



Vol.7 No.2 (2024)

Journal of Applied Learning & Teaching

ISSN : 2591-801X

Content Available at : <http://journals.sfu.ca/jalt/index.php/jalt/index>

Graphic assemblages for storytelling: A posthuman perspective from an English language classroom

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Keywords

Affect;
agency;
assemblages;
ESP;
graphic narratives;
higher education;
posthuman pedagogy;
speaking;
stories.

Abstract

The post-anthropocentric concept of posthumanism decentralizes human experiences and dismantles absolute human agency. This is done by endorsing the importance of relationality between various human, non-human, material and abstract elements in constituting/composing experiences, events or matters. In education, posthumanist philosophy envisages an inclusive, interdisciplinary perspective that endorses the human and non-human agencies dynamically engaging in material and abstract relations, inside as well as outside the classroom, to reconstruct traditional pedagogies that focus on texts, teachers and the lack of learner agency. Conceived in the qualitative paradigm, the present study attempts to examine the role of learner agency, motivation, and the affect of assemblages in developing the speaking proficiency of tertiary-level learners in an English for Specific Purposes (ESP) classroom in India.

As part of the intervention, learners created wordless graphic assemblages (in groups) with arbitrary images using an online digital comic builder platform to create stories. Their post-task activities, such as discussions, hypothetical questioning, and Socratic seminars oriented towards the development of their speaking proficiency, were analysed. The findings of the study show that graphic assemblages can be used as an affective posthuman pedagogical tool to enhance learners' speaking skills and operationalize their higher-order thinking skills. It also augments agency, facilitates affect, and increases motivation among learners. The results of the study suggest that the graphic assemblages fulfil different teaching and learning objectives. It also provides scope for educators to formulate strategies involving creative practices in a language classroom using a posthuman educational perspective.

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Article Info

Received 22 April 2024

Received in revised form 20 June 2024

Accepted 5 August 2024

Available online 8 August 2024

DOI: <https://doi.org/10.37074/jalt.2024.7.2.21>

Introduction

Stories as a pedagogical tool have been effectively used in language classrooms for varied purposes such as language and skill development (Bayram & Tongur, 2020), enabling a secure and stress-free learning environment (Porras, 2010) and fostering cultural sensitivity (Alkhaleefah, 2017). Graphic narratives are relatively new forms of stories that have gained significance in language learning. Eisner (1985) defined graphic narratives as “sequential art, the arrangement of pictures or images and words to narrate a story or dramatize an idea” (p. 5)—for example, graphic novels such as *V for Vendetta* by Moore et al. (2005). Numerous studies assert the potential of graphic narratives that substantially contribute to language teaching and learning (Aldahash & Altalhab, 2020; Manning-Lewis, 2019). However, using graphic narratives as a pedagogical tool is not practiced widely probably owing to their unfamiliarity among teachers (Carter, 2007).

The COVID-19 pandemic has changed education’s ambit, necessitating educators to upgrade their practices that cater to the current needs of learners by involving technology as a chief aspect (Sam, 2022; Bala & Mitchell, 2024). Additionally, the present exclusive and hierarchical nature of education essentializes new modes of teaching that disrupt humanistic ideologies and create new knowledge with interdisciplinary perspectives such as posthumanism (Blaikie et al., 2020). For instance, the COVID-19 pandemic enabled online and hybrid classes that disrupted the idea of classroom space and enabled new modes of teaching and learning. This allowed the interactions and transactions between the teachers, learners, materials, environment and methods to evolve which challenged the conventional humanistic ideology of teacher-learner hierarchies. The entanglement of concrete and abstract, living and non-living elements both inside and outside the classroom interacts with the processes of learning and teaching, making the educational space dynamic and constantly evolving (Karthika, 2024). When technology mediates learning and we perceive education in a posthuman context, acknowledging differences, dismantling the notion of agency, and fostering the idea of connectivity between similar or dissimilar material or abstract ‘things’ or ‘events’ become important. For instance, the material elements such as chalk, blackboards, benches, windows and lights impact the physical interaction occurring in the classroom. Likewise, PowerPoint slides facilitate sharing information with ease and at the same time, mediate intellectual transactions by helping to convey complex ideas and creating an emotional, social and intellectual impact, which helps in knowledge production in the learning process.

It is important to understand that posthumanism is a post-anthropocentric philosophic strand that decentralizes the experiences of humans and demonstrates them as a part of totality by establishing that ‘things’ come into being through/in relations and their attributes do not pre-exist in isolation (Barad, 2007). For instance, a technological gadget such as a mobile phone comes into being and is put to use only when it comes into contact with a human who operates it. Similarly, a human defines her/his/their being in relation to other humans, materials and others. The notion of posthumanism is more inclusive, considering

humans, nature, animals, technology, the environment, and other non-human or material objects in terms of relationality (Dolphijn, 2020). Situated in a relational ontology, posthumanism emphasizes how everything is already entangled with humans, non-humans, technologies and discourses in non-hierarchical relationships (Kuby, 2019; Karthika, 2024). Thereby it extends subjectivity and agency to non-human actors in an entanglement (Herbrechter, 2016). The concept also questions the notion of binaries such as nature/culture, body/mind, human/nonhuman and theory/practice. It attempts to establish an ‘intra-action’, which is the relational encounter between/among the elements (Barad, 2007; Taylor, 2016; Murris, 2020; Malone, 2016) and produce multiple and heterogeneous perspectives that add to the nuanced knowledge production concerning such faulty binaries (Taylor, 2016). Thus, posthumanism is a navigational tool to understand the current conditions undergoing massive change, such as the post-pandemic hybrid classrooms and climate crisis and to rethink literacy. Deriving elements from the posthuman theory, the theory of assemblages, and the idea of graphic narratives, this study formulates the model of graphic assemblage as a posthuman pedagogic tool in English classrooms. Assemblages can be defined as the grouping of various elements that involve human, non-human, social, material and technological aspects that collaboratively work in a context to produce an affect (Deleuze & Guattari, 1987; Bennett, 2010; Strom, 2017). The role and agency of these elements become relational as they possess a non-hierarchical relationship with each other in the assemblage (Lenters & McDermott, 2020). The study explores the graphic assemblage model as a posthuman mediation in the learning process that involves the coming together of learners, teachers, technology, art, graphic narratives, classroom spaces, and many others that interact and work collectively in the learning assemblage to produce an affect. Therefore, the present study explores the posthuman possibilities and the role of post-Anthropocene thinking in an English for Specific Purposes (ESP) classroom through the implementation of graphic assemblages as a posthuman pedagogic tool. It aims to examine the enabling of agency, motivation and affect in the learning process from a posthuman theoretical perspective and outlines some possibilities for the teachers to incorporate creative classroom practices/activities in their language teaching. The study also documents the impact of the intervention on the speaking proficiency of second language (L2) learners.

Graphic narratives in language learning

Graphic narratives can be used as pedagogical tools in language classrooms for diverse purposes to enhance the overall language learning of the learners. Studies suggest that graphic narratives can contribute substantially to teaching and learning a foreign or second language (Aldahash & Altalhab, 2020; Manning-Lewis, 2019) as they foster better learning by amalgamating graphics and words more than texts with absolute words (Mayer, 2009). They are also used to enhance the learners’ language skills, such as vocabulary (Castillo-Cuesta & Quinonez-Beltran, 2022), reading (Aldahash & Altalhab, 2020; Thompson, 2023), writing (Manning-Lewis, 2019) and speaking (Gultom et al., 2022). Graphic narratives improve and sharpen visual literacy

(Kwon, 2020), contribute to the four components of intrinsic motivation, which are curiosity, competence, internalized motivation, and autonomy (Thompson, 2023) and motivate reluctant learners (Matuk et al., 2021). It also develops higher-order thinking skills (Gultom et al., 2022). Studies also claim that graphic narratives improve the affective and cognitive faculties and facilitate the learners' Intercultural Communicative Competence (Savic, 2022). In this study, graphic narratives in an English language classroom are explored to examine their role in the learning assemblage and account for the rich, heterogeneous classroom spaces and the multiple affects they can have on the learner's English language proficiency. In the 21st century, where learners have a considerable degree of expertise in the use of technology, such explorations facilitate greater learner engagement and sustained learner motivation assisting them to assume more agency in the teaching-learning process. Rather than being mere witnesses/participants in the learning process, the graphic assemblages equip learners to create their own learning assemblages by using technology for co-constructing knowledge which is an important aspect of posthuman education.

Posthumanist education

The humanistic view of education operates based on binaries and hierarchies. This view accounts for the exploitation of disadvantaged humans, nonhumans and the environment responsible for the manifold crises we face such as exclusivity and climate crisis (Braidotti, 2013, 2019; MacCormack, 2020). Therefore, the current conditions require new modes of teaching that disrupt humanistic ideologies and create new knowledge with interdisciplinary perspectives. Posthumanism as a theoretical framework enables educators to achieve this requirement (Blaikie et al., 2020). Posthuman education places all creatures (human and non-human) in a nonhierarchical web (Morris, 2014). This enables us to examine all the actors and their agencies in a learning environment that extends beyond texts and incorporates many other dimensions that shape classroom learning which might not have been thoroughly accounted for in literacy research (Nichols & Campano, 2017). In other words, all the material objects involved, the environment of the class and the emotional bearings of the students and the teachers are some of the aspects that are left unexplored. Therefore, posthumanist encounters enable heterogeneity and multiplicity in learning not just in terms of subjectivities but also with regard to classroom practices and methodologies (Taylor, 2016). Discontinuity and nonlinearity are the characteristics of posthuman educational practices that deregulate the learning process, position the learner in discomfort, and enable the learner to deal with the unfamiliar to learn, unlearn and relearn (Semetsky, 2014; MacDonald et al., 2020).

Posthumanist theory of assemblages

According to Deleuze and Guattari (1987), assemblages 'have elements (or multiplicities) of several kinds: human, social, and technical machines' (p. 36). Assemblages are also described as 'ad hoc groupings of diverse elements,

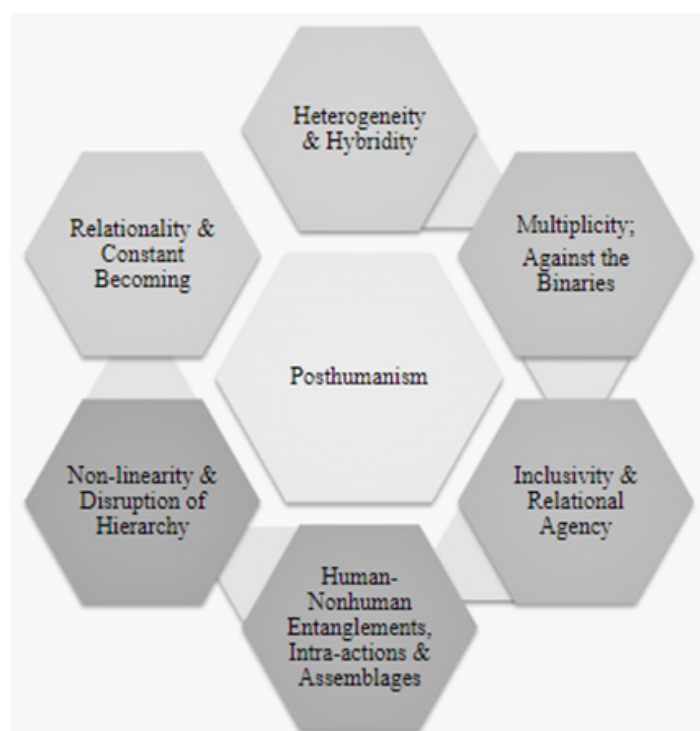


Figure 1. Aspects of posthumanism.

of vibrant materials of all sorts' (Bennett, 2010, p. 23) that function collectively in a context to produce something (Strom, 2017). For instance, a classroom can be considered an assemblage of learners, teachers, texts and material objects which are a mix of bodies, things, ideas, senses, memories, words and much more, deconstructing the subject/object binary (Haraway, 1987). Every element of an assemblage is conceived as a participant and its relationship with every other element is non-hierarchical (Lenters & McDermott, 2020). The assemblages are subject to change as they are always in the process of 'becoming' (Deleuze & Guattari, 1987) which involves 'coming together' (reterritorializing) of diverse elements as/in an assemblage and 'moving apart' (deterritorializing) from it (Deleuze & Guattari, 1987; Wise, 2005). Owing to the constant 'becoming,' the assemblages are always fluid and do not arrive at a final point where it is complete with stable elements and boundaries (Wee, 2021). For instance, a classroom assemblage is never fixed with any constant elements. Instead, the elements keep changing, coming in and moving out. The hybrid classroom as an assemblage is distinct from the traditional classroom and academic discussions occurring outside classroom spaces in themselves are assemblages with varied, untraditional elements contributing to their formulation. This also implies that the constituting elements forming assemblages are independent entities that can be detached and attached and interact differently in different assemblages (DeLanda, 2019; Wee, 2021). Barad (2007) also affirms that all human and non-human things are in a continual state of exchange due to relationality and interdependency while being a part of an assemblage. As a result of this relationality, the outcomes and effects of an assemblage are always emergent and 'becoming' and cannot be reduced to the totality of each element's potential (Bennett, 2010).

The theory of assemblages shares many cognate concerns with theories such as Latour's Actor-network theory (ANT) and Cultural-historical activity theory (CHAT) drawn from the ideas of Vygotsky. Similar to the notion of assemblages, ANT is a relational concept that situates all human and non-human entities equally. ANT also accounts for the multiple and simultaneous trajectories in a network (which is similar to assemblage in this context) that explain the complexities of its workings (Muller, 2015). CHAT, on the other hand, is an advanced version of the Socio-cultural theory (also known as Cultural activity theory) which assumes that human interactions and transactions are always mediated by objects and tools and cannot be isolated from the social context in which the activity is carried out. CHAT also takes into account the relationality between the individual and the community, culture, history and context which is dynamic (Batiibwe, 2019).

While both ANT and CHAT focus on exploring the role and contribution of object-oriented activities on learning and human development, they have differences with regard to posthumanism and the theory of assemblages. For instance, if the social context is not found to be a strong influence to become a concrete network, ANT rejects it. ANT also suggests that agency is a mediated achievement and hence, the components in a network do not have intrinsic qualities or agencies (Muller, 2015). Contrarily, the theory of assemblages does not reject any aspect that could be affecting an assemblage. It is more inclusive and argues that every participant has intrinsic qualities and agencies outside its participation in an assemblage (Bennett, 2010; Deleuze & Guattari, 1987). Therefore, while all three theories share similarities, ANT and CHAT are comparatively rigid and concrete; posthumanism and assemblages are fluid and accommodate multiplicity.

Learning design: The graphic assemblage model

The term *graphic assemblage* is creatively used in this context to elucidate the entanglements of all the multiple elements in the classroom acting together to create something. The term combines graphic narratives and the posthuman idea of assemblages to illustrate how creating distinct graphic panels with the intervention of learners, teachers, and technology can act as a pedagogical tool in an English language classroom that challenges absolute agency and hierarchy in terms of knowledge or power.

Graphic assemblages, in the context of classroom activity, are the arbitrary groupings of various wordless graphic panels created by the learners using a freely available comic builder website called *storyboardthat.com*. Each participant in the group creates one panel and all the panels are grouped arbitrarily as an assemblage. These graphic assemblages created by the learners in groups are used to construct stories by all the learners individually by making meaningful connections between the graphic panels present in the assemblage. Each of such panels is an assemblage while the clubbing of such several panels creates further assemblages. Ideas, perspectives, pictures, technology, training (to narrate a story), and the physical presence of collaborators, and gadgets interact and intra-act to create several abstract as

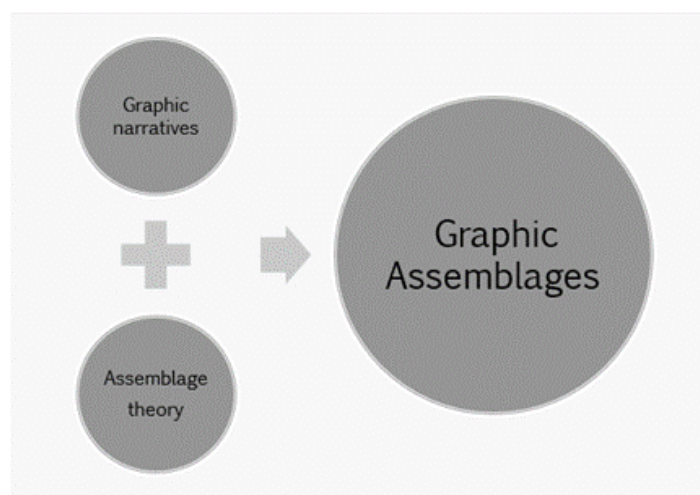


Figure 2. Demonstrating the formulation of graphic assemblages as a pedagogical tool.

well as concrete assemblages.



Figure 3. Participants creating graphic panels.



Figure 4. Arbitrary groupings of graphic panels to form an assemblage.

These pedagogical tools from the posthuman perspective explain the human-nonhuman entanglements, technology inclusion, and new forms of materialism (Herbrechter, 2016). Graphic assemblages are the result of learners, technology,

materiality, visual images/objects, and graphic panels coming together and intra-acting in the classroom assemblage that disrupt the subject/object binaries (Haraway, 1987). As non-human agents such as computers and other material objects are involved in language learning in this context through non-hierarchical relationality, the output is always multifold (Barad, 2007; Bennett, 2010; Taylor, 2016), which is discussed further in the results below. It enables posthuman classroom practices as learning and knowledge production in this context is achieved through creativity, relationality and experimentation (Wee, 2021).

Graphic assemblages in a posthuman English classroom

Design

As the participants' reflections, perceptions and experiences form the core of this exploratory study, it adopts a qualitative case study methodology to analyse the various assemblages that emerge in the classroom and the effectiveness of them as posthuman pedagogical tools in facilitating English speaking proficiency. Case study as a research method enables the researchers to analyse the data at the micro level (Zainal, 2007). It also allows a holistic conceptualization of the phenomenon to derive important insights (Merriam & Tisdell, 2015). To avoid researcher bias and ensure objectivity while analysing the data, which is pivotal in case study research (Yin, 2004; Priya, 2021), the study was conducted in two batches independently, with 8 participants in each batch and their results were compared to affirm the derived conclusions.

Participants

The study was ethically approved by the host university - the National Institute of Technology, Tiruchirappalli, which is a premier science and technology institute in south India. Twelve first-year students from the Department of Metallurgical and Material Engineering and ten first-year students from the Department of Civil Engineering volunteered to participate in this study and sixteen students, eight from each department, were considered. All of them were aged between 17-20 and are referred to as S1, S2, etc. A purposive sampling method was used in selecting the participants for the study to enhance the credibility and relevance of the data (Bock & Sergeant, 2002), as one of the core objectives of purposive sampling is to ensure that all relevant people are included in the sample. Therefore, preference was given to those whose English-speaking proficiency levels were between basic to intermediate levels, allowing scope for improvement.

Data collection and procedures

The study was conducted in December 2022 and January 2023 for six weeks. The intervention was not completely predetermined as it was also subject to 'knowing-in-being', which developed in the very act of carrying out the research (Taylor, 2016). The intervention entailed creating

graphic assemblages in groups, creating stories out of them individually, narrating them, self-evaluating them, and having Socratic seminars. These happened twice, first as a preliminary task and then as the final task. The learners were introduced to storytelling by holding discussions on the elements of the story and speaking proficiency and formulating rubrics for evaluating the stories based on discussions. All the stories were audio recorded with consent for further analysis. After every class, a reflective questionnaire was circulated, and the participants' inputs were obtained through their response sheets and semi-structured interviews. The questions for the interview were open-ended (See Appendix) and they prompted the participants to share their experiences and takeaways from the study. The stories narrated by the participants and their interviews were transcribed. Those transcriptions were closely read and further explicated for the analysis of the study. Additionally, a researcher's diary was maintained to note important intervention episodes.

Instruments

This study used the following instruments for data collection.

Instruments	Coded as
Questionnaire	QS
Reflection Report	RR
Semi-Structured Interviews	SSI
Researcher's Diary	RD
Researcher's Observation	RO

Figure 5. Instruments used for data collection and their codes.

Data analysis and findings

The data collected were qualitatively examined. The analysis aimed to identify and explore various assemblages in the English language classroom to give an account of how agency, motivation, and affect of the learners are relational and non-hierarchical. In addition to exploring the posthuman perspectives, the analysis documents the pedagogical implications of employing such creative interventions.

Agency

Agency is the ability of anything to be a part of an assemblage and act in a particular way when it comes to other things to produce an outcome. This is one of the significant aspects discussed in relation to posthumanism. The agency is not limited to humans but other non-humans and material objects as well. The agency is relational, distributive and always dependent 'on the collaboration, cooperation or interactive interference of many bodies and forces' (Bennett, 2010). Through "agential realism," Barad (2007) also affirms that agency exists through intra-action and not as an influence of a pre-existing element that blurs the subject/

object dichotomy. Bennett's 'thing-power' establishes the role of nonhuman things as actors in an assemblage that augments the overall agency during the intra-action of the humans with those nonhuman actors. This is reflected in the study as 13 out of 16 participants from both batches together performed better which is further discussed in the next section. This is because the material for the activity in this context was not predetermined; instead, the participants were the creators of the materials (graphic assemblages) by intra-acting with the classroom assemblage of technology, digital comic builder platform, material objects, other learners and the researcher (the first author of this paper). This led to their maximum involvement in the activity owing to their learner-centeredness.

Batch	Transcript
Batch 1	<i>While choosing the image, we choose something which already exists..but when we make our own panel, we make it from scratch. That's why I like it more than choosing a picture. (SSI, S3)</i>
	<i>..Because these were randomly selected images that were earlier selected.. But this one was our panel that we made by ourselves and according to our convenience.. (SSI, S7)</i>
Batch 2	<i>Yeah exactly, it was more in-depth and we were able to say a lot because.. that was because.. we created this panel. We added all the elements we want. In stories with personalized graphic panels, we can create our own and execute stories. It gives satisfaction.. (SSI, S12)</i>

Figure 6. Learners sharing their experiences concerning agency.

Formulating the rubric through classroom discussion enabled the learners to self-evaluate their recorded stories. The ten criteria of the rubric involved fluency, vocabulary, grammar, task completion, interaction, body language, accuracy, voice and intonation, the interconnectedness of events (panels), and pragmatic knowledge. The self-evaluation involved three steps - clear explanation of each criterion of the rubric to the learners by the researcher, self-evaluation of the recorded stories by the learners, and engaging in introspection by reflecting on their performance. Self-evaluation was a pivotal part of the study. It fostered learners' autonomy in learning and promoted reflective practices and motivation among learners, thereby augmenting their agency. Through interviews, it was found that the rubric was a helpful tool that facilitated the learners to self-evaluate their stories efficiently.

Batch	Transcript
Batch 1	<i>..it was very useful because it gave me an idea that.. on what basis I have to evaluate the story.. and I also got to know some new components of speaking. (RR, S2)</i>
Batch 2	<i>It was very useful in the way that there were 10 components given.. and we had to evaluate each of them in our story.. and.. evaluate it by noticing it carefully. This way we could easily find our mistakes in story narrating.. and.. where and in which aspect we have to improve. (RR, S9)</i>
	<i>It's very effective for self-analysis, it saves reviewing and analysis from other people or someone pointing out our mistakes. Recordings helps us to do it ourselves. (RR, S15)</i>

Figure 7. Learners commenting on the usefulness of the rubric.

All the learners who shared specific details about their observations of their recordings during the self-evaluation rectified their mistakes and improved their story narration, such as correcting the use of wrong pronouns and reducing the number of fillers during speaking.

Batch	Transcript
Batch 1	<i>..through self-evaluation... I felt that I could have done better and I need to improve in some of the elements of speaking.. like.. fluency and interaction. (SSI, S1)</i>
	<i>It was good to evaluate our stories by ourselves. I feel.. this way we can precisely get to know about our mistakes and how to improve them. Our way of talking and clarity of speaking is also known to us. That way we can improve.. accordingly. (SSI, S5)</i>
Batch 2	<i>In previous.. when I.. I made many mistakes like using she instead of that.. I used he.. that one. I made many mistake in second one. I clarify.. I rectify that finally. (SSI, S11)</i>
	<i>Of course yes. Well before this activity I was using.. I would say while speaking much, I was stopping.. stopping like even though now I'm stopping, but I'm not using any fillers. (SSI, S16)</i>

Figure 8. Learners sharing their experiences of self-evaluation.

Motivation

Multiplicity and creativity

Through data explication, it was found that several factors motivated the learners in the process of learning through graphic assemblages. Firstly, the very nature of the task of creating and narrating stories through assemblages individually is open-ended, creative and manifold, with multiple possibilities for the story to develop. These are the tenets of posthumanism where the learning process is constituted by the interplay of diverse human and non-human factors such as the infrastructure of the class, the technological resources that facilitate creativity and learner engagement when intra-acting with the learners, and the emotional bearings of the learners that get reflected through their creation of panels which have not been thoroughly account for in educational research (Nichols & Campano, 2017). The results of the workings of the classroom as various assemblages have motivated the learners to actively participate as they could listen to diverse stories that differed in narration style, genre, and theme narrated by their team members from the same assemblages.

Technology

Studies recommend that teachers find creative ways of engaging learners in learning the language that is fun and exciting and, at the same time, not very difficult for the learners to carry out (Lile, 2002; Hussin et al., 2001). Generating graphic panels is a creative act that requires technological engagement. The interface of *storyboardthat.com*, which was used to create graphic panels is remarkably user-friendly, allowing the learners to engage with the task without hindrances. The website also offered various options for learners to craft their panels. For instance, the

Batch	Transcript
Batch 1	<i>We were able to hear different versions of stories from the same assemblages. (RR, S6)</i>
	<i>That we have to create a story by connecting some random pictures in a sequence which actually has no connection with each other. (SSI, S1)</i>
Batch 2	<i>We heard our friends.. Like how they have made a different story out of the same images.. That was very interesting for me.. I enjoyed listening to all of them. (SSI, S15)</i>
	<i>the third task is very interesting. And also creative because I have to create a panel by my own and then I have to create this story. (RR, S9)</i>

Figure 9. Learners sharing their views on the storytelling activity.

options included a variety of facial expressions, bodily positions that involved sitting, standing, moving, hand gestures, and a range of objects, images and backgrounds. This facilitated interest among the learners to engage in the activity. Therefore, access to technology and online tools, and intra-acting with them in a classroom assemblage where the agency of the learners gets augmented due to their interplay with the agency of the technological tools can be a significant source of motivation for English language learners. The theory of posthumanism enables educators to view teaching/learning practices with a new perspective that accounts for the human-nonhuman entanglement in creating graphic assemblages in an already existing classroom assemblage

Batch	Transcript
Batch 1	<i>That was very very interesting because.. I was doing.. while creating the panel, I was creating a theatre setup.. and I didn't know how to add people. I was planning to add single.. single people in each seat, but that will be much difficult. But then the.. the website had an option for the crowd on and crowd off, and light on light off. it was.. we can add expressions too. That's.. that's very good I guess. (SSI, S5)</i>
	<i>Yeah, actually a website is very interesting and familiar. It is easy to use. It's not so difficult for me to operate this website. in panels.. I have the story with panels because there are many elements.. so it's easy to create those panels also.. It was very interesting.. Like a puzzle game. (SSI, S11)</i>

Figure 10. Learners sharing their experience of using the website for creating graphic panels.

Researcher’s mediation

Some studies have found that creating a secure environment and understanding the learners’ needs and difficulties is crucial for meaningful engagements (Alison & Halliwell, 2002; Dornyei & Ushioda, 2011; White, 2007). Therefore, throughout the study, the researcher made sure to establish mutual trust and respect for one another by interacting with them, understanding their needs and personal challenges, showing enthusiasm about the classroom activity and creating a safe classroom environment for the learners to narrate their stories with confidence and express themselves. This explains the role of a teacher in a classroom assemblage and how the agency of the researcher in this context is relational to the agency of the learners in the learning process. The

well-being and emotional bearing of the teacher, and the excitement and safe space that the researcher creates have a direct impact on learner engagement. Posthumanism enables us to record these elements that foster motivation among the learners. The learners expressed during their interviews that they were motivated by the researcher to perform better.

Batch	Transcript
Batch 1	Researcher: So, what motivated you to speak like that?
	Learner: Actually.. You also motivated me.. and.. and.. helped me
	Researcher: Why did you say that I motivated you?
	Learner: You. Actually... actually you teach me that.. how I can be good at public speaking.. You also encouraged me.. (SSI, S6)
Batch 2	<i>Like you, you said one day that it's your story. You have to express. so.. that gave me confidence. (SSI, S11)</i>

Figure 11. Learners sharing their source of motivation.

Learners’ self-evaluation

Self-evaluation is a useful exercise that has been asserted as beneficial in teaching and learning practices (Andrade et al., 2010; Jamrus & Razali, 2019). In this study, self-evaluation facilitated autonomy among learners, enabled them to reflect on their mistakes while evaluating their stories, and motivated them to rectify the errors and perform better in the final task.

Batch	Transcript
Batch 1	<i>..through self-evaluation.. I felt that I could have done better and I need to improve in some of the elements of speaking.. like.. fluency and interaction. (SSI, S2)</i>
Batch 2	<i>Evaluating our story on our own was a good idea.. through it, we came to know about our speaking skills and difficulties.. and how to improve.. (SSI, S13)</i>

Figure 12. Learners commenting on their experience of self-evaluation.

Affect

Affect is a “visceral, pre-conscious response of the body” that “precedes the articulations of language and thought” (Lenters & McDermott, 2020, p. 20). It is a form of knowing that begins as unconscious and then informs our immediate actions (Semetsky, 2014). Accounting affect in pedagogical practices is imperative as affect has been less discussed in comparison to the significance given to utility and knowledge gain concerning language learning (Garrett & Young, 2009). There is a need for learners to reveal how they affect and are affected by the classroom assemblage (Massumi, 2015) by being agents of human-nonhuman entanglements for socially just pedagogical practices to take place (Bozalek & Zembylas, 2016). This is an essential aspect of posthumanism as it attempts to break the mind/body duality. The mind is given superiority in comparison to the body. Affect also gives significance to bodily responses that precede the

mind and establish a connection between them, thereby disrupting the binary. The learners spontaneously created the panels, resulting from the bodily senses. Therefore, this study examined the use of graphic assemblages in eliciting affect where the learners expressed affect through intra-acting with the assemblages.

The learners articulated their spontaneous act of creating the graphic panels and, later, connected it with their emotions, revealing how they were unconsciously affected by it while simultaneously affecting the graphic assemblage. This enables the teacher to move beyond objectivity and facilitate affective pedagogical practices in a classroom space.

Batch	Transcript
Batch 1	Researcher: Why did you create a basket ball court with supernatural people playing it? Learner: After coming to NIT, I playing basketball with full passion, so I'm loving this. The first time I'm playing basketball and I'm kind of good at it. Just two months if I see so. It was kind of automatic that. Saw a court and imagine something and I built near basket. It was, you know, something without resistance. You could just kind of continuous flow.. it automatically. I didn't use that much of my.. Like that will scale up brain.. like it just came.. just automatically kind of thing. (SSI, S4)
Batch 2	Researcher: Why did you create a spaceship in your panel? Learner: I really like some astronomy. Yeah, actually like. I like to some doing like doing some sorry. I like the. OK, oh, so I want to do some degrees in astrophysics, so I tried some ISER exams, also selected in that. But it is in Punjab Mohali, so my parents didn't allow me. So that created. (SSI, S10)

Figure 13. Learners realizing the affect while creating the panels by reflecting on it.

Impact of the intervention on the speaking proficiency of the learners

Beyond exploring the posthuman tenets in an English language classroom, the intervention also led to a significant improvement in the learner’s speaking proficiency which is discussed further.

Improvement in speaking proficiency

To evaluate the learners’ speaking proficiency through the stories created and narrated from the graphic assemblages, a tailor-made rubric was developed through classroom discussions for them to self-evaluate their audio recordings of the story. The results of the self-evaluation were compared with the researcher’s evaluation and observation to infer a rigorous analysis of the results and outcomes.

Most learners showed considerable improvement concerning interaction, body language, voice and intonation, interconnectedness, pragmatic knowledge and task completion. This was majorly influenced by self-evaluation and other motivational factors discussed above. The learners included dialogues in their stories and prompted interaction by asking the other team members questions while narrating the story, thereby involving other learners as active participants. They were able to stress a few words and change their intonation and voice to draw attention and emphasize significant events of the story. The learners who

hesitated to speak in front of others with stiffened bodies and less or no eye contact were able to stand at ease with confidence, make hand gestures when necessary and make eye contact with everyone, which is imperative for effective communication and transfer of knowledge (Gregersen, 2007; Basnet et al., 2022; Shumin, 2002). The learners also shared that the self-evaluation and classroom discussions led to the cognizance of each criterion of the rubric and enabled them to practice speaking with better body language and interaction. Despite the difficulties with using advanced vocabulary and syntactically correct sentences, all the learners were able to convey the meaning by using familiar expressions and explaining concepts in simple sentences, which exhibited their pragmatic knowledge.

Batch	Transcript
Batch 1	After self-evaluation.. I felt that I could have done better and I need to improve in some of the elements of speaking like fluency and interaction. I didn't know.. story telling can be interactive.. So I added many questions in the final task.. I asked my friends few questions.. It was good. (Interaction-SSI, S8) Many students performed better. They interacted with other participants while narrating the story, they made eye contact and hand gestures.. Many of them used appropriate sounds and intonations whenever required... Overall, they were more confident with their narrative. (Body language- RD, RO). My voice is very soft.. And usually I talk very low voice.. But after I came to know that sound and saying words correctly is important.. I tried to increase my pitch when I have to stress (Sound and intonation- SSI, S3)
Batch 2	I didn't mug up the story, I just came.. and I want to say my views. So I explained what was there in my mind to my friends.. (Pragmatic knowledge-SSI, S12) Almost all learners were able to make meaningful connections among the panels and the events of the story created through those panels were coherent. All the learners completed the task of creating stories by incorporating the elements of story, such as having a beginning, middle and end, surprise elements, climax and a moral. (Interconnected and task response- RD, RO)

Figure 14. Excerpts from the semi-structured interview transcripts and researcher’s diary supporting the improvement in the learners’ speaking proficiency.

Duration of speech and sentence structures

They spoke with ease for a longer time with confidence due to increased motivation, active engagement in creating the text for the task, and increased agency as an outcome of their intra-action with technology, material objects, team members, researcher and classroom space. The learners expressed that they were not conscious of the time taken to narrate the story as they were more involved in the final task.

A few learners struggling to make sentences with appropriate vocabulary could make more prolonged and complex sentences with basic vocabulary as they focused on conveying the story and meaning. This was also aided by other measures such as pragmatic knowledge, body language, voice and intonation and involving the participation of the team members through interaction.

Batch	Transcript
Batch 1	<i>I made the panel so I.. I.. said that I already know the elements of my panel. But during the storytelling I feel that I have to tell what in my mind to create the.. all the story.. I tell everything, but I don't know how it take long. (SSI, S4)</i>
Batch 2	<i>I didn't mug up the story, I just came and I want to say my views. So I explained what was there in my mind to my friends. (QS, S10)</i>

Figure 15. Excerpts from the semi-structured interview transcripts and questionnaire explaining the duration of the learners’ speech.

Batch	Transcript
Batch 1	<i>I went away from my school. In my... in my school there is a... there is a ground. So I'm walking in middle of the group. Two, the two boys. They are driving the bike. So they tried to hit me. (shorter sentences in the preliminary task- S7)</i> <i>So actually the next day is Christmas, and she's missing her brother because the previous time they two celebrated Christmas.. but this time her brother had work... (longer sentence in the final task- S7)</i>
Batch 2	<i>He is also a scholar of geography. He is doing research on the planet Earth and Sun. So he used to notice every day the sunrise. Timing and sunset. So when he once one day when he.. he is taking the reading of the sunrise. (shorter sentences in the preliminary task- S12)</i> <i>So they just planned that every weekend you both came here and play a match with us and after that they leave him to the main door of the mansion and after that they both came out from the mansion and with happily. (longer sentence in the final task- S12)</i>

Figure 16. Excerpts from the audio transcripts of the stories narrated by the learners.

It was also noted that a few learners attempted to reduce the use of fillers in the final task. Instead of fillers, they paused, formulated thoughts, and then resumed. This practice made the learners unflustered and enabled them to narrate the story with clarity. The learners also expressed that self-evaluation enabled them to work towards reducing fillers while speaking, through conscious practice.

Of course yes. Well before this activity I was using... I would say while speaking much, I was speaking for a long time... I was stopping ... like even though now I’m stopping, but I’m not using any fillers. (Batch-1, SSI, S4)

Higher-order thinking skills

Making graphic assemblages and creating stories through them enabled the learners to operationalize their higher-order thinking skills. The learners were able to analyse all the panels of the assemblage by closely reading them and identifying all the elements of the panels. They were able to evaluate the numerous ways in which they could make meaningful connections between the panels and the varied directions in which the story could be taken forward. Through this process, they could create an original story using graphic assemblages (Phakiti, 2018; Wilks, 1995; Dillon, 2002; Zohar & Dori, 2003).

Batch	Transcript
Batch 1	<i>Yes, I love history very much, so I like to learn.. I learn about history so... and I love to watch movies. So I.. I.. combined both of them- people watching movie about history. (SSI, S5)</i>
Batch 2	<i>There's a process.. very simple.. The first.. I know much about my panel than the other.. other panels, right? So I created. I started writing the story based on my panel. So my panel was theatre where people are watching some movie OK. My plot was depending on a director and his friend because there are two people in the screen which I created. So it's like my director, which is depending on the movie so... its a friend and his friend. So I started writing the story on that and when it comes to places.. when it comes to.. where they're meeting.. all that, I took the other images and I was able to do that. I was.. I just added that other images and my.. my the main plot was depending on my panel. (SSI, S9)</i>

Figure 17. Learners explaining the process of creating stories through graphic assemblages.

Discussion

The study of the graphic assemblage model as a storytelling posthuman pedagogical tool has exposed the learners’ perceptions, reflections and experiences that facilitated an understanding of the nature of the model and the classroom assemblage, the role of various classroom actors in carrying out the task, the process of their learning and their achievements. The model positively impacted the motivation level of the learners similar to the studies that dealt with graphic narratives (Thompson, 2023; Matuk et al., 2021). Studies have focused on enhancing learner agency through graphic narratives (Saltzman, 2021; Kinoshita, 2022). However, a one-size-fits-all approach, where using an existing definite text in a classroom for varying purposes can limit the learners’ agency and design capabilities (Reid et al., 2021). On the contrary, this study documents numerous possibilities of a classroom intervention and many elements working together in an entanglement. Therefore, creative practices such as these, formulated through posthuman perspectives that include multiplicity, heterogeneity and non-linearity as its chief aspects, enable multitudinous possibilities in a classroom space that nullify the factors limiting the learner agency. The study affirms that learner agency is affected by various factors such as self-evaluation, peer learning, and intervention of the teachers, technology, and environment.

This study also essentializes the affect in the learning process. While other related studies illustrate the significance of graphic narratives in affecting learning strategies and outcomes (Castillo-Cuesta & Quinonez-Beltran, 2022; Gultom et al., 2022), the present study explores how the learners affect and are affected by the learning process (Massumi, 2015). This is carried out by emphasizing the pre-conscious response of bodily movements and unconscious knowing (Lenters & McDermott, 2020; Semetsky, 2014). These perspectives enable the teachers to build convivial relationships with the learners (Alison & Halliwell, 2002) and facilitate socially just pedagogical practices (Bozalek & Zembylas, 2016). Similarly, concerning language learning, the study confirms the improvement in English speaking proficiency of the learners and the development of higher-order thinking skills. The findings show that learners with basic level speaking proficiency in English significantly improved their interaction, body language, voice and

intonation, interconnectedness, pragmatic knowledge and task completion. Fluency, vocabulary, grammar and accuracy can also be majorly improved if aided with parallel classroom sessions focusing on these subskills.

The interview data highlighted that storytelling as a pedagogical tool has been underused in language classrooms. This can be due to factors such as a large number of students in a classroom, time constraints and the extreme energy consumption of teachers (Kalia, 2017). To tackle these conditions, it is important to realize the affect that the agency and autonomy of a learner can have on the learning process with the informed nature of possible classroom assemblages and, therefore, facilitate them to engage in creative classroom activities that foster language proficiency. Additionally, the intervention enabled the learners to perform better in their class presentations of other subjects and engage in their daily social life.

Batch	Transcript
Batch 1	<i>Yes, before this activity I.. I sometimes.. I get.. got nervous while talking to new person. But by this activity, during the Pongal days I went to the Rockfort Temple and some French foreigner is also there. So sometime.. for two or three minutes, I talked to them. but earlier from this activity I.. I don't talk some new persons. Yes. that was achievement for me. (SSI, S3)</i>
Batch 2	<i>Yes ma'am. This activity helped me a lot in improving my speaking ability because we had presentation of our other class and I had not done any presentation earlier before. But I had done that story telling in front of that eight.. eight students. So I had I had knowledge of my ability that I can do so, it helped me a lot to improve my speaking ability in this stage also. And I get to know about my weak weak points. Also that I have to.. I have to take less gaps and stop using in the fillers. (SSI, S15)</i>

Figure 18. Learners sharing their experiences post-study.

Analysis of the gathered data revealed that storytelling through learner-created graphic assemblages enhanced agency, affect and motivation in them in addition to attaining linguistic goals, promoting language proficiency levels and enabling the learners to operationalize their higher-order thinking skills. The findings also affirm that storytelling as a pedagogical tool, and technological resources can be used efficiently in language classrooms as they are underused and have more potential to enhance language learning.

Limitations and further research

Despite the detailed reports, the results of this study cannot be extended to generalizations concerning English language proficiency as the study has been conducted with a limited number of participants for six weeks. Most of the learners were comfortable with technology and using computers; all the learners were able to use the comic builder platform efficiently and create their panels successfully. This can also be a limitation in learning environments where technology and good infrastructure are not a part of the learning assemblage. Similarly, the agency of the learners and teachers can be limited if they are not digitally equipped/literate enough to utilize the resources which will have a consequence on the overall engagement in the classroom affecting the learning outcomes. Teachers with a critical understanding of their students, their needs, learning objectives, learning space

and the availability of infrastructure and resources can use creative pedagogical interventions that are informed by posthuman perspectives, such as graphic assemblages to cater to diverse requirements in the learning process.

Further research can focus on various other posthuman perspectives that are inherent in teaching/learning methodologies in English language classrooms. This will add new dimensions to the existing practices, encouraging teachers to be informed practitioners who are aware of the complexities and nuances of the classroom assemblage and how every element, human and non-human, has its role to play in the entangled classroom spaces.

Conclusion

Summarizing the major findings of this study, we argue that learner agency is augmented through intra-acting in human-nonhuman entanglements. Additionally, learners' motivation increases due to factors such as the creative nature of the task with multiple possibilities, the inclusion of technology, the supporting role of the researcher, and the self-evaluation of the learners. The affect throughout the task is significant, with learners both being affected by and affecting the learning process. Furthermore, learners' speaking proficiency improves, particularly in terms of interaction, body language, voice and intonation, interconnectedness, pragmatic knowledge, and task completion, as well as in making longer, more complex sentences and speaking for extended periods. Higher-order thinking skills are also operationalized as learners create and narrate stories through graphic assemblages. The study also emphasizes the importance of integrating technology into the classroom to reform conventional story-telling practices. The findings of the study provide scope for the teachers and researchers to revisit and analyse how they have been engaging with educational practices and language teaching through posthuman perspectives to better account for the intricacies of learning. As graphic assemblages are wordless graphic panels put together arbitrarily, they can be used as pedagogical tools at any level of education for learners of any proficiency level, with tailor-made tasks.

Language classrooms are complex ecosystems, where technology-mediated interactions challenge the conventional teaching-learning processes. Defining or attempting to read the classroom dynamics using any single established theoretical framework would not guarantee an actual representation. This is where the posthuman framework becomes useful in interpreting and generating classroom dynamics. The posthuman perspective on English language teaching acknowledges the diminishing boundaries of various binaries, facilitating knowledge exchange without hierarchical restrictions (Karthika, 2024). When the learners operationalize their agency, they are found to be motivated enough to regulate the affects they create and to acknowledge the differences in perspectives that their peers produce. As the monopoly of knowledge shifts from being a capitalist possession of teachers to being distributed among various agencies with the aid of technology, education is undergoing a posthuman transformation.

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Appendix: Questionnaire for the semi-structured interview

- 1) What do you think of stories? And storytelling?
- 2) Did you enjoy the storytelling activity during the study? Can you share your experience?
 - What did you like the most?
 - Is there anything you did not like about the activity?
 - What challenges did you face?
- 3) Can you tell me what difference did you find between the three tasks?
 - How different was your experience in each task?
- 4) Do you find any difference between your first and second stories?
- 5) You have spoken longer, and your story is more elaborate in the last story. Why do you think that happened?
- 6) Your last story is more detailed, and you have used the graphic panel better and used the objects in the panel well. Can you tell me why that happened?
- 7) In your recording, you also sound very expressive and enthusiastic while narrating the last story compared to the previous one. How is it that you sound so motivated? What is the reason behind it?
- 8) Do you think this activity had an effect on your speaking proficiency? In what way?
- 9) What differences did you notice between the first and second narrative styles of the stories?
- 10) After the study period, did you have any encounters where you applied what you learned here through this activity?
- 11) Was there any situation where you remembered this activity and used those learnings in that situation?
- 12) How have you benefited from this activity?
- 13) Why do you think this activity will be useful in a language classroom, especially for engineering students?
- 14) Can you explain how you created the story out of those images and panels?
- 15) Did you use real-life events in your story? Or something that you have already watched?
- 16) The panel is something you created. How was your experience in creating the panel?
- 17) What did you find interesting about the website and creating the panel?
- 18) Your last story was better and more detailed. Do you feel the creation of the graphic panel had an impact?
- 19) Do you think the panel made you think more deeply about your story? How?
- 20) Were there any emotions attached or reasons behind why you chose certain elements from the website to create the panel?