Decentering the Human in Higher Education: A Posthuman Pedagogical Framework for University Learning

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Abstract

Rapid change in technology, ecological crisis and changing epistemological assumptions are also influencing higher education and pose a challenge to the dominance of human-based pedagogies. Conventional models of instruction and education have favoured human reasoning and agency, often excluding the expanding role of non-humans, including artificial intelligence and digital systems, along with environmental systems in educational processes. This research sought to investigate how principles of posthuman pedagogy can be comprehended and utilised in higher education, but more specifically how educators understand and respond to non-human agency in their practise. The study adopted a qualitative research design through semi-structured interviews with 12 University educators (lecturers/faculty) with different institutional backgrounds. The results showed that teachers are becoming more aware of the fact that technologies, artificial intelligence, and ecological systems are active contributors to the learning process, but not neutral instruments. The participants explained that teaching is a relational and distributed practise, whereby knowledge is created through interactions among human and non-human actors. The paper concluded that posthuman pedagogy can be an excellent conceptual as well as practical approach towards rethinking higher education within the framework of technological disruption and global sustainability issues. Posthuman approaches can provide more accepting, ethical, and robust education that can better correspond to the complexity of modern society because they decentre the human and recognise the agency of non-human actors.

Keywords: *Posthumanism, Pedagogy, Higher Education, Non-human Agency, Educational Reform*

Introduction

Higher education is a rapidly changing environment, which can be affected by global issues, technologies, and cultural shifts (Akour & Alenezi, 2022). Banihashem et al. (2025) articulated that the conventional education systems have been anthropocentric because they offered human agency, cognition, and experience as central to education. Nevertheless, with the increased environmental crises, Mena-Guacas et al. (2025) explain that the technological shift and appreciation of different epistemologies make this humanistic method inadequate to meet the demands of modern education. The research problem this paper addresses is the lack of understanding about how posthuman pedagogy can be operationalised in higher education teaching practices.

As Edwin Jeevaraj (2023) points out, Posthumanism, one of the philosophical frameworks that is critical of human beings, is a response to the shortcomings of human-centred thinking. Posthumanism is based on the understanding of interrelationships and interdependence of human beings, non-humans, and the environment, and focuses on the erosion of the human-non-human boundaries. Posthumanism in the area of higher education provides a chance to

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reevaluate the traditional pedagogical paradigm, which tends to be very focused on human subjectivity and cognition (Taylor & Bayley, 2019). By implementing a posthuman pedagogical framework, EERA (2020) suggests that higher education can be more responsive to modern issues, such as climate change, technological shocks, and a growing complexity of global systems.

Fundamentally, posthuman pedagogy aims to make the human peripheral in a manner that would acknowledge the role of non-humans in the learning process. Yan et al. (2020) do not claim to deny that learning is entirely a human process. Still, they also recognise the role played by technologies and ecological systems (and other non-human actors) in the educational processes. The gap that this paper tries to fill is how posthuman values can be accommodated in the modern teaching practises with the help of qualitative research, i.e. semi-structured interviews with University educators (lecturers/faculty). Accordingly, Siddhartha Dhungana (2023) posits that posthuman pedagogy creates the opportunity to rethink the concept of university education as a process of interacting with each other and dynamic relations that do not rely on human-related boundaries. Wang and Wang (2025) affirm that posthuman pedagogy is more comprehensive and holistic to education in that it does not ignore the role of non-human actors, such as machines, artificial intelligence, and the environment, in knowledge building.

The anthropocentric models of higher education of the past focused on human cognition and experience. Nevertheless, they are growing inappropriately within the 21st-century environment marked by Artificial Intelligence, technological change, and environmental disasters. Existing pedagogies, including those developed by Rodrigues et al. (2023) and Pasha (2023), lack non-human agency and therefore become irrelevant in an interconnected world. The study holds a research gap in both theoretical and methodological approaches since other researchers have largely dealt with the theoretical nature of posthumanism, but, like Olorunlana (2025), many studies have not conducted empirical studies extensively. Although there are a few qualitative studies, they tend to be limited to a few case studies. The present paper discusses the use of posthuman pedagogy to reform higher education by being more inclusive, sustainable, and ethically responsible based on the qualitative research approaches. The aim of this study is to explore how university educators conceptualise and apply posthuman pedagogical principles in relation to non-human agency in higher education

This paper further aims to explores how a posthuman pedagogy framework can be relevant in higher education and presents an elaborate framework on how the human can be decentred in university learning. The paper aims to restrict the traditionalized educational paradigms through peripheralizing the agency of non-humans and their engagements in the production of meaning, establishing new possibilities in the pedagogical practice. The study examines the integration of posthuman values into the existing teaching practises and education programmes with special reference to the application of technologies, artificial intelligence, and ecological systems in reorganising the learning process. With the use of qualitative research, such as semi-structured interviews with educators, this paper shall explore how posthuman principles can be put into practice in the modern teaching setting. Finally, this article is intended to posit an imaginary theoretical and practical framework of how to rethink higher education to respond to the realities of the 21st century that are interconnected and complex in addressing social justice, technological disruption, and global challenges such as sustainability.

Literature Review
Theoretical Framework
Posthuman pedagogy is based on posthumanist theories that criticise the traditional concept of human autonomy and cognition in educational institutions. The theorists, including Rosi Braidotti (2019), Karen Barad (2007), and Bruno Latour (2005), give this framework its conceptual underpinning. The idea of becoming posthuman, developed by Braidotti (2019), facilitates the merging of human and non-human divisions and the idea of knowledge production being relational. The agential realism presented by Karen Barad provides a view concerning the manner in which humans and non-humans ought to generate knowledge in entangled relations collectively. According to Scholz (2024), learning is not a human activity, but it is common to both human beings and non-humans. Latour (2005) elaborates the perspective in his Actor-Network Theory (ANT) that collaborates around the networks of actants (human beings, technologies, and ecosystems) that are involved in knowledge-making (Rangga Kala Mahaswa, 2023). All these theoretical components shape the creation of posthuman pedagogies, which believe that the education sector must adopt a wider range of actors, such as artificial intelligence, digital technologies, and ecological processes and conditions. Figure 1 presents the conceptual posthuman pedagogical framework that guided the analytical interpretation of the study.
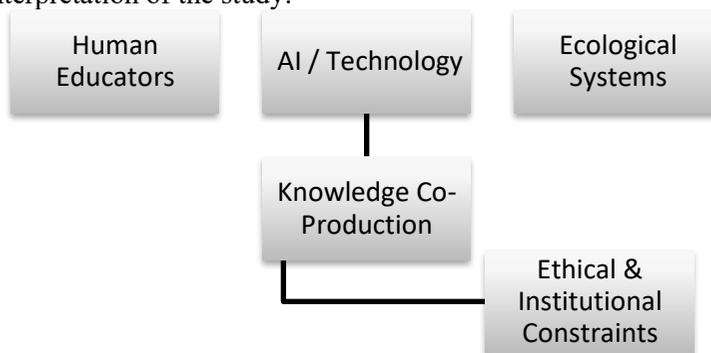

Figure 1: Posthuman pedagogical framework illustrating distributed agency between human educators, technological systems, and ecological contexts, mediated through ethical and institutional constraints.

Human-Centred Pedagogy in Higher Education
The history of education has been based on human-centred pedagogy. This paradigm is based on humanism in which the student as well as the teacher is at the centre of the learning process. According to Alam and Limo (2025), educational models proposed by John Dewey and Paulo Freire focusing on individual cognitive development, self-freedom, and critical thinking are still relevant to the educational practise in modern times. However, such models have been lamented as prioritising human subjectivity unfairly and without adequate focus on social–ecological systems and non-human determinants of learning conditions. Ozmen Garibay et al. (2023) argue that the anthropocentric models cannot be used to solve such global crises as climate change, technological shock, and environmental degradation. Such a strategy is limited in a more digitalised and globally connected world and therefore in the environment of globalisation. Posthuman pedagogy accordingly requires a shift towards more participatory,

ecologically aware and interconnected modes of education acknowledging agency on the part of non-human as well as human participants.

The Role of Non-Human Actors in Education

Posthuman pedagogy outlines non-human actors of the learning process, which include technology, the environment and animals. As shown by Alqahtani et al. (2023), the growing role of artificial intelligence, machine learning, and online platforms evidences that technology has the potential to influence the course of learning. The modern applications of AI involve personalising learning, data analysis and evaluation of student performance, which necessitates pedagogical changes to consider the role of these non-human actors in knowledge generation. AI is now being used to personalise education, sift data, and measure student achievement, which requires a pedagogical change, taking into consideration the contribution of these non-human actors to the production of knowledge. In one of the articles by Sidhartha Dhungana (2023), the proponents of posthuman pedagogy urge the educational community to incorporate ecological awareness into the academic programme because the environment is an active agent in the process of education. On the same note, Firinci Orman (2025) assumes that multispecies pedagogy focuses on the moral obligation of human beings in engaging with other species, as they can also contribute to the learning. Posthuman pedagogy can deliver a more all-encompassing and inclusive education by recognising the agency of such non-human agents.

Educational Reform Through Posthuman Pedagogy

Posthuman pedagogy provides an avenue of reform of higher education by decentering the human and acknowledging the agency of non-human agents. According to Castaño et al. (2025), adopting posthuman values as the means of addressing the world issues like climate change and technological alienation allow universities to develop a curriculum that focuses on sustainability, digital literacy, and environmental sensitivity. Volkmann and Fraunhofer (2023) present the evidence that posthuman pedagogy can transform education with reference to the case studies of universities that implemented interdisciplinary approaches emphasising environmental and technological literacy. As an example, higher educational institutions have started to incorporate AI ethics, sustainability and multispecies education into their curriculum and create more holistic learning experiences. Posthuman pedagogy can help universities in training students to meet the demands of the 21st century by reconsidering the role of technology, nature and other objects in the learning process.

Method

Research

Design

In this research, a qualitative research method was used, considering this approach was appropriate to address the dynamics of posthuman pedagogy in higher education. The study aimed to develop a comprehensive insight into the perception and application of posthumanist principles by teachers in their pedagogy and the ways in which these concepts may transform the learning experience in universities. The qualitative design promoted an in-depth analysis of the subjective experiences, insights and opinions of the subjects, given the exploratory nature of the topic. The qualitative design encourages a profound examination of the subjective experiences, understanding, and thoughts of the subjects, which is crucial to investigating complex, nuanced subjects (Lim, 2024). Since the topic is exploratory, such insights would have been hard to elicit in a quantitative design, which is usually not flexible enough to elicit the depth of the personal views of the participants.

Participants

The purposive sampling technique was used to identify the participants most apt to provide rich and relevant data on the subject of posthuman pedagogy in higher education. This approach helps in selecting samples which were coherent with research goals (Ahmed, 2025). Focusing on this research, samples include people who have knowledge or experience in implementing the posthuman concepts into their teaching methods. The participants involved in the study were 12 individuals who were recruited across different higher education facilities, both public and private universities. The respondents were mainly University educators (lecturers and academic staff) from public and private universities who had either directly worked with posthumanist pedagogical models or had been interested in investigating the impact of non-human agents on the learning process. The sample size of 12 participant is adequate to achieve data saturation, meaning that no additional themes or insights were likely to arise during the interviews (Ahmed, 2025)..

Data Collection

The data was collected using semi-structured interviews, which were selected because they are flexible and structured at the same time. Semi-structured interviews were extremely appropriate especially in researching a comparatively untapped field of study like the integration of posthuman pedagogy in the learning context in institutions of higher learning. The interviews were around 40-60 minutes long and held through Zoom. The respondents were chosen based on professional academic networks or through an email invitation. These semi-structured interviews provided the researcher with the chance of inspecting attitudes, experiences, and difficulties pertaining the adoption of posthuman approaches in pedagogical practise. It is a flexible approach since the participants are free to explain their views in detail without neglecting important areas of interest (Mashuri et al., 2022). Semi-structured interviews are appropriate when studying complex phenomena because they enable the researcher to pursue answers and adapt to the conversation patterns and to collect rich and qualitative data (DeJonckheere & Vaughn, 2019). The interview arranged included a variety of subjects, such as the level of familiarity of the educators with posthumanism and its applicability to the educational process, how they viewed the role of non-human actors (technology and ecology) in learning and the difficulty and possibilities they encountered in applying posthuman principles to the teaching process. The participants were also requested to consider how posthuman pedagogy affected the engagement of students and their knowledge production.

Data Analysis

The data obtained in the semi-structured interviews were analysed using thematic analysis. This methodology has been selected due to its flexibility and the possibility to locate, analyse and present patterns (themes) in qualitative data. Use of thematic analysis helped the researcher to represent the intricacies of the data in responding to the research questions. The thematic analysis was conducted according to the six stages of the thematic analysis described by Braun and Clarke (2006), and it helped identify and develop themes methodically. These six phases of analysis included the familiarisation with the data, coding, theme development, reviewing themes, defining themes and writing the report.

Results and Discussion

The Influence of Technology as a Non-Human Actor

One of the key themes that came out of the interviews was the significant impact of technology, and specifically, artificial intelligence (AI) and digital platforms, on the teaching and learning

experience. The opinions of numerous educators were involved in the fact that these technologies are no longer viewed as tools that facilitate human learning; they have become participants in the educational process. An example of this is AI that can be used to customise learning, tailor the content to the needs of individual students and evaluate the performance of students. One participant shared:

"In education, AI has left the tools of simple use. It is changing the way we go about our teaching, and in particular, personalised learning. It is not merely helping, but it is part and parcel of the learning process".

This observation is echoed by the concept of becoming posthuman by Braidotti (2019), in which the boundaries between human and non-human beings are becoming transferrable. Rezaei (2025) is critical of the fact that AI, as a non-human agent, is no longer regarded as an outside force but as a part of the process of knowledge-making. The respondents concurred that even though technology facilitated more customised and adaptive learning. One educator noted:

"Personalised learning using AI is a two-sided sword. As much as it enables us to satisfy the needs of individuals, we should be aware of the biases inherent in these algorithms and the possible reduction of student learning to that which is considered important by the machine".

This issue brings out the weakness of human-centred pedagogy, where the emphasis has been laid on human cognition and agency in the learning process. Conversely, Jehalut et al. (2025) argued that the posthuman pedagogy acknowledges the fact that humans and non-human agents, like AI, are interconnected, and it is ethical to take responsibility in this integration. This theme reflects Braidotti's (2006) concept of becoming posthuman, where agency is distributed beyond the human subject.

Ecological Systems and Environmental Awareness

The increased awareness about the ecological system and the sustainability of the environment in the context of education was another theme that appeared. According to the participants:

"The notion of posthumanism, which entails the dislocation of the boundaries between human beings and their surroundings, promotes a more comprehensive perspective of learning".

Some of them stated that:

"The idea of promoting ecological awareness in the curricula is not merely about educating students into being more conscious of the environment, but about establishing a dynamic connection with the natural world"

The environment is not a study topic anymore. *"We are educating students to think about how they fit into the ecosystems, and how they have their own power in ensuring environmental sustainability".*

This is the same perspective as that of Barad (2007), the theory of agential realism, which, as Scholz (2024) puts it, focuses on the intertwining of human beings and non-human beings. Copeland et al. (2023) highlight that posthuman pedagogy can advise students to understand themselves not as distinct from nature, but as a part of an ongoing conversation about the environment. Nevertheless, the issue is to apply these principles to all curricula. Participant: And that is what all the participants thought:

"And most of the time, when we are discussing sustainability, we are putting it as a course or a handful of lectures. It means that the actual ecological awareness can be fully integrated only with the help of the fundamental change in the character of our attitude to the very process of education".

This reaction is an indication that although there is an increase in the recognition of the

importance of ecological systems in education, the implementation of these principles is at an initial phase. Moreover, Tavares et al. (2024) state that the institutions have structural issues in terms of changing the traditional models of education to the ones that incorporate ecological responsibility and sustainability at all levels. This aligns with Barad's (2007) agential realism, positioning learning as an entangled human–nonhuman process.

Shifting from Human-Centred Pedagogy to Posthuman Perspectives

One of the most significant results of the interviews was the paradigm change from human-centred views to posthuman ones. Most teachers admitted the drawbacks of humanism, which traditionally focused on the mental capability and independence of the person. Within the framework of posthuman pedagogy, the human subject is dis-centred and non-human actors are perceived as an equal part of the learning process. One educator stated:

"It has been education, and the student, and the teacher. However, in posthuman pedagogy, we add technologies, nature, and even AI to that list, as contributors to the educational experience".

This opinion is consistent with the Actor-Network Theory (ANT), where Rangga Kala Mahaswa. (2023) underscores that knowledge is viewed as an outcome of a network of human and non-human actors with complex interconnections. The pedagogues involved in the research identified that posthuman pedagogy finds a way to exclude the human subject, and instead of considering the individual as a learning subject, it involves a more collaborative and distributed approach to learning. As one of the participants described:

"They are no longer students reading the textbooks or the teachers, as they now interact with the surrounding world via digital devices, the problem of the environment, and the data collected by artificial intelligence systems".

Nonetheless, even though the theoretical advantages of the decentering of the human found a great number of supporters, a lot of participants were worried about the practical difficulties of the development of such a shift in a daily classroom environment. These difficulties encompass institutional resistance, resource deficiency, and long-held beliefs on human primacy in education. As one participant noted:

"It is difficult to make people agree that we should abandon human-centred teaching when the whole system of academia is based on this idea. It is going to take time."

This issue is indicative of the stagnation of the traditional model of pedagogy and the challenge in adopting posthuman concepts in a system that has traditionally been quite resistant to radical transformation. Latour's (2005) ANT is evident here, as knowledge emerges through networks of human and technological actants.

The Role of Non-Human Actors and Ethical Considerations

Posthuman pedagogy acknowledges the non-human actors involved, such as AI, technology and even animals, as part of the educational process. Nevertheless, the ethical aspects of the implementation of these non-human agents into the classroom were also often mentioned in the interviews with Rangga Kala Mahaswa. (2023). Although the majority of educators admitted the necessity of ethical responsibility, they posed the question of the morality of employing non-human agents in education. One participant remarked:

"We cannot simply leave the future of AI to individualise education and not consider the consequences. So what about the biases of the system? However, what of the environmental effects of the technologies we use"?

These issues raise the ethical dilemma involved in the integration of non-human beings in the educational practice. The Cyborg Manifesto by Haraway (1991) can serve as a prism through

which these issues can be considered, in that, even though non-human beings such as AI and machines can bring better experiences to human beings, there is also the ethical responsibility that cannot be overlooked. Another participant stated:

"The respondents to the research appeared to concur that posthuman pedagogy offers a chance to renegotiate the nature of education in a manner that recognises the advantages as well as the ethical issues surrounding the process of incorporating non-human agents".

This consideration highlights the fact that there must be ethical frameworks that inform the application of technologies and other non-human actors in education, whereby their application is not at the expense of equity, justice, or sustainability.

Practical Challenges and Institutional Resistance

The interviews also indicated that there are major impediments to the practical application of posthuman pedagogy. The institutional resistance was mentioned by many participants when discussing the main obstacles to applying posthuman principles to teaching activities. Such obstacles are hard curriculum frameworks, dependence on standardised testing and just an overall inability of university administrations to support the same. One educator noted:

"Some of the faculty are pushing towards posthuman approaches, but the institutional structures are not accommodating such a transition. No clear model of how to incorporate the non-human agents in a structured curriculum exists".

In addition, the fact that educators had no opportunities to visit posthuman pedagogy is considered a major obstacle. One of the participants described it as follows:

"There is hardly anything in terms of resources or training on how to teach, using a posthuman lens. This is not one of the things that most of us were not ready to have in our graduate studies".

This points to the urgent necessity of institutional assistance, such as professional development initiatives, which would enable educators to acquire the instruments and know-how to be able to operationalise posthuman pedagogical concepts in their classrooms.

Conclusion

To be precise, study contributes to posthuman pedagogy by demonstrating that educators operationalise posthumanism not as abstract theory, but through everyday pedagogical practices such as AI-mediated assessment, ecological curriculum design, and distributed learning networks. The findings introduce the concept of pedagogical co-agency, where responsibility for learning is shared between human and non-human actors. The research aimed to consider the question of how posthuman pedagogical principles can be framed and work in higher education with reference to how non-human agents, including artificial intelligence, digital technologies, and ecological systems, can influence the process of learning. Relying on qualitative research on teacher experiences, the results show that teaching and learning become more relational and distributed activities and not only human-centred activities. Those involved in the educational field recognised that non-human agents can no longer be considered as peripheral instruments but as participants in the production of knowledge, which has an effect on the way content is provided to students, how it is interpreted and experienced. This change is an indication of an increasing understanding that learning arises out of multifaceted constellations of human and non-human relations, and not out of personal cognition.

The discussion indicated that posthuman pedagogy is applied across the various forms of educators. Others still exist within many humanist paradigms, in which technologies and environmental issues are regarded as helping but secondary factors. Others take even more

posthuman approaches where AI, ecological systems, and digital infrastructures are considered as co-constructive forces in the learning environment. These teachers characterised the teaching as a collaborative act between human and non-human lines, with agency dispersed and learning being a resultant product of the interaction of many actors. These views pose a challenge to traditional beliefs about authority, experience and power in the educational institutions. This indicates that the Instructor becomes not only a role of relaying knowledge, but also a facilitator of relationship networks in learning. On the whole, the results confirm the didactic relevance of the posthuman theory as a critical framework to reconsider higher education in the conditions of technological disruption and global environmental crisis. Posthuman pedagogy by stepping out of the human creates possibilities of inclusive, ethical and sustainable education practises that can recognise dependence within and across humans, technologies and the environment. This strategy challenges universities to shift their attitude towards instrumental applications of technology and instead critically reflect on the wide ramifications of non-human agency to power, accountability and knowledge. Through such an approach, posthuman pedagogy can provide an important opportunity that higher education can use to react to the nuanced expectations of the twenty-first century.

Limitations and Future Implications

This research is limited in a number of ways that can be taken into consideration when discussing the results. To begin with, the study was based on a rather small sample of educators, which constrains the degree to which the findings can be extrapolated to various institutional, cultural, and disciplinary settings. In spite of the qualitative method, which provided valuable, rich and comprehensive materials, another study could use larger and more varied samples to increase the generalisability of the results, in addition to the possible varied experiences of posthuman pedagogies. Second, the researchers were mostly interested in the perceptions and reflections of teachers, but did not make in-person observations of classroom lessons or observe students. The findings are thus subjective meanings of posthuman pedagogy and not literally the way such methodologies work in reality. The further study might utilise either a multi-method or mixed-method design that will incorporate interviews with classroom observations, curriculum review, or student viewpoints to create a more comprehensive concept of implementing posthuman principles.

Third, the study achieved a cross-section of posthuman pedagogy at one point in time. Since educational technologies and environmental issues change very quickly, longitudinal studies would also be useful in tracking the development of the attitudes and practises of educators. This area of research may investigate the ways in which preliminary interactions with non-human agents transform the professional identities, pedagogical practises, and institutional cultures. Research into the future ought to find out structural and policy aspects of posthuman pedagogy. Research into the role of institutional governance, assessment and technological infrastructures in facilitating/limiting posthuman ways of doing things would also shed light on the viability of educational change in practice. Moreover, participatory and design-based research offer opportunities in terms of making educators and students co-create posthuman learning spaces, in which ethical responsibility, inclusivity, and ecological consciousness can be prioritised. With higher education facing technological and environmental uncertainty, research on this topic should not remain descriptive, but instead critically addresses the normative and political consequences of decentering the human in education.

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