

# Learning in the More Than Human World: A Conceptual Analysis of Posthuman Pedagogy

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**Abstract:** A growing number of studies have been investigating educational problems from the perspective of posthumanism. Posthumanism is about rethinking the relations between the human and nonhuman by challenging the anthropocentric thinking. Education scholars tend to regard posthumanism as critical social theories rather than theoretical frameworks for practice. The emergence of posthuman discourses in the field of education indicates a need for a pedagogy that represents the transformation. However, there is a lack of research on how posthuman pedagogy is defined, described, and practiced. This study presents findings from a conceptual analysis, which elucidates four characteristics of the idea of posthuman pedagogy. Based on these characteristics, we argue that posthuman pedagogy informs the rethinking of the relationships embodied in pedagogy and the reimagination of the dynamic practice of learning.

## Introduction

Posthuman discourses are gradually increasing in the field of education (Chiew, 2018). Typically seen as a critical lens, posthumanism, or the idea that questions the dichotomy between humans and animals (Wolfe, 2010), challenges the anthropocentric ideas that elevate human beings above the other species. Western formal education is rooted in humanist ideals, which symbolize the idea of education as “becoming human” through the cultivation of certain cognitive, social, and moral abilities (Pederson, 2010). These ideals reinforce the boundary of the human and the nonhuman world. Early criticism of the anthropocentrism, or centering of humans, in education is represented by dystopian fictions such as *Never Let Me Go* (2005) and *Oryx and Crake* (2003). In both stories, education is depicted as a means to maintain the humanness that elevates human beings. That said, the increasing integration of technology with human activities brings into question the ontology of education. The need to rethink education becomes more acute when science and technology breakthroughs are moving closer to the identification or the formulation of possible nonhuman agency such as nonhuman semiosis (e.g., Copley, 2016) and machine intelligence (e.g., MacFarlane, 2013).

Although there is a wide scope of concepts that could represent the posthuman thinking, the common ground is that posthumanism is about rethinking the relations between the human and nonhuman such as animals and machines (Snaza & Weaver, 2015). Posthumanism, however, is not about the denial of humanity. Instead, it is transformative and socially constructive (Snaza & Weaver, 2015). Practically, posthumanism brings into question several humanist dualisms in education such as the model (e.g., an “A” student) and the exceptional (Lewis & Kahn, 2010) and, therefore, promotes democracy in education. Posthumanism disrupts the human and nonhuman hierarchy that is normalized and standardized in Western ways of knowing (Derrida, 2008). Learning scientists have also argued that a view of human supremacy is an obstacle when scholars seek to engage with diverse cultural communities (Bang, 2015). Bang (2015) argued that such anthropocentric thinking is a learned cultural model rather than the only way of reality-making. For example, with the Western perspective of the natural world, humans are often believed to be the only agentic actors (Latour, 2012), which excludes different beliefs and knowledge systems. It is, therefore, necessary to understand how posthuman pedagogy supports the inquiry of learning beyond the Western normative model.

In addition, with the increasingly pervasive concerns on the environment, the relationship between human and nonhuman animals are hard to avoid in education. For example, Rowe and Rocha (2015) regarded school lunch as an educational event where eating animals was routine but often ignored. Similar ethical concerns were pointed out by Mustola (2019). It is challenging to keep animal bodies in educational settings. “Dead bodies of animals were warmly welcomed into educational institutions while live ones were not” (Mustola, 2019, p. 1439). Along with these challenges, the question arises whether there is a “posthuman education”? (e.g., Pederson, 2010). More specifically, what pedagogy is available to represent the values of such a shift and to accumulate experience to tackle the challenges?

Education researchers have used Posthuman pedagogy to indicate the practice that challenges anthropocentric views (e.g., Mustola, 2019). However, there is a lack of synthesis that joins the related research together. This study examines how the concept of posthuman pedagogy has been defined, used and practiced in the current educational research. We conducted a systematic conceptual analysis guided by the following research

questions: a) In what ways do scholars currently characterize posthuman pedagogy? b) How is the concept used in practice?

## Research method

We conducted a systematic conceptual analysis to identify major attributes of posthuman pedagogy and clarify ambiguous usage. Often used as a method to explore concepts in a given field, conceptual analysis has been recognized as an important inquiry to expand knowledge (Rodgers, 1989; Walker & Avant, 2011). Based on Rodgers' (1989) framework, our steps of analysis were as follows: (1) identify the concept, (2) identify surrogate names, (3) identify and select a sample of research articles, and (4) identify characteristics of the concept.

Since the concept of posthuman pedagogy is still establishing, we looked for possible surrogate terms in the preliminary search on EBSCO Ultimate. We used the combination of keywords posthuman and pedagogy and selected the first forty results. After a skimming of the title and abstract of these articles, we identified two possible surrogate terms: *posthuman Bildung* and *cyborg pedagogy*. With these terms, we conducted a database search (EBSCO Ultimate) and found 381 research articles. And then we examined whether each article met the following criteria we established: (1) full articles published in English, (2) within the field of education, and (3) peer-reviewed journal. As a result, 17 articles were included in our analysis. The articles were published from 2004 to 2019 and, of these, nine included empirical data. Traditional qualitative methods, such as case studies, were often used in these studies.

For each article, we first coded the following information: year, author, and title. We, then, read through each article and selected main texts that describe or indicate the notion of posthuman pedagogy. We coded each main text for possible themes about the ways that the concept is defined or applied. When analyzing the main texts, we specifically focused on how each article characterizes learners, teachers, and teaching content, the three components that are central to the idea of pedagogy (Murphy, 2003). And we also kept a memo for the possible components of the concepts that were beyond the scope of the previous three foci. Finally, we grouped the themes into several characteristics of the concept.

## Findings

A review of selected texts from all the included articles showed that most articles conceptualize the notion of posthuman pedagogy through descriptions. Though only one article offered a definition of posthuman pedagogy, through our analysis, we identified four characteristics of posthuman pedagogy in terms of learner, teaching content, technology (nonhuman actors), and ethical practice based on how these articles operationalize the concept.

### Posthuman pedagogy in terms of learner

Posthuman pedagogy challenges the traditional relationship between the learner and what is learnable. Building on Haraway (2016), Leibowitz and Naidoo (2017) pointed out that there was a need to question the idea that "both students and academics are separate bodies with their own intentionalities" (p. 160). The notion of intra-action is therefore proposed to respond to such a challenge. Intra-action is different from interaction in that the pre-existence of entities is not assumed (Postma, 2016). In this sense, learners are not defined by the pre-subscribed roles and abilities that the learner identity is often associated with. For example, a posthuman pedagogy is concerned about how child knower is positioned. The pedagogy practice that embraces the posthuman ideas should give more room to the notion that children are knowledge producers rather than just knowledge consumers (Murreis, 2017). However, this perspective does not mean to overemphasize a student-centered approach. Instead, it intends to direct our attention to other beings and entities on our planet. In this way, it can offer alternatives for student-centered pedagogy (Chiew, 2018) that represents the current individualistic culture and instead help to focus on the interconnectedness of the possible entities in learning.

### Posthuman pedagogy in terms of teaching content

In articles we reviewed, posthuman pedagogy also refers to the practice of teaching with the subject knowledge associated with posthumanism. Mustola (2019) identified posthuman pedagogy as "the practices and ideas that are found in posthuman thinking" (p. 1435). Very scant research can be found about the teaching practice of posthuman topics. In Mustola's (2019) article, stories about bringing the nonhuman animal into the class discussion were put into question, which was learned from the teaching an academic course about posthuman philosophy. It is further argued in the article that this teaching practice can help to change the human-centered discourse in education.

Posthuman pedagogy also includes the design of learning activities around the content of posthuman thinking. Specific teaching procedures of a course on “Geographies of material culture” that incorporated a cyborg ontology were discussed in Gough’s (2004) article. Another example is the design of Nature in Culture Matrix (The NatCul Matrix, n.d.). The analytical matrix with four apices, Anthropocentric horizon, Ecocentric horizon, celebrating nature, and problematizing nature, was proposed by the NaChiLitCul Research group for ecocritical analysis across media forms and educational practices. The incorporation of the matrix into the design of learning activity can encourage the understanding of posthuman thinking (Guanio-Uluru, 2019).

### Posthuman pedagogy in terms of technology (nonhuman actors)

As posthuman pedagogy entangles with posthuman thinking, the added dimension of the nonhuman is inevitable, which is often represented by rethinking the role of technology. Building on Gough’s (2004) notion that posthuman pedagogy can be seen as becoming cyborg, Gourlay (2012) argues that the nature of the lecture has changed. With the ubiquity of digital technologies, virtual learning environments or mobile devices are highly integrated with traditional face-to-face lectures. The role of technology has blurred the divides between material/virtual, and past/present. Technology is not only a tool for posthuman pedagogy. Strom, Mills, Abrams, and Dacey (2018) further argued that technology was an important nonhuman actor in learning. Technology is a reciprocal agency in collaborative work. Its agency demonstrates in the way that technology structures or even constrain interactions.

### Posthuman pedagogy as an ethical practice

Posthuman pedagogy is inherently an ethical practice. Informed by posthumanism, posthuman pedagogy focuses on the interconnectedness between these concepts in dichotomy, human/nature, and mind/body (Charteris, Nye & Jones, 2019). Ethics is traditionally part of pedagogies. Such ethical awareness leads to more democratic and expansive forms of education (Ecclestone & Goodley, 2016; Snaza & weaver, 2015). Focused on higher education, Taylor (2018) suggested that being aware of posthuman thinking in higher education is “ethically responsible and responsive” (p. 376) to the challenged ethics within Anthropocentric thinking. Posthuman pedagogy embraces such ethics-in-relation (Taylor, 2017) and moves towards an ecology of interdependent ethical relations in education.

### Implications

Posthuman pedagogy offers a new perspective to understand the dynamic practice of learning, which contributes to several key areas of interest in the field of learning sciences. Posthuman pedagogy redefines learning as situated in the more than human world. Studies on learning usually focused on human-human interactions, especially the teacher-student, student-student or student-agent interactions. Posthuman pedagogy provides a new perspective for us to further work to understand learning that happens through students’ relationship with technology and the natural world. From the studies we found, posthuman pedagogy is interested in human-technology and human-nature relations. In terms of the human-technology relation, it calls for seeing technology beyond a mediating tool and focusing on how it co-defines learning. The human-nature relation is also a part of posthuman pedagogy. Western science separates human from nature by arguing that learners, as the only active agent, can make sense of nature with measurement and empirical observations (Hu, 2019). As Western science is often privileged as one reality among many possible ones, the diverse human-nature relations are often ignored. Exploring the human-nature relations is important for navigating the knowledge systems from different cultures. Furthermore, studies on posthuman pedagogy also call for a methodological turn to align with this more-than-human framework.

### Conclusion and future directions

The concept of posthuman pedagogy captures the way posthuman thinking is practiced in education. With a conceptual analysis, we identified four characteristics of posthuman pedagogy in terms of learner, teaching content, technology (nonhuman actors), and ethics. Posthuman pedagogy enlightens the understanding of learning by decentering humans and enriches the studies of learning by rethinking the Westernized dichotomy between human and animals. This work contributes to the critical evaluation of learning in the human-centered context and provides a new perspective through which to understand learning through human-nonhuman relations.

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