

# **In Their Own Words: Student Engagement as Defined by Online Learners**

**Jennifer F. Humber  
The University of Alabama**

*Student engagement is linked to various measures of academic achievement, including retention, student satisfaction, and institutional success. Further research to determine student engagement as it relates to online students is now more necessary as online enrollments continue to increase. To understand how student engagement applies in online education, it is important to gain additional insight as to how online students define student engagement. In this qualitative case study, online learners were interviewed to gain their perceptions of engagement in an online course required for certain majors at a large public institution. Using a constructivist grounded theory approach, their perceptions were used to determine how this specific group define student engagement. The study also revealed various types of activities that were perceived to be most engaging to students enrolled in the course. The results of this study provide administrators and faculty the ability to better understand student perceptions so that they can be considered when developing resources to enhance instructional design and communication with online learners.*

*Keywords: student engagement, online learning, retention, technology*

## **INTRODUCTION**

The percentage of students who have taken an online course increased drastically when the COVID-19 pandemic forced many post-secondary institutions to move to solely online learning for at least one semester. Even before the challenges presented by the recent pandemic, administrators and faculty have sought to adapt traditional classroom learning practices to a virtual experience that incorporates innovative teaching styles and technology that promote student engagement and student success. Today, more faculty have the experience of teaching online and better understand the challenges and benefits of teaching in a non-traditional format. They also have the opportunity to reflect upon that time and adjust as needed for the demand in teaching additional online courses in the future. While making improvements, instructors may also wonder if students enrolled in online classes engage in the same way as students learning in a traditional, face-to-face classroom. Although many believe that efforts are improving the quality of online learning, it is still important to consider actual student experiences.

To better understand how online students engage in a virtual classroom, this study sought to gain perceptions of engagement on an individual level. Online learners were interviewed to determine their feelings of engagement in an online course required for online education programs at a large public institution. In this research study, a constructivist grounded theory approach was used to focus on three

central questions: (a) How do online students define engagement in online coursework? (b) What aspects of online learning do students perceive to be engaging? (c) What are the challenges to engagement online?

## **BACKGROUND**

For decades, many discussions and research studies have centered around the importance of student engagement as it relates to students' success both academically and socially within their educational experience. However, for the most part, previous studies only focused on traditional college students as they attended classes on a college or university campus (Robinson & Hullinger, 2008). The first online degree programs were not introduced to post-secondary students until the late 1980s (Miller, 2014). Within a decade, 62% of colleges and universities quickly expanded from offering a few online courses to providing full degree programs via distance education (Allen & Seaman, 2013). Today, students have the opportunity to complete entire degree programs online without even one campus visit to the institution that will confer their degree. Traditional campus students might also choose to take an online course for various reasons. In fact, recent surveys have reported that approximately 35% of all undergraduate students attempted at least one online course in the Fall of 2018 (Lederman, 2019). Other reports indicated that over 6.4 million students, mostly undergraduate students, completed at least one online course during their academic endeavor (Seaman, Allen, & Seaman, 2018). Motivated by opportunities for career growth, many individuals are now more willing to consider online education as general perceptions on online learning have improved and online students find increased satisfaction with their online learning experience (Venable, 2020).

George Kuh (2009), the founder of the National Survey of Student Engagement (NSSE), has provided a great deal of research and insight to help educators better understand the premise of student engagement. NSSE was built upon five benchmarks of student engagement: level of academic challenge, active learning, student interactions, enriching educational experiences, and supportive campus environment (Kuh, 2009). Furthermore, Kuh, along with others, contend that engagement has to do with the amount of time and energy that a student devotes to learning participate in the learning experience (Angelino, Williams & Natvig, 2007; Kuh, 2009; Robinson & Hullinger, 2008). As definitions continue to evolve, it is clear that engagement can mean various things to different people. A deeper review of the literature was conducted to focus on the following three aspects that may impact a student's ability to engage: student engagement in online learning, challenges of online learning, and factors of engagement.

### **Student Engagement in Online Learning**

To meet the demands of online learning, more faculty than ever are being asked to teach online. They are tasked to develop course content that is equally as engaging as lectures and discussions typically offered within a traditional classroom setting. Instructors now have their choice of a wide array of learning management systems and Web 2.0 software to incorporate into their preferred teaching styles. Learning management systems (LMS) are now widely used among most institutions of higher education. These software programs offer instructors a structured platform to easily manage multiple courses within built-in applications and tools that allow them to efficiently post lectures, initiate discussions, embed videos, and manage assessments. Students, whether living locally or via distance, also have the ability to access materials for multiple online courses in one central location. Other faculty, whether using a university-sponsored system or a self-developed webpage, use web-based applications, such as social media boards, YouTube, Google applications, and Zoom, to initiate conversations between classmates or to share videos and other helpful information.

Regardless of the many types of technology that faculty have access to, students still have an individual responsibility to engage in activities and discussions within a course (Chen, Lambert, & Guidry, 2010). The types of communication tools that faculty use within their delivery modes have a great impact on student's ability to engage in coursework. Within a virtual classroom, students can communicate by using either asynchronous or synchronous communication. In many classrooms, faculty may even try to use a combination of these two types of delivery to better serve various learning styles.

### *Asynchronous Communication*

Asynchronous communication allows instructors to prepare material ahead of time and present content in a way that students can view the information at a time that works best for them. Examples of this type of delivery include emails, discussion boards, social media and blog posts, wikis, and general lectures. While this type of communication is very convenient for both the faculty and the students, it does not require that students or faculty log in at a specific time or be required to provide instant response or feedback. However, it does provide students more time for understanding and reflection which ultimately leads to higher levels of critical thinking and application (Lundberg & Seridan, 2015; Robinson & Hullinger, 2008).

While email may be the most used form of asynchronous communication, discussion boards, blogs, and wikis have also become known as a great tool to support student engagement within an online classroom. Discussion boards are frequently used within learning management systems because they provide “a mechanism for students to increase their knowledge through student-driven content and/or a forum for peer review and exchange that creates a supportive climate within online classes” (Revere & Kovach, 2011, p. 115). Students typically can post their understanding of a topic and then classmates can review and respond to create a conversation and build a greater understanding of the topic. Studies have also shown the online discussions have a positive impact on the social presence within the online environment, especially when the instructor actively participates in the discussion as well (Cho & Tobias, 2016). To encourage frequent discussions, many faculty members may also use social media and blog sites to provide a forum outside of the official classroom since students are likely visiting these sites daily to communicate with others. For example, microblogs, such as Facebook, Twitter, LinkedIn, and other social media sites, allow students to initiate conversations with those involved in their personal and non-academic circles to build a professional network with others associated with their intended field of study.

Although peer interaction has become a necessary component of an online classroom, it is mostly used as an efficient way to build upon content that is shared by the instructor through general lectures, readings, and assignments. Online faculty members can now use various types of technology to create audio-recorded or even video-recorded lectures that can be shared within an LMS or a variety of web-based forums. After viewing lectures, presented in a variety of forms, students may have the opportunity to join classmates in more collaborative learning experience through the use of wikis. Wikis, a webspace typically offered through an LMS or other web-supported software, allows students to create their content that can be shared and edited as a team for group presentations. Studies have shown that online students appreciate collaborative projects because it requires student participation and often results in higher levels of learning outcomes (Robinson & Hullinger, 2008).

### *Synchronous Communication*

To overcome the challenges of asynchronous communication, due to the absence of real-time communication, technology experts created more synchronous options that students can now use within online learning environments. Chat rooms, instant messaging, web conferencing, and other innovative software programs, now provide a forum for students to communicate in a way that allows them to directly interact with the instructor and classmates. Students may experience less frustration and anxiety when interacting in these forums because they do not have to wait to receive clarification or feedback on their ideas. While these forums can be used to communicate with the class as a whole, faculty members may also use these forums to hold private meetings with students to answer questions and concerns. The use of Zoom meeting rooms has been widely used during the COVID-19 pandemic because it creates a secure meeting space for learning and conversations. This type of web-conferencing tool has been used to present lectures, facilitate discussions, conduct group meetings, and address issues or concerns. Research has shown that many students prefer synchronous lectures over asynchronous delivery (Skylar, 2009).

### **Challenges of Online Learning**

It is important to understand the different types of communication that online learners experience because it directly affects an online student’s perception of the challenges associated with online learning. Of these challenges, a sense of isolation is most often shared (Gray & DiLoreto, 2016; Rabe-Hemp,

Woollen, & Humiston, 2009). Some students feel less connected to the college because they cannot attend classes on campus or have direct communication with their instructor or classmates. Others feel disconnected because academics are just somewhat of a lesser focus in comparison to their full-time job or other responsibilities due to family obligations. However, juggling various responsibilities may lead to a lack of motivation to maintain enrollment if they do not feel connected or actively engaged in their academic courses (Park & Choi, 2009).

In addition to isolation, accessibility to technology has proven to be a challenge for both instructors and students, especially for those in rural areas. Not only must both parties be willing to learn and adapt to new technologies, but they must also obtain the necessary internet connection and equipment to properly access the information. Faculty members and online learners often need developmental assistance and technological support to use the necessary tools required to listen to lectures, complete coursework, and communicate with others (Roby, Ashe, Singh, & Clark, 2013). If students are not confident in their ability to use the required technology, it could prevent them from completing assignments or interacting with others (Gillett-Swan, 2017).

Another challenge of online learning is associated with institutional concerns and faculty perceptions of teaching online. As the demand for online learning continues to grow, institutions must quickly adapt to enhance the perceived quality of online courses as opinions can affect accreditation benchmarks and institutional rankings (Bennet & Bennet, 2002; Robinson & Hullinger, 2008). Faculty are still somewhat reluctant to teach online because of the additional time and resources needed to develop courses and then participate in a virtual environment (Allen & Seaman, 2015; Gillett-Swan, 2017). Previous research indicated that online learners were less engaged and had lower retention rates than traditional campus students (Kuyini, 2011). Due to the diverse set of demographics that are associated with online learners, it is somewhat difficult to identify their specific needs and challenges. Online learners may only be able to enroll in coursework on a part-time basis or only attend during certain times of the year due to their various other responsibilities; however, their inconsistent enrollment may negatively affect attrition and an institution's ability to increase persistence and retention rates (Angelino et al., 2007).

## **Factors of Engagement**

While many scholars have introduced multiple factors to support the concept of engagement, this study focused on four factors associated with engagement to include student motivation, attention and related factors, involvement and active learning, and level of academic challenge.

### *Student Motivation*

Motivation has often been associated with engagement because of the direct impact that it has upon behavior and the ability to give an activity meaning and purpose (Beer, Clark & Jones, 2010). While both intrinsic and extrinsic motivation are known to affect student engagement, intrinsic motivation has proven to have a greater impact on the student's overall success in academic performance (Schunk & Zimmerman, 2012). However, several studies have also shown that the two types of motivation may also be interrelated as students are intrinsically motivated to serve as an example to family or valued individuals by earning a certain grade point average, earning an employee benefit, or using new knowledge to benefit their personal communities (Yoo & Huang, 2013).

### *Attention, Interest, and Self-Regulation*

Attention has been referred to as a necessary factor of engagement as it refers to one's ability to maintain focus on a task (Major, 2015). Keller (1987) even deemed attention as a necessary prerequisite for learning. While students can develop attention fairly quickly, by a welcoming statement, introductory video, or inspiring word, many scholars contend that attention is also one of the most difficult aspects of engagement to sustain (Keller, 1987; Keller, 2010, Milman & Wessmiller, 2016). Further research uncovered that "interest plays a central role in focusing attention" as students are more likely to complete a task if they recognize personal interest or relevance to their own lives (Hidi & Ainley, 2012, p. 82). Hidi & Ainley (2012) went on to say that when a student's attention involves their personal interest, they are more likely

to develop self-regulatory skills that help them maintain engagement throughout coursework. Self-regulation is very important to the lives of online learners as they are solely responsible for managing their time and various responsibilities. Studies have shown that self-regulated students, who can develop behaviors that allow them to better manage their thoughts, motivation, and behaviors to efficiently complete desired goals, also reach higher levels of course satisfaction and performance within their academic courses (Wang, Shannon, & Ross, 2013).

### *Involvement and Active Learning*

Alexander Astin's (1999) theory of student involvement proposed that "student involvement refers to the quantity and quality of the physical and psychological energy that students invest in the college experience" (p. 528). For online learners, involvement may be limited to the amount of time and energy that can be spent on a task at hand (Beer et al., 2010; Major 2015). Separated by distance, these students benefit from active learning experiences that can provide interaction between faculty and classmates. By collaborating with others, it challenges others to think differently and apply knowledge in various settings. Since students can not physically participate in campus activities when learning via distance, they can still use discussion boards, group projects, and reflective writing to reap the benefits of interaction and active learning with their peers.

### *Level of Academic Challenge*

While some courses may present more challenges for some students than others, the level of academic challenge can generally be determined by how much intellectual effort a student puts forth in a course by studying, reading, writing, and completing assignments or assessments (Kuh, 2009; Robinson & Hullinger, 2008). A study conducted by Lundberg and Seridan (2015) found that online students put greater effort into their courses, in comparison to traditional campus students, to meet the expectations of their faculty. Another study found that, even though student grades were similar, students enrolled in an online course, versus a face-to-face course, reported more hours of class preparation time and higher levels of participation and contact with the instructor (Rabe-Hemp et al, 2009).

## **METHODOLOGY**

For this research project, the researcher conducted a qualitative case study to identify online students' perceptions of engagement in an online learning environment. A constructivist grounded theory approach was used because it provided the opportunity to use data alone to develop themes without a preconceived hypothesis or theory. The following research questions were designed to define student engagement, as perceived by online learning students, and identify aspects of online learning that students find to be engaging and challenging:

- (a) How do online students define engagement in online coursework?
- (b) What aspects of online learning do students perceive to be engaging?
- (c) What are the challenges to engagement online?

### **Participants**

Twenty currently enrolled online students were interviewed using a web-conferencing software offered within a learning management system. These undergraduate students were currently enrolled in the same course required of all students within the same academic college. The final population of students included both traditional campus students and distance learners who registered for the online sections of this specific course. Demographically, participants represented a very diverse population and included individuals between 19 and 45 years of age, both married and non-married, with most students living away from campus. Also, the majority of this population maintained both employment and family responsibilities while pursuing full-time student enrollment.

## **Data Collection and Analysis**

The researcher led semi-structured interviews, lasting from 30 – 45 minutes, in which all participants were asked questions from a pre-established questionnaire. Interviews were audio and video-recorded using a software tool made available to students through their student account. Recordings were saved, transcribed, and then returned to the participant for review and approval. Physical data, while limited, included handwritten memos taken during the interview to record facial expressions, demeanor, and the surrounding environment. Transcribed interviews and written documentation were read and analyzed by using both hand-written coding and a data-analysis software program. During the coding process, open coding was first implemented to identify initial themes and begin organizing data. The second process of focused coding allowed the researcher to better focus on reoccurring themes to build common categories. The final stage of theoretical sampling led to the development of a new theory as it related to this specific data set.

## **Delimitations and Limitations**

In this case study, the researcher felt it necessary to set specific boundaries to better focus on student perceptions alone. Faculty perceptions of engagement were not considered due to the opinion that literature lacked rich descriptions from a student perspective. Furthermore, only undergraduate students were included because they represent the largest percentage of students enrolled in online learning courses. In addition, by conducting a case study based upon one single course, the researcher hoped to provide a study that could easily be duplicated within various other online environments. In consideration of limitations, it is important to understand that participants were recruited based upon their enrollment in one single course. While course enrollment included a variety of majors with very diverse backgrounds and lifestyles, the population is a very small representation of all online learners enrolled across the world. Students were also recruited by an email sent to the entire class by the instructor of the course that included an incentive of a \$20 gift card to those who participated. Because interviews were completed in the middle of the semester, their reflections do not include experiences from the course in its entirety.

## **RESULTS**

The purpose of this research was to determine how online students define engagement in their online coursework. The researcher sought to better understand the types of assignments and activities that online learners perceive to be engaging. Participants involved in this study defined engagement in different ways, using a variety of descriptions and examples to better understand their individual viewpoints. Their accounts also provided detailed descriptions of engaging activities to better inform online instructors of what should be included in their virtual classrooms. By learning more about their experiences, the study provided the opportunity to learn the motivators and challenges of students that are directly related to their desire and ability to engage in online courses.

### **Defining Engagement**

Early in the interview, students were asked to share their definitions of engagement. It was somewhat surprising that many of the participants felt challenged by such a question as they hesitated before providing their answer. One student even acknowledged that “it can be defined in so many ways” (Humber, 2018, p. 74). However, among these students, four main themes did evolve. Participants reported that engagement is doing the coursework, conversation in the classroom, communication with the instructor, and individualized.

#### *Engagement is “Doing the Coursework”*

Over half of the participants agreed that engagement involves the completion of coursework, whether it be listening to lectures, reading text, completing assignments, or taking assessments. Several others referenced engagement as being a process of “prioritizing” to determine the amount of time and effort needed to complete all the requirements (Humber, 2018, p. 75). Several students considered the knowledge

gained from their courses to be a good indicator of whether they felt engaged in coursework. Participants referred to weekly logins and assignments that required discussion with classmates. Students also indicated that they felt more engaged when they were able to apply their knowledge and use it in general practice.

#### *Engagement is “Conversation in the Classroom”*

This study confirmed that students see value in interacting with their peers as over half the participants included this reference when defining student engagement. Overwhelmingly, students referenced their participation in discussion threads to create a "conversation in the classroom" (Humber, 2018, p. 76). While students seem to have a love-and-hate relationship with required discussion boards, they recognized the fact that they help each other consider various viewpoints and experiences. One student stated that she appreciates discussions because it allows her to incorporate more real-life scenarios than just textbook information. Several students also said that the required posts on discussion boards motivate them and challenge them to put more thought and effort into their responses after seeing what is posted by their classmates.

#### *Engagement is “Communicating With the Instructor”*

Most participants did not include instructor communication in their initial definition of engagement, but every participant mentioned the importance of feedback from the instructor when discussing activities that create a sense of engagement. Many students referred to engagement as a collaborative effort between the instructor and classmates. They also indicated that their interaction with their instructor highly influenced their motivation to engage in coursework. For example, one student explained, “If an instructor doesn’t want to interact or engage in the course then I will not really want to do as well in the course; just because I feel like they are not putting in the effort” (Humber, 2018, p. 79). Overwhelmingly, students mentioned their expectation and appreciation of instructor availability and timely response through email. They also valued instructor feedback on assignments or assessments as they felt encouraged that the instructor was invested in their success.

#### *Engagement is “Individualized”*

Seventy-five percent of those interviewed recognized engagement as a personal responsibility based upon their interests and goals. Several students shared that they really did not want to interact with other students in a class; instead, they wanted to focus on what they could learn as an individual and apply specifically to their future career goals. Several participants referenced their personal attention as an indicator of whether they wanted to engage in coursework. For example, one adult stated that she more actively engaged in coursework related to her major because it was more interesting to her and she could easily relate to course content.

### **Perceptions of Engaging Activities**

To relate participants’ definition of engagement to practical application, students were asked to describe activities and assignments that they perceived to be most engaging. In general, their responses were similar and easily categorized into five main types of activities. The following activities are listed in order of popularity.

#### *“Discussions With Other Students”*

Participants overwhelmingly referred to the use of discussion boards as among the most engaging types of assignments in online courses. However, many students also stated they likely would not participate in these conversations if they were not required. Respondents reported that reading discussion posts were fun and interesting because it allowed them to see other's viewpoints. For students who defined engagement as interaction with others, they mentioned that discussion boards were the only type of assignment that allowed them to communicate with others in this specific course.

### *“Writing About Topics”*

Not all students involved in this study enjoyed discussion boards; rather, they preferred prepared assignments that allow them to share their thoughts privately in written essays or self-reflection journals. The students that preferred writing assignments also stated that they appreciated these activities because instructors were more likely to provide clear guidelines and instructions on how to complete the assignment.

### *“Step-out-of-Class” Projects*

One online student explained that she values “diversity in assignments” and enjoys assignments that challenge her to research information outside of the typical classroom content (Humber, 2018, p. 87). Other students recalled activities that allowed them to conduct case studies at local organizations or other reflective activities using real-world experiences.

### *“Listening to Lectures”*

While several students mentioned “listening to lectures” as a necessary component of engaging, most students mentioned that they prefer video-recorded lectures because “hearing it and then reading it – it’s better than just reading it, and everybody knows that” (Humber, 2018, p. 88). Participants also mentioned the helpfulness of being able to go back and review lectures again when preparing for assignments or quizzes.

### *Group Activities*

A few students also mentioned that they felt engaged in their coursework because of the group projects that were required in their courses. As one online student reminded, although these projects can be stressful in overcoming the challenge of time and distance, “it makes it feel more than a classroom” (Humber, 2018, p. 89). Though very few students involved in this study had a great deal of experience in online group projects, the majority said that they would be excited to participate in group projects that was facilitated in an online environment.

## **Motivators of Engagement**

Intrigued by the relationship between motivation and engagement, participants were asked to explain how they are motivated to engage in their online coursework. Largely, students quickly and easily replied to this question. The majority of students shared that they were motivated by the goal of simply earning a good grade in the course or completing requirements to earn their degree. Several students described their learning experiences to be motivating because it prepared them for their prospective careers. Others, mostly adult online learners, explained that they were motivated by personal factors, including family, career, health concerns, or their communities.

## **Challenges of Online Engagement**

Although participants were not asked a specific question as to the challenges faced in their online coursework, their responses indicated that there were many. As indicated in previous research, many students did express feelings of isolation. They described feelings of frustration and anxiety when being forced to wait on responses from the instructor when directions for assignments seemed unclear. Many participants also made passive references to the limited interaction with the faculty in online courses. Technology was also frequently mentioned as a challenge due to the technical difficulties that they often experienced in accessing videos, submitting assignments, or completing proctored exams. Participants recommended that institutions make websites and other online resources more user-friendly to online students so that they wouldn’t have to spend so much time searching for necessary answers to their specific needs. Finally, managing time and personal responsibilities was a concern shared by all participants. Online students are more likely to forget to log in to their course often and miss assignments because they forgot to keep a record of specific activities. Older students, with family responsibilities, shared the need for better organization to manage the various tasks related to the various aspects of their family, work, and school life.

## CONCLUSION

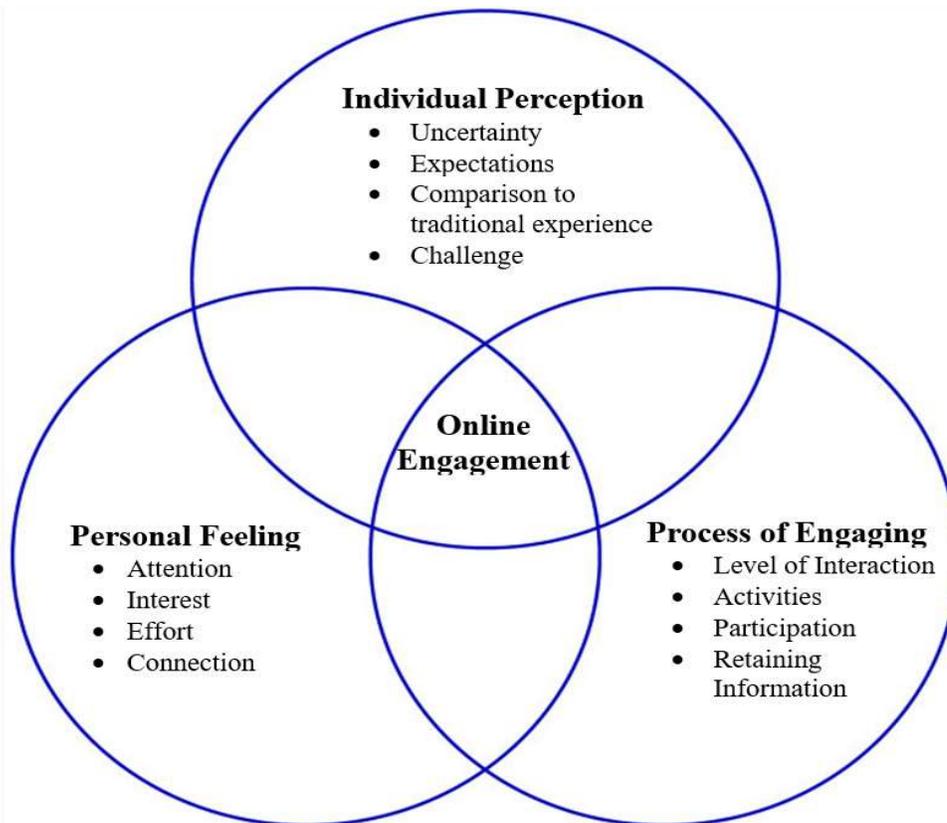
Students involved in this study defined engagement by referring to the completion of coursework, communicating with instructor and peers, and individual engagement. In addition, participants interviewed in this study found discussion boards, video lectures, and individual structured assignments to be among the most engaging activities offered in this specific online course. The study also revealed certain motivations and challenges associated with online learning that contributes to students' perception and reluctance to define student engagement in online learning.

The experiences shared by students suggest that online learners develop individual definitions of online engagement by considering their own perceptions, personal feelings, and processes of engaging. Students developed preconceived notions of engagement based upon their personal experiences derived from their previous educational experiences. While defining engagement, many participants often qualified their definitions by referencing their explanation as a personal feeling or assumption of what they thought engagement should be (Humber, 2018). Ultimately, they considered engagement to be a very personal encounter that was determined by the amount of effort and time that they were able to contribute to the learning experience. As a whole, participants acknowledged the fact that their perceptions, interests, and goals must be put into action by actually completing activities and assignments and communication with others as required. The process of engaging granted them the opportunity to succeed in course objectives and completion.

The researcher suggests that student engagement should be defined by the student's perception as it relates to their individual feelings of how engagement relates to them directly. It is the student's responsibility to determine how to engage in their coursework in a meaningful way. However, it is believed the highest level of online engagement can be achieved where the three aspects of student perceptions—personal feelings, individual perception, and process of engagement—can become one central unit as indicated in Figure 1.

While students have ultimate control of their engagement in an online course, the data suggests institutions and online instructors can also contribute to their ability to engage by providing quality courses that offer a variety of resources and activities. Findings suggest that incorporating discussion forums, a variety of diverse activities, video-recorded lectures, and regular communication through frequent announcements and instructor feedback would likely enhance a student's willingness and ability to achieve higher levels of engagement within an online learning environment. Furthermore, institutions can raise awareness of the importance of engagement by providing college-specific definitions of engagement to increase student awareness of institutional support. By listening to students' individual perceptions of engagement, administration and online instructors can better determine the needs of online learners. This deeper understanding can assist instructors as they build quality courses that facilitate engagement and support for academic success and student satisfaction.

**FIGURE 1**  
**STUDENT ENGAGEMENT IN ONLINE LEARNING**



**REFERENCES**

Allen, I.E., & Seaman, J. (2013). *Changing course: Ten years of tracking online education in the United States (Research Report No. 10)*. Retrieved from [https://onlinelearningconsortium.org/survey\\_report/2013-survey-online-learning-report/](https://onlinelearningconsortium.org/survey_report/2013-survey-online-learning-report/)

Allen, I.E., & Seaman, J. (2015). *Grade level: Tracking online education in the United States*. Babson Park, MA: Babson Survey Research Group and Quahog Research Group. Retrieved from <http://www.onlinelearningsurvey.com/reports/gradelevel.pdf>

Angelino, L.M., Williams, F.K., & Natvig, D. (2007). Strategies to engage online students and reduce attrition rates. *The Journal of Educators Online*, 4(2), 1-14.

Astin, A.W. (1999). Student involvement: A developmental theory for higher education. *Journal of College Student Development*, 40(5), 518-529.

Beer, C., Clark, K., & Jones, D. (2010). Indicators of engagement. In C.H. Steel, M.J. Keppell, P. Gerbic, & S. Housego (Eds.), *Curriculum, technology & transformation for an unknown future. Proceedings Ascilite Sydney* (pp.75-86). Retrieved from <http://ascilite.org.au/conferences/sydney10/procs/Beer-full.pdf>

Bennett, J.F., & Bennett, L.B. (2002). Assessing the quality of distance education programs: The faculty's perspective. *Journal of Computing in Higher Education*, 13(2), 71-8.

Chen, P.D., Lambert, A.D., & Guidry, K.R. (2010). Engaging online learners: The impact of web-based learning technology on college student engagement. *Computers & Education*, 54, 1222-1232.

- Cho, M-H., & Tobias, S. (2016). Should instructors require discussion in online courses? Effects of online discussion on community of inquiry, learner time, satisfaction, and achievement. *International Review of Research in Open and Distributed Learning*, 17(2), 123-140.
- Gillett-Swan, J. (2017). The challenges of online learning: Supporting and engaging the isolated learner. *Journal of Learning Design*, 10(1), 20-30.
- Gray, J.A., & DiLoreto. (2016). The effects of student engagement, student satisfaction, and perceived learning in online learning environments. *NCPEA International Journal of Education Leadership Preparation*, 11(1), 1-20.
- Hidi, S., & Ainley, M. (2012). Interest and self-regulation: Relationship between two variables that influence learning. In D.H. Schunk, & B.J. Zimmerman (Eds), *Motivation and self-regulated learning: Theory, research and applications* (pp. 77-109). New York: Taylor & Francis Group, LLC.
- Humber, J.F. (2018). *Student engagement in online courses: A grounded theory case study* (Order No. 10750609). Available from ProQuest Dissertations & Theses Full Text. (2055781332). Retrieved from <https://search.proquest.com/docview/2055781332?accountid=14472>
- Keller, J.M. (1987). Development and use of the ARCS model of instructional design. *Journal of Instructional Development*, 10(3), 2-10.
- Keller, J.M. (2010). *Motivational design for learning and performance*. New York, NY: Springer.
- Kuh, G.D. (2009). The national survey of student engagement: Conceptual and empirical foundations. *New Directions for Institutional Research*, 141, 5-20. doi:10.1002/ir
- Kuyini, A.B. (2011). Exploring the effects of including students' ideas and concerns on their participation in online groups. *The Journal of Distance Education*, 25(3), 1-15.
- Lederman, D. (2019). *More students study online, rate of growth slowed in 2018*. InsideHigherEd.com. Retrieved from <https://www.insidehighered.com/digital-learning/article/2019/12/11/more-students-study-online-rate-growth-slowed-2018>
- Lundberg, C.A., & Seridan, D. (2015). Benefits of engagement with peers, faculty, and diversity for online learners. *College Teaching*, 63, 8-15. doi:10.1080/87567555.2014.972317
- Major, C.H. (2015). *Teaching online: A guide to theory, research and practice*. Baltimore: Johns Hopkins University Press.
- Miller, G. (2014). *History of distance learning*. WorldWideLearn.com. Retrieved from <http://www.worldwidelearn.com/education-articles/history-of-distance-learning.html>
- Milman, N.B., & Wessmiller, J. (2016). Motivating the online learner using Keller's ARCS model. *Distance Learning*, 13(2), 67-71.
- Park, J-H., & Choi, H.J. (2009). Factors influencing adult learners' decision to drop out or persist in online learning. *Educational Technology & Society*, 12(4), 207-217.
- Rabe-Hemp, C., Woollen, S., & Humiston, G.S. (2009). A comparative analysis of student engagement, learning, and satisfaction in lecture hall and online learning settings. *The Quarterly Review of Distance Education*, 10(2), 207-218.
- Revere, L., & Kovach, J.V. (2011). Online technologies for engage learning: A meaningful synthesis for educators. *The Quarterly Review of Distance Education*, 12(2), 113-124.
- Robinson, C.C., & Hullinger, H. (2008). New benchmarks in higher education: Student engagement in online learning. *Journal of Education for Business*, 84(2), 101-109.
- Roby, T., Ashe, S., Singh, N., & Clark, C. (2013). Shaping the online experience: How administrators can influence student and instructor perceptions through policy and practice. *The Internet and Higher Education*, 17, 29-37. doi:10.1016/j.iheduc.2012.09.004
- Schunk, D.H., & Zimmerman, B.J. (2012). *Motivation and self-regulated learning: Theory, research and applications*. New York, NY: Taylor & Francis Group, LLC.
- Seaman, J.E., Allen, I.E., & Seaman, J. (2018). *Grade increase: Tracking distance education in the United States*. Babson Park, MA: Babson Survey Research Group. Retrieved from <http://www.onlinelearningsurvey.com/highered.html>.

- Skylar, A.A. (2009). A comparison of asynchronous online text-based lectures and synchronous interactive web conferencing lectures. *Issues in Teacher Education*, 18(2), 69-84.
- Venable, M.A. (2020). *2020 Online trends in education report*. BestColleges.com. Retrieved from <https://www.bestcolleges.com/research/annual-trends-in-online-education/>.
- Wang, C.H., Shannon, D.M., & Ross, M.E. (2013). Students' characteristics, self-regulated learning, technology self-efficacy, and course outcomes in online learning. *Distance Education*, 34(3), 302-323.
- Yoo, S.J., & Huang, W.D. (2013). Engaging online adult learners in higher education: Motivational factors impacted by gender, age, and prior experiences. *The Journal of Continuing Higher Education*, 61(3), 151-164.