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Establishing Community in Online Courses: A Literature Review

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The purpose of this literature review is to examine the evolution of online learning over the last several decades in relation to student engagement. Much has been made of both the successes and failures of online learning and, consequently, much has been written to enumerate the reasons for those successes and failures. After lengthy review, a great deal of the writing indicates that the relative success or failure of a student is caused by a confluence of three factors: the student, the environment, and the faculty. Online learning is unique in that a much greater share of the burden of success or failure falls on the faculty and their strategies for teaching.

Keywords: Interaction, online learning, sense of belonging, sense of community

From the advent of correspondence courses delivered via mail to internet and computer enhanced courses, institutions have been offering alternative learning methods to students. There are a variety of reasons that institutions of higher education have for offering alternative learning methods to students such as physical space limitations, desire to reach an adult learner market, changing student demographics and needs, continuing education and professional development opportunities, and desire to integrate new technologies (Selingo, 2013). The National Center for Education Statistics has predicted that by 2021, adult learners will compose 42 percent of the entire college student population (Blumenstyk, 2015). As the demographic of student populations shift, higher education will need to adapt to learning that is flexible with a greater emphasis on the needs, lifestyles, and characteristics of adult students (Holder, 2007). In addition, students entering college from high school today have experienced at least a portion of their studies via technology, whether as an enhancement to traditional approaches, fully online, or some mixture of the two (Miller, 2014).

Opponents of online learning cite that students need to physically interact with their learning and environment in meaningful ways to truly develop and learn (McInnerney & Roberts, 2004). Opponents also argue that the absence of visual meaning-making cues such as gesture, voice tone, and immediate interaction can frustrate students and lead to feelings of isolation and disconnectedness in an online classroom (Delahunty, Verenikina, & Jones, 2013; McInnerney & Roberts, 2004). The need for direct interaction and communication is cited as the reason that face-to-face education is a superior learning environment to a virtual classroom (McInnerney & Roberts, 2004). Based on the

arguments from the opponents, it is important to show research and evidence that meaningful interaction can be achieved in an online environment.

        The purpose of this literature review is to determine if it is possible for students in online courses to have a meaningful educational experience, including engagement with content, peers, faculty, and institution that constitute a sense of belonging among students. The literature review was initiated by conducting a literature search in the Education Resources Information Center database. Journal publications that included the words "sense of belonging in online learning" were examined. Additional literature was found through search referrals, frequently cited literature within found resources, and through a recursive reference search. It was decided to only include research that focused on courses or programs that were offered entirely online. For the purpose of this literature review, online learning is defined as courses or programs that have at least 80% of their content provided online (Allen & Seaman, 2013).

Online Learning

        The study of online students is important because the percentage of students taking courses online has increased much faster in the last ten years than the number of enrollments in traditional classrooms. According to Allen and Seaman (2013), the average rate of growth in total college enrollments over the last ten years is 2.39 percent, while the average rate of growth in online enrollments is 15.77 percent. The proportion of college students taking at least one online course a year is at an all-time high of one in three students (Allen & Seaman, 2013; Bowen, 2013). Institutions meeting the demands for an increase in online courses want to ensure that they are giving students the best experience possible. One way to ensure this is by evaluating the student experience in an online course. One study revealed that students, while nervous about online learning at first, found after that they preferred it to traditional classrooms and that the immersion in online courses promoted self-confidence and efficacy (Gallagher-Lepak, Reilly, & Killion, 2009). Other benefits mentioned of online learning include: increased opportunities for reflection and refinement of ideas, greater degree of flexibility permitted by unrestricted access to course materials and content, greater degree of learner control, and richer levels of interaction, both in relation to content and in the opportunities provided to interact with other students (Stansfield, McLellan, & Connolly, 2004). Online education serves a significant market need for place-bound, time-pressed students such as working adults (Selingo, 2013). Students who have been previously eliminated from college instruction due to their inability to physically sit in the classroom are not fully able to participate in higher education without the addition of online learning and digital resources made available through technology (Renes & Strange, 2011). Online education provides accessibility for those who previously would not have taken a course for a variety of reasons such as disability, social anxiety issues, or learning disorders (Simpson, 2012). The ideal market for online learning is defined as the following:

- Homebound/place bound students – especially in rural locations who are unable to relocate;
- Home schooled students;

- High school students seeking Advanced Placement courses or extended learning opportunities not available at their school;
- Students who have difficulty learning in traditional classroom settings;
- Students with physical and mental disabilities;
- Parents with children who do not have access to child care;
- Military personnel serving in remote locations; and
- Adult learners (Benke & Miller, 2014).

There are many reasons why a student may choose online learning over the traditional learning environment but the most cited reason is flexibility of time and place (Miller, 2014). Online courses offer the flexibility for students to study at convenient hours and locations for them and allow education to become a continuous activity spread across multiple time zones and locations (Shelton & Saltsman, 2005). Online learning provides students with the ability to work independently and maintain a balance of life, family, and work commitments (Holder, 2007). While there is a myriad of reasons that drive college students to select online courses, the question is whether or not students can experience a sense of community or belonging in an online course while they are isolated from their peers in time and location.

Sense of Belonging/Community and Online Learning

Strayhorn (2012) built upon Maslow's (1968) hierarchy of needs theory to develop a model that stresses "sense of belonging" as a basic human need that must be fulfilled before college students are able to succeed in academic and social endeavors. Maslow (1968) stated that humans have a fundamental need to belong and other needs, such as learning, cannot be met without satisfying this need of belongingness. Strayhorn (2012) defined "sense of belonging" as the feeling of being valued, needed, and significant within a system or environment. In relation to college students, Strayhorn (2012) discussed that sense of belonging refers to student's perceived social support, their feeling of connection with their environment, and their feeling of being accepted, respected, and important to the college. Students who lack a sense of belonging suffer higher levels of mental and physical illness, are more likely to drop out of learning environments, and exhibit feelings of isolation, rejection, and exclusion (Bauemeister & Leary, 1995; Strayhorn, 2012; Hughes, 2007). Students who feel a strong sense of belonging have higher academic achievement, retention and persistence (Baumeister & Leary, 1995; Strayhorn, 2012). Sense of belonging is relational, created by frequent, positive interactions and needs to be maintained (Baumeister & Leary, 1995; Strayhorn, 2012). As demonstrated by research, a student's sense of belonging increases their success in college (Tinto, 1997). Learning whether or not a sense of belonging can be experienced by students in an online course is important given that a sense of belonging increases performance, retention, and the student experience.

Review of the literature pertaining to online learners discovered other terms that were used in place of "belonging." Most of the literature described interaction within the online environment as either "engagement" or building a "sense of community." Engagement is defined as the amount of time and effort students devote to their academic

responsibilities (Strayhorn, 2012). Community is defined as a group of participants, relationships, interactions, collaboration, common goals, connectedness and trust (Rovai, 2002; Sadera, Robertson, Song, & Midon, 2009; Shea, Li, Swan, & Pickett, 2002). Educational or classroom community is built through a social community of learners who share knowledge and goals, possess shared expectations, and believe that they matter to each other (Delahunty et al., 2013; Mercer, 2000; Rovai, 2002). Sense of community is defined as the individual perception of community relationships between group members (Delahunty et al., 2013). Technology and the emergence of online learning have made it possible for communities to be developed beyond time, space, or physical proximity and made communities accessible to a diverse and widely distributed membership (Mercer, 2000; Perrotta, 2006; Rovai, 2002; Rovai, Wighting, & Lucking, 2004).

   The asynchronous nature of online communication and the potential for disconnectedness and feelings of isolation among students have led to the importance of fostering a sense of community in online courses (Akyo, Garrison, & Ozden, 2009; Dawson, 2006; Garrison, 2004; Rovai, 2002). As indicated earlier, a strong sense of belonging or community increases students' experiences in any academic situation. Thus, learning how to create a sense of community is important for institutions, instructors, and designers of online courses. The literature noted that it is important for facilitators of online learning to understand how online communication differs from face-to-face communication in order to create practices that help foster community and reduce the amount of isolation among online students (Benke & Miller, 2014; Delahunty et al., 2013; Rovai, 2002). Learning environments with a community focus are defined as being learner-centric, are structured to emphasize the strengths of students, create a feeling of security and safety so students feel comfortable to pursue and develop knowledge, skills and abilities that can transfer beyond the community without fear of unwarranted discouragement or unconstructive judgement (Shea, Li, & Pickett, 2006).

   Two models for community development in online courses surfaced during this literature review: Community of Inquiry (COI) and Rovai's Classroom Community Scale. The COI framework was initially developed to provide an ordered understanding and methodology to studying and practicing online learning (Garrison & Archer, 2000). The COI model centers on teacher presence and learning activities that support high levels of community among online learners (Anderson, Rourke, Garrison, & Archer, 2001). Under the COI framework, teaching presence is viewed as the core role of the instructor and involves instruction, course design, and facilitation of discourse (Shea & Bidjerano, 2009; Shea et al., 2006). Social presence is the ability to project one's self and establish purposeful relationships and is considered essential for establishing relationships within the online learning community (Ryman, Burrell, & Richardson, 2009; Garrison, 2004). The development of social presence stimulates learning community among students in online courses (Dawson, 2006). Cognitive presence is defined as the exploration, construction, resolution and confirmation of understanding through collaboration and reflection in a community (Garrison, 2004). COI framework implies that a quality educational experience is produced within a community of instructors and students utilizing three levels of presence: teaching, social and cognitive (Akyol et al., 2009).

Rovai's (2002) Classroom Community Scale is a survey instrument which measures social community and learning community within an online learning environment. In this framework, social community represents the feelings of students regarding their trust, safety, and sense of belonging (Rovai, 2002). Learning community is the feeling that knowledge and meaning are actively created within the community, the community enhances knowledge and understanding, and that the learning needs of all community members are being satisfied (Rovai et al., 2004). Rovai (2002) places high focus on the feelings of belonging, connectedness, and acceptance and states that once individuals feel accepted they have a higher willingness to speak openly and share with others which is important for collaboration and learning.

Evaluation of current online education programs at institutions either using the Classroom Community Index (CCI) or Community of Inquiry (COI) framework can guide institutions and instructors in their current programs and courses. Evaluating and redesigning current programs to improve student engagement and satisfaction in online courses can benefit the design of future programs. Students who reported a high sense of community in their online courses showed greater levels of persistence, were less likely to drop out, felt burned out less often, reported a higher level of learning, felt less isolated, and had greater satisfaction with their online courses (Garrison, 2004; Rovai, 2002; Sadera et al., 2009). There is a significant positive relationship between sense of community, perceived learning, and student satisfaction with online learning (Gallagher-Lepak et al., 2009; Liu, Magjuka, Bonk, & Lee, 2007; Rovai et al., 2004). Research consistently showed that it is possible to create a sense of community in an online environment (Arbaguh, 2008; Correia & Davis, 2008; Liu et. al, 2007; Moore, 2008; Shea & Bidjerrano, 2009; Wise, Duffy, & Padmanabhan, 2008). Online learners need deliberately orchestrated opportunities to engage with each other so that social relationships are developed and a sense of community can be established (Delahunty et al., 2013). Learning environments that produce high sense of community included high levels of interaction between students and instructor, active roles for learners, prompt feedback, and student cooperation in learning together (Shea et al., 2006). The two factors most commonly cited among the literature as being influential in building sense of community were the instructor and course design.

Instructor

The single most influential factor in establishing a sense of community in an online classroom is the instructor (Delahunty et al., 2013). Students are acutely sensitive to the presence or absence of their instructor in online classrooms (Miller, 2014). Shea, et al. (2006) reported a clear connection between perceived teaching presence and a student's sense of community and satisfaction with the course. Teaching presence is also a core factor in the COI framework for an online course's ability to create a sense of community. The role of teaching in online education is markedly different than teaching in face-to-face classrooms. The online instructor has evolved from the role of lecture/teacher to a facilitator that focuses on helping students collaborate with each other in order to develop personal understanding of course content (Bailey & Card, 2009; Gallagher-Lepak et al., 2009). Directed facilitation on the part of the instructor

contributes more to the learning environment and sense of community than total measures of course design, content, and institution (Shea et al., 2006)
Keys to establishing teaching/instructor presence are to:

- Develop activities that promote interaction and socialization;
- Check into the course regularly and provide a communication schedule for students;
- Provide feedback and responses in a timely manner;
- Facilitate learner dialogue;
- Clearly communicate expectations; and
- Monitor student interactions and intervene as necessary (Buchanan, 2000; Rovai, Ponton, & Baker, 2008).

The two most singled-out activities for instructors throughout the research were feedback and clear communication. Students want and need timely feedback on their performance, suggestions for improvement, and validation of work well done (Boling, Hough, Krinsky, Saleem, & Stevens, 2012; Stansfield et al., 2004). Students need appropriate feedback and suggestions for improvement in a timely manner in order to reflect on what they have learned, what they still need to know, and how to better assess themselves (Chickering & Gamson, 1987). Students also noted that clear communication and regular announcements showed them the instructor was engaged with the course, encouraged them to be engaged themselves, and was an important aspect of sense of community (Gallagher-Lepak et al., 2009; Liu et al., 2007).

Online students in one study reported that the most effective online instructors strive to establish relationships and will do whatever necessary to make the class a positive learning environment (Bailey & Card, 2009). Many online instructors recognize the importance of developing a sense of community in the online classroom but indicated that the high social and pedagogical expectations of constantly being online and interacting with students can lead to stress and burnout (Bailey & Card, 2009; Gallagher-Lepak et al., 2009). Faculty development and training programs offered by the institution can help teach faculty new to online learning how to balance these expectations and reduce stress and burnout. While the research continuously reiterated that communication, timely and meaningful feedback, and constant teacher presence are integral to creating community within an online course; there were no suggestions as to how instructors can best achieve this while managing other demands on their time.

Course Content/Design

Course content and design involves all materials and activities of the course, including the organization and design of the course. Most development in online education is done by faculty with no formal training in instructional design or online learning theories (Boling et al. 2012). Rapidly changing technologies have outpaced research on how to integrate technology into online learning environments in ways that enhance student learning and engagement (Delahunty et al., 2013; Shea & Bidjerano, 2009). Instructors and students have to utilize technology in order for online learning to

be successful. Students have high demands and standards for functionality in online courses and extremely low tolerance for technology that works poorly, is difficult to navigate, or is superfluous to the class (Miller, 2014). Having an orientation period for students with informal discussion and course navigation modules reduces the need for technical support, assists learners, reduces anxiety of using new technologies such as classroom specific software, and allows students to become comfortable with their online selves which fosters learning and sense of community (Hill, Song, & West, 2009; Liu et al., 2006; Miller, 2014; Shelton & Saltsman, 2005).

Prolonged engagement with course content is directly connected to greater levels of learning for students (Chickering & Gamson, 1987; Pelz, 2004). The ideal online course design emphasizes active learning and offers multiple opportunities for interaction with the content and collaboration with other students (Carini, Kuh, & Klein, 2006; Chickering & Gamson, 1987; Lorenzo & Moore, 2002; Miller, 2014; Stansfield et al., 2004). Students described feelings of disconnection from instructors, the course content, and fellow classmates when online course structure only included text-based content and video lectures (Bayne, 2004; Boling et al., 2012; Gunawardena & Zittle, 1997; Hughes, 2007). Email, discussion boards, and group projects are very important components of online learning environments (Boling et al., 2012; McInnerney & Roberts, 2004; Rovai et al., 2008). An informal "water cooler" discussion board created in the learning system allows students to create conversations outside of the course content, builds camaraderie, and is instrumental in establishing and building community (Gallagher et al., 2009; Liu et al., 2007).

Interaction is a major factor in creating sense of community (Delahunty et al. 2013). Baumeister & Leary (1995) stated that people who have things in common, share common experiences, or are simply exposed to each other frequently will form social attachments to each other, and that people are naturally inclined to form social relationships. Good learning environments were identified as those that promote high levels of interaction between participants (Delahunty et al., 2013; Shea et al., 2006). Interaction, dialogue and mutual exchanges were cited as being essential for the formation of sense of community, feelings of connectedness, trust and familiarity (Delahunty et al., 2013; Gallagher-Lepak et al., 2009; Hill et al., 2009; Ryman et al., 2009). Online course design that utilizes dialogue and interaction throughout the course increases the social presence of students under the COI framework. Pelz (2004) noted that online students bond to each other earlier than students sitting in a classroom because of the level of anonymity online and the fact that online students self-disclose to a greater extent. The literature consistently showed that student's prefer online courses that use discussions, group projects, and other activities that encourage interaction.

Chickering and Gamson (1987) noted that for students to engage in active learning they must be given opportunities to talk about what they learn, write about it, and relate it to current and past experiences. When a student contributes to the online class through discussions and collaboration, they engage in the process of interacting with the content. Participation and interaction have been demonstrated to be closely connected to developing a sense of community in an online course. Gallagher-Lepak et al. (2009) noted that interaction was regarded as essential to establishing community, providing support, and creating opportunities for learning and exchange of ideas.

Students asked to describe favorite and least-favorite aspects of their online course stated that social exchanges were their favorite and rote memorization was their least favorite (Boling et al., 2012).

Most students showed a desire to get to know their peers better, were willing to introduce themselves to an online group if prompted, and acknowledged the benefits of teamwork (Gallagher-Lepak et al., 2009; Hughes, 2007). Students come into courses not knowing their other classmates and with lowered expectations of interactions because of the online environment (Gallagher-Lepak et al., 2009). Students should feel like they belong, like they matter to the other members of the group, and that each member's educational needs will be met because of the support and collaboration of the group (Rovai et al., 2008). There are many occasions to include opportunities for interaction within an online course. As mentioned earlier, discussion boards, group work, and other collaborative learning can be easily facilitated in an online course through the use of technology. Peer-to-peer learning and interaction can be done through study groups, group discussion, group projects, peer facilitation, answering each other's questions, and encouraging each other (Lee, Srinivasan, Trail, Lewis, & Lopez, 2011). Students reported that sharing information, providing and receiving feedback from peers, and working on group projects contributed to learning and the development of a sense of community (Delahunty et al., 2013; Liu et al., 2007). Intentional course design and instructor facilitation with an increased opportunity for interaction is repeatedly shown in the literature to increase the sense of community students experience in online courses.

Institution

Kuh, Kinzie, Schuh and Whitte, (2005) defined engagement as the ways that an institution allocates its human and other resources and organizes learning opportunities and services to benefit students and encourage participation. Online learners need to know from a very early stage what types of support are available and where to find those support services (Lee et al., 2011). Academic and administrative support services impact student success. Before a student engages with course content, instructors, and peers in a course they engage with the institution. Institutional support services utilized by students include Learning Management System support (LMS), technical support, support to set-up their campus email and identity and a host of other services (Buchanan, 2000; Lee, 2010; Lorenzo & Moore, 2002; Simpson, 2012). Institutions offering online courses need to think about the reasons that students choose online learning. With flexibility in time and place being the most cited reason for selecting an online course, the possibility that students will also need support on their own schedule also exists. Technical support was noted as being a vital factor for students as problems accessing the content leaves students frustrated and discouraged (Dawson, 2006; Holder, 2007). For example, an online student who can only access their online course on weekends because of other commitments may become quickly frustrated if technical support from the institution is only available during regular business hours. The quality of support services plays an important role in online learning and student satisfaction (Lee, 2010; Simpson, 2012). Lack of readily available student services left online students feeling frustrated, isolated, and alienated (Shelton & Saltsman, 2005; Simpson, 2012). Findings in the research

concluded that institutional support is a key element in optimizing student learning, student satisfaction, and student's sense of community or belonging (Benke & Miller, 2014; Holder, 2007; Rovai et al., 2008; Simpson, 2012). It is important for institutions to note that student satisfaction with online learning is not only restricted to the individual course and the instructor but also includes institutional-wide support for online students.

Conclusion

The purpose of this literature review was to determine if it is possible for students in online courses to have a meaningful educational experience, including engagement with the course, peers, faculty, and institution that constitute a sense of belonging among students. Review of multiple studies in the literature showed that with deliberate course design and instructor presence, the learning experiences of online students could create a sense of belonging or community among online students. As such, the data presented in this literature review should only be seen as a part of the story of online learning in higher education. Facilitators of online courses and programs need to determine how best to approach course design and faculty development within their institutions.

Liu, et al. (2007) indicated that while their results demonstrated that the concept of sense of community is widely acknowledged in online education research, the value of it may not be readily accepted in current online course design principles and practices. Faculty that are unaware of the different pedagogical requirements for online learning or of the benefits of building community may not utilize techniques that encourage interaction and community development in their courses (Delahunty et al., 2013). Faculty aware of the benefits of community and course design standards that facilitate community may find themselves overwhelmed with time management issues while trying to find the proper balance of teaching presence for a course. Faculty development and support should be the primary focus of institutions in creating successful online programs (Bailey & Card, 2009; Simpson, 2012).

Institutions and instructors can create online learning environments that create strong sense of community and belonging for enrolled students. Various studies showed that online students can feel connected to a virtual classroom community, and students with strong sense of community showed greater levels of learning and satisfaction. While multiple factors contribute to sense of community in an online course, the instructor was most influential. Further research could be conducted on whether faculty development programs cause any demonstrable improvement in student engagement and satisfaction. Course design is another influencing factor on whether students perceived a sense of community in their online course. Further implications from this knowledge include decisions on whether to offer universal design templates for online courses or to create faculty development programs that focus on course design. Another avenue that could be explored is removing course design from the instructor entirely and having instructional designers use instructor content to create courses that follow best online pedagogical practices. As enrollment continues to grow in online courses; research, evaluation, and execution of online learning continues to be an important challenge and goal for institutions of higher education.

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