

# Using VoiceThread to Create Community in Online Learning

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**Abstract** A sense of belonging to a learning community has been identified as one of the factors contributing to greater student satisfaction and persistence in online education programs. Using the community of inquiry framework as a theoretical guide, the purpose of this study was to explore the role of VoiceThread, a web-based platform that facilitates cloud communication, in creating a sense of community for U.S. adult learners in the online environment. This study surveyed 39 students in a College of Education fully online master's program and in a blended doctoral program regarding their experiences using VoiceThread in their courses. Results indicate that students perceive VoiceThread positively in the creation of online community. Students reported feeling more connected their classmates due to the tool's ability to add voice to online activities. Students also felt more connected to their instructor due to VoiceThread's ability to humanize, or make the instructor seem real.

**Keywords** Learning community · Online learning · Voicethread · Online learning community · Online presence · Instructor presence

The proportion of all college students taking at least one online course in the United States is at an all-time high of 33.5% (Allen and Seaman 2014). For graduate students, online education offers the possibility of earning an advanced degree in a format that is more accommodating of their busy schedules. Indeed, in 2012, 22% of graduate students were enrolled

exclusively in distance education courses, while 7.8% were enrolled in some distance education courses (Ginder 2014). Catering to this need for flexible learning, in 2012, 62.4% of higher education institutions offered fully online programs (Allen and Seaman 2013).

Yet for all the convenience online learning offers adult learners, it is not without drawbacks. Retention of students in online courses is an ongoing concern for institutions of higher education. Administrators at universities and colleges offering online learning are aware of the difficulties associated with this type of learning. According to Allen and Seaman, "...41 percent of chief academic officers reported that they agreed that retaining students was a greater problem for online courses than for face-to-face courses" (2014, p. 18). Low retention of students in online courses has negative implications for institutions. Programs which fail to retain students risk suffering financial constraints or discontinuance, possibly exposing the institution to accreditation issues. Rovai and Downey (2010) identified seven factors related to the failure of distance education programs. Among these factors were student retention and online course design and pedagogy.

A number of studies have examined factors that influence students' decisions to drop out of online courses (Aragon and Johnson 2008; Lee and Choi 2011; Park and Choi 2009; Street 2010; Willging and Johnson 2009). Willging and Johnson (2009) categorized these factors as personal-, job-, program- or technology-related. Within the category of program-related factors, students noted a lack of one-on-one interaction with other students and instructor as a reason for dropping an online course, while within the category of technology-related reasons, a learning environment that was too de-personalized was cited. Studies have found that there are some factors related to students' dropout from online courses, such as lack of family support and/or organizational support from the workplace (Park and Choi 2009) and time commitments (Herbert

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2006; Willging and Johnson 2009), which may be beyond the control of the institution. However, there are other factors related to students' dropout from online courses, such as faculty-student interactions (Lee and Choi 2011) and course design (Ivankova and Stick 2007; Lee and Choi 2011) which institutions may be able to positively influence. How then do universities improve student retention in online courses and programs? Researchers have analyzed the factors that lead students to persist in online learning (Hart 2012; Herbert 2006; Ivankova and Stick 2007; Park and Choi 2009). One of the factors that aided in student persistence was a sense of belonging to a learning community.

## Theoretical Framework

### Community of Inquiry

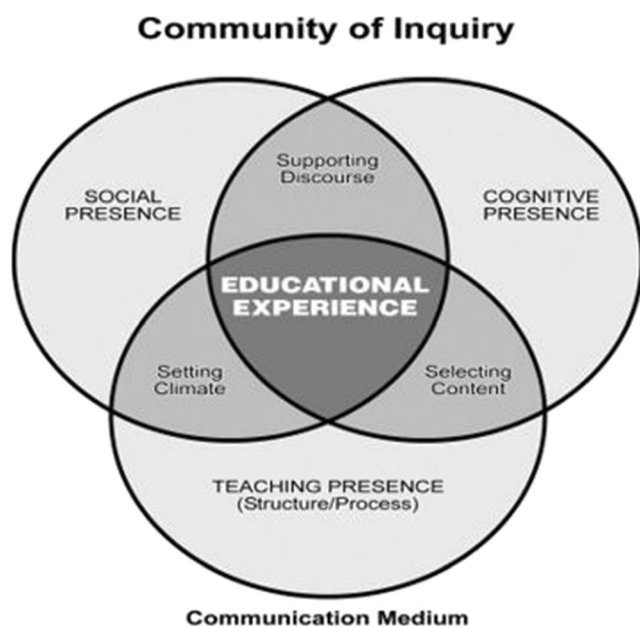
The community of inquiry (COI) model developed by Garrison et al. (2000) provides a useful framework for examining the role of community in online learning (see Fig. 1). Initially created to help the researchers understand issues surfacing in their online graduate program, COI has been recognized as an important tool for researching online and blended education (Swan and Ice 2010). Specifically, COI provides a model for understanding interactions and social integration in online environments (Boston et al. 2009). The framework identifies three types of *presence* necessary for online students to have a

positive educational experience: social presence, teaching presence and cognitive presence (Garrison et al. 2000).

The community of inquiry model supplements Moore's (1993) theory of transactional distance, one of the most-cited theories in the field of distance education, through the concepts of social presence and cognitive presence (Shearer 2013). Social presence is the ability of instructors and students to project their authentic selves into the online community. Teaching presence is comprised of two functions, designing the educational experience, which is typically the responsibility of the instructor, and facilitating the educational experience, which may be shared among the instructor and students. Considered by the researchers to be "the most basic element" (Garrison et al. 2000, p. 89) of the COI framework, cognitive presence is the ability of instructors and students "to construct meaning through sustained communication" (p. 89). This study focused on the ways in which VoiceThread, a collaborative cloud-based tool, can be used to promote community in online learning, particularly through social presence.

**Social Presence** Social presence is the way in which online learners portray themselves as "real" people in their online interactions with others and in the absence of face-to-face interaction (Garrison et al. 2000). In their review of literature concerning effective retention strategies of online graduate programs, Gazza and Hunker (2014) noted the importance of social presence as a best practice. Indeed, researchers have found that social presence increases student performance in online learning (Hostetter and Busch 2013). Further, social presence was identified as a significant predictor of course retention and final grade in the community college online environment (Liu et al. 2009). Pollard et al. (2014) found that instructor social presence significantly impacted community in online learning. Atkinson (2013) discussed the positive outcomes for instructors that resulted from efforts to increase instructor social presence in fully online reading/literacy courses and offered recommendations for ways that teacher education programs could support online instructors.

**Sense of Community** Research has established that a sense of community enhances student learning (Garrison et al. 2000; Palloff and Pratt 2007; Rovai 2002). Palloff and Pratt declared that community is "the essence of distance learning" (1999, p. 163). As early as 2002, Rovai wrote about the need for more attention to community building in distance education programs, emphasizing that learners were attracted to and retained through a sense of community. Palloff and Pratt (1999, 2003, 2005) identified the elements of community as: people, shared purpose, guidelines, technology, collaborative learning, reflective practice, and social presence. Young and Bruce (2011) defined classroom community as "the connections among students and between students and instructors that can lead to increased learning" ("Theoretical



**Fig. 1** Community of Inquiry Framework. From "The First Decade of the Community of Inquiry Framework: A Retrospective," by D.R. Garrison, T. Anderson, & W. Archer, 2010, *The Internet and Higher Education*, 13, p. 6. Copyright 2009 by Elsevier. Reprinted with permission.

Framework,” para 2). Their study of 1410 students in undergraduate and graduate online courses revealed that classroom community consisted of both a sense of community between students and between students and the instructor. (“Research Questions One and Two,” para 1). Studies have shown that students perceive community in online courses as helpful to their learning (Liu et al. 2007; Vesely et al. 2007).

## VoiceThread

There are so many technologies available for the facilitation of online learning that an instructor could literally spend years researching and testing options. One such tool which has received generally positive feedback from both instructors and students, particularly regarding its ability to help convey social presence in online learning, is VoiceThread. VoiceThread is a collaborative, cloud-based tool that allows users to share content (including videos, audio files, presentations and images) with over 50 different types of media (VoiceThread n.d.). It has been described as both an “interactive media album,” and an “online slide show” (Weir 2008, para 3), as well as a “multimodal interactive tool” (Romero-Hall and Vicentini 2017, pg. 91). Among its applications to higher education, VoiceThread has been used to expand teacher candidates’ responses in a case study (McCormack 2010), to support pre- and in-service secondary English teachers’ efforts to teach poetry (Archambault and Carlson 2011), to develop a self-directed learning opportunity in the gross anatomy laboratory (Dunham 2015), and to assist in developing student presentation skills in a chemistry course (Fredricks et al. 2016).

VoiceThread’s ability to allow students and instructors to share their voices in an online learning environment is an advantage of the tool (Borup et al. 2011), enabling an enhanced understanding of nuance through voice (Pacansky-Brock 2014). Ice et al. (2007) noted the positive benefits of incorporating instructor audio feedback in an online course. Study participants, who were master’s and doctoral students, reported feeling less isolated and more cared about by the instructor when they received audio feedback. They were also able to better understand instructor’s comments when delivered aurally, and expressed high satisfaction with the audio feedback.

Stodel et al. (2006) have suggested that audio and video technologies that do not rely on text may be effective in creating social presence and enhancing communications. This was borne out in the research of Ching and Hsu (2013) as well as Fox (2016) which found an increased sense of connection between online students through the use of VoiceThread. Parise (2015) compared VoiceThread as a presentation tool to text-based discussion boards available in Blackboard, a learning management system, with favorable results from both undergraduate and graduate business students. In the study, Parise found that graduate students utilized

VoiceThread’s audio comments more often than did undergraduates, while the undergraduate students used the text comments more frequently than did the graduate students. Of note were Parise’s (2015) findings that students using VoiceThread reported increased levels of emotional connection as compared with text discussion using Blackboard. Smith’s (2012) study of 10 doctoral students enrolled in an instructional technology course indicated increased social presence as an outcome of using VoiceThread. In Pacansky-Brock’s (2010) survey of 101 community college students, 80% agreed that VoiceThread helped establish a sense of community in their online art class. Additional research has found support for VoiceThread as an agent to promote or increase community in online learning (Kirby and Hulan 2016; Koricich 2013). This present study sought to contribute to the existing body of research through an exploration of VoiceThread as a means of facilitating community for graduate students in blended and online classes.

## Research Question

The research question that guided this study was: Does VoiceThread help create community for online learners?

## Methodology

### Participants

Participants ( $n = 39$ ) were graduate students in a College of Education in a southeastern public university in the United States. An additional seven participants were not included in the study because they indicated that they had not used VoiceThread. At the time of the study the students were currently or previously enrolled in a fully online master’s program (55%) or currently enrolled in a blended doctoral program (45%). The students were adults with ages ranging from 22 to 57. The racial or ethnic background of participants was reported as Black/African-American (36%), White/Caucasian (59%), Hispanic (0%), Native American (0%) and Other (5%). The gender makeup of participants was 40% male and 60% female. Forty-six percent of students had never used VoiceThread in a blended class while 38% had never used VoiceThread in a fully online class. Fifty-four percent of students had used VoiceThread in one or more blended classes while 62% of students had used VoiceThread in one or more fully online classes. A blended class is defined by the institution as reducing seat time by at least 15% but usually not more than 85% (University 2011). Participants indicated that the types of assignments VoiceThread was used for in their classes included student introductions (95%), presentations (55%), historical timelines (40%) and book reviews (18%).

## Data Collection

An online Class Climate survey was administered to students at the end of the Spring 2015 semester and at the end of the Summer 2016 semester. Questions on the survey related to students' experience with VoiceThread and the extent to which they believed the collaborative tool helped increase community and connectedness between online learners in a course and between online learners and the course instructor. Students were asked to rate their level of agreement with proposed statements on a four-point Likert-type scale with responses ranging from "strongly disagree" to "strongly agree." Data from these closed-ended questions were analyzed using statistical reports generated from the Class Climate survey software. In addition to the closed-ended questions, a number of open-ended questions were asked in order to elicit qualitative data from students. This qualitative data was exported from Class Climate to a Word document and was analyzed using an initial structural coding process (Guest et al. 2012; Saldaña 2013) to summarize groups of data. Following this, a secondary pattern coding process (Miles and Huberman 1994; Saldaña 2013) was employed to reduce the groups of data into smaller units. From these coded units, major themes (such as "hearing a voice" and "getting to know the instructor") from the data were identified.

## Results

Survey results indicated that largely, participants felt that VoiceThread played a positive role in their relationships with classmates (see Fig. 2). In response to the statement "VoiceThread helps me feel more connected to my classmates," most participants felt that it did ("somewhat disagree" – 5.1%, "somewhat agree" – 53.8%, "strongly agree" – 41%). Similarly, responses to the statement "VoiceThread helps me to get to know my classmates better,"

were primarily positive ("somewhat disagree" – 5.1%, "somewhat agree" – 38.5%, "strongly agree" – 56.4%).

"Hearing a voice" was a common theme in participant responses to the question "Why do you think VoiceThread helps you feel more connected to your classmates?" Participants noted how the addition of voice supplemented their experience, saying "A lot can be gained from voice inflection as opposed to just reading text on a page." Another theme that arose from participants' responses was that of "interaction." A number of comments such as "...helps you to interact with them vocally," spoke to the interactive nature of VoiceThread. In addition to the comments on the audio benefits of VoiceThread, a number of students also pointed out its visual benefits, saying "...it allows me to see my classmates' life experiences," and "By seeing the pictures...it makes for a more personal connection." Participants who felt that VoiceThread did not help them feel more connected to classmates remarked on the lack of face-to-face interaction, saying "Nothing can replace a face-to-face conversation." Other barriers to a feeling of connectedness related to technical issues, such as poor audio quality on voiced responses, or to structural concerns such as students having difficulty with the organization of information within a VoiceThread.

In response to the question "Why do you think VoiceThread helps you get to know your classmates better?" the most common theme was that of "sharing information." Icebreaker assignments such as student introductions and other assignments such as informational presentations created with VoiceThread helped classmates get to know each other. One participant offered "The information presented by classmates on VT became topics of discussion later and helped me better understand who they were as students." Participants who thought that VoiceThread did not help them get to know their classmates better indicated a lack of face-to-face interaction and the asynchronous nature of the tool as reasons.

**Fig. 2** Participant experiences with VoiceThread regarding classmates

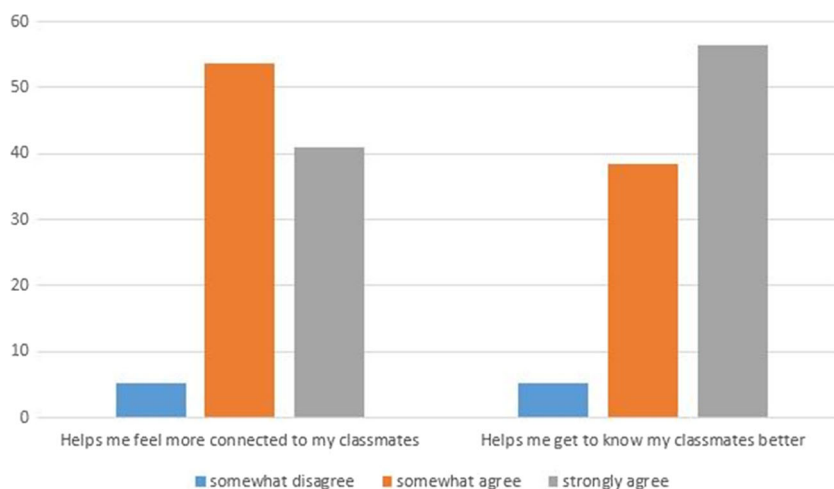
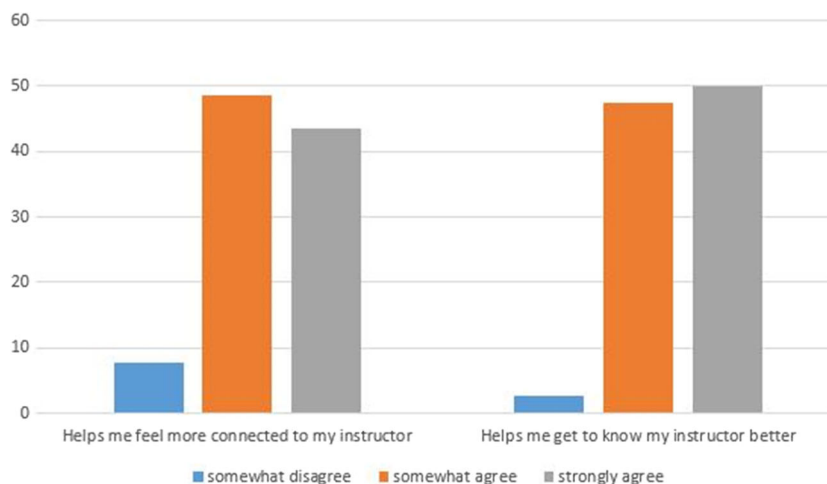


Figure 3 shows that participants felt that VoiceThread also played a positive role in their relationships with the instructor. In response to the statement “VoiceThread helps me feel more connected to my instructor,” most participants felt that it did (“somewhat disagree” – 7.7%, “somewhat agree” – 48.7%, “strongly agree” – 43.6%). Similarly, responses to the statement “VoiceThread helps me to get to know my instructor better,” were primarily positive (“somewhat disagree” – 2.6%, “somewhat agree” – 47.4%, “strongly agree” – 50%).

“Getting to know instructor” was a common theme among participants’ responses to the question “Why do you think VoiceThread helps you feel more connected to your instructor?” Participants noted that particularly through instructor introductions created using VoiceThread they were able to learn more about the instructor, including strengths, expectations, personal experiences and interests. One participant commented that such instructor VoiceThreads “provide good information that you may not learn in the traditional classroom setting.” A secondary theme related to feeling more connected to the instructor was that of “viewing instructor as a person.” Respondents remarked that through the use of VoiceThread they were able to see the instructor as “a person” or as “human,” rather than seeing them as “just an instructor” or even as “objects.” For the small percentage of respondents who felt that VoiceThread did not help them get to know the instructor better, reasons given were a lack of face-to-face interaction and a lack of participation on the instructor’s part.

The question “Why do you think VoiceThread helps you get to know your instructor better?” yielded no primary theme. Instead participants focused on things such as instructor comments, expectations and voice. Other aspects of VoiceThread that helped students get to know the instructor included pictures and the sharing of personal information. There were no comments from respondents on the question “Why do you think VoiceThread does not help you to know your instructor better?”

**Fig. 3** Participant experiences with VoiceThread regarding instructor

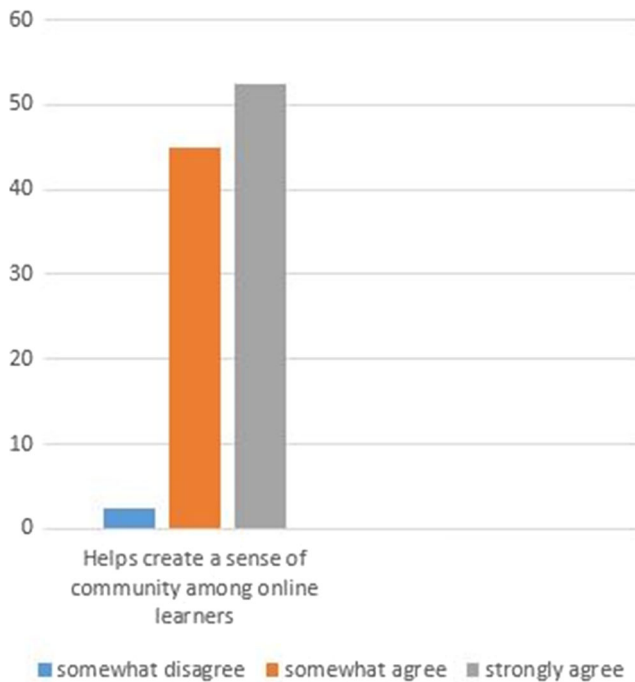


As indicated in Fig. 4, participants indicated that generally VoiceThread helps create a sense of community among online learners (“somewhat disagree” – 2.5%, “somewhat agree” – 45%, “strongly agree” – 52.5%).

The majority of the responses to the question “Why do you think VoiceThread helps to create a sense of community?” related to the theme of “getting to know classmates.” Participants indicated that through the use of VoiceThread assignments they were able to learn more about each other than they might have done in a face-to-face class. One participant remarked “Learning about classmates’ interests made me feel a sense of shared values/beliefs about education.” Doctoral students in blended classes also expressed appreciation for VoiceThread allowing them to first virtually meet cohort members, which helped ease feelings of awkwardness at their initial in-person meetings.

## Conclusions and Limitations

This survey was administered to students enrolled in online and blended graduate programs in one College of Education at a Southeastern university. Due to the limited number of participants and specific field of study, results should be interpreted with care. Results did not distinguish between the two groups of students surveyed. Future studies might examine each group separately (i.e., students in fully online programs vs. students in blended programs), looking for similarities and differences in perceptions of VoiceThread’s role in the facilitation of community in the online environment. Much of the research involving VoiceThread in online learning environments has focused on students’ perspectives regarding the tool. However, insight into instructors’ experiences with VoiceThread would also be valuable. Because of the importance of pedagogy and course design in online



**Fig. 4** Participant experiences with VoiceThread regarding community

student retention, future research might investigate VoiceThread's role in the creation of community through teaching presence. The results of this study indicate that the use of VoiceThread in online learning environments is warranted as a valuable tool to help create a sense of community. However, VoiceThread is not a freely available tool, which means that academic units will have to budget for an annual subscription.

Retention of students in online courses and online programs is critical to the future of institutions of higher education. One way colleges and universities can help retain online learners is through the creation of community in online learning environments, as envisioned in the community of inquiry model (Garrison et al. 2000). This study adds to the body of research concerning the creation of community and social presence in online learning. Results confirm previous research that found an increased sense of connection between online students through the use of VoiceThread (Ching and Hsu 2013; Fox 2016), as well as research that found support for VoiceThread as an agent to promote or increase community in online learning (Kirby and Hulan 2016; Koricich 2013). In particular, results indicate strong student belief that the use of VoiceThread, a cloud-based collaborative tool, does indeed contribute to a sense of community among graduate online learners. Study participants noted that the ability to hear classmates' voices through VoiceThread helped them feel more connected to those classmates. Additionally, the use of VoiceThread by the instructor helped humanize

them in the eyes of participants, thereby increasing a feeling of connectedness between the students and instructor.

**Compliance with Ethical Standards** The author affirms that there was no conflict of interest, financial or non-financial, associated with the research represented in this article. All procedures performed in this study involving human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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