Inquiry of (Re)configurings: Toward a Review of Posthumanist Methods for the Study of Learning

Anna Keune, Technical University of Munich, anna.keune@tum.de
Paulina Ruiz-Cabello, University of Bristol, paulina.ruizcabello@bristol.ac.uk

Abstract: Educational researchers are increasingly adopting posthumanist approaches, questioning methodological assumptions toward the study of learning. Yet, it remains under documented how researchers align methodological doing to this aim. The present poster presents two studies that employed posthumanist perspectives and how they led to think methodologically with theory. The paper points to the need for a systematic review of posthumanist methodological approaches and decisions for the study of learning.

Introduction and background

Scholars across fields of educational research are increasingly adopting posthumanist perspectives (e.g., Kuby & Rowsell, 2017), claiming more recently for the need to articulate how these perspectives contribute to studying learning (Peppler et al., 2020). Posthumanism proposes a notion of social life and, therefore, of learning that decenters the human to attune to the inextricable connection between people and the physical world. To decenter people, research methods become "(re)configurings <u>of</u> the world" (Barad, 2003, p.816; sic): performative entities of the research process that make and remake the world. The tools and approaches for viewing aspects of the world actively contribute to what the world becomes both socio-historically and ontologically (Barad, 2003).

However, the reconfigurations that researchers and methods undergo in the process of aligning methodological doing toward the study of learning with posthumanist perspectives remains under documented. Following Sørensen's (2009) call to inquire about methodological shifts that posthumanist perspectives require, we asked: *How do methods align with posthumanist perspectives? What do they allow to capture?*

We drew on two of our own studies and analyzed how participant observation and video data analysis were reconfigured when applying a posthumanist lens. First, we examine participant observations and field notes around the informal presence and use of 15-16 years-olds' mobile phones in two high schools in Chile as a complex relational production space. Then, we turn to an inquiry that aligned video-based research to move toward flattening power relations between humans and non-humans in the context of computational crafting. Both studies provide insights into methodological reconfiguring based on posthumanist perspectives, such as considering human and non-human practices, and changing the *point of* view by filming from above. Our analysis points to the need for a systematic review of posthumanist methodological approaches for studying learning.

Methods

We selected two studies for analysis that were part of our own research because we have deep understanding of their methods evolution. The first study was the *mobile phones in schools* project, an ethnographic study in two stated-funded schools in Chile examining the negotiation process of 10th-grade students' phone use in school. Posthumanist perspectives informed tracing of how people, phones, discourses, and identities played a role in phone use and negotiations. The second study was the *computational crafting* project, which investigated fiber crafts as a context for computational learning in a middle school context. Posthumanist perspectives informed the data collection and analysis to highlight relational reconfigurations of people and craft materials that produced opportunities for computational learning. We analyzed how the studies looked for relationality, integrated researchers' points of views, and flattened movements to gain an understanding of how important aspects of posthumanist theoretical orientations informed methodological understanding of studying learning.

Findings

Mobile phone in school used a relational and socio-material approach (Burnett et al., 2012), in which phones were part of entanglements of positional identities, practices, objects, and discourses. The theoretical commitments led to field notes on what occurred *within* and *throughout* the phones' physical presence in the classroom, with teachers, peers, and objects (i.e., textbooks and calculators) in classes, and peers and parents outside of them. The theory guided focusing on relationships and connections of phone use within and across the classroom. students were invited to bring their phones into subsequent interviews to talk about and recreate observed practices. Preliminary analysis of observations during fieldwork (Figure 1) pointed to the complexity of relationships and identification of events, which then were further co-analyzed with students and teachers. That analysis showed that phones had a key role in how classes were being organized and how students were (dis)engaging in classes.

For instance, the phones acted as an entertainment source to ease self-declared moments of frustration, or as a substitute for non-existent educational tools in the study classrooms. The visual analysis (Figure 1) also pointed to negotiation and emerging practices that were *initiated* by the phones *themselves.* The relational and posthumanist perspective traced the emergent *discursive-materiality* (Barad, 2003) of the phone as a personal object, a communication device, and a contested educational tool.

Figure 1. Visual analysis of observational data with field notes (excerpts) in school 1, Chemistry class.
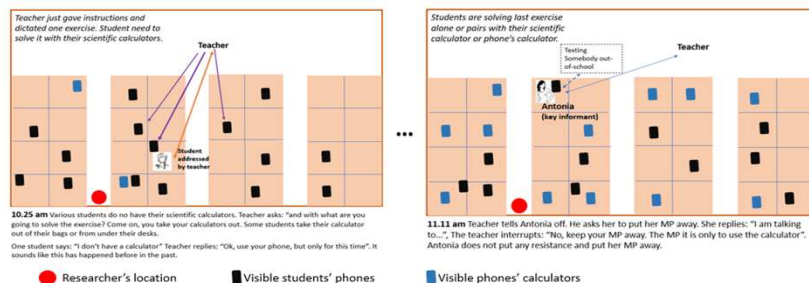
Computational crafting aligned with the Baradian (2003) notion of (re)configurings of relationships of people and things. Video data recorded the craft table from a birds-eye-view angle, showing what people and materials did to each other as they came together to shape opportunities for domain learning (Figure 2). The data analysis looked at patterned coming together of people and materials that produced computational moments. For instance, in weaving loom-youth movements produced conditional statements one dimension at a time: youth drew the threads of the loom vertically in space (either up or down) and paired this movement with a horizontal movement as they moved their yarn across the loom from left to right or from right to left. The study analyzed (re)configurings of the patterns and what happened when repetitions broke down. While youth called them mistakes, a human-centered reading that assumes a deficit notion, the analysis showed that (re)configurings physically expanded computational possibilities (e.g., including a range of additional pairings of loom-youth movements).

Figure 2. Camera set up to capture (re)configuring at the craft table and video excerpt.

Discussion

The posthumanist methods that we analyzed looked for relationality (e.g., human and non-human practices within the classroom), integrated researchers' points of views (e.g., changing the research process on the fly), and flattened movements (e.g., filming from above). A posthumanist lens made it possible to reframe deficit orientations into generative opportunities for learning. This study suggests the need for a more in-depth review of researchers' experiences and decisions across the wide range of posthumanist educational research.

References

Peppler, K., Rowsell, J., & Keune, A. (2020). Advancing posthumanist perspectives on technology-rich learning. *British journal of educational technology*, (4), 1240-1245.

Barad, K. (2003). Posthumanist performativity: Toward an understanding of how matter comes to matter. *Signs: Journal of women in culture and society*, 28(3), 801-831.

Burnett, C., Merchant, G., Pahl, K., & Rowsell, J. (2014). The (im)materiality of literacy: The significance of subjectivity to new literacies research. *Discourse: Studies in the Cultural Politics of Education*, *35*(1), 90-103.

Kuby, C. R., & Rowsell, J. (2017). Early literacy and the posthuman: Pedagogies and methodologies. *Journal of Early Childhood Literacy*, 17(3), 285–296.

Sørensen, E. (2009). *The materiality of learning: Technology and knowledge in educational practice.* Cambridge University Press.