

Editorial: How Real-Virtual-Relationships Impact Learning

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Introduction and Background

Technology has changed how we interact with others. This is not a recent phenomenon; one could argue that technology has always impacted how we engage with ourselves and our community. For instance, radio changed how information was disseminated. The telephone altered the frequency and format of having conversations with others, particularly those not in our immediate proximity. And, social media have greatly impacted how we network and who we connect with.

In early 2017, we began a conversation related to research on ‘real-virtual-relationships.’ The concept related to the multi-faceted idea that our face-to-face relationships were becoming virtual and our virtual relationships were impacting our face-to-face interactions. The conversation took place in the form of a call for papers in a special issue we were co-guest-editing in the [Journal of Virtual World Research](#).

Given the scope of the journal, it was not surprising to see a number of submitted manuscripts address relationships in games and simulated environments. However, there were also a large number of submissions that were related to learning. These manuscripts addressed both how virtual environments impact learning and how technologies impact relationships which, in turn, impacts learning.

This should not have surprised us given recent trends in the field. Recent research has demonstrated how technology can foster and maintain social relationships within, around, and for the purposes of teaching and learning. And, as research has shown, relationships are critical to teaching and

learning. In a recent commentary published in *Education Week*, Gehlbach (2017) noted, “Studies on thousands of students show that learners who are better socially connected to their teachers and classmates are significantly more engaged and achieve better than their less well-connected peers” (n.p.).

The articles submitted to the JVWR special issue that were related to learning and real-virtual-relationships asked and answered many important questions about educational technologies. Namely, what do relationships within teaching and learning look like as more and more educational settings are occurring online in both formal educational spaces and informal learning spaces. We quickly made the decision to separate out these instructional articles; the result of the peer review process is this special issue of the *Journal of Interactive Learning Research*. It is dedicated to an exploration of virtual relationships and their influence on learning and teaching.

The articles in this issue provide a series of important lessons for how people develop, create, and maintain relationships in online settings. Each article has important implications for how and what people learn by developing relationships in online spaces. These can be formal learning spaces, such as online schools; however, these can also be informal spaces where creating relationships contributes to people’s learning. Each article includes nuanced implications, but we’ve noted four broad implications for how relationships in online spaces supports learning.

Implication #1: Learning is significantly impacted by our real-virtual-relationships.

Three authors in this special issue explore how technology is not just a means of communication, but also an avenue for relationship building and maintenance with populations of people who may have previously experienced barriers to these relationships. For example, Kist and Morgan examined the virtual social world of Jason, a young man diagnosed with autism. These relationships were positive for his social and emotional growth; additionally, the advancements in technology that allowed him to participate in online relationships that aided in his communication skills. Similarly, Davis explored the online spaces that housed a community support group for people with disabilities and another for people with Parkinson’s disease. These virtual worlds fostered valuable relationships that influenced their quality of life. Finally, the importance of this implication is also evident in Ohlson and colleagues work with mentors. They found virtual programs are effective to providing young people access to cultural and social capital, even when

they face barriers, such as geographic isolation, lack of financial resources, or lack of human services.

Implication #2: Real-virtual-relationships to support learning can exist with non-humans

Real virtual relationships go beyond traditional student-teacher relationships to include non-virtual humans and or perspectives on self that had of yet been unexplored. This is particularly important with new advancements in robotics. For example, Heller provided evidence of this when investigating conversations with Freudbot, a conversational agent (CA). His article solidifies the idea that rapport can be established with conversational agents. This has implications for learning as it relates to social presence, teaching presence, and cognitive presence. The article by Davis & Antonenko also highlights this implication in their examination of how pedagogical agents' gesture design (lifelike characters in virtual environments) influences learning. Examining the experiences of 160 South Korean 5th and 6th graders learning English grammar, the researchers found that the design of pedagogical agent gestures can influence learning and social perception.

Implication #3: The field has created new innovations for assessing the impact of real-virtual-relationships but needs more exploratory and experimental tools

There are new instruments and methods to assess real-virtual relationships; however, these emerging real-virtual-relationships require new ways to assess relationship and learning outcomes. Arguably this implication is evident in all the studies in this special issue. However, there are two clear examples—one that addresses a new instrument and one that addresses a new one of examining relationships. First, Karpinski examined the psychometric properties of the SNSAS (Social-Networking Site Activities Scale) to explore university students' self-reported behavior on social media sites. This new approach is critical as researchers work to better understand the ways people use social media to initiate, develop, and maintain relationships and engage in socialization. This has specific implication for the ways gender and culture influence behavior on social media. Second, Ferdig et al. studied motivation and self-efficacy for literacy acquisition using eWriters. Their findings suggest that a piece of hardware (rather than the software that is often mentioned in real-virtual-relationship work) acted as an important conduit to

support relationship-building between teachers and parents. This outcome is important because of the existing research on how such relationships can impact student engagement. However, the research also suggests the need to explore future methods to capture how technologies can inadvertently positively or negatively impact such relationships.

Implication #4: Cultural understanding and social perception change can be supported through real-virtual-relationships

Scholars have noted that real virtual relationships can support cultural understanding and social perception; however, it is critical to understand how these real-virtual-experiences translate to the physical world and how these experiences influence teachers' conceptual understanding and pedagogical practices. Moran explores how teachers interact with people from international backgrounds to gain cultural understandings and build relationships. Using the Whatsapp, preservice teachers experienced a shift in their perceptions about ELL students and learned new tools to facilitate communication. This is important as more professionals serve people from backgrounds considered diverse from their own as virtual experiences can offer exposure to culture and language.

Conclusion

Research has clearly demonstrated that social and emotional growth are intertwined with people's learning. And the articles in this special issue provide important implications for how these relationships are formed, developed, and maintained in virtual worlds. Furthermore, these articles document how virtual relationships engage people in significant learning and teaching opportunities.

Technology is ubiquitous; therefore, it should not be surprising that given the amount of time people spend in online settings that the significant relationships formed clearly impact what people learn and the ways people learn. Given this fact, it would be worthwhile for scholars to consider new terminology describing interactions in and around these "real-virtual-relationships", further defining how people engage, communicate, and gain knowledge or skills in online spaces. It will also be important for researchers to continue to study "real-virtual-relationships" in ways that broaden our understanding of this important phenomenon.

References

- Gehlbach, H. (2017). *How Teachers Can Find the Time for Social-Emotional Learning*. Retrieved from: <https://www.edweek.org/ew/articles/2017/10/25/how-teachers-can-find-the-time-for.html>