

**Hosts:** Members of the Building Digital Literacy research cluster of the Digital Life Institute

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- Nupoor Ranade, George Mason University
- Jason Tham, Texas Tech University
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**Title:** Negotiating Networked Learning Relationships with Augmentation Technologies: Smart Education, Data Analytics, and Human-autonomy Teaming

**Elevator Pitch:** The hosts of this round table discussion, members of the Building Digital Literacy (BDL) research cluster of the Digital Life Institute ([www.digitallife.org](http://www.digitallife.org)), adopt a critical disposition (NLEC, 2021a, 2021b) toward emerging augmentation technologies that sit at the core of networked learning. Augmentation technologies, such as wearable devices that extend human senses, augment creative abilities, or overcome physical limitations (Pederson & Hill, 2021), represent the engine that drives the next generation of networked learning. As emerging augmentation technologies, use of data analytics, and “smart” technologies proliferate, we see the critical need for research, presentation, and discussion of the implications for networked learning. This round table invites conversation about the role of artificial intelligence, big data, and learning analytics in networked learning.

We situate this round table discussion within networked learning [NL] as (re)defined by the Networked Learning Editorial Collective (2021a):

Networked learning involves processes of collaborative, co-operative and collective inquiry, knowledge-creation and knowledgeable action, underpinned by trusting relationships, motivated by a sense of shared challenge and enabled by convivial technologies....

Networked learning promotes connections: between people, between sites of learning and action, between ideas, resources and solutions, across time, space, and media. (p. 320)

Chris Jones writes that this NL definition “needs to emphasize the relationship to technologies, understood as socio-technical systems and to stress the role of digital networks as configurations that straddle both technical systems and human interactions—interactions between humans, between humans and machines, and in assemblages of both humans and machines” (NLEC, 2021b, pp. 331-332). We position networked learning as increasingly negotiated through augmentation technologies, and emphasize the need to negotiate networked learning relationships with augmentation technologies. We illustrate how NL is negotiated through augmentation technologies, and that such technologies are not necessarily convivial.

We seek to engage round table participants in addressing these and additional questions surrounding the role of augmentation technologies in networked learning. Brief remarks defining terms and narrating scenarios will precede each set of questions.

- To what extent do the connected technologies and educational approaches in smart cities engage residents in networked learning? What role do these technologies play in the

assemblages that emerge to enable networked learning? What critical stance should be taken toward technological platforms inherent in smart cities and schools of the future?

- How are data analytics engaged in data collection from technological platforms, especially those embedded in networked learning? To what extent should data collected for analysis from technological platforms be accepted as accurate and representative of disparate users? How might networked learning both engage data analytics critically and use data analytics to gain insight in the activity and results of networked learning?
- What impact do algorithms, artificial intelligence, and machine learning have on networked learning? To what extent are humans augmented by these technologies, and to what extent are they hampered? How should we envision the future of networked learning when networked learning assemblages of human and non-human entities include artificial intelligences capable of non-programmed learning?
- To what extent should we consider the technologies addressed in this round table discussion as “convivial”? What pedagogical approaches might we propose to prepare citizens for a future where networked learning is increasingly mediated by artificial intelligence? What does the future of networked learning look like in an increasingly “smart” digital world?

**Goal:** We set the following goals for participants in this round table discussion:

- Emphasize intersections among the work of the BDL research cluster of the Digital Life Institute and the NLCC, especially centered around augmentation technologies.
- Continue research and collaboration to expand the definition of networked learning to include connections between digital augmentation technologies and people, especially around “smart” environments, data analytics, and autonomous agents.
- Invite NLC participants to engage in technical and professional communications (TPC) research, and TPC participants to engage in NLC research.
- Propose a professional research network (PRN) to explore connections among digital literacy, technical communication, and networked learning.

**Engaging participants into the discussion:** We plan to use Zoom to facilitate this round table discussion, enabling both in-person attendees and remote participants online to engage in this conversation. Following brief positioning statements for each set of questions listed above, we will engage participants in addressing these questions in as much detail, and with as much leeway for exploration, as time permits. We will take notes during the discussion and request permission to record the session to ensure that remaining questions and comments are addressed following the round table, especially if we’re able to propose a PRN at the conclusion of the round table. We seek to learn from participants how they are thinking about augmentation technologies and the roles they play in networked learning theory and practice. We hope to facilitate and listen as hosts.

## References

Pedersen, I., & Duin, A. H. (2021). Defining a classification system for augmentation technology in socio-technical terms. *2021 IEEE International Symposium on Technology and Society (ISTAS)*, 1-4. <https://doi.org/10.1109/istas52410.2021.9629174>

Networked Learning Editorial Collective (NLEC). (2021a). Networked learning: Inviting redefinition. *Postdigital Science and Education*, 3, 312-325. <https://doi.org/10.1007/s42438-020-00167-8>

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