the project could also be incorporated into developing an online or blended professional development for other aspects of online teaching. Engaging teachers as learners will create opportunities for the teachers to be reflective about their practices through the lens of a student. Increased engagement helps all learners to be more motivated in the learning process and achieve more overall.

Larger Context

Research about online learning in a K-12 setting is limited compared to the online environment in higher education. The research in this study provides a knowledge base for teacher to understand the importance of implementing engaging activities in online courses. Online learning is growing throughout all levels of education and it is important to have various perspectives on teaching online for all different grade levels.

Conclusion

Section three outlined the project I created for online middle and high school teachers. The project is a three-day professional development workshop developed from a review of literature and the data analysis in Section two. Appendix D contains a copy of the workshop materials. In Section three I discussed the goals and a rationale for the project, reviewed the literature on professional development for online teachers, described the implementation and evaluation of the project, and project implications for social change. In Section four, I will share my reflections and conclusions about the completed project study.

Section 4: Reflections and Conclusions

Introduction

The purpose of this study was to investigate teachers' motivation to support student engagement opportunities in an online high school. I created the professional development project based on the data findings to enhance the understanding of increasing student engagement in online courses. The professional development project also provides teachers time to collaborate on instructional strategies and course development. In the subsequent sections, I will outline the limitations of the project study and make recommendations for alternative approaches. I will also reflect on my personal learning through the process of research, data collection, data analysis, and project development. In the conclusion, I will offer recommendations for practice and more research.

Project Strengths and Limitations

Strengths

The participants in the professional development workshop can improve student engagement practices in online high school courses and give teachers an opportunity to share best practices in their content and grade level areas (Althauser, 2015; Hung & Yang, 2015, Vrchota, 2015). Gaining a better understanding of student engagement can help teachers to develop more interactive courses for all students (Althauser, 2015). Understanding student engagement practices from the perspective of teachers can help inform administrators and instructional designers on future course development and

procurement. This project supports teachers, which should benefit student learning by providing knowledge that teachers can use to create more engaging online activities.

Limitations

The goal of the professional development was to improve understanding of student engagement in online courses, develop ideas for increasing teacher presence in the online setting, share communication and feedback strategies used in online courses, align technology to best support pedagogical strategies, create practical activities to engage students in online courses, and build a community among the Online High School staff. Organizational challenges, such as budgeting, time, and leadership goals, may inhibit teachers from maximizing student engagement in online courses. The turnover of courses with vendors and teaching assignments also may personally affect a teacher's motivation to maximize student engagement. The work to increase student engagement is an ongoing process, and it requires teachers to continually reflect on the instruction and the student's learning, which is time-consuming (Althauser, 2015).

Recommendations for Alternative Approaches

The problem addressed in this study was inconsistent teacher implementation of engaging instructional strategies in online courses. This local problem at Online High School could have been addressed in a multitude of ways. I could have examined how teachers' efficacy matches student learning outcomes or how teachers perceive students' motivation to engage in various courses. Another way to approach the problem in this study would have been to look at how specific teaching strategies in online courses influence student achievement across content and grade levels. These approaches may

have provided other insight into implementing student engagement activities into online high school courses.

Alternatively, I could have used a quantitative research design incorporating a survey of the participants about student engagement in online courses. In addition, a mixed-methods approach could have been used to collect survey results along with qualitative data from interviews. Both designs could have resulted in a larger sample size and more generalizable results. A program evaluation could have provided a more in-depth understanding beyond the school level.

Scholarship, Project Development, and Leadership and Change

Scholarship

During my time at Walden University, I was challenged by coursework and supported by all my professors and classmates. Throughout the last 5 years I worked on this project, I grew as a student, teacher, and leader. Every class was a new learning opportunity and helped me to gain more knowledge on the importance of scholarly research and writing. As I continued with this program, I learned how to define a clear problem based on evidence, align a conceptual framework to research questions, collect and analyze qualitative data, and articulate findings in a scholarly manner. I am in awe of the dedication and grit it takes to complete doctoral research. My appreciation for the research process has grown immensely.

As an educator, I value lifelong learning and attempt to instill this value on my students. I shared my journey as an online student with my colleagues and students, while simultaneously teaching online classes. Learning about Deci and Ryan (2000)

motivational theory allowed me to look at my work with a new perspective and focus on how to be a better and more effective teacher. I now share scholarly articles with my peers on meaningful topics with the hope of inspiring professional discourse to improve teaching amongst my colleagues.

Project Development

During the development of this project I continuously reviewed the research findings and the research questions in order to ensure that I was addressing them. It was challenging to collect my ideas for the project development while staying focused on data collection and analysis. During the interviews, it was tempting to write down ideas based on one participant's statements. My own personal experience of implementing professional development in a face-to-face, blended, and online environment helped me to create ideas for the project. My experience helped me to decide on the timing and outline of the day. It also helped me to create formative and summative evaluation questions beneficial for feedback on areas I needed to review or areas I missed in the daily agendas. Developing this project gave me a thorough understanding of my own research and how it applied to teacher practice.

Leadership and Change

During the doctoral process, I reflected on my own leadership skills and how change happens in an organization. My leadership evolved from being active, outspoken, and taking charge to being supportive, challenging my colleagues in their own thinking, and using research as a foundation for my inquiries. Before, I wanted to focus on the details and logistics. Now, I understand the importance of alignment between goals,

research, and a product. Conversations with leadership who are decision makers in my organization are more approachable when I am clear about the problem and have evidence to explain my thinking. This process or research and developing a project has allowed me to increase my confidence as a leader and to be a leader for change.

Reflection on the Importance of the Work

As a teacher for the past 13 years, I am a strong advocate for the work we do for all students both in and out of the classroom. Teaching is a profession that requires a passion for learning, and I value learning at the core of who I am as a person. Three years ago, I transferred to an online school to teach. Doing this research gave me insight into how online teaching is viewed differently from my face-to-face teaching colleagues. During this research study I was able to learn from my colleagues who have more experience teaching in an online environment. I have learned the importance of building relationships with students and colleagues. The participants helped me to understand that the content knowledge I gained in a face-to-face classroom is valuable in an online environment and I cannot rely on the course to run "as-is." I can advocate for a different aspect of teaching, online teaching, with a world-wide classroom to show as an example. I will continue to support my colleagues and students in the best way I can; now, I have a strong knowledge base to help me further the conversation.

Implications, Applications, and Directions for Future Research

The project can benefit teachers, both online and face-to-face, beyond the local level by providing them with further knowledge about student engagement types and practical applications. Many teachers transfer from the face-to-face setting to an online

classroom and expect to apply the same instructional tools using technology (Lane, 2013). The focus of online teaching is not the technology, but the student, which is the core of teaching.

The application of this project can go beyond online teachers and be implemented in schools where blended learning is a focus. Additionally, novice online teachers or teachers considering a shift to an online environment would benefit from this project to understand how student engagement is equally important in an online environment like a traditional classroom. The growth of online learning continues to increase, and more research will be needed to further the knowledge base of effective online teaching and the motivational factors to be more effective (Allen & Seaman, 2016; Caruth & Caruth, 2013). Recommendations for further research could focus on the student perceptions of engagement and what factors motivate their learning.

Potential Impact for Social Change

Collecting and analyzing the data from the participants showed me the importance of creating a professional development workshop on student engagement. The varied perspectives on student engagement how it is applied to their online courses showed a clear need for more learning about how to implement engaging activities online and the need for teacher collaboration. Online teachers need to feel a strong sense of community with their colleagues and to have opportunities to collaborate on all aspects of teaching (Scarpena, Riley, & Keathley, 2018). The online learning environment is not isolated to a school setting, but it also used in professional training. The more students are exposed to online learning in a positive way the better they will be equipped for future

development. Students in an online learning environment can connect and learn within a world-wide classroom. The walls of an online classroom do not have any boundaries and students can learn alongside classmates from around the world. The more students are exposed to other people outside of their comfort zone will help to gain an understanding for other cultures and appreciate other perspectives.

Conclusion

In Section four, I reflected on my personal doctoral journey and how it has influenced me as a leader, scholar, and project developer. I also outlined the project's strengths and limitations and gave recommendations for alternate approaches. The overall process of research, data collection, data analysis, and project development provided me with a new appreciation for the learning process and my own ability to persevere through professional and personal obstacles. I have a new respect for my colleagues in online learning environments and because of this research study, I am better able to advocate for ongoing professional development to support students around the world. I am excited to continue my learning and advocacy for all teachers.

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Appendix A: Online High School Course Offerings School Year 2016-2017

Area	Course Design	Course Name	Grade	Length
CTE	Teacher-Created	Bus & Personal Finance (Fall/Spring)	10-12	18 weeks
	Teacher-Created	Gaming Design I (Fall)	9-12	18 weeks
	Teacher-Created	Gaming Design II (Spring)	9-12	18 weeks
	Teacher-Created	Java I (Fall/Spring)	9-12	18 weeks
	Teacher-Created	Java II (Spring)	9-12	18 weeks
	Teacher-Created	Web Design (Fall/Spring)	9-12	18 weeks
	Teacher-Created	AP Computer Science A+	11-12	36 weeks
	Teacher-Created	Spreadsheet Applications (Fall/Spring)	9-12	18 weeks
ENGLISH	Teacher-Created	Language Arts 9	9	36 weeks
	Teacher-Created	Language Arts 10	10	36 weeks
	Teacher-Created	Language Arts 11	11	36 weeks
	Teacher-Created	Language Arts 11A (Spring)	11-12	18 weeks
	Teacher-Created	Language Arts 12	12	36 weeks
	Teacher-Created	Language Arts 12A (Spring)	12	18 weeks
	Teacher-Created	Language Arts 12B (Fall)	12	18 weeks
	Teacher-Created	AP English Literature and Comp.	11-12	36 weeks
FINE ARTS	Teacher-Created	Art Appreciation (Fall/Spring)	9-12	18 weeks
	Teacher-Created	Digital Photography (Fall/Spring)	9-12	18 weeks
	Teacher-Created	Humanities (Fall/Spring)	9-12	18 weeks
	Teacher-Created	Music Appreciation (Fall/Spring)	9-12	18 weeks
HEALTH & PE	Teacher-Created	Activity & Nutrition (Fall/Spring)	9-12	18 weeks
	Teacher-Created	Health Ed (Fall/Spring)	9-12	18 weeks
	Teacher-Created	Lifetime Sports (Spring)	9-12	18 weeks
	Teacher-Created	Personal Fitness (Fall)	9-12	18 weeks
MATH	Teacher-Created	AP Calculus AB	11-12	36 weeks
	Teacher-Created	AP Calculus BC	11-12	36 weeks
	Teacher-Created	AP Statistics	11-12	36 weeks
	Vendor-Created	Algebra I	9-12	36 weeks
	Vendor-Created	Algebra IA (Spring)	9-12	18 weeks
	Vendor-Created	Algebra IB (Fall)	9-12	18 weeks
	Vendor-Created	Algebra II	10-12	36 weeks
	Vendor-Created	Algebra IIA (Spring)	10-12	18 weeks
	Vendor-Created	Algebraic Modeling	9-12	36 weeks
	Vendor-Created	Geometry	9-12	36 weeks
	Vendor-Created	Geometry A (Spring)	9-12	18 weeks
	Vendor-Created	Geometry B (Fall)	9-12	18 weeks
	Vendor-Created	Trigonometry (Fall/Spring)	10-12	18 weeks
	Vendor-Created	Financial Literacy (Fall/Spring)	10-12	18 weeks

Area	Course Code	Course Name	Grade	Length
SCIENCE	Vendor-Created	AP Biology	12	36 weeks
	Teacher-Created	AP Environmental Science	11-12	36 weeks
	Teacher-Created	AP Physics 1	11-12	36 weeks
	Teacher-Created	AP Physics C	11-12	36 weeks
	Teacher-Created	Biology	9-12	36 weeks
	Vendor-Created	Chemistry	10-12	36 weeks
	Teacher-Created	Earth & Space Science	9-12	36 weeks
	Teacher-Created	Marine Biology	10-12	36 weeks
	Teacher-Created	Physics	10-12	36 weeks
SOCIAL STUDIES	Teacher-Created	Economics (Fall/Spring)	10-12	18 weeks
	Teacher-Created	Psychology (Fall/Spring)	11-12	18 weeks
	Vendor-Created	Sociology (Fall/Spring)	10-12	18 weeks
	Teacher-Created	U.S. Gov and Politics (Fall/Spring)	12	18 weeks
	Teacher-Created	U.S. History	11-12	36 weeks
	Vendor-Created	World History 9: Civilizations	9	36 weeks
	Vendor-Created	World History 10 - Modern	10	36 weeks
	Teacher-Created	AP Government and Politics	12	36 weeks
	Vendor-Created	AP Human Geography	9-12	36 weeks
	Teacher-Created	AP Macroeconomics	11-12	36 weeks
	Teacher-Created	AP Psychology	11-12	36 weeks
	Teacher-Created	AP U.S. History	11-12	36 weeks
	Teacher-Created	AP World History	10-12	36 weeks
WORLD LANGUAGES	Teacher-Created	French I	9-12	36 weeks
	Teacher-Created	French II	9-12	36 weeks
	Teacher-Created	French III	9-12	36 weeks
	Teacher-Created	French IV	9-12	36 weeks
	Teacher-Created	German II	9-12	36 weeks
	Teacher-Created	German III	9-12	36 weeks
	Teacher-Created	German IV	9-12	36 weeks
	Teacher-Created	AP German Language	11-12	36 weeks
	Teacher-Created	Japanese I	9-12	36 weeks
	Teacher-Created	Japanese II	9-12	36 weeks
	Teacher-Created	Japanese III	9-12	36 weeks
	Teacher-Created	Spanish I	9-12	36 weeks
	Teacher-Created	Spanish II	9-12	36 weeks
	Teacher-Created	Spanish III	9-12	36 weeks
	Teacher-Created	Spanish IV	9-12	36 weeks
	Vendor-Created	AP Spanish Language	11-12	36 weeks

Appendix B: Interview Questions

Basic Information

1. Briefly describe your position at the school.
2. How many years have you been teaching?
3. How many years have you taught online?
4. What subject area do you teach?
5. What are the grade levels of your students?
6. How many courses do you teach?
7. Which of your courses are vendor-created vs. teacher-created?
    a. A list is available for you to view that outlines the design of each course. (show teachers list and briefly explain if they are unaware)

Student Engagement in Online Courses

8. How do you define student engagement?
9. What is your idea of an actively engaged student?
10. Describe ways your students are engaged in the teacher-created course.
    a. Describe ways your students are engaged in the vendor-created course.
11. What opportunities are available for students to be engaged in your teacher-created course?
    a. What opportunities are available for students to be engaged in your vendor-created course?
12. What do you do to foster (encourage) student engagement in your courses?

13. Do you feel you have the ability to offer additional engagement opportunities in your teacher-created course? Why or why not?
    a. Can you offer an example?
    b. Do you feel you have the ability to offer additional engagement opportunities in your vendor-created course? Why or why not?
    c. Can you offer an example?
14. How do you encourage students to interact in online activities?
15. Do you feel you have the freedom to change course assignments and other course elements to better support student learning and engagement? Why or why not?
16. Do you feel you have the knowledge to design or create engaging activities in your course? Why or why not?
17. Can you describe an area of engagement in online courses that you would like to learn more about?
18. Do you seek opportunities to discuss implementing engaging activities with your colleagues? Why or why not.
19. With whom do you discuss implementing engaging activities in your courses? Why?
20. How often do you and your colleagues discuss student engagement in the course?
21. Does the design of the course influence the implementation of student engagement opportunities? Why or why not?
22. Do you notice a difference in student engagement activities in a vendor-created vs. a teacher-created course? Explain.

Appendix C: Rubric for Assessing Interactive Qualities of Distance Courses (Roblyer Wiencke, 2003)

RUBRIC DIRECTIONS: The rubric shown has five (5) separate elements that contribute to a course's level of interaction and interactivity. For each of these five elements, circle a description below it that applies best to your course. After reviewing all elements and circling the appropriate level, add up the points to determine the course's level of interactive qualities (e.g., low, moderate, or high).

Low interactive qualities	1 – 9 points
Moderate interactive qualities	10 – 17 points
High interactive qualities	18 – 25 points

Element 1: Social/Rapport- Building Designs for Interaction

Low	Minimum	Moderate	Above Average	High	Score
The instructor does not encourage students to get to know one another on a personal basis. No activities require social interaction or are limited to brief introductions at the beginning of the course.	In addition to brief introductions, the instructor requires one other exchange of personal information among students, e.g., written bio of personal background and experiences.	In addition to providing for exchanges of personal information among students, the instructor provides at least one other in-class activity designed to increase communication and social rapport among students.	In addition to providing for exchanges of personal information among students and encouraging communication and social interaction, the instructor also interacts with students on a social/personal basis.	In addition to providing for exchanges of personal information among students and encouraging student-student and instructor-student communication and social interaction, the instructor also interacts with students on a social/personal basis.	
1 point	2 points	3 points	4 points	5 points	

Use the space provided to share examples or a brief rationale for your choice.

_____

_____

_____

Element 2: Instructional Designs for Interaction

Low	Minimum	Moderate	Above Average	High	Score
Instructional activities do not requires two-way interaction between instructor and students; they call for one-way delivery of information (e. g., instructor lectures, text delivery) and student products based on the information.	Instructional activities require students to communicate with the instructor on an individual basis only (e. g., asking/responding to instructor questions).	In addition to requiring students to communicate with the instructor, instructional activities require students to communicate with one another (e. g., discussions in pairs or in small groups).	In addition to requiring students to communicate with the instructor, instructional activities require students to develop products by working together cooperatively (e. g., in pairs or in small groups) and sharing feedback.	In addition to requiring students to communicate with the instructor, instructional activities require students to develop products by working together cooperatively (e. g., in pairs or in small groups) and share results and feedback with other groups in the class.	
1 point	2 points	3 points	4 points	5 points	

Use the space provided to share examples or a brief rationale for your choice.

graphics).	asynchronous exchanges of information (text and graphics).	synchronous exchanges of primarily written information.	written information additional, technologies (e. g., teleconferencing) allow one-way visual and two-way voice communications between instructor and students.	way video or videoconferencing technologies allow synchronous voice and visual communications between instructor and students and among students.	
1 point	2 points	3 points	4 points	5 points	

Use the space provided to share examples or a brief rationale for your choice.

Element 4: Evidence of Learner Engagement

Low	Minimum	Moderate	Above Average	High	Score
By end of course, most students (50%-75%) are replying to messages from the instructor, but only when required; messages are short and sometimes unresponsive to topics.	By end of course, most students (50%-75%) are replying to messages from the instructor and other students, both when required and on a voluntary basis; replies are short but usually responsive to topics.	By end of course, all or nearly all students (90%-100%) are replying to messages from the instructor and other students, both when required and voluntarily; replies are detailed and responsive to topics.	By the end of course, most students (50% - 75%) are both replying to and initiating messages, both when required and voluntarily; most messages are detailed and responsive to topics, but may be wordy and rambling.	By the end of course, all or nearly all students (90% - 100%) are both replying to and initiating messages, both when required and voluntarily; most messages are detailed and responsive to topics, and reflect efforts to communicate well.	
1 point	2 points	3 points	4 points	5 points	

Use the space provided to share examples or a brief rationale for your choice.

Element 5: Evidence of Instructor Engagement

Low	Minimum	Moderate	Above Average	High	Score
Instructor responds only randomly to student queries; responses usually take more than 48 hours; feedback is brief and provides little analysis of student work or suggestions for improvement.	Instructor responds to most student queries; responses usually are within 48 hours; feedback sometimes offers some analysis of student work and suggestions for improvement.	Instructor responds to all student queries; responses usually are within 48 hours; feedback sometimes offers some analysis of student work and suggestions for improvement.	Instructor responds to all student queries; responses usually are prompt, i.e., within 24 hours; feedback always offers detailed analysis of student work and suggestions for improvement.	Instructor responds to all student queries; responses are always prompt, i.e., within 24 hours; feedback always offers details analysis of student work and suggestions for improvement, along with additional hints and information to supplement learning.	
1 point	2 points	3 points	4 points	5 points	

Use the space provided to share examples or a brief rationale for your choice.

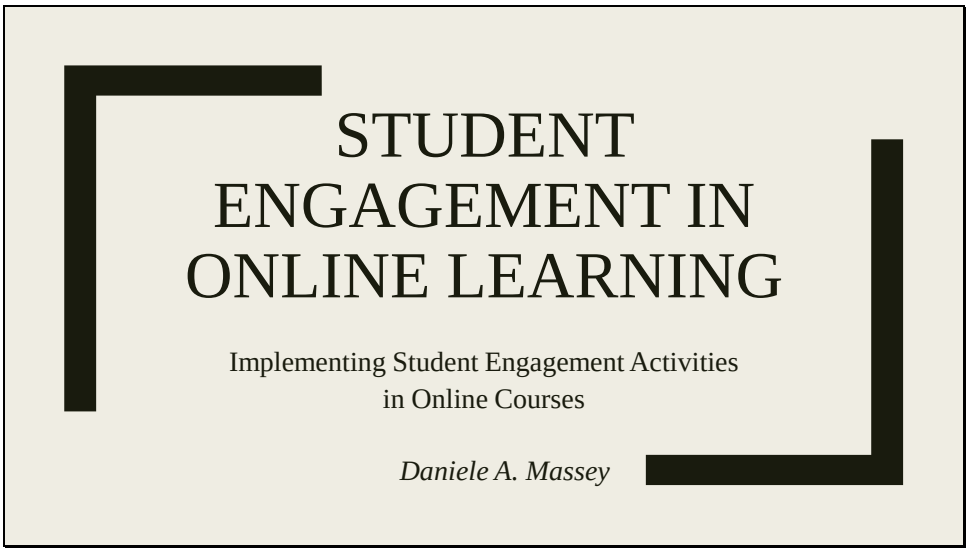
Total Points:					

IRB approval was granted to use the rubric based on proof of three attempts to contact the author across a reasonable time period. IRB approval number is #10-19-17-0460784.

Copies of proof of contact submitted to IRB consisted of the following. Request for use via email was sent to Dr. Roblyer on March 8, 2017; phone call to the university on March 15, 2017 to speak to person in Graduate Studies (Gretchen Downing), follow-up email sent March 16, 2017 to Jackielyn Dixon-Guyah (Department); phone call and email to the Human Resource Department on March 20, 2017 to Lesliee Whitfield. Response has not been received due to the professor no longer working at the university.

Appendix D: The Project

Slide 1

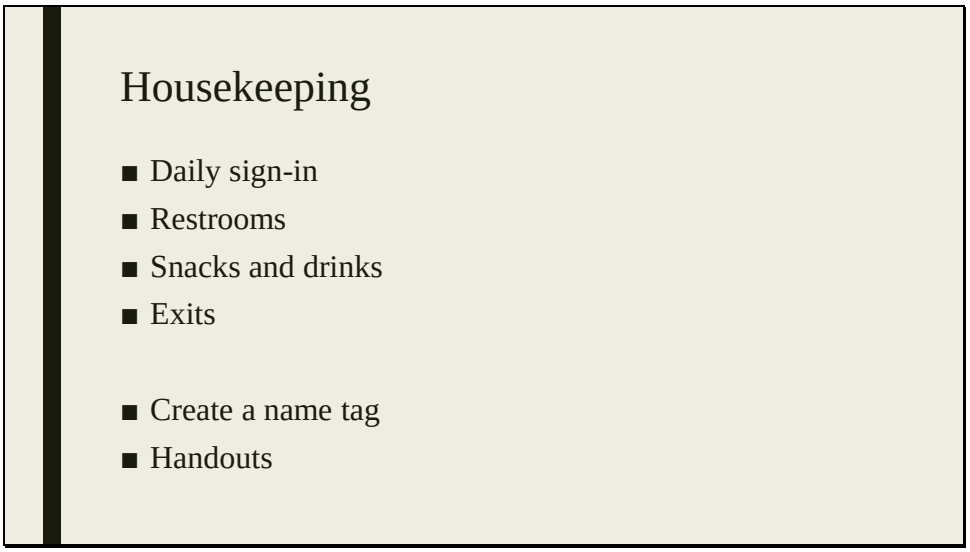


Note to Presenter:

Welcome participants to the professional development three-day workshop.
Explain: The purpose of the workshop is to create an action plan to increase student engagement activities in online courses. We will work collaboratively over the next three-days to increase understanding of student engagement and how it effects online learning.

2 -3 minutes

Slide 2



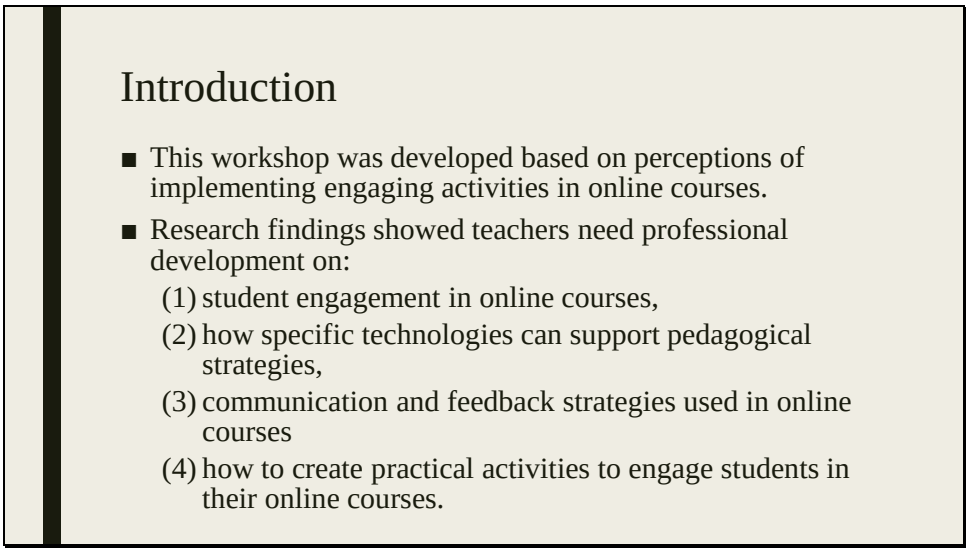
Note to Presenter:

Explain general information for participants about signing in, restrooms, food and drinks, and in case of an emergency locate the exits.

Ask participants to create a name tag at their tables with the markers and get a folder of handouts from the middle of the table.

2 -3 minutes

Slide 3

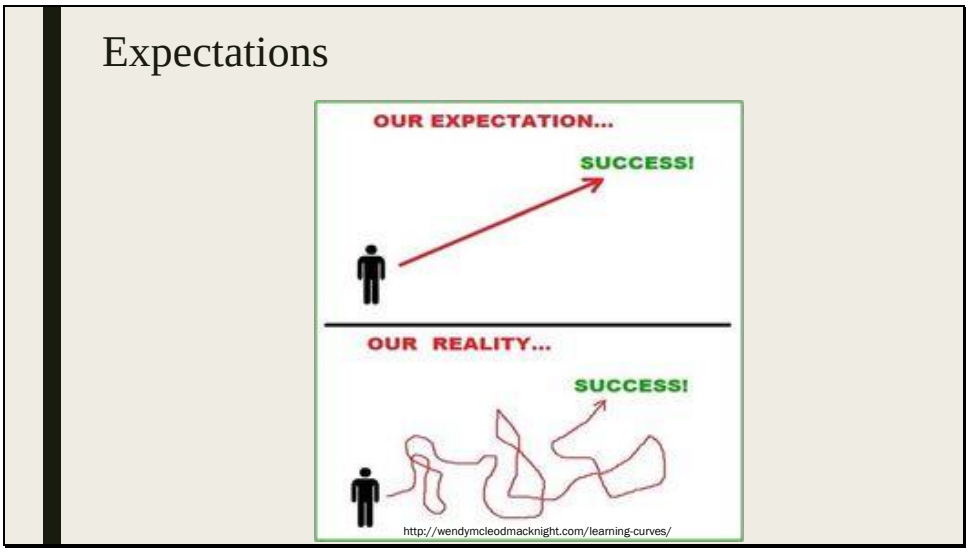


Note to Presenter:

Introduce yourself and give a brief overview of the research study. Explain the research findings. The perceptions are of teachers in an online high school teaching a variety of subject areas and grade levels.
Through semi-structures interviews and assessments of the online courses, participants shared the need for time to collaborate on various components their online courses. These areas of need are a more thorough understanding of (1) student engagement in online courses, (2) how specific technologies can support pedagogical strategies, (3) communication and feedback strategies used in online courses, and (4) how to create practical activities to engage students in their online courses. A three-day professional development workshop consisting of synchronous and asynchronous components was selected to address the problem of this study. A blended learning approach to the professional development will support the modeling of online best practices while also giving participants the opportunity to gain insight as an online learner. Teachers, administrators, and support staff will work together to build collegial relationships within the school.

5 – 7 minutes

Slide 4



Note to Presenter:

Allow participants a few seconds to look at this image and explain the path to success looks different for every person and the reality compared to the plan may look different.

Ask participants to take 2 -3 minutes to write down at least two expectations they have for the three-day workshop on a post-it note. Write one expectation per post-it note.

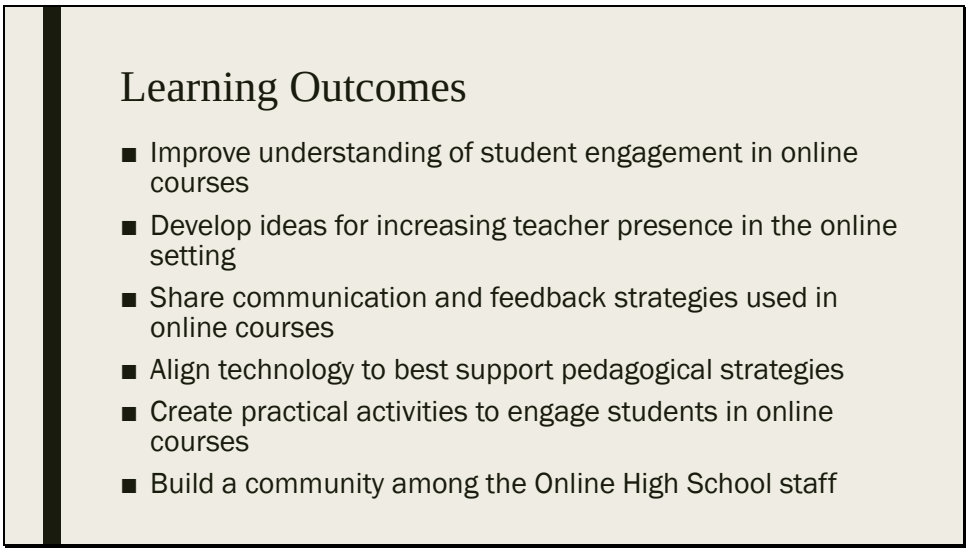
Then ask participants to share their expectations with the person next to them at their table and place the post-it notes on chart paper at the back of the room.

Explain to participants you will ask them throughout the workshop to revisit the expectations and if one has been met you will ask them to move it to the area of the chart that says “success”.

10 minutes

Image: Macknight, W. M. (2018). http://wendymcleodmacknight.com/learning-curves/

Slide 5

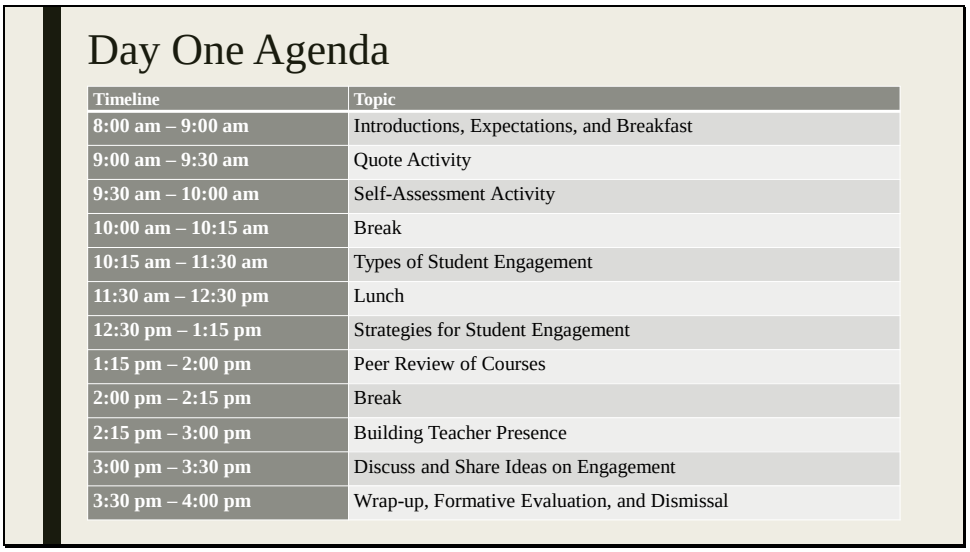


Note to Presenter:

Review the learning outcome of the workshop and ask participants to discuss at their table group how these are similar or different to their own expectations.

5 – 7 minutes

Slide 6

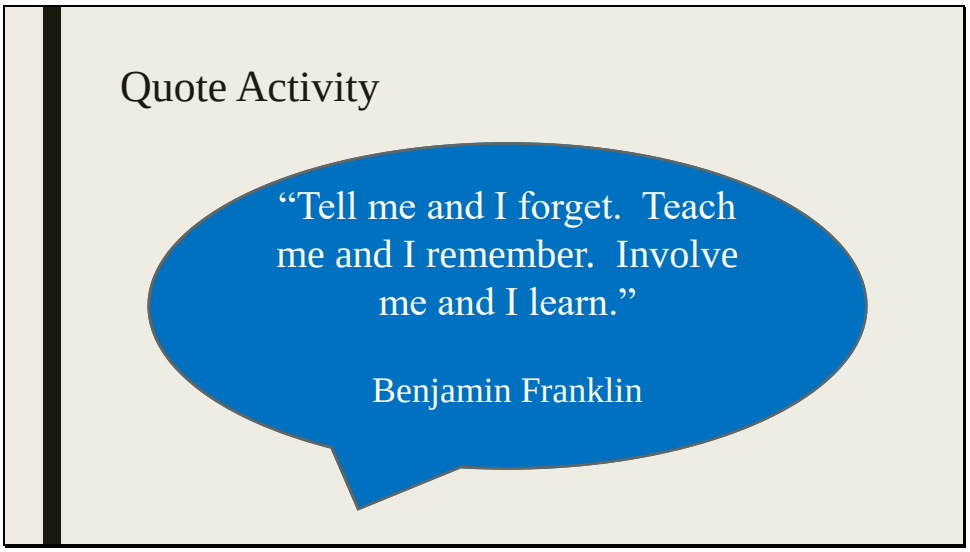


Note to Presenter:

Give an overview of the day. Ask for a volunteer to remind you of the times for breaks, lunch, and dismissal.

2 – 3 minutes

Slide 7



Note to Presenter:

The goal of this activity is meant to get participants interacting with each other and to gather information on the participants thinking regarding student engagement and online learning.

Explain: On the table is a list of quotes about student engagement and learning. Choose the quote that resonates with you the most and then go to the quote you chose that is hanging on the wall. Once all participants have chosen a quote the facilitator will ask participants to share why the quotes resonates with them. Participants may share personal stories.

Possible quotes:
"Great teachers focus not on compliance, but on connections and relationships “P.J. Caposey
"The students who are most engaged are the ones who think they matter to the teacher" Dr. Russell Quaglia
"Our kids do not want to be taught, they want to be moved... focus a little less on figuring out how you will teach them, and a little more on how you will inspire them." Paul Bogush
"I'm continually learning new ways to do what's best for my students, not what's best or easiest for me." Tony Kline PhD

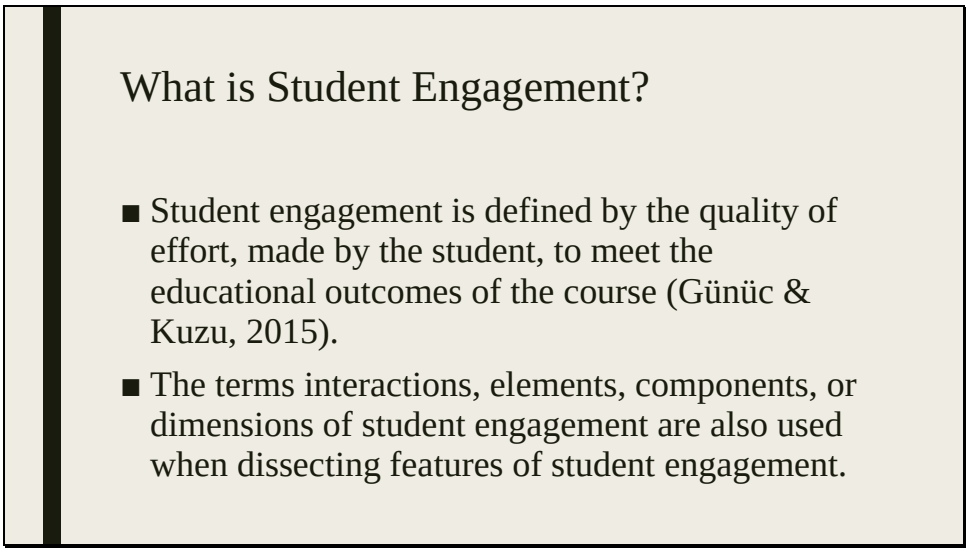
“Give a kid a grade and the learning stops. Give feedback and extending questions and the learning goes deeper.” Justin Tarte

"Student motivation hinges on their personal success, not on our approval.” Nathan Lang, Ed.D.

"If more teachers used music to engage and educate students; students would remember the lesson for as long as they remember the song." Nicholas A. Ferroni

"Do you teach students who are not motivated? The truth is, all students are motivated, just not by school." Barbara Blackburn

Slide 8

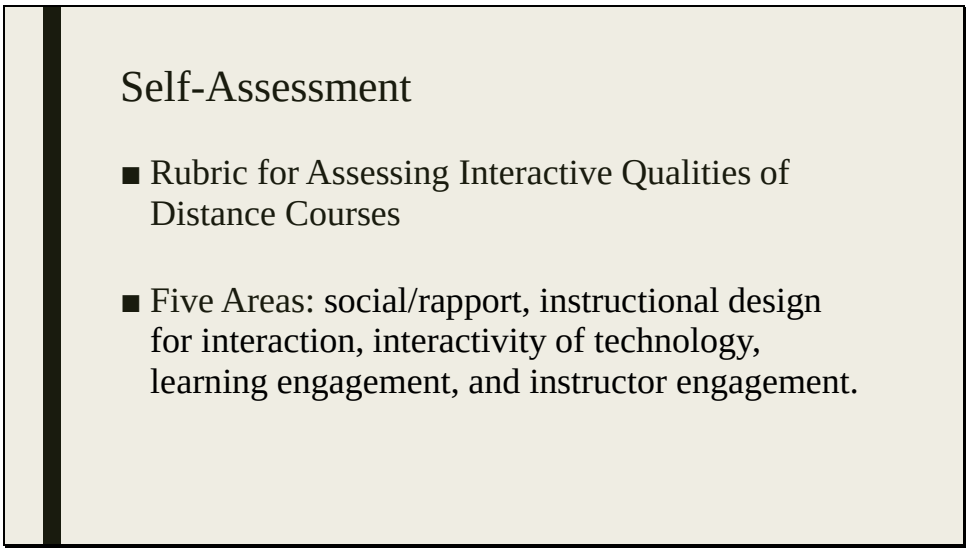


Note to Presenter:

Briefly share the various definitions of student engagement. Reference points the participants made during the quote activity – examples or ideas.

There are many definitions of student engagement and we will discuss the various types throughout the morning session. It is agreed upon that student engagement is a critical component to student learning. Student engagement is used a predictor of academic achievement and promotes academic, behavioral, and emotional success in school (Guvenc, 2015; Harbour, Evanovich, Sweigart, & Hughes, 2015).

Slide 9



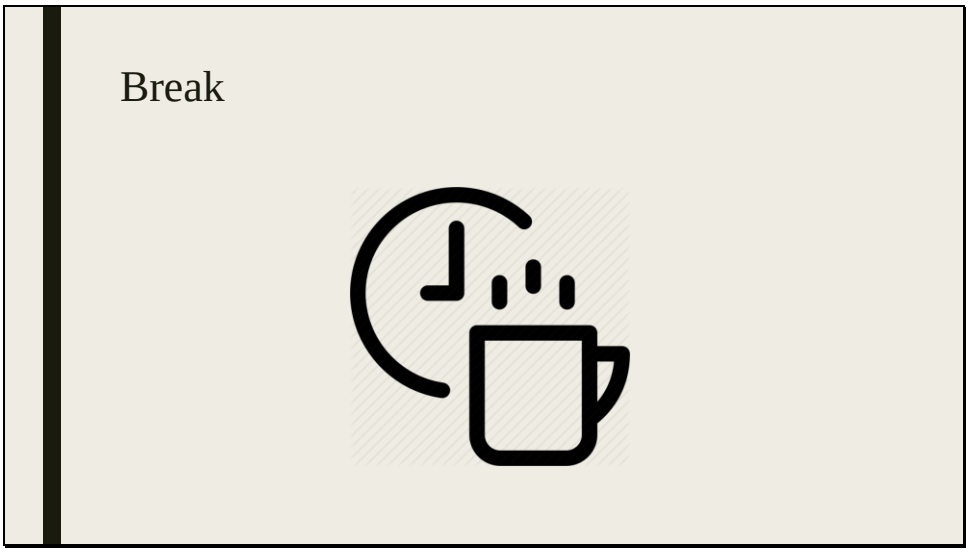
Note to Presenter:

Ask participants to look at the Rubric and ask them to self-assess their courses (all teacher or vendor-created courses). There is space for participants to write notes or examples on why they put the rating. Ask participants to do this by themselves. If there is a question you will answer, but throughout the workshop we will investigate these areas more closely and you will self-assess again at the end of the three days.

Background information to share: Roblyer and Wiencke's (2004) Rubric for Assessing Interactive Qualities of Distance Courses (RAIQDC) measures student engagement specific to online courses. The term interaction can be exchanged with engagement in an online environment due to the definition. The rubric contains five aspects of engagement: social/rapport, instructional design for interaction, interactivity of technology, learning engagement, and instructor engagement.

30 minutes

Slide 10

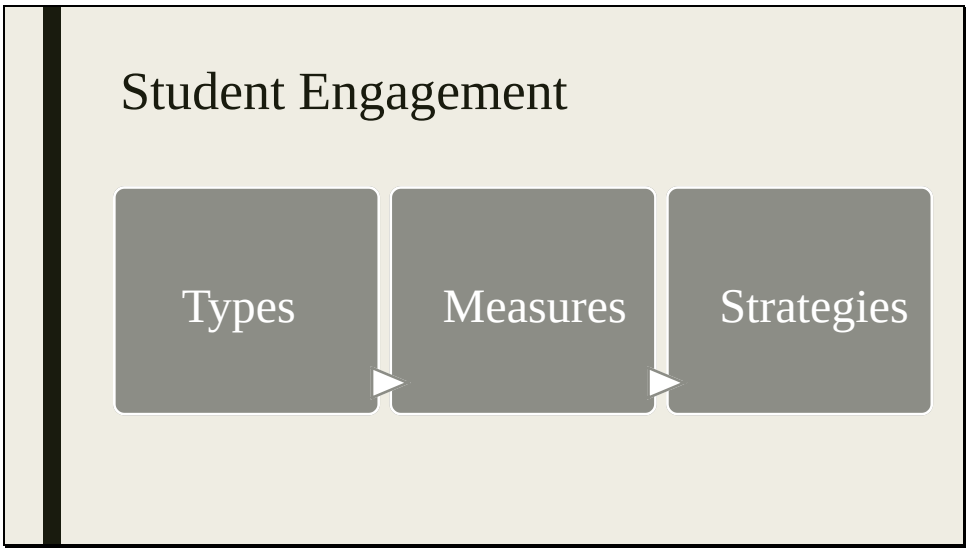


Note to Presenter:

15 minutes for a break

Image found at iconfinder.com

Slide 11

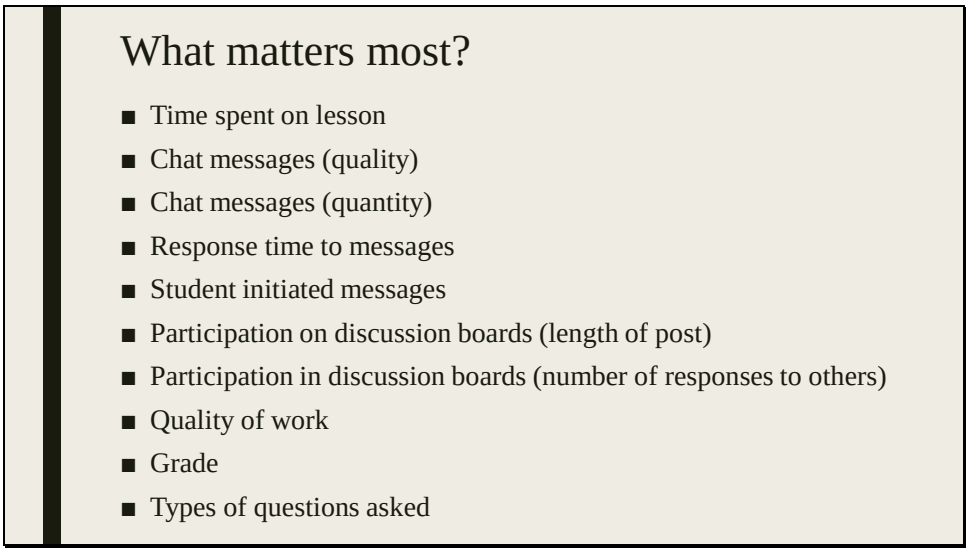


Note to Presenter:

We are now going to look more closely at student engagement in three areas: types, how to measure it, and various strategies.

1 minute

Slide 12



Note to Presenter:

First, we are going to do an activity at your table.

Here is a list of ways students engage in online courses. At your table is an envelope with these items on note cards. (Presenter will have to create the cards prior to the workshop). Add two blank cards.

Ask participants to discuss at their table to visually display the items in a way that represents what matters most in your online course. With your group you will have to agree on the visual display. There are two blank cards for you to use in your own way as a group. You will have 10 minutes to discuss and create your visual display.

This is an open-ended task and participants may ask for more clarity. Let the participants struggle with the task. Let the groups share what was frustrating or worked well.

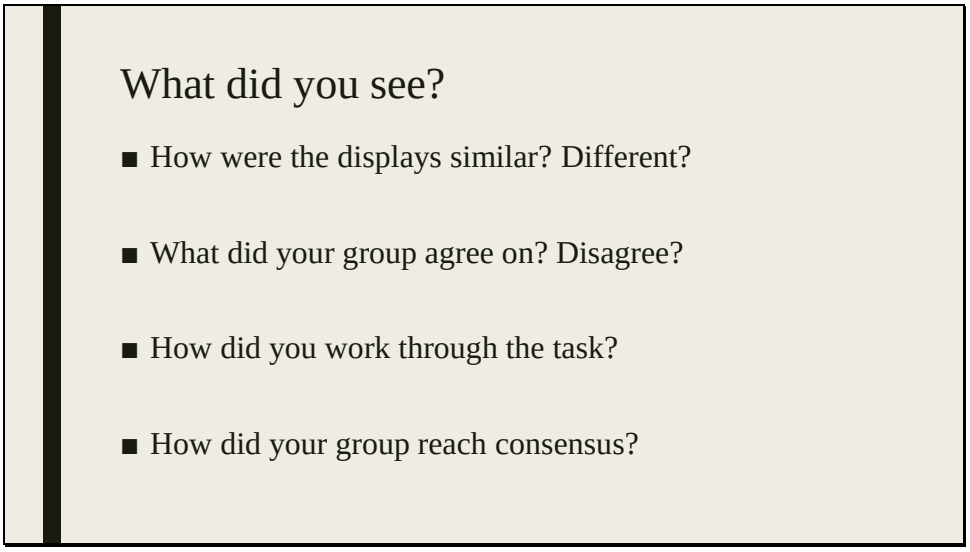
Remind participants of the time at 5 minutes left, 2 minutes left, and 1 minutes left.

At the end, ask participants to walk around to the other tables and look at what the other groups displayed. 5 minutes

As participants return to their seats, go to the next slide.

15 minutes

Slide 13



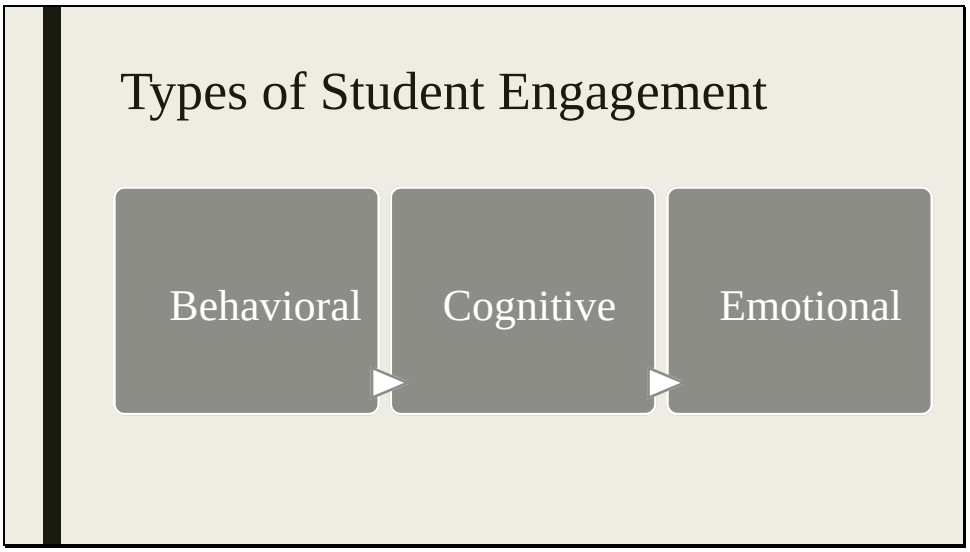
Note to Presenter:

Ask participants to share their thoughts on the questions displayed.

The goal is to role model an engaging activity through the types of engagement and gain perspective on the what participants view as engagement.

5 minutes

Slide 14

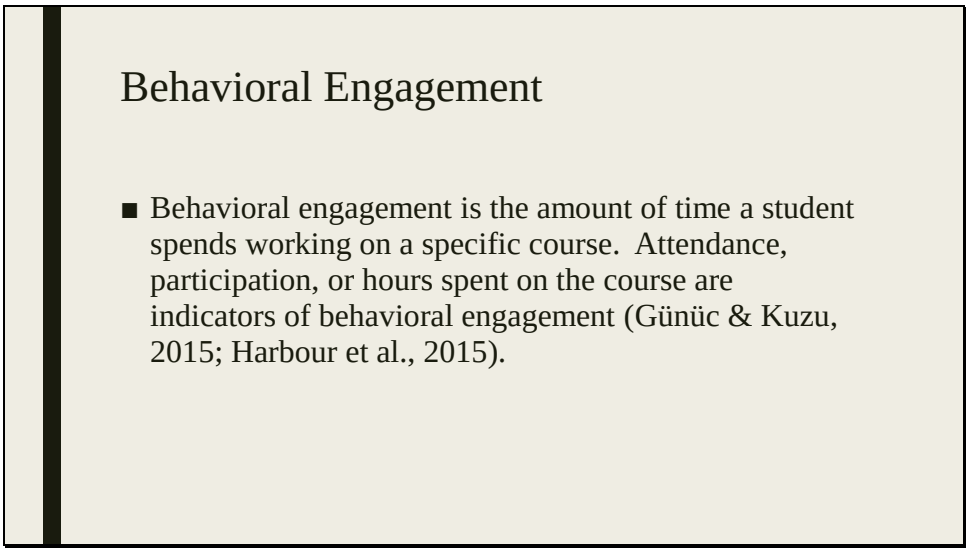


Note to Presenter:

We are now going to look more closely at student engagement in three areas: types, how to measure it, and various strategies.

1 minute

Slide 15



Note to Presenter:

Show the definition of behavioral engagement and then ask participants to write down two – three things in their class that support behavioral engagement, such as a time log or weekly check-ins. Participants do not need to share currently.

3 – 5 minutes

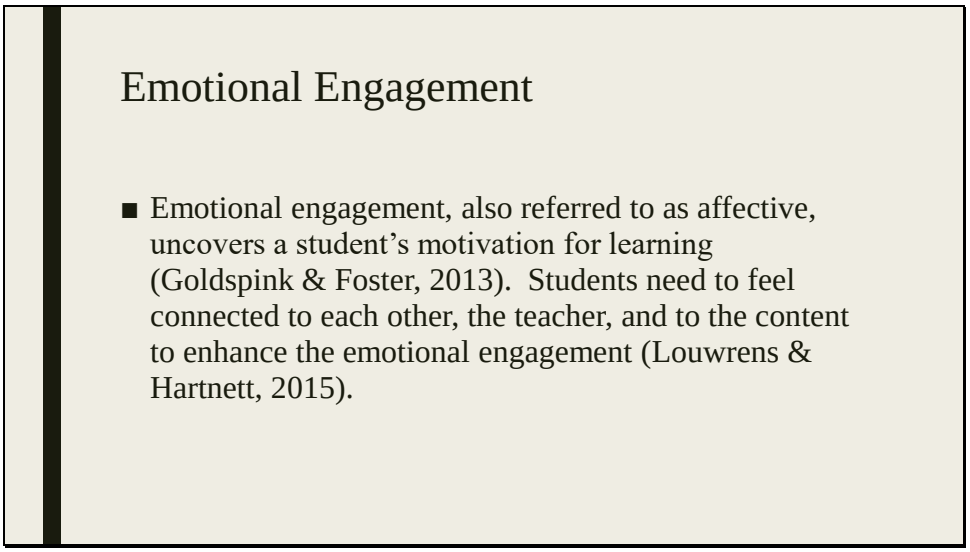
Slide 16

Note to Presenter:

Show the definition of behavioral engagement and then ask participants to write down two – three things in their class that support behavioral engagement, such as a time log or weekly check-ins. Participants do not need to share currently.

3 – 5 minutes

Slide 17

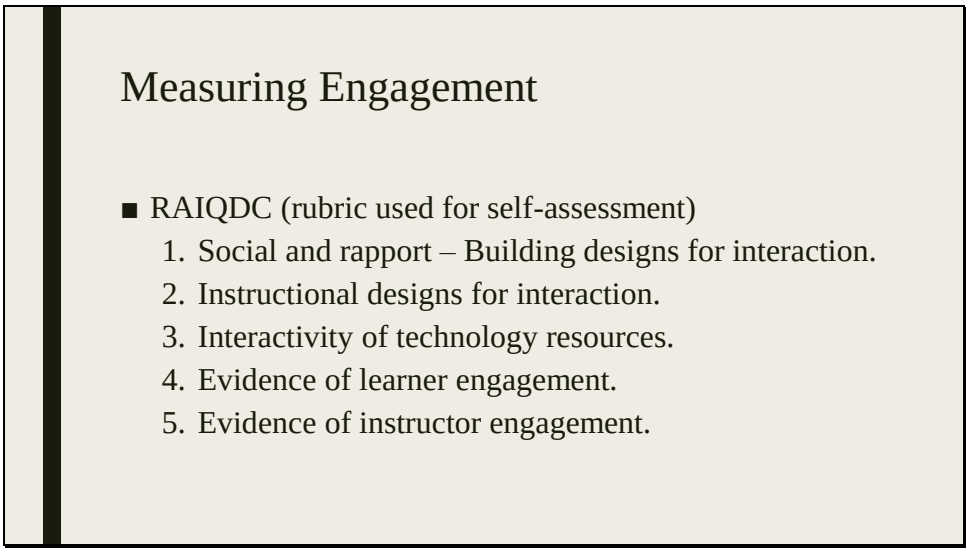


Note to Presenter:

Show the definition of behavioral engagement and then ask participants to write down two – three things in their class that support behavioral engagement, such as a time log or weekly check-ins. Participants do not need to share currently.

3 – 5 minutes

Slide 18



Note to Presenter:

Measuring engagement is a difficult challenge due to the various definitions. In an online setting, the term interaction is interchangeable with engagement.

Let's explore the 5 areas of the rubric you used for the self-assessment. At the time you had a lot of questions about the meaning of the terms and what was meant, so let's take time to align our thinking with the terminology.

Please choose one element of the rubric to explore. Go to the designated table for that element.

Take 5 minutes to look through it reflectively alone. Write down notes about the element, such as words you are not sure of the meaning or items that could be interpreted differently.

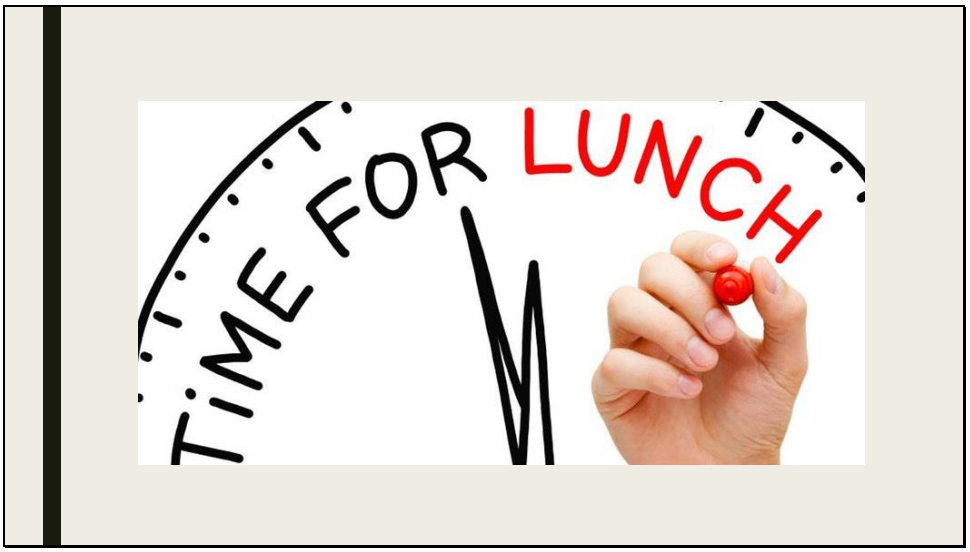
During the next 10 minutes, ask the groups to share their thoughts and discuss in the group.

Next, what types of engagement (behavioral, cognitive, emotional) can you expect in each element? Make a list of concrete examples in your courses. 10 minutes

Finally, in the last 15 minutes we will share an overview of each element and then discuss how we can support growth in that area of interactivity and engagement.

40 minutes

Slide 19



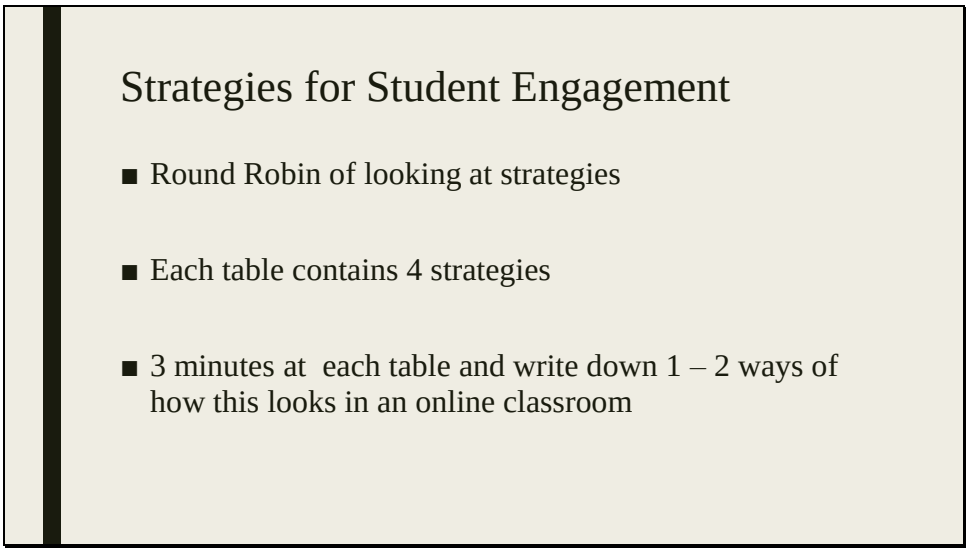
Note to Presenter:

Dismiss participants for lunch

1 hour

Image found at madetoflourish.org

Slide 20



Note to Presenter:

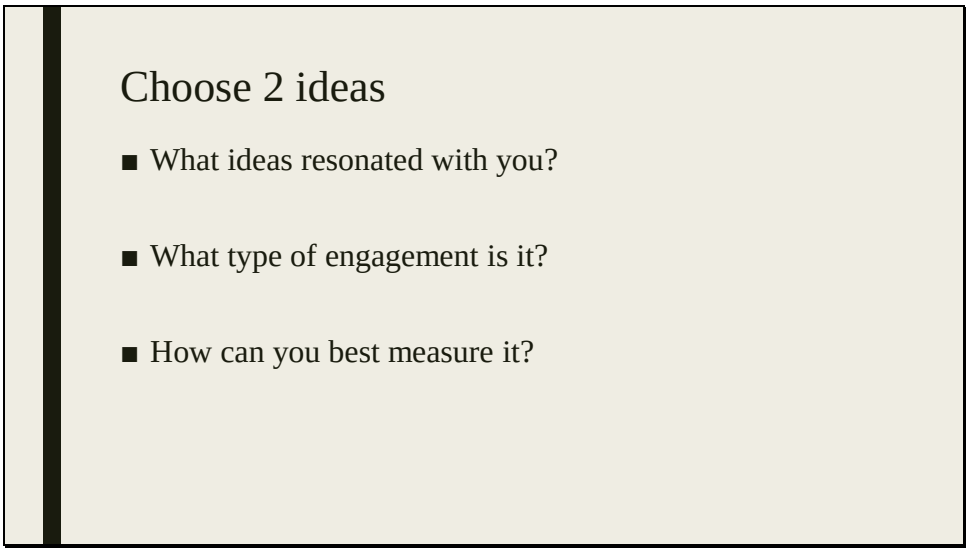
https://www.marzanoresearch.com/resources/tips/hec_tips_archive

This list contains 16 different ideas. Place 4 strategies and the description at 4 different tables. Ask the participants to look at the strategies on each table and suggest of what this looks like in an online classroom.

For example: Teachers can build choice into the process of designing standards for expected classroom behaviors. Offer choices in assignments or activities to show mastery of the standard.

16 - 20 minutes

Slide 21



Note to Presenter:

Ask participants to break into group with the ideas that resonated the most and brainstorm how to increase the engagement using that idea they chose.

Here is another resource list: http://www.esc5.k12.in.us/index.php/inside-wvec/documents-and-forms/student-engagement/835-instructionalstrategiestoincreasestudentengagement/file

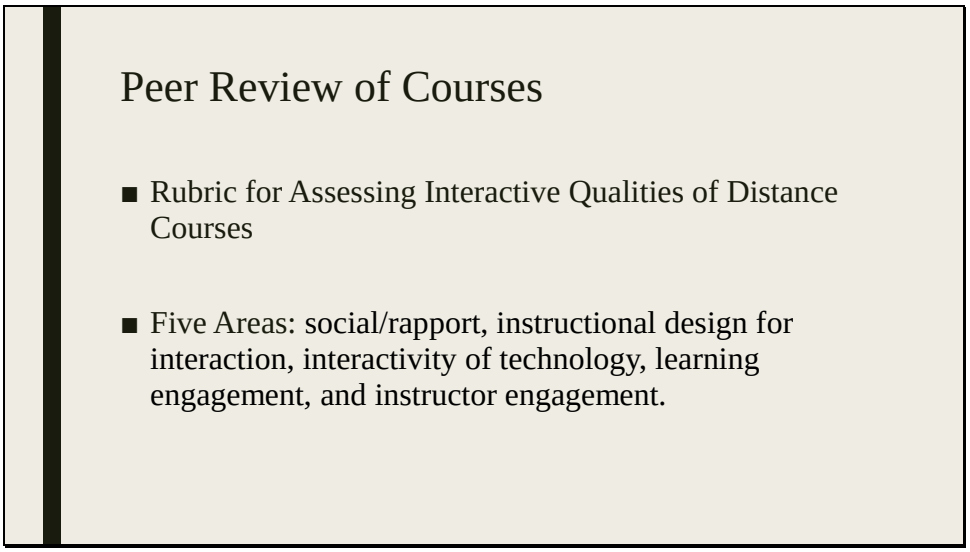
This list can be used to be more concrete in brainstorming strategies. Do not give to group at the beginning of the brainstorm. Wait at least 7 minutes and offer it as ideas.

10 – 15 minutes

Ask Groups to share their best idea.

10 minutes

Slide 22



Note to Presenter:

Ask participants to look at the same used during the self-assessment. Find a partner who you are willing to share and discuss your course with as a peer reviewer.

Give participants 30 minutes to look at each other's courses. Then, use the remaining time to share and discuss thoughts. (15 minutes per person)

Background information to share: Roblyer and Wiencke's (2004) Rubric for Assessing Interactive Qualities of Distance Courses (RAIQDC) measures student engagement specific to online courses. The term interaction can be exchanged with engagement in an online environment due to the definition. The rubric contains five aspects of engagement: social/rapport, instructional design for interaction, interactivity of technology, learning engagement, and instructor engagement.

1 hour

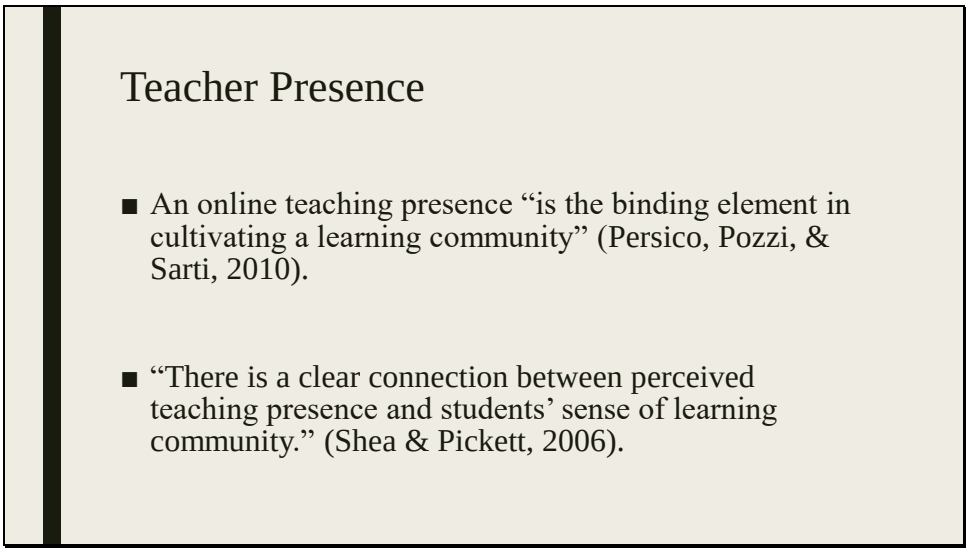
Slide 23

Note to Presenter:

15 minutes for a break

Image found at iconfinder.com

Slide 24



Note to Presenter:

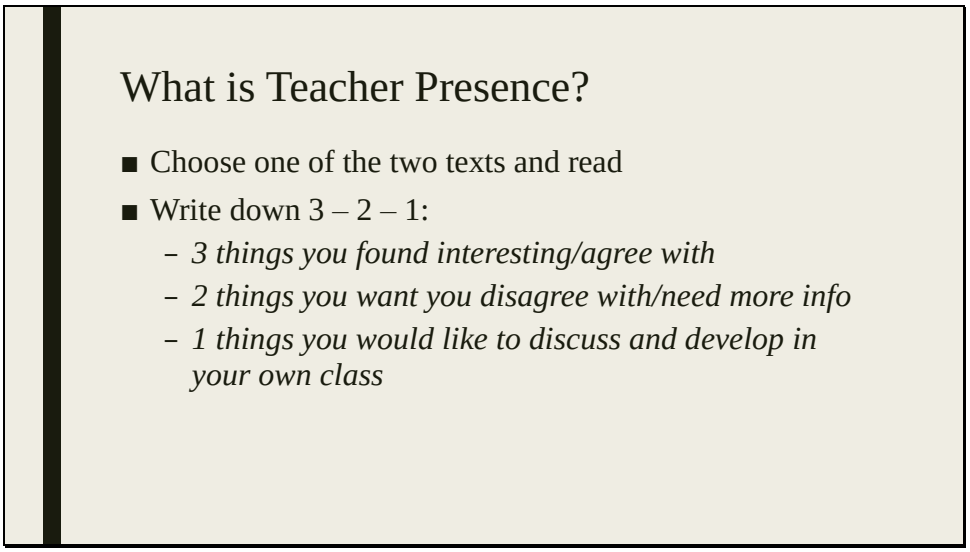
Ask participants to think for a moment about this quote.
Pose these questions.
What does teaching presence look like in your online course?
In your experience, what is the correlation between teacher presence and student success?

Ask participants to write down initial thoughts on a post it for their own reference.

Silence can be uncomfortable but try to give participants a full minute to consider these questions and the quote. No need for participant sharing yet, just trying to get everyone focused on the topic.

2- 3 minutes

Slide 25



Note to Presenter:

Texts to have available for participants:

https://vpadillavigil.wordpress.com/2014/07/30/meaningful-learning-teacher-presence-learner-engagement-and-in-the-online-classroom/

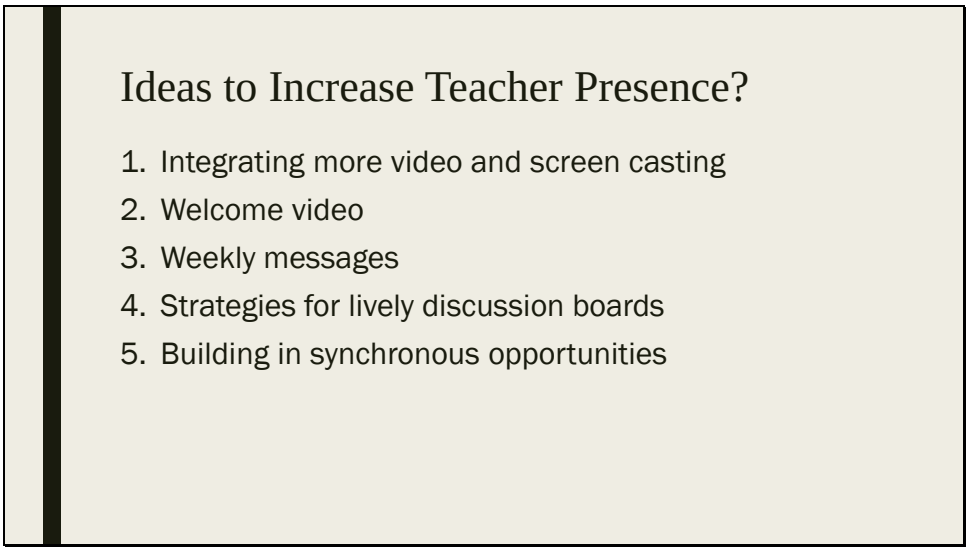
https://ccrc.tc.columbia.edu/media/k2/attachments/effective-online-instructor-presence.pdf

10 minutes to read and take notes
10 minutes to share in table groups
5 – 7 minutes to share ideas with the whole group

Ideas you are looking for:
Teacher voice?
Personality? Sense of humor?
Igniting a passion for your subject?
Building relationships with students?
Creating trust in your online learning community, both teacher to student and peer to peer?

If teacher presence is an important factor and understand why we should work on developing it in our online courses, then the next step is to consider what exactly it looks like.

Slide 26

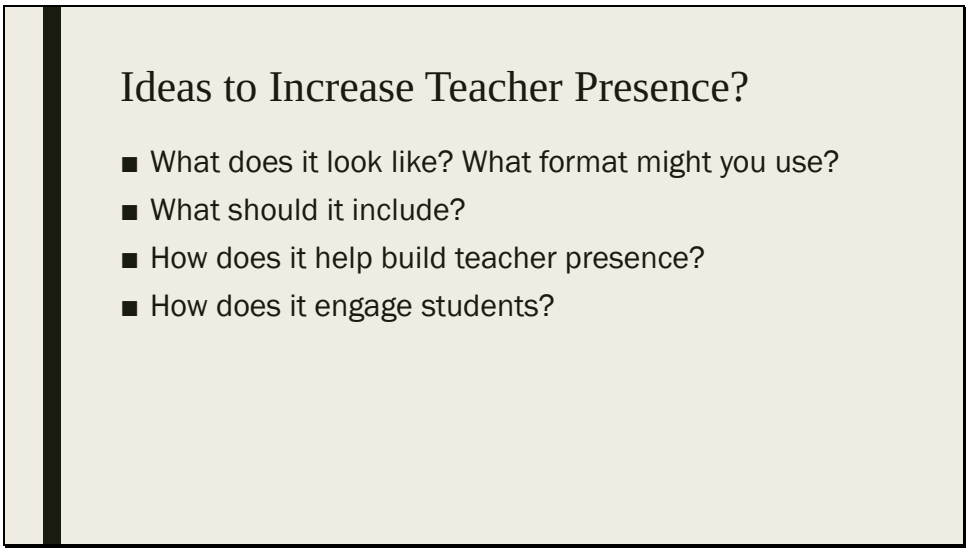


Note to Presenter:

Ask the group to choose one of the five areas listed. Place numbers 1 – 5 around the room for participants to move to that area. Give participants 10 minutes to discuss and generate ideas.

15 minutes

Slide 27



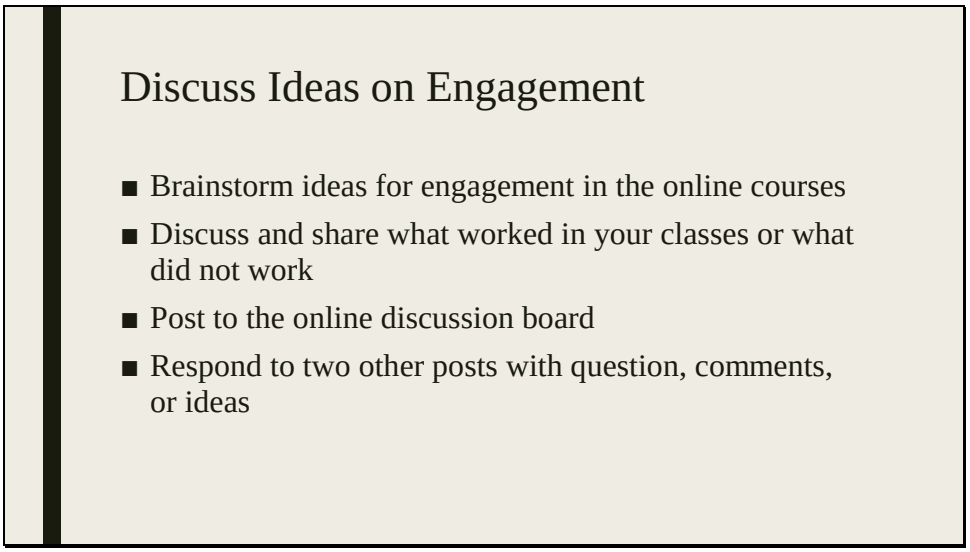
Note to Presenter:

Generate ideas about your topic considering these questions:

- Integrating more video and screen casting
- Welcome video
- Weekly messages
- Strategies for lively discussion boards
- Building in synchronous opportunities

15 minutes

Slide 28



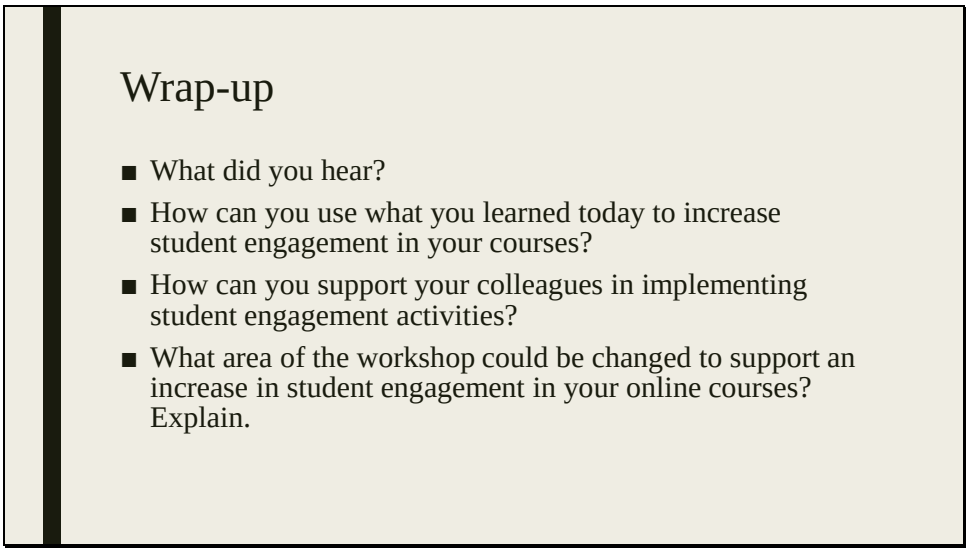
Note to Presenter:

Ask participants to work with an elbow partner to review ideas that have been shared on teacher presence. Brainstorm ideas for what has worked in your own classes. Share what has worked or not worked and why. Think of ideas you have wanted to do or heard during the training.

Post to the workshop discussion board and respond to other posts.

30 minutes

Slide 29



Note to Presenter:

Wrap-up any activities currently in progress. Ask participants for any clarifying questions on the day's learning. Then ask participants to visit the expectation they wrote at the beginning of the day. Have any of those expectations been met? If so, participants may move their post-it note to the area of the room that indicates "met expectations". Then ask participants to return to their seats.

Ask participants to take a blank sheet of paper and divide it into 4 quadrants. Use the next 10 minutes to reflect on today's learning and answer each of the four questions. One answer per question in each quadrant. Please place your papers in the middle of the table and I will collect them when you are finished.

Offer any final thoughts for the day and thank participants prior to dismissal.

30 minutes

Slide 30

Note to Presenter:

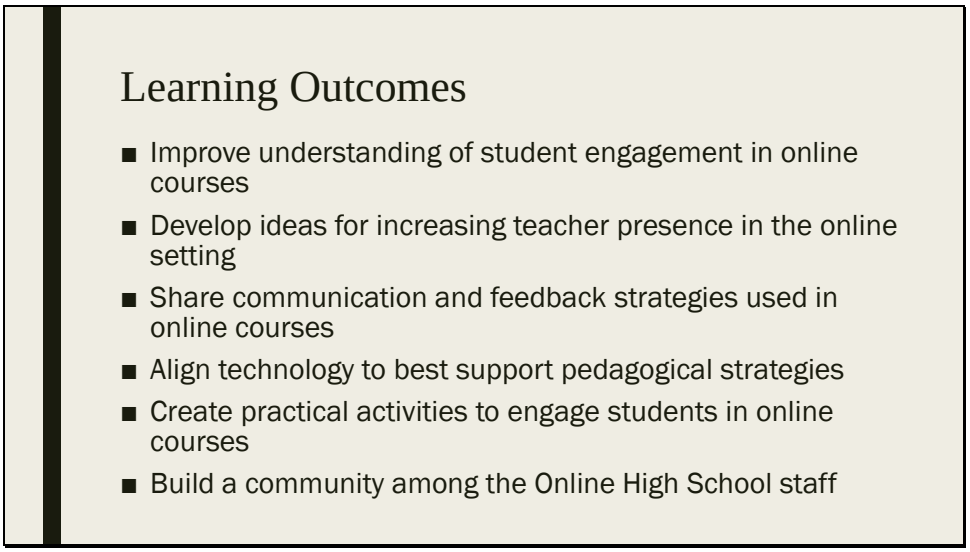
Welcome participants as they are seated. Share a thought about your favorite quote from yesterday or an "AHA" thought you had from the first day of learning. Ask if there are two people who would also like to share.

Images of non-21st century or online learning are used to add to the comfort and nostalgia of teaching.

2 – 3 minutes

Image found at http://www.thebluediamondgallery.com/typewriter/w/welcome.html

Slide 31

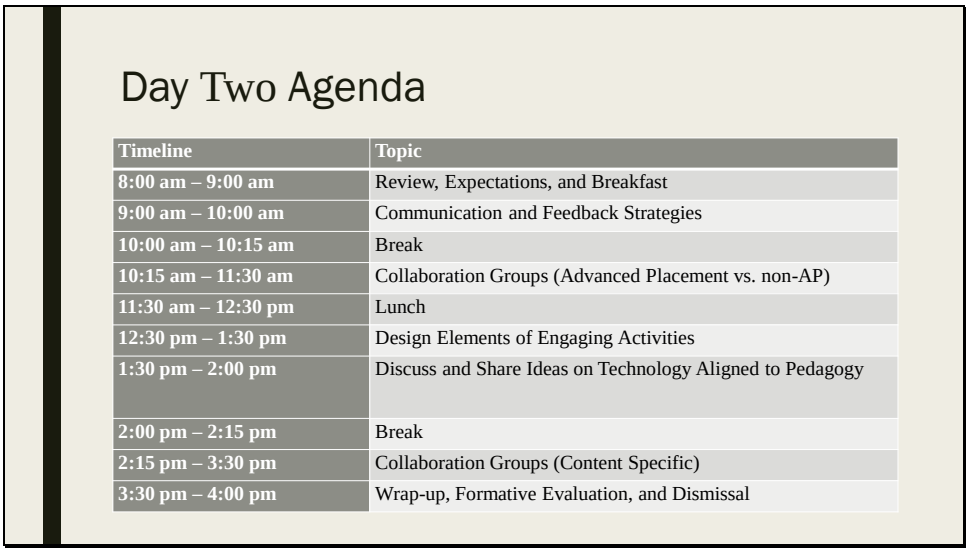


Note to Presenter:

Review the learning outcome of the workshop and ask participants to discuss at their table group how these are similar or different to their own expectations.

2- 3 minutes

Slide 32

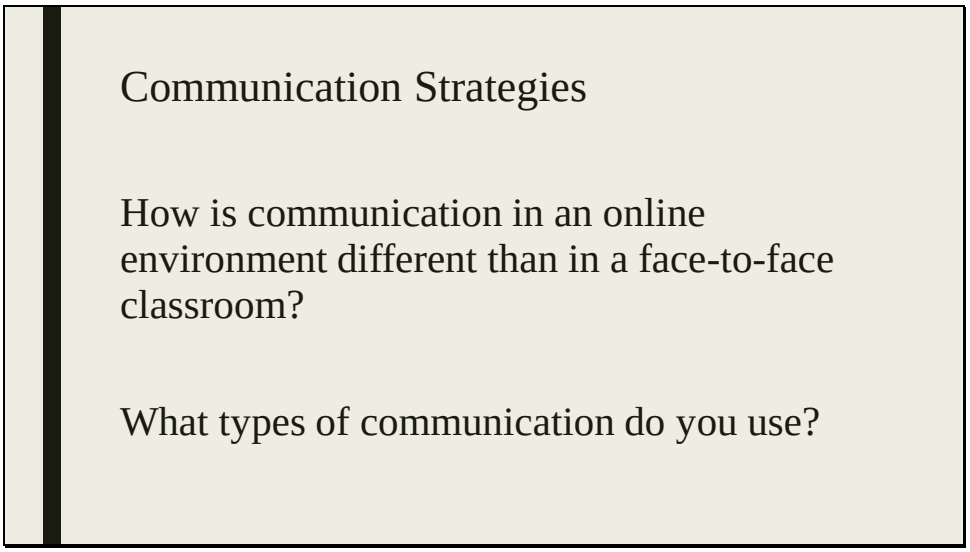


Note to Presenter:

Give an overview of the day. Ask for a volunteer to remind you of the times for breaks, lunch, and dismissal.

2 – 3 minutes

Slide 33



Note to Presenter:

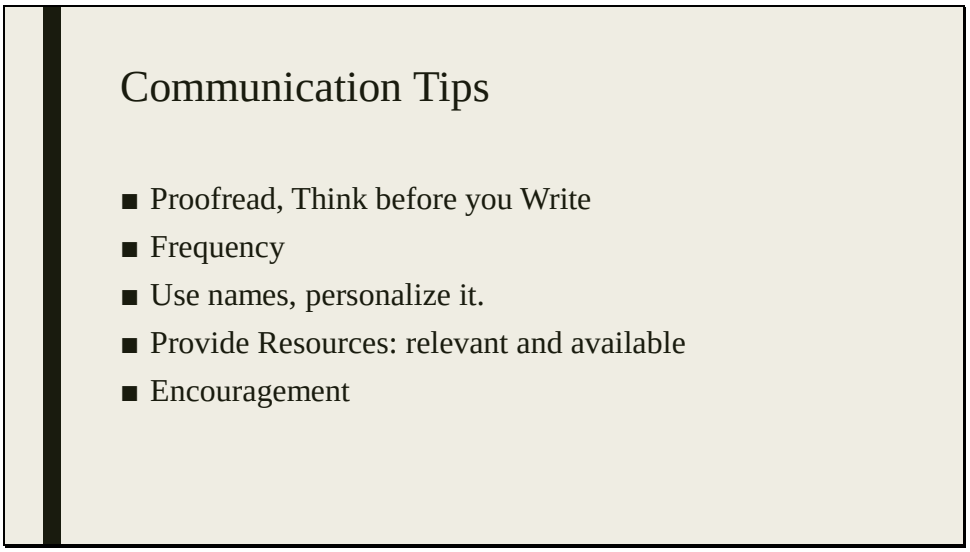
Ask participants to shout out ideas. There is not right or wrong answer. One example may be “it is mostly written”.

Make a list of all the types of communication types: phone, email, video conferencing, audio messages, and instant messages.
Types: written, audio, video.

Pose this question to the tables:

2 – 3 minutes

Slide 34



Note to Presenter:

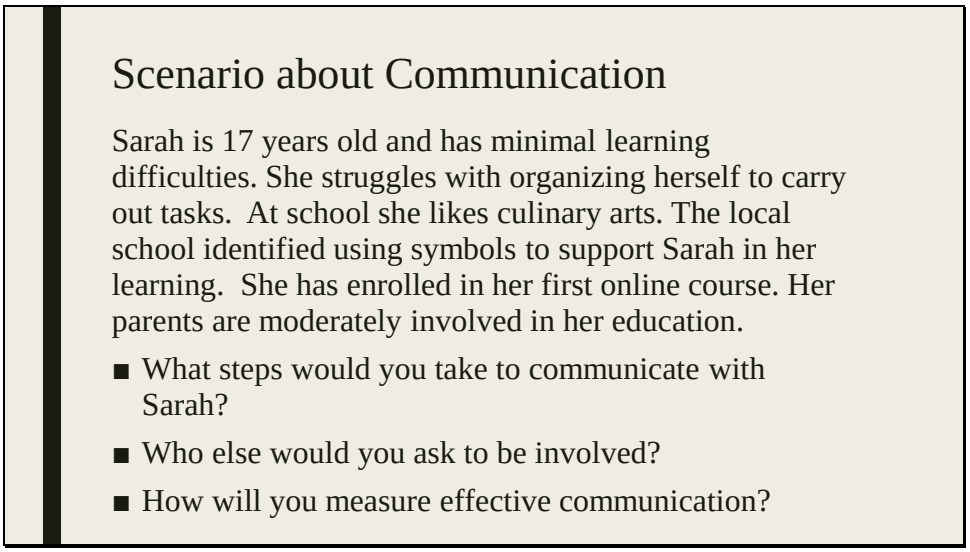
Ask participants to look at this list: What should be added? How do you do this in your online course?

What are areas for improvement?

https://elearningindustry.com/10-best-practices-effective-online-teacher

10 minutes

Slide 35



Note to Presenter:

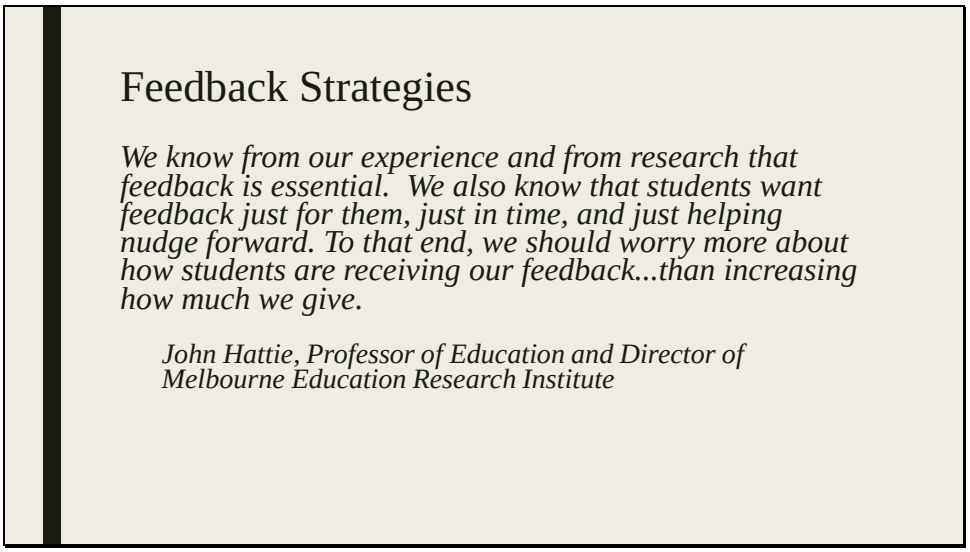
Ask table groups to read this scenario and develop a communication plan for Sarah. What should you consider in a communication plan? Who will be involved?

Share one or two points with the whole group.

15 – 17 minutes

Scenario adapted from:
https://www.thecommunicationtrust.org.uk/media/363742/examples_goodpractice_casestudies.pdf

Slide 36

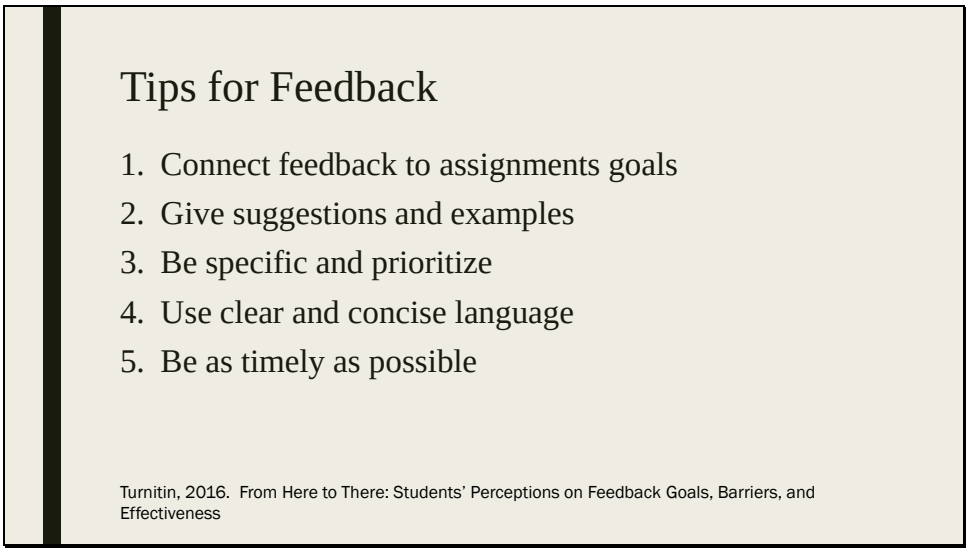


Note to Presenter:

Introduce the new topic of looking at feedback.

1 minute

Slide 37



Note to Presenter:

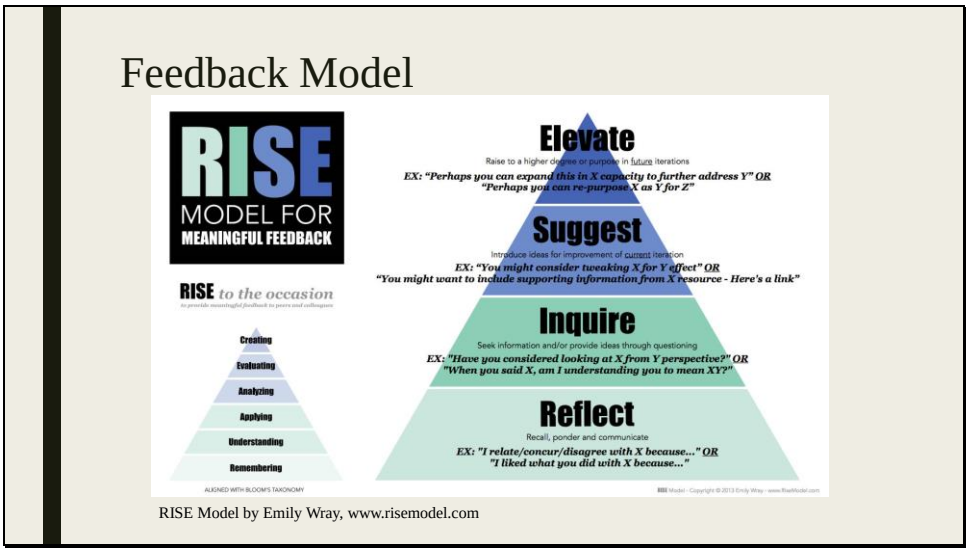
Tips for feedback: From Here to There: Students' Perceptions on Feedback Goals, Barriers, and Effectiveness

Ask participants to look at this list: What should be added? How do you do this in your online course?

What are areas for improvement?

10 minutes

Slide 38



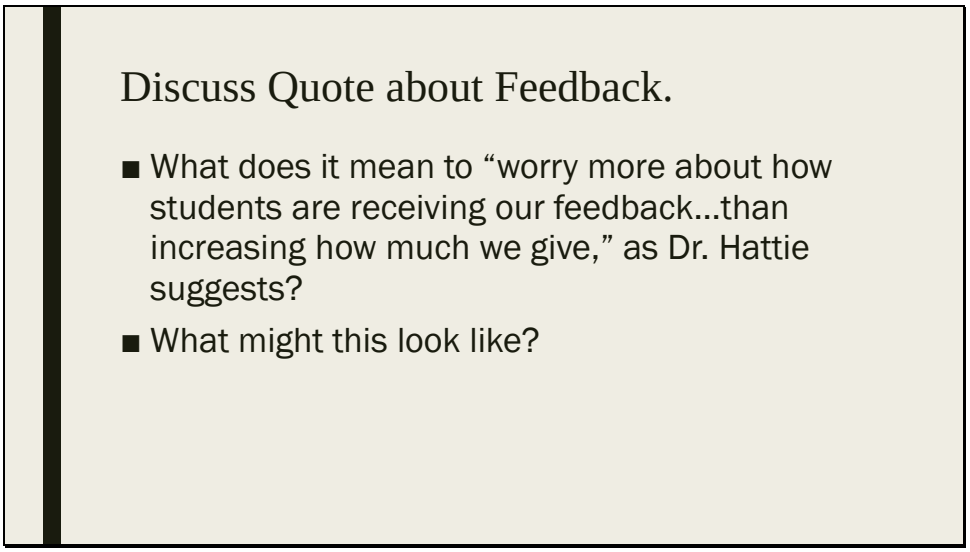
RISE Model by Emily Wray, www.risemodel.com

Note to Presenter:

Here is a model that can be used for feedback aligned to Blooms taxonomy. Look at each area and solicit ideas and examples from the participants.

10 minutes

Slide 39



Note to Presenter:

You may have to show the quote again to remind participants.

The goal is to gather ideas on feedback and share one or two per table.

10 minutes

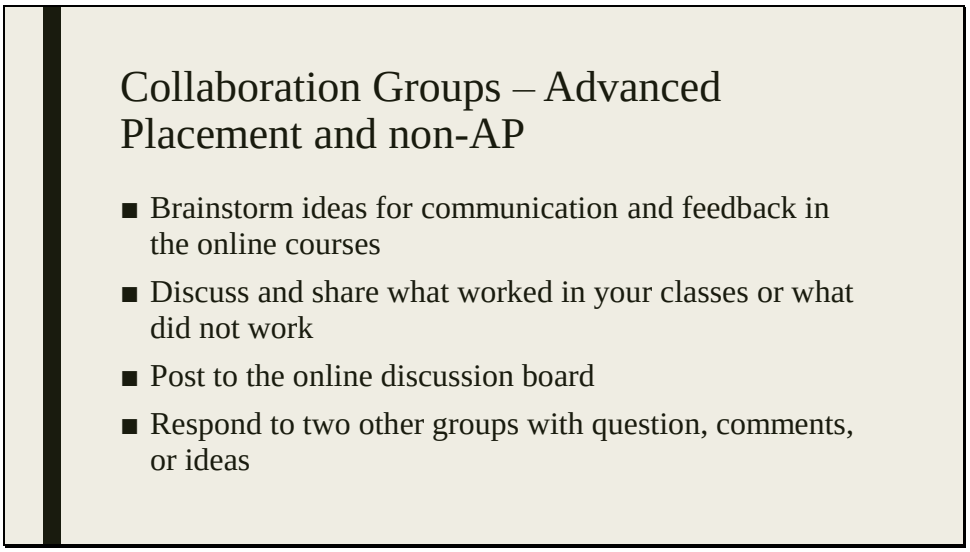
Slide 40

Note to Presenter:

15 minutes for a break

Image found at iconfinder.com

Slide 41

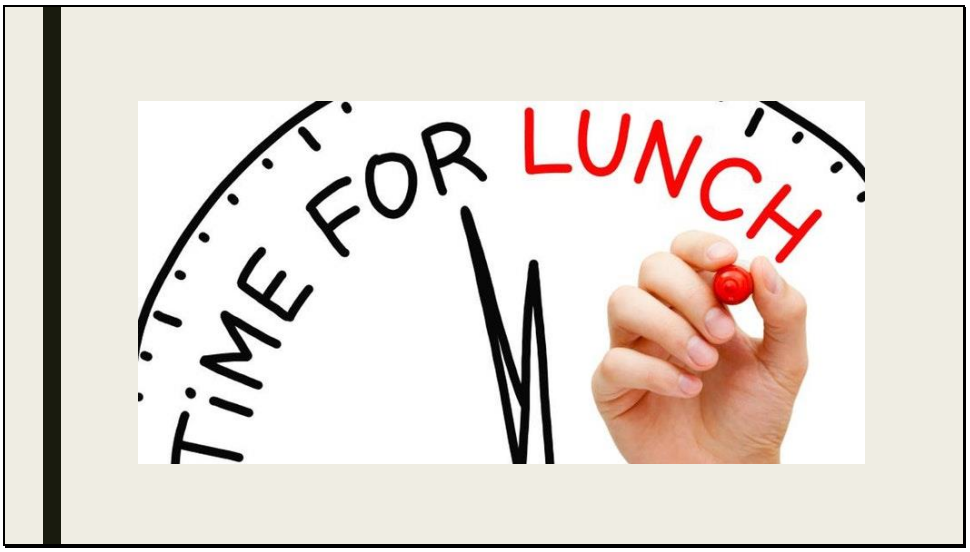


Notes to presenter:

Ask participants to form two groups: advanced placement and non-AP. Then ask each of those groups to split into smaller groups, two – three participants per group.

Brainstorm ideas for what has worked in your own classes for communication and feedback. Share what has worked or not worked and why. Think of ideas you have wanted to do or heard during the training. Post to the workshop discussion board and respond to other groups posts.

Slide 42



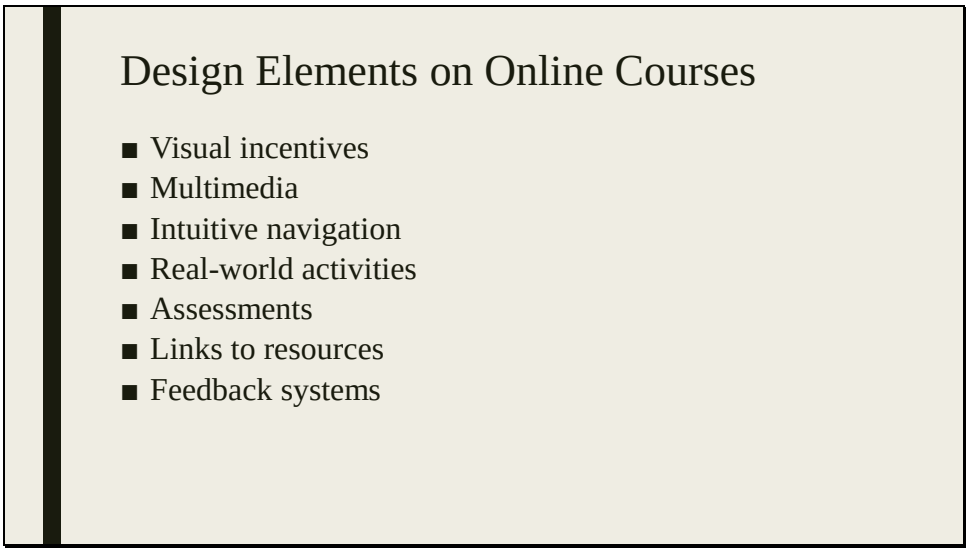
Note to Presenter:

Dismiss participants for lunch

1 hour

Image found at madetoflourish.org

Slide 43



Note to Presenter:

Ask instructional designers to provide examples of the items above. It would be helpful to have a good and bad example.

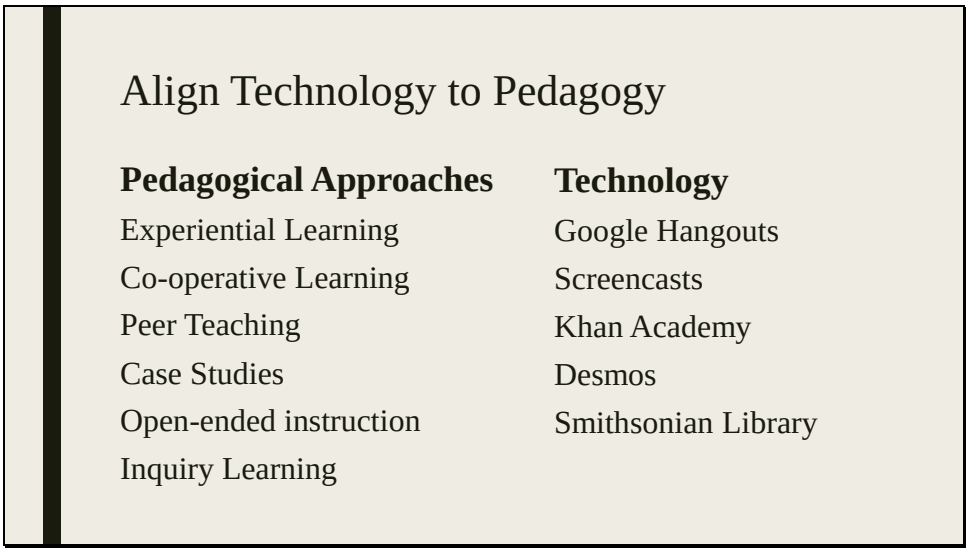
Allow participants to ask questions on how this is created.

Demonstrate the creation of an online discussion board with a virtual poll and a video component.

https://elearningindustry.com/instructional-design-elements-include-every-elearning-course

30 minutes

Slide 44



Note to Presenter:

Use any resources to find a list of various pedagogical strategies. Here are a few examples. This list is not comprehensive.

http://resources4rethinking.ca/en/resource-review-tool/pedapp

The goal is for you to look at the types of technology available and see where types of technology best support pedagogy.

The downfall is to let the technology drive our teaching. We will spend 10 minutes looking at different types of pedagogy and creating a list at your table. Then we will use the online discussion board to generate examples, ideas, and questions about how types of technology support pedagogy.

30 minutes

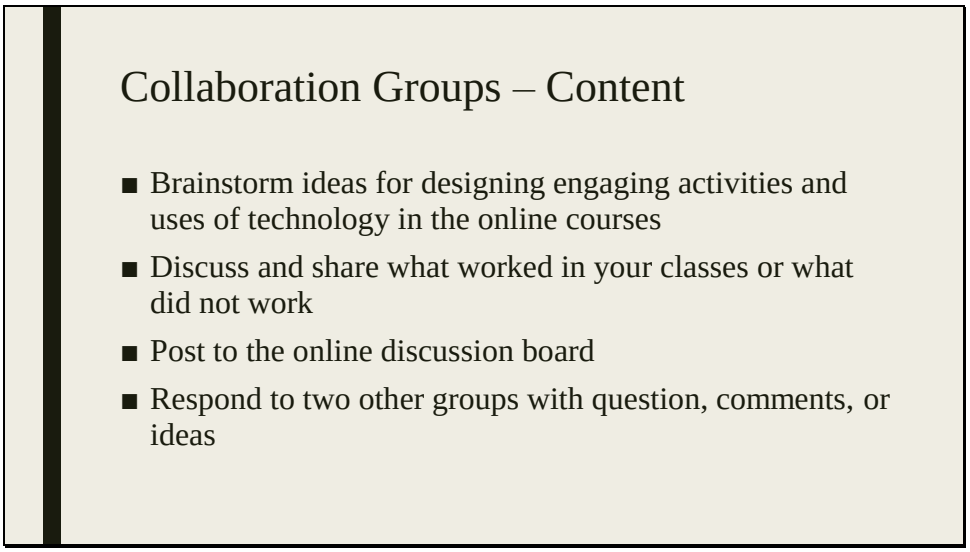
Slide 45

Note to Presenter:

15 minutes for a break

Image found at iconfinder.com

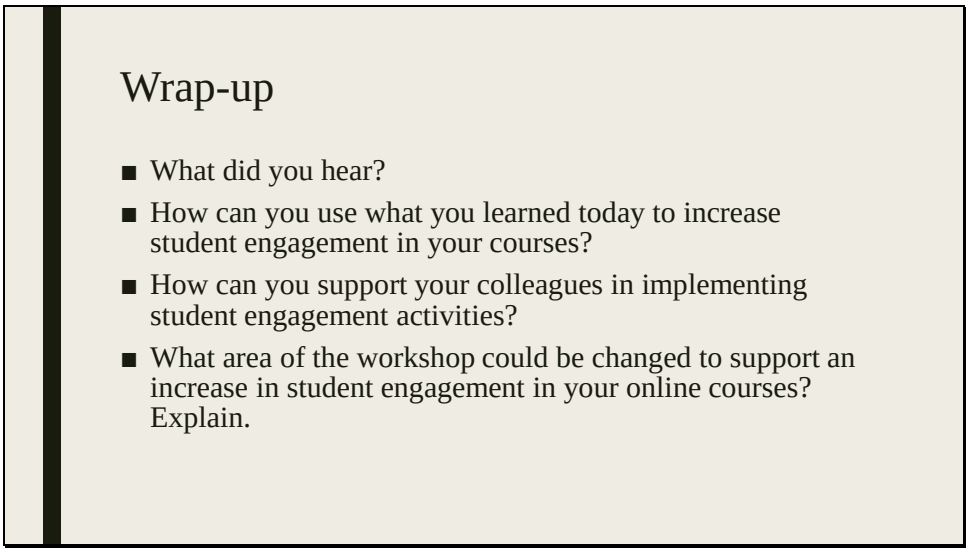
Slide 46



Notes to presenter:

Ask participants to form groups according to content.

Slide 47



Note to Presenter:

Wrap-up any activities currently in progress. Ask participants for any clarifying questions on the day's learning. Then ask participants to visit the expectation they wrote at the beginning of the day. Have any of those expectations been met? If so, participants may move their post-it note to the area of the room that indicates "met expectations". Then ask participants to return to their seats.

Ask participants to take a blank sheet of paper and divide it into 4 quadrants. Use the next 10 minutes to reflect on today's learning and answer each of the four questions. One answer per question in each quadrant. Please place your papers in the middle of the table and I will collect them when you are finished.

Offer any final thoughts for the day and thank participants prior to dismissal.

30 minutes

Slide 48

Note to Presenter:

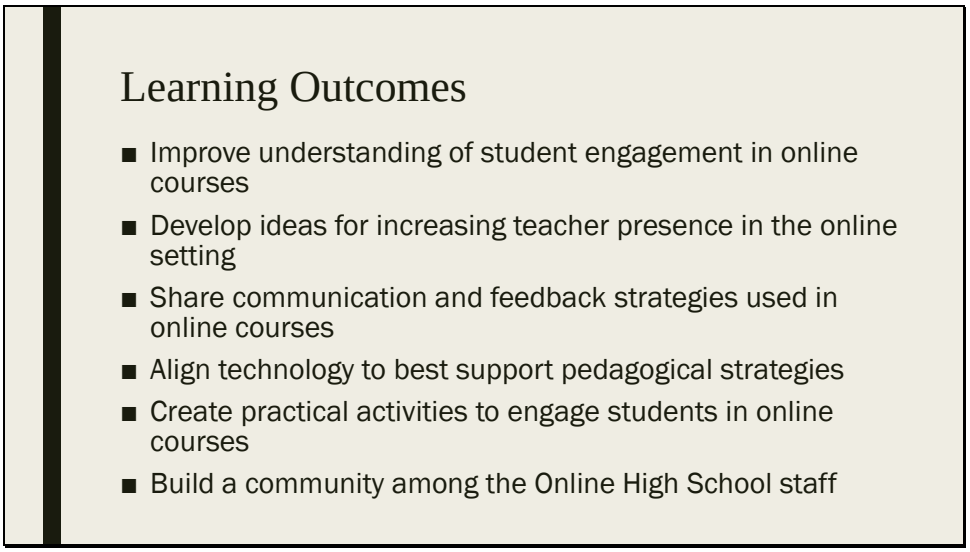
Welcome participants as they are seated. Share a thought about your favorite quote from yesterday or an "AHA" thought you had from the first day of learning. Ask if there are two people who would also like to share.

Images of non-21st century or online learning are used to add to the comfort and nostalgia of teaching.

2 – 3 minutes

Image found at pixabay.com

Slide 49



Note to Presenter:

Review the learning outcome of the workshop and ask participants to discuss at their table group how these are similar or different to their own expectations.

2- 3 minutes

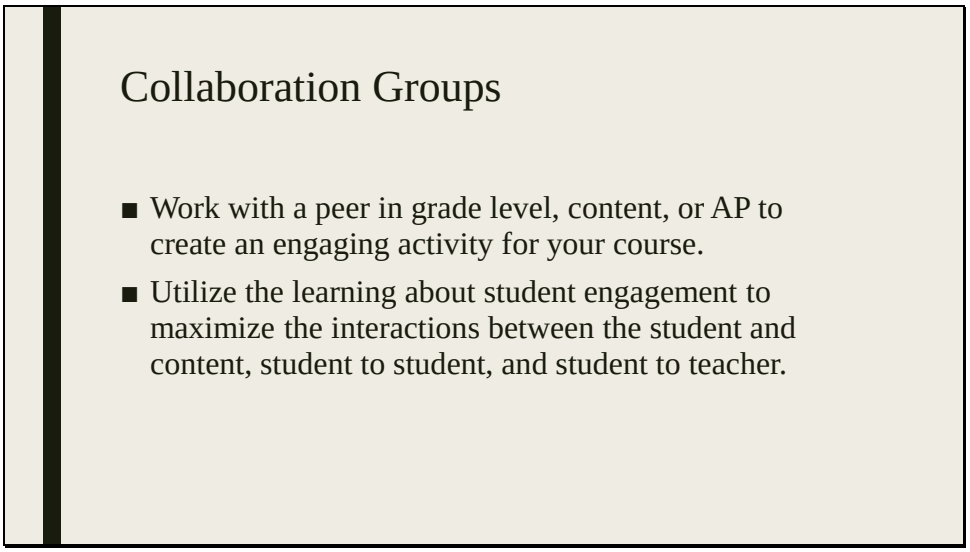
Slide 50

Note to Presenter:

Give an overview of the day. Ask for a volunteer to remind you of the times for breaks, lunch, and dismissal.

2 – 3 minutes

Slide 51



Note to Presenter:

Participants will choose who to work with to create an engaging activity for their course. Participants can work in content areas, grade levels, or advanced placement (AP).

1 hour

Slide 52

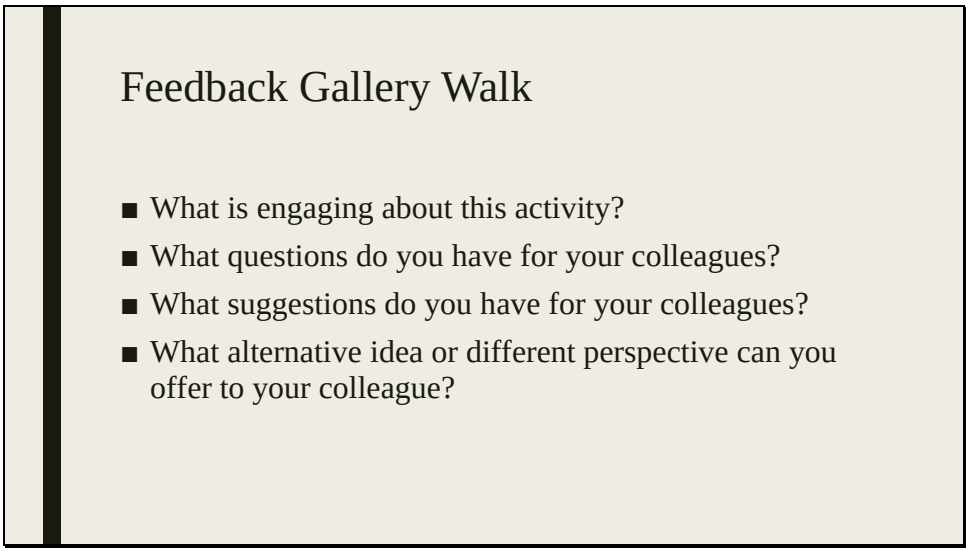
Note to Presenter:

15 minutes for a break

Participants may choose to work through the break. Please let them know the feedback gallery walk will begin at 10:15.

Image found at iconfinder.com

Slide 53

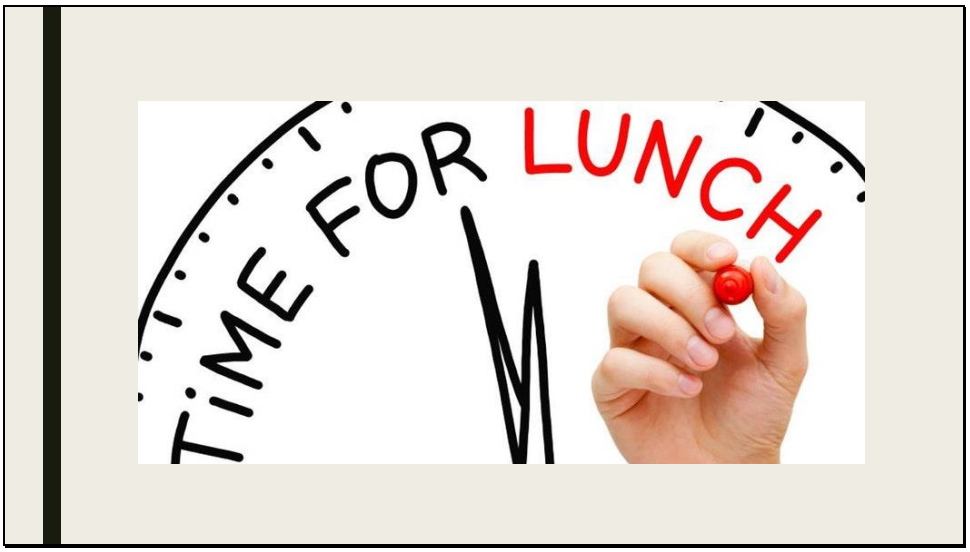


Note to Presenter:

Ask each participant to display their activity either digitally or on paper. Then ask each person to find a partner he or she has not worked with in the collaboration groups. You are going to walk around and look at your peers' activities with a critical lens of a student. Use post it notes to write at least 4 comments on each person's activity. Here are four questions to guide your feedback. Please do not engage with the person who made the activity. Use the information we have learned the last few days to examine the activity for engagement and interaction.

1 hour 15 minutes

Slide 54



Note to Presenter:

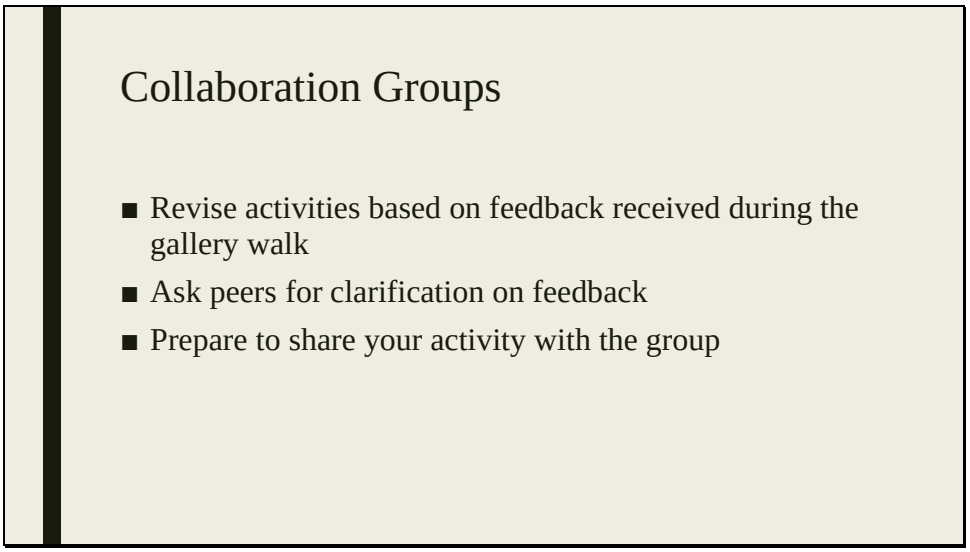
Dismiss participants for lunch

Participants may choose to work through lunch. Please let them know the sharing with your colleagues will begin at 10:15.

1 hour

Image found at madetoflourish.org

Slide 55

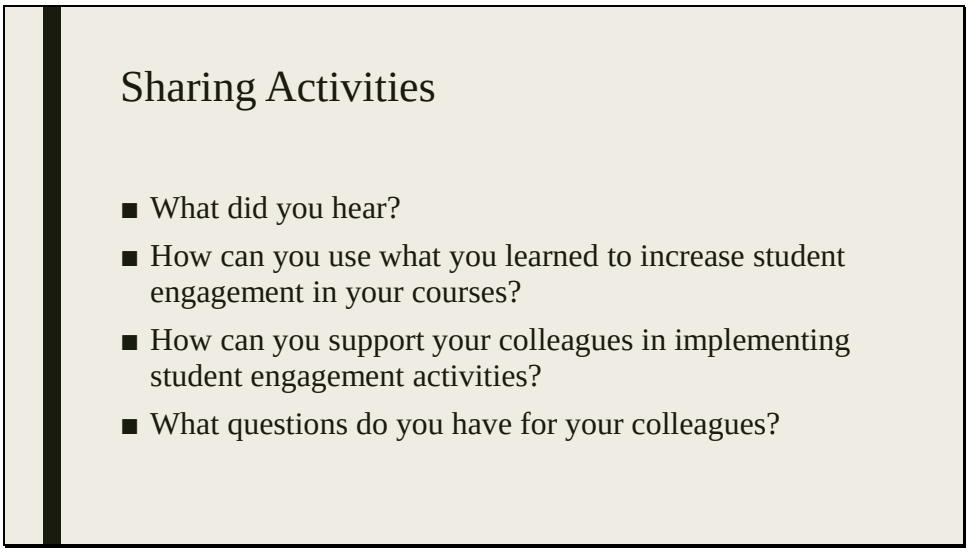


Note to Presenter:

Explain that this time is dedicated to revise your activities based on the feedback received in the gallery walk. The goal is to present your activity to the whole group. You will have 5 minutes to present and then you will receive feedback.

45 minutes

Slide 56



Note to Presenter:

Each group or pair will have 5 minutes to share about the activity they created. The questions posed are focus questions for feedback. The participants should be taking in notes in a manner suitable to their learning style – handwritten or digital.

Allow participants 2 -3 minutes to process the information presented and then 2 – 3 minutes for feedback.

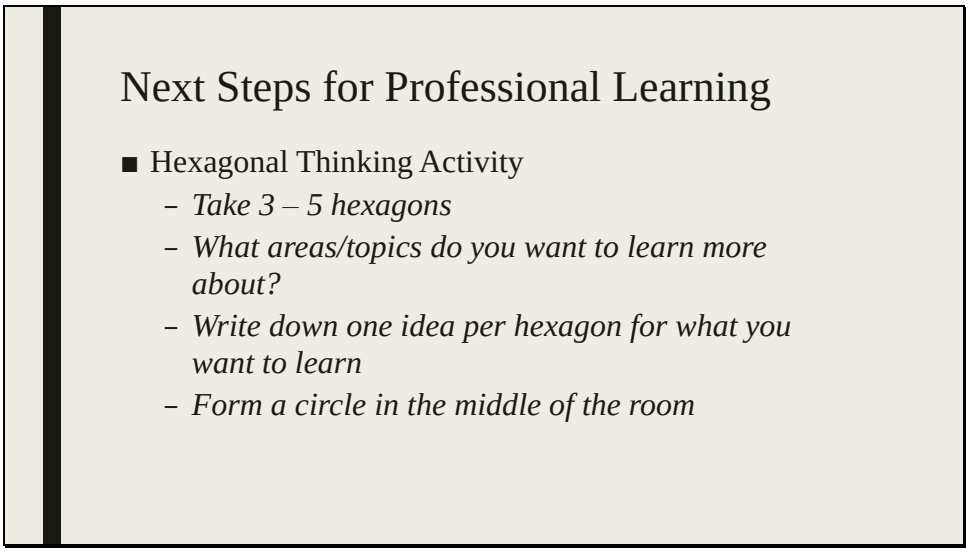
1 hour

Slide 57

15 minutes for a break

Image found at iconfinder.com

Slide 58



Note to Presenter:

The goal of hexagonal thinking is to have participants discover the connections between the ideas participants write down.

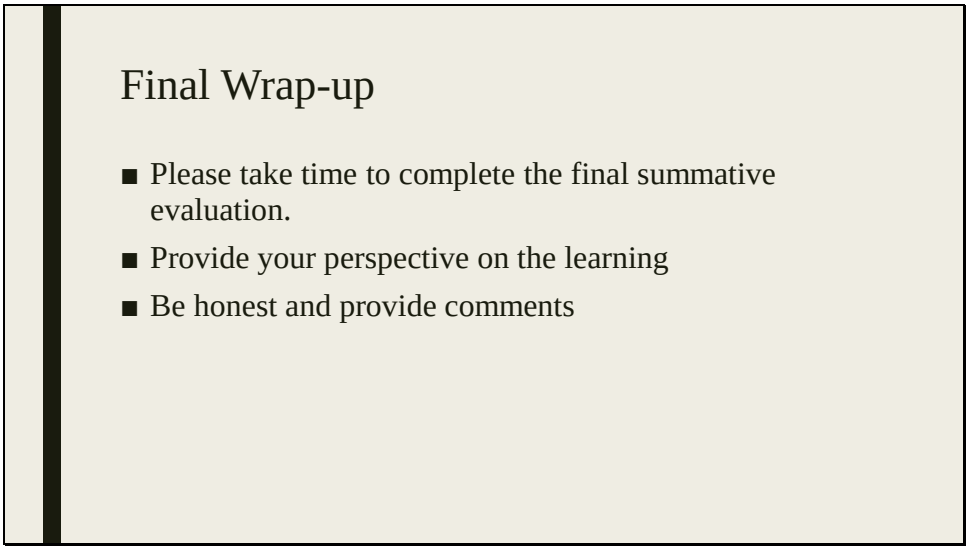
Once participants write down a few ideas, one per hexagon, then ask participants to form a circle and bring the hexagons with them. You will start with one person and continue to the next person around the circle till all the hexagons are placed in a pattern on the floor. As participants place their hexagons on the floor you want participants to place his or her hexagon next to other hexagons that are similar or make a connection. (25 – 35 minutes)

In the end you want the participants to look at the visual representation of their ideas and form topics about the next steps for professional learning. When it is done, facilitate a discussion on what the needs are for continuing professional learning on student engagement. (20 – 25 minutes)

Resource: https://visioninpracticeblog.wordpress.com/2017/10/30/long-term-learning-strategy-hexagonal-thinking/

1 hour

Slide 59



Note to Presenter:

Wrap-up any activities currently in progress. Ask participants for any clarifying questions on the day's learning. Then ask participants to visit the expectation they wrote at the beginning of the day. Have any of those expectations been met? If so, participants may move their post-it note to the area of the room that indicates "met expectations". Then ask participants to return to their seats.

Direct participants where to locate the summative evaluation. You can use it as a worksheet handout or a digital google form.

Offer any final thoughts for the day and thank participants prior to dismissal.

30 minutes

Slide 60

Note to Presenter:

Thank the participants for attending the workshop and distribute handout with a list of resources for more research on student engagement, online learning, and measuring student engagement.

Handout of Resources for Professional Development Workshop Participants

Alsofyani, M., Aris, B., & Eynon, R. (2013). A preliminary evaluation of a short online training workshop for TPAK development. *International Journal of Teaching and Learning in Higher Education, 25(1),* 118-128.

Annamalai, N., & Tan, K. E. (2015). Exploring two teachers' engagement with their students in an online writing environment. *The EUROCALL Review*, *23(2),* 58-73.

Dixson, M. D. (2015). Measuring student engagement in the online course: The online student engagement scale (OSE). *Online Learning, 19(4),* 1-15.

Goldspink, C., & Foster, M. (2013). A conceptual model and set of instruments for measuring student engagement in learning. *Cambridge Journal of Education,* 43(3), 291- 311.

Günüc S., & Kuzu, A. (2014). Factors influencing student engagement and the role of technology in student engagement in higher education: Campus-class-technology theory. *Turkish Online Journal of Qualitative Inquiry,* 5(4), 86 – 113.

Günüc S., & Kuzu, A. (2015). Student engagement scale: development, reliability and validity. *Assessment & Evaluation in Higher Education,* 40 (4), 587 – 610.

Guvenc, H. (2015). The relationship between teachers' motivational support and engagement versus disaffection. *Educational Sciences-Theory & Practice, 15*(3), 647-657.

Hampel, R., & Pleines, C. (2013). Fostering student interaction and engagement in a virtual learning environment: An investigation into activity design and implementation. *CALICO Journal, 30(3),* 342-370.

Harbour, K., Evanovich, L., Sweigart, C., & Hughes, L. (2015). A brief review of effective teaching practices that maximize student engagement. *Preventing School Failure,* 59(1), 5 – 13.

Hartnett, M., St. George, A., & Dron, J. (2014). Exploring motivation in an online context: A case study. *Contemporary Issues in Technology and Teacher Education (CITE Journal), 14*(1), 31-53.

Jaggars, S. S., Edgecombe, N., Stacey, G. W., & Columbia University, C. C. (2013). Creating an Effective Online Instructor Presence. Community College Research Center, Columbia University.

Louwrens, N., & Hartnett, M. (2015). Student and teacher perceptions of online student engagement in an online middle school. *Journal of open, flexible and distance learning,* 19(1), 27 – 44.

Paquette, P. (2016). Instructing the instructors: Training instructors to use social presence cues in online courses. *Journal of Educators Online, 13*(1), 80-108.

Roblyer, M. D., & Wiencke, W. R. (2003). Design and use of a rubric to assess and encourage interactive qualities in distance courses. *The American Journal of Distance Education,* 17(2), 77 – 98.

Skinner, E. & Belmont, M. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. *Journal of Educational Psychology, 85,* 571- 581.