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Mediating the Tensions of Online Learning with *Second Life*
by Nancy Evans, Thalia M. Mulvihill, and Nancy J. Brooks

Technological advances in computing have made online learning accessible and manageable for both institutions and students, providing tools for efficient and instantaneous communication. However, when such forms of communication limit the personal element in education, both students and instructors can become frustrated. While attempting to determine meaning that has gotten lost or that has been misconstrued, students and educators can experience acutely what Macdonald has termed a "tension of humanness and technology" (1995, 4). As a result, educators must give careful consideration to the appropriate integration of technology into what is an essentially human environment. Such tensions are not necessarily insurmountable, however, since they often inspire creative solutions and practices to minimize them.

Evolving multiuser virtual environments (MUVEs) like *Second Life* provide a particularly productive location from which to mediate the tensions that can be produced by integrating technology into education. In this article, we consider educational technology from the perspectives of curriculum theory and social foundations , and we use *Second Life* as a vehicle to explore larger theoretical perspectives and questions regarding human interaction, activities, and relationships in the context of the future of education and technology. Because it can meet human needs for belonging, esteem, and self-actualization; complement users' motivations for engaging with technology; and aid in building relationships and personal connections in an online environment, *Second Life* offers a valuable medium for enhancing and enriching online education.

New Needs in Online Instruction

The emergence of a generation of "digital natives" (Prensky 2001) or "insiders" (Lankshear and Bigum 1999) has created new challenges for the future of education, particularly as more learning occurs online, be it in traditional classrooms integrating online technologies or in full-fledged online classes. Many educators see the importance of human interaction in learning, but students are growing up with more opportunities for less human interaction. Students are now immersed in communication technologies such as text messaging and online gaming, and the future of education depends on our ability to integrate technologies that complement our students' out-of-school lives. Content-oriented curricula will need to integrate emerging technologies, shifting focus to the importance of "understand[ing] knowledge in relation to building, inhabiting, and negotiating virtual worlds" (Lankshear and Knobel 2003, 168) where students are now interacting, sharing, and building relationships. As Lankshear and Bigum (1999) note, "for perhaps the first time in human history, new technologies have amplified the capacities and skills of the young to such an extent that many conventional assumptions about curriculum (and pedagogy) become inappropriate" (460).

One indication of a shift in such assumptions has been the growing influence of constructivist learning theory in current discussions of online learning. Constructivism requires a space for experimentation and exploration as students construct their own understandings through interaction with their teachers, peers, subject matter, and environment. Furthermore, the guiding principles of constructivism provide ways to employ online technologies as pedagogies evolve. For example, mind mapping is a constructivist exercise that can be implemented in an online setting in order to share ideas among students and the instructor (Muirhead 2006). As technology develops, educators will need to be more intentional and agile in the use of constructivist-learning theories because this pedagogy depends upon much more student-created and student-evaluated content and processes. As technology is incorporated into teaching, students will have further ways to become co-creators of their own learning environments.

In the constructive-learning process, however, tensions will arise as students wrestle in their partnership with other students and teachers, and the technologies they rely upon can aggravate these tensions. Relationships are critical to this process, but e-mail and discussion boards lack the immediacy necessary to build such relationships. Chatting online may add an "additional level of personality" (Childress and Braswell 2006, 188) that enhances the constructive experience, but this medium can still be too removed to foster the sort of sustained bonds that are necessary for constructivist-learning activities. Research by Zhao et al. (2005) demonstrates that human interaction is the key to effective online education, yet the tools that customarily support online courses may fail to accommodate such interaction with sufficient richness and flexibility. While adapting pedagogies to reflect the needs of digital natives, we must keep in mind the importance of human relationships in learning.

Second Life

In the wake of such challenges, emerging online technologies are providing new ways to negotiate human relationships through social presence, and *Second Life* is part of this trend. In *Second Life* participants use avatars, virtual selves that reflect the creators' personalities, to interact with one another within the online environment. Through this feature *Second Life* can bring people, ideas, and subject matter together in a fuller representation of real human relationships. *Second Life* and similar MUVE technologies that enhance social presence can support collaborative online activities and enrich interpersonal understanding among their participants.

In terms of educational practice, this virtual world allows for a reimagining of the classroom as one that meets the new needs of online instruction while providing students with a sense of belonging to a learning community. For example, *Second Life* allows for online interactions that mimic the face-to-face conversations of the campus classroom while minimizing the formality that usually prevails in academic discussion forums. As such, it may encourage the creativity and openness that are essential to constructive learning. In some contexts, particularly where role playing is involved, students may be willing to be more experimental with their ideas and "experience at an 'arms length' things that they would otherwise not contemplate" in the guise of a digital avatar (Deuchar and Nodder 2003, 257). From a constructivist perspective that emphasizes student reflection on the processes and models they use to make sense of their experience (Bruner 1990; Dewey 1933; Vygotsky 1978), *Second Life* offers an ideal environment for learning.

The flexibility of *Second Life* also makes it an ideal vehicle for constructivist pedagogy. Not all MUVEs possess communities that are as well developed as those in *Second Life*; for example, MUVEs such as *Quest Atlantis* and *River City Project* (Barab et al. 2007; Blaisdell 2006; Nelson et al. 2007) are more narrowly focused on educational purposes, making them mere environments—virtual classrooms or laboratories—and not communities. In *Second Life* entirely new communities can be created by the participants, allowing for the power of human relationships to be integrated more freely in the learning process. *Second Life* thus provides instructors with more educational possibilities than other MUVEs (Exhibit 1). Using *Second Life* as a virtual-learning community as opposed to merely a virtual-learning environment focuses attention on relationships, growth, and development (Cooper 2003). The future of online learning will depend on our ability to make use of the Internet and other technologies that focus less on "information dissemination" (Barab, Thomas, and Merrill 2001, 109) and more on communication, "camaraderie," and human experience (106); *Second Life* is such a technology.

Shneiderman Meets Maslow in *Second Life*

In *Leonardo's Laptop* (2002), Ben Shneiderman attempts to reconcile the tension that arises when technology becomes a large part of human lives. Much of his work is based on the premise that "new computing" (11) goes beyond "mastering technology" (12) and needs to consider human relationships as a motivating factor for computer users (Shneiderman 2002). In doing so, he argues that technological innovators need to take

into account Maslow's [hierarchy of needs](#) when examining people's motivations in using technology. According to Maslow's ([1943](#)) hierarchy, once physiological and security needs are satisfied, humans feel a need for affiliation with others, a sense of belonging, and the existence of esteem. Once we understand those motivations, Shneiderman suggests, we can integrate technology more effectively into educational contexts.

A virtual-learning community in *Second Life* can make students' experience more meaningful by filling those needs as it also provides the resources to help students meet educational objectives. For example, Sarah Robbins, an instructor in the [Department of English](#) at [Ball State University](#), uses the online environment in *Second Life* to build trust with her students by encouraging "communal living" and letting them into her virtual house so that they get to know her as well as each other (Robbins 2006, 36). Building relationships with students in this fashion leads to greater communication as well as "reflection and self-discovery, which is absolutely necessary for building a learning community" (Robbins 2006, 38). Other students also appreciate the use of *Second Life* as an alternative to traditional online delivery methods—expressing a preference for this mode of interaction over instant messaging or e-mail because they felt more personally connected and reporting that they have "made friends, explored, and been able to share [their] work with people from around the world" (Bedford et al. 2006, 26). Such findings confirm Shneiderman's argument that technology users want "more information, better relationships, more chances to create, and better ways to send the world their message" (2002, 61). They also realize his vision of new computing technologies that will "recognize . . . collaborative experiences, entertainment, and aesthetics" (Shneiderman 2002, 11), meeting Maslow's hierarchical human needs as well as needs that are unique to the student population.

Based on Shneiderman's work, we suggest that the future of education will require students to be able to create and donate knowledge and artifacts rather than simply receiving and regurgitating information from instructors. These further activities have their own role in a threefold set of interrelated needs: interacting with instructors, peers, and others outside the academic environment (relating); making and doing as part of the learning process (creating); and sharing what has been learned or created with others (donating). Schneiderman links these needs or skills, which we see as educational needs or skills, directly to the framework of Maslow's hierarchy of human needs ([Exhibit 2](#)).

While traditional online mechanisms address the imperative for students to cultivate these skills, they do not address the tension that arises when the personal element is missing. *Second Life* can provide opportunities for students to address learning tasks while also providing human interaction through the use of avatars. For example, *Second Life* can provide spaces for students to explore subject matter through virtual presentations, simulations, and museums while simultaneously interacting with other visitors ([Exhibit 3](#)). In turn, students can engage with the subject matter in creative, productive, and meaningful ways, either by making note of a connection or by conveying what the information means to them in various forms of output ([Exhibit 4](#)). Students also can meet informally in *Second Life* to share their insights with one another, making their connections stronger, more personal, and perhaps more enjoyable. Meanwhile, opportunities for students to create and to donate their creations to the greater population are also available through the [*Second Life* grid](#) or [education wiki](#) where students can use blogs, share podcasts, make movies, perform concerts, and learn about other presentation opportunities. Through these further means of interaction, *Second Life* offers a venue where online education can meet a full range of human needs in the learning process.

Conclusion

Through its ability to enhance social presence, Second Life provides a virtual, learner-centered environment through which instructors and students can mediate the tensions that typically arise in many current approaches to online education. Such technologies allow for a "relationship among learning, playing, and helping" (Barab, Arici, and Jackson [2005](#), 15) by providing opportunities for human interaction that, in turn, can sustain authentic, meaningful learning experiences. In doing so, they promote curricular innovations that can help students and instructors better understand each other's needs, abilities, and interests (McCombs and Whisler 1997).

This understanding is necessary in our world where change, globalization, and diversity converge upon our learning environments and where respect and trust are required to foster motivation and learning (McCombs and Whisler 1997). These developments bring social foundations to the forefront. As we adapt to changing conditions, we will need to examine social values, educational contexts, access issues, and basic human needs, from relationship building to creating and donating one's work to the world. When new educational technologies are vetted theoretically and philosophically through curriculum theory and social-foundations perspectives, then such technological innovations can become truly transformative.

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