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DRAMA AND ARTIFICIAL INTELLIGENCE IN PRIMARY EDUCATION: A COMPARATIVE STUDY OF CHINESE AND GREEK STUDENTS THROUGH THE MYTH OF ODYSSEUS

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Abstract:
This pilot study examines an educational intervention that integrates drama with Artificial Intelligence (AI) in primary education, through a series of three drama-based workshops inspired by the myth of Odysseus. The intervention was implemented with two groups of nine-year-old students: one comprising 20 students from an urban school in China, and the other comprising 20 students from a rural school in Greece. The aim was to explore student engagement and forms of creative and collaborative learning in different cultural contexts. Using the Qualitative Comparative Analysis (QCA) method, the research identified cultural, pedagogical, and technological factors influencing participation. Findings indicated high engagement in both groups, with variations in modes of expression. The use of AI tools such as HeyGen AI, Character AI, Suno AI, Canva, and DALL·E enhanced imagination and visualisation without constraining experiential learning. The study highlights the potential of combining theatrical and digital media in intercultural settings, fostering critical and creative thinking, embodied learning, and dialogue.

Keywords: drama in education; artificial intelligence; embodied learning; critical thinking; primary education

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1. Introduction

In an era defined by global interconnectedness and rapid technological mediation, education faces the challenge of addressing the complex needs of young learners for creativity, cultural understanding, and active participation in learning processes. Drama in education has long been recognised as a form of embodied and experiential learning that fosters imagination, empathy, and collaborative action (Hu & Shu, 2025). It cultivates students' creativity and communication skills, while also offering meaningful opportunities for intercultural encounters through role-play, improvisation, and collective performance (Lenakakis, 2024). Theatrical interaction enables children to engage with diverse sociocultural contexts, nurturing intercultural sensitivity (Mavroudis, 2020) and enhancing their sense of collective identity and social responsibility (Popov & Karásek, 2021).

At the same time, the integration of AI into drama education introduces an innovative and cross-disciplinary dimension, expanding the possibilities for creative and critical engagement in schools. Recent perspectives on assisted creativity suggest that AI functions not as an autonomous creator but as a collaborative agent that can enrich imagination, extend modes of expression, and support dialogic learning (Vinchon *et al.*, 2023). When designed with a human-centred approach, AI enhances multimodal learning, offering new pathways for visualisation, representation, and exploration of abstract ideas (Hwang *et al.*, 2020; Shneiderman, 2022). By linking embodied performance with digital interactivity, drama with AI has the potential to foster both critical and creative thinking while preparing students for participation in technologically mediated societies.

The present study investigates the design and implementation of a drama-based workshop, enhanced with AI tools, inspired by the myth of Odysseus. The workshop was carried out in two culturally distinct educational contexts: students of a primary school in China and students of a primary school in Greece. The choice of Odysseus as the narrative axis was deliberate: the themes of nostos (homecoming), decision-making, identity quest, and encounters with the "Other" provide fertile ground for intercultural exploration, critical reflection, and creative adaptation in pedagogy. The myth's universal yet culturally negotiable dimensions enabled students from both groups to engage with shared human experiences while interpreting them through their own cultural lenses.

By adopting a comparative perspective, this study examines how students from the two contexts expressed themselves bodily, verbally, and collaboratively within the same drama-based educational framework. Particular attention is given to the role of AI as a creative ally in facilitating dialogue, imagination, and multimodal representation, as well as to the embodied and dialogic forms of expression that emerged. Through this cross-cultural and cross-disciplinary investigation, the article contributes to ongoing debates on how drama education and AI together can cultivate cultural diversity, embodied learning, and critical-creative engagement in twenty-first-century classrooms.

2. Literature Review

2.1 Drama Pedagogy and Embodied Learning

Drama in education functions as a multidimensional pedagogical practice that merges creative expression with experiential and embodied modes of learning. Its strength lies in its capacity to engage students on cognitive, emotional, and physical levels, thereby cultivating not only artistic sensibilities but also life skills, intercultural awareness, and dispositions for critical reflection. Within the classroom, drama operates as a microcosm of social interaction, offering a fertile ground where students rehearse ways of thinking, feeling, and acting in relation to others (Kondoyianni *et al.*, 2013). As a global symbolic practice, it has evolved into a system of shared forms and performative conventions that reflect human creativity and inventiveness, while simultaneously addressing the needs of individual learners and broader social communities (Kondoyianni *et al.*, 2013).

Participation in dramatic roles, stage performance, and collective activities transforms learning into a socially mediated and personally meaningful experience. By embodying characters and situations, students develop a dialogic mode of understanding in which knowledge is not transmitted but co-constructed through interaction and reflection (Jjarrah, 2019). This process allows for the negotiation of meaning and the critical questioning of assumptions, as students confront ethical dilemmas and alternative perspectives in a protected environment. The aesthetic dimension of theatre is particularly powerful in this regard: it opens a polyphonic space where narratives can be reinterpreted beyond the confines of a "correct" version, thereby fostering multiple perspectives and interpretative openness. Such openness is vital for the development of critical capacity and creativity, as it challenges learners to grapple with complex socio-political and moral issues through the voices of characters (Alam *et al.*, 2024).

Moreover, drama pedagogy provides an important channel for intercultural learning and inclusion. By adopting roles that represent diverse cultural identities and experiences, students encounter ways of life different from their own and engage in imaginative perspective-taking (Liu *et al.*, 2024a). This embodied engagement is not confined to intellectual recognition of diversity but becomes an experiential process inscribed in the body and in the collective memory of the group (Haarhoff, 2018). Such experiences nurture empathy, intercultural communication skills, and the capacity to engage respectfully with difference—competencies that are increasingly recognised as central to inclusive education in pluralistic societies.

Grounded in theories of embodied and participatory learning, drama pedagogy emphasises the role of the body, voice, and spatial relationships as epistemic resources in the learning process. Through role-play and improvisation, students do not simply act out pre-defined characters; they mobilise imagination, collaboration, and critical dialogue. In doing so, they cultivate communicative skills and reflexive awareness, while also learning to inhabit perspectives different from their own. These processes contribute to a form of learning that is both affective and intellectual, personal and collective,

aesthetic and ethical. Ultimately, drama pedagogy offers an educational paradigm where creativity, inclusion, and critical thinking converge, enabling students to become active participants in the co-construction of knowledge and meaning (Zhang *et al.*, 2025).

2.2 Artificial Intelligence in Education: Creative and Critical Applications

The incorporation of AI into education, although still at a formative stage, is reshaping the ways in which learning can be designed, experienced, and assessed. AI technologies open up new possibilities for multisensory, interactive, and personalised educational experiences that combine verbal, visual, and embodied forms of knowledge. In this sense, AI does not simply function as a technical tool but as a cultural artefact that mediates the processes of teaching and learning (Jafari, 2024). Its integration into creative learning environments supports an inquiry-based approach, positioning learning as a process of experimentation, exploration, and discovery rather than passive information reception (Zhou & Peng, 2025). Marrone *et al.* (2022) further demonstrated that students familiar with AI capabilities developed more positive dispositions towards its educational use, recognising not only its pragmatic but also its creative and reflective potential (Kotsidis & Anastasiades, 2025).

At the international level, UNESCO (2024) highlights that AI systems are now capable of replicating high-order cognitive functions such as pattern recognition, problem-solving, and decision-making. Similarly, the World Economic Forum (2024) notes the unprecedented potential of generative artificial intelligence (GenAI) to produce novel artistic and linguistic content ranging from music and visual art to narrative composition, thus raising fundamental questions about the boundaries between human imagination and computational creativity. Such developments challenge educational systems to reconsider their pedagogical values and priorities: how to integrate emerging technologies in ways that nurture creativity, inclusion, and critical thought, while safeguarding ethical responsibility (Urmeneta & Romero, 2024).

Creative applications of AI already illustrate these possibilities. Tools such as ChatGPT enable students to co-create narratives and dialogues, supporting imagination and storytelling capacities. Platforms like Character.AI allow learners to rehearse roles, engage with diverse perspectives, and develop empathy through interactive conversation. HeyGen AI provides opportunities for personalisation and multimodal expression via digital avatars, broadening the ways in which learners can communicate ideas (Kotsidis & Dima, 2025). Importantly, recent research suggests that AI in artistic-pedagogical contexts can act not merely as a content generator but as a dialogic partner, supporting meaning-making processes between students and digital characters (Tang & Putra, 2025). In drama-based classrooms, such dialogic encounters enable students to test different perspectives "within" fictional situations and to articulate ideas through embodied interaction, thereby aligning digital creativity with embodied learning practices.

Beyond the creative dimension, AI serves as a crucial field for cultivating critical thinking, digital literacy, and ethical awareness. Engagement with AI-generated content

invites students to interrogate the reliability of information, identify biases in datasets, and reflect on issues of transparency and accountability in algorithms (Yampolskiy, 2024). In this respect, AI becomes not only a technological aid but also a critical lens through which learners examine the production, circulation, and contestation of knowledge. Vinchon *et al.* (2023) emphasise that the future of creativity in the age of AI lies in a collaborative relationship where human intentionality, curiosity, and ethical judgment remain decisive at every stage of the creative process. AI may enhance productivity and innovation, but the reflective and interpretive agency of the learner is indispensable for ensuring that technological outputs align with human values and social responsibilities.

Nevertheless, risks and challenges persist. Concerns about academic dishonesty, such as students' over-reliance on AI tools to bypass authentic learning, underscore the need for responsible implementation. Likewise, unequal access to AI technologies can deepen existing educational inequalities, limiting opportunities for students from marginalised backgrounds. Ayala-Pazmiño (2023) argues that such disparities highlight the importance of nurturing human capabilities alongside technological literacy, ensuring that AI does not replace but rather complements human creativity and critical reasoning. For educators, this means adopting pedagogical strategies that balance innovation with caution: integrating AI in ways that stimulate curiosity, foster inclusion, and cultivate reflective agency, while actively addressing ethical risks and structural inequities.

In sum, AI in education represents both a powerful creative catalyst and a site for critical engagement. Its responsible integration requires not only technical adoption but also pedagogical vision, one that foregrounds ethical awareness, inclusive practice, and the development of critical and imaginative capacities. Only then can AI become an ally in shaping educational futures that are innovative, equitable, and human-centred.

2.3. Intercultural and Comparative Education in the Context of the Present Study

Drama in education, when combined with technological tools such as artificial intelligence, provides a rich pedagogical environment where students' cultural expressions can emerge, be compared, and be creatively reflected upon (Shneiderman, 2022). In this respect, the present study adopts a comparative lens not to highlight divergences or reproduce stereotypical contrasts between cultural groups, but to investigate how two groups of students from China and Greece creatively engage with a shared cultural and narrative framework: the myth of Odysseus. The comparative dimension is therefore framed not in terms of difference alone but as an exploration of commonality, variation, and mutual enrichment.

Through theatrical practice and the integration of AI tools, students encounter the mythological material in ways that are filtered through their cultural repertoires, narrative traditions, and aesthetic orientations. Art here functions as a common symbolic language, while drama provides a safe and embodied space for the interpretation and renegotiation of concepts such as homeland, adventure, identity, and return (Mavroudis

& Kondoyianni, 2020). Artificial intelligence, rather than flattening these cultural particularities, supports the process by stimulating imagination, diversifying expressive possibilities, and creating openings for students to articulate perspectives in novel forms (Ma *et al.*, 2025).

Particular attention in the present study is directed to the ways in which students express themselves both bodily and dialogically, and how these modes of expression are shaped by different cultural orientations. The comparative framework allows for a nuanced analysis of how cultural experience informs dramatic creation and educational engagement, without privileging or hierarchising one cultural perspective over another. As Bray *et al.* (2014) argue, comparative pedagogy is not concerned merely with juxtaposing educational models; rather, it seeks to deepen understanding of the sociocultural contexts that shape learning experiences. In line with this perspective, the study foregrounds not the binary of "East" and "West" but the shared processes of imaginative engagement, artistic negotiation, and dialogic co-creation.

Thus, intercultural education is here intertwined with creative pedagogy, framed not as an attempt to erase or bridge differences but as an invitation to shared interpretation and collaborative meaning-making. Drama, with its embodied, dialogic, and culturally situated character, when combined with the generative affordances of AI, provides a fertile ground for the encounter of diverse voices. This pedagogical synthesis enables students to reflect critically on their own cultural assumptions, to engage empathically with alternative perspectives, and to co-construct educational experiences that are inclusive, equitable, and artistically generative.

3. Methodology

The present study adopts a qualitative comparative approach to investigate the creative engagement and pedagogical responses of two groups of students from China and Greece who participated in the same drama-education workshop integrated with AI tools. The QCA methodology was selected as an appropriate approach for studying forms of embodied and artistic expression influenced by cultural and pedagogical contexts, highlighting similarities, differences, and recurring patterns between the two cases, particularly in relation to embodied expressive forms and dialogic interaction (Bray *et al.*, 2014; El Sherif *et al.*, 2024). QCA offers a particularly suitable interpretative framework when the focus of research is on cases and contexts rather than on generalisation via variables, while allowing for the identification of multiple causal pathways leading to the same outcome (Thomas *et al.*, 2014). Therefore, it was chosen for this study as a tool to reveal necessary and/or sufficient conditions that appear to affect the educational dynamics and cultural differentiation in the reception of the drama workshop.

For the analysis of qualitative data, Thematic Analysis was employed (Clarke & Braun, 2017), as it enabled the systematic identification, categorisation, and interpretation of recurring themes emerging from students' actions, the frozen and dynamic images

created by the groups, improvisational dialogues, and the children's verbal and non-verbal expressions during the activities. The coding process was both inductive and deductive: initial codes were generated directly from the raw material, while recurring patterns were later grouped into higher-order categories and thematic axes. This dual process enhanced both the transparency and the reliability of the findings. The combination of QCA and Thematic Analysis strengthened the validity of the results, allowing both for an in-depth understanding of each group's cultural characteristics and for a careful, systematic comparison of factors identified as critical in the interaction between drama in education, Artificial Intelligence, and educational contexts (Hong *et al.*, 2020).

The study was based on a convenience sample, as school and student selection were determined by availability and access. In total, 40 nine-year-old students participated, divided equally into two groups. The first group consisted of 20 students from a public provincial primary school in Greece, while the second group comprised 20 students from a public urban school in China. Neither group had prior experience participating in a drama process integrating digital AI tools. The workshops took place in Greece. The working language was Greek for the Greek students and English for the Chinese students, with support in Chinese where necessary. Importantly, the content, structure, and pedagogical approach of the workshops were carefully maintained identically in both settings to ensure comparability across the two groups.

The drama-education workshop was designed around the mythological adventures of Odysseus, emphasising timeless themes such as wandering, decision-making, and encounters with the 'other' or foreignness. The pedagogical framework was grounded in drama in education and embodied learning, including activities such as role play, frozen images, improvisational dialogues, conscience corridor, and group scene composition. Artificial Intelligence was incorporated as a creative ally, providing students with opportunities for visual representation, audio material, and interactive storytelling. For example, students interacted with digital characters of "Odysseus" and "Circe" created using AI chatbots, and were invited to pose questions or propose alternative versions of the story, which AI processed and developed visually and verbally. This combination of embodied drama techniques and AI-driven tools aimed to enhance both the students' imaginative engagement and their critical reflections on narrative, choice, and cultural meanings.

Each group participated in three workshop sessions, lasting approximately two hours each. The repeated sessions were intended to allow deeper familiarisation with both the dramatic techniques and the use of AI tools, as well as to enable richer data generation through students' developing improvisations and reflective contributions. Data collection was conducted during and after the workshops and drew on multiple sources. Specifically, students' staged actions (through improvisations, frozen images, and group compositions), the researchers' field notes, and individual student reflections expressed either verbally or through drawing were documented. Photographs of group work were also taken to capture ephemeral dramatic moments, while no video recording

was employed to preserve the students' sense of safety. Additionally, brief semi-structured focus group interviews were conducted with both groups, adapted to the children's linguistic and developmental levels, and designed to elicit their perceptions of both the drama process and the use of AI.

The analysis was organised comparatively (cross-case), in order to identify differences potentially related to cultural or technological factors, as well as to highlight common educational experiences and pedagogical dynamics that emerged through the application of drama with the support of digital tools. All ethical considerations were rigorously observed: parental consent was obtained, participant anonymity and confidentiality were ensured, and the design of all activities was carefully adapted to the children's emotional, cognitive, and social developmental stage. This study represents a pilot investigation, aiming to explore initial patterns of engagement and creative expression, providing a foundation for future, larger-scale, longitudinal research.

3.1 The Drama Workshop: Structure and Implementation

The drama educational workshop was carried out in three sessions for each group of students. Each session was designed as a distinct yet interconnected stage of the overall pedagogical process, allowing for a gradual unfolding of embodied learning, intercultural exploration, and creative engagement with the myth of Odysseus. The structure thus combined the principles of drama pedagogy with the creative possibilities of AI, ensuring that students had multiple opportunities to revisit, expand, and critically reflect on their experiences. The overarching aim across the three meetings was to foster active participation, cultural exchange, and collective storytelling, with artificial intelligence serving as a creative, supportive resource throughout. The workshop sessions were conducted by the researchers, who facilitated the activities and guided student participation throughout all three sessions for each group.

3.2 First session - Introduction and immersive engagement

The initial meeting focused on collective introductory activities that promoted group cohesion and the creation of a safe collaborative environment. Kinetic exploration of the space, influenced by music, provided the foundation for sensory and imaginative engagement. Artificial intelligence was employed to project multimedia material, reinforcing the fictional representation of Odysseus and the milestones of his journey. Interactive digital tools, such as digital maps and videos, supported the understanding and spatiotemporal placement of the mythical narrative. At this stage, students also engaged with multimodal stimuli, including images, sounds, and short animated scenes created with AI tools (DALL-E, HeyGen.AI). These materials functioned as prompts for imagination and curiosity, encouraging children to reflect on the emotional dimensions of Odysseus's journey and to express personal interpretations around concepts such as nostalgia, courage, and identity.

3.3 Second session - Active exploration and collaborative creation

The second meeting emphasised playful and participatory approaches, beginning with a treasure hunt and puzzle-solving game inspired by episodes of the myth. This activity encouraged collaborative learning and active engagement, while music and AI provided dynamic support through smart enhancements and adaptive narratives, promoting critical thinking and logical reasoning. Students then moved into role-play, embodying Odysseus, his companions, mythical creatures, and deities. The "teacher-in-role" technique guided improvisations, enabling participants to reconstruct mythic scenes while transferring them to contemporary contexts and incorporating cultural elements from their own experiences. As illustrated in Figure 1, the Chinese students initially constructed a frozen image, which was then dynamically transformed into a collective scene. Similarly, Figure 2 highlights the collaborative nature of the Greek group during one of the drama activities.

Figure 1: Chinese students transforming a frozen image into a dynamic scene during the drama workshop

Figure 2: Greek students engaged in a collaborative drama activity during the workshop

AI-generated music via Suno.AI and the use of masks enhanced immersion in the imaginative process, supporting embodied learning and the exploration of symbolic themes. Students worked in small groups, creating frozen images and combining spoken language, movement, and visual storytelling. These were presented to the class, with peers simultaneously acting as audience and co-creators through feedback.

3.4 Third session - Dialogic negotiation and reflective closure

The final meeting shifted the emphasis from embodied representation to dialogic interaction. Using interactive roles and digital applications such as Character.AI, students enacted dialogues between Odysseus and characters such as Circe, fostering emotional expression and critical negotiation of the mythical content. This stage deepened the reflective dimension of the workshop, enabling participants to consider both the cultural resonance of the myth and the interpretive choices made during dramatization. The concluding activities focused on collective reflection: students discussed their creative decisions, the emotions elicited during the process, and the cultural patterns that emerged from their narratives. Importantly, they also evaluated the role of artificial intelligence by articulating how the digital tools had influenced their imagination, collaboration, and storytelling.

The workshop, implemented across three meetings, was not a simple theatrical re-enactment of a classical myth but a dynamic and iterative space for meaning-making, intercultural dialogue, and the cultivation of digital and critical skills. By combining the embodied and collective nature of drama with the creative affordances of artificial intelligence, the process offered children a space for expression, inquiry, and the re-creation of narratives with personal and cultural significance.

4. Results and Discussion

The data were analysed using a thematic approach and organised around two main axes that emerged as recurring patterns across students' actions, dialogues, and improvisational scenarios. Within the framework of a comparative qualitative methodology (cross-case analysis), the two axes were examined sequentially across the two different cultural groups (China - Greece), in order to highlight both shared pedagogical dynamics and distinctive features shaped by the educational and cultural context (Table 1). It should be noted that the Greek students were already familiar with the myth of Odysseus, whereas for some Chinese students, it was their first encounter with this narrative.

Table 1: Comparative findings of expressive and communicative participation

Thematic axis	Chinese group	Greek group	Common features
Expressive and embodied participation	Free movement; strong bodily expression; use of individual imagination	Collective scene construction; inventive frozen images; gradual activation through group interaction	Enthusiasm for physical play; AI use reinforced embodied participation and imaginative experimentation
Communicative and dialogic skills	Reflective questions (moral motives, emotions); AI dialogue used for interpretation and deeper understanding	Descriptive/narrative questions; re-negotiation of the storyline; creation of alternative scenarios	Active verbal collaboration; AI used as a dialogic and reflective tool, supporting critical thinking

4.1 Expressive and Embodied Participation

In both groups, students were physically engaged and approached the myth through frozen images, kinesthetic patterns, and brief improvisations. In the Chinese group, the theme of free bodily expression was particularly pronounced: children used a wide range of movements, created scenes without verbal guidance, and embodied emotions through their bodies. One student simply remarked, "*I feel his fear*," as they connected their bodily posture to the character's experience.

The Greek group also demonstrated embodied participation, but with a stronger focus on collective representation. A notable comment was, "*let's all become companions together*," reflecting the gradual activation of the group and the co-construction of the scene. Although less kinesthetically daring, the Greek group highlighted elements of collaborative imagination through spatial organisation and synchronous role enactment.

AI tools enhanced embodied expression in both contexts. In the Chinese group, a student noted, "*Circe feels real*," while in the Greek group, a child said, "*I can ask him a question and continue the scene*." In both cases, technology acted as a catalyst for further bodily and narrative engagement, reinforcing the interplay between imaginative experimentation and embodied participation.

4.2 Communicative and Dialogic Skills

The communication theme encompassed both dialogue with digital characters and verbal collaboration on stage. In the Chinese group, dialogic engagement was characterised by reflective questions exploring moral motivations: "*Why did he turn them into animals?*" "*Did he regret it?*" Children used dialogue with AI characters to deepen their understanding of roles rather than merely to obtain information.

In the Greek group, questions were also frequent, but focused more on strategy and storytelling: "*How did you manage to escape?*" "*What would you do in his place?*" Although ethical analysis did not appear as strongly, children used dialogue to create new story versions, indicating creative renegotiation of the myth and verbal collaboration.

The use of digital tools further supported participatory reflection. One Greek student said, "*let's make our own version*," while a Chinese student commented, "*every time I ask something, another idea appears*." Through this dialogic process, both groups developed communication skills, enhanced verbal collaboration, and activated critical thinking as part of the dramatic creation.

In summary, the comparative thematic analysis revealed that the two groups engaged with the myth expressively and communicatively in different yet complementary ways. The observed differences do not function as evaluative judgments but rather illustrate how cultural and educational contexts shape distinct forms of creative and collaborative learning. The following summary findings serve as a bridge to the study's conclusions.

5. Recommendations

Future research could expand the scope by implementing longer-term projects in multicultural or mixed school environments, exploring how cultural identity intersects with modes of dramatic expression, and examining the sustained impact of drama AI integration on students' learning trajectories. AI should not be treated as an end in itself, but as a pedagogical instrument that enables creative and critical engagement through embodied and dialogic learning processes. This analysis also confirms the utility of QCA as an appropriate methodological framework for understanding how different cultural contexts influence student participation in drama-educational practices.

6. Conclusion

This study adopted the principles of QCA, prioritising an in-depth, cross-case examination of two culturally distinct groups that participated in a shared drama-based intervention integrating AI. Across three workshop sessions with each group, the research captured recurring patterns of student engagement, thereby identifying combinations of cultural, pedagogical, and technological factors linked to expressive and dialogic participation (Milošević & Maksimović, 2020). The comparative analysis between Chinese students from an urban primary school in China and Greek students from a rural primary school in Greece illuminated how diverse cultural frames can shape distinct, yet equally productive, forms of artistic engagement.

The findings revealed that, while both groups exhibited high levels of participation and creative experimentation, the Chinese group tended to activate individual embodied imagination, whereas the Greek group gravitated towards collective and collaborative scene construction. Both groups employed AI-mediated dialogue as a means of exploring perspectives, motivations, and alternative storylines. In this sense, AI did not function as a dominant technological element but rather as a dialogic and creative resource that supported embodied learning, perspective-taking, and verbal collaboration.

These findings resonate with recent comparative studies on AI and education (Dong, 2025; Gjermeni & Prodani, 2024; Hong & Guo, 2024; Stampfl *et al.*, 2024), which consistently show that the use of AI by learners is mediated by the specific cultural and pedagogical frames within which learning takes place. Dong (2025) emphasises that culturally embedded understandings of efficiency and creativity affect the way students engage with AI-driven tasks, while Gjermeni and Prodani (2024) underline the importance of personalised and responsive AI environments for sustaining engagement. Other studies point to the relationship between dialogic AI tools and the development of critical thinking and perspective-taking (Hong & Guo, 2024), especially when integrated within simulated role-play environments (Stampfl *et al.*, 2024). In this light, the present study confirms that AI can facilitate processes of critical inquiry and imaginative meaning-making when it is embedded within embodied and dialogic forms of dramatic activity.

At the same time, the study presents certain limitations. The relatively small sample and the short-term nature of the intervention, limited to three sessions per group, restrict the extent to which generalised conclusions can be drawn. Moreover, the evaluation relied primarily on observation and thematic analysis, without a longitudinal perspective. Nevertheless, the research demonstrates the pedagogical and intercultural potential of combining drama with AI in cross-cultural educational settings, supporting creativity, critical thinking, and embodied interaction.

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Conflict of Interest Statement
The authors declare that there are no conflicts of interest.

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References

Alam, S., Madej, M., Warda, W. U., & Kobylarek, A. (2024). Utilizing process drama in education: A study of pedagogical perceptions. *XLinguae, 17*(2), 132-149. https://doi.org/10.18355/XL.2024.17.02.09

Ayala-Pazmiño, M. F. (2023). Artificial intelligence in education: Exploring the potential benefits and risks. *593 Digital Publisher CEIT, 8*(3), 892-899 https://doi.org/10.33386/593dp.2023.3.1827

Bray, M., Adamson, B., & Mason, M. (2014). *Comparative education research: Approaches and methods* (2nd ed.). Springer. https://doi.org/10.1007/978-3-319-05594-7

Clarke, V., & Braun, V. (2017). Thematic Analysis. *The Journal of Positive Psychology, 12* (3), 297-298. https://doi.org/10.1080/17439760.2016.1262613

Dong, W. (2025). A comparative analysis of the impact of artificial intelligence on children in different cultural educational settings. *Lecture Notes in Education, Psychology and Public Media, 87*(1), 97-102. https://doi.org/10.54254/2753-7048/2025.BO24006.

El Sherif, R., Pluye, P., Hong, Q. N., & Rihoux, B. (2024). Using qualitative comparative analysis as a mixed methods synthesis in systematic mixed studies reviews: Guidance and a worked example. *Research synthesis methods, 15*(3), 450-465. https://doi.org/10.1002/jrsm.1698.

Gjermeni, F., & Prodani, F. (2024). AI and student engagement: A comparative analysis. *Interdisciplinary Journal of Research and Development, 11*(3), 195. https://doi.org/10.56345/ijrdv11n326.

Haarhoff, È. (2018). The use of embodied imagination and empathy to bridge actor–character dissonance. *South African Theatre Journal, 31*(1), 115-132. https://doi.org/10.1080/10137548.2017.1417741.

Hong, H., & Guo, J. (2024). Cultivation of critical thinking skills: Exploring the impact of generative artificial intelligence-enabled instruction in English essay writing. *Journal of Contemporary Educational Research, 8*(8), Article 8. https://doi.org/10.26689/jcer.v8i8.7999.

Hong, Q. N., Rees, R., Sutcliffe, K., & Thomas, J. (2020). Variations of mixed methods reviews approaches: A case study. *Research synthesis methods, 11*(6), 795-811. https://doi.org/10.1002/jrsm.1437.

Hu, Y., & Shu, J. (2025). The effect of drama education on enhancing critical thinking through collaboration and communication. *Education Sciences*, *15*(5), 565-581. https://doi.org/10.3390/educsci15050565.

Hwang, G. J., Xie, H., Wah, B. W., & Gašević, D. (2020). Vision, challenges, roles and research issues of Artificial Intelligence in Education. *Computers and Education: Artificial Intelligence, 1*. https://doi.org/10.1016/j.caeai.2020.100001.

Jafari, E. (2024). Artificial intelligence and learning environment: Human considerations. *Journal of Computer Assisted Learning*. Advance online publication. https://doi.org/10.1111/jcal.13011.

Jjarrah, H. Y. (2019). The impact of using drama in education on life skills and reflective thinking. *International Journal of Emerging Technologies in Learning*, *14*(09), 4-20. https://doi.org/10.3991/ijet.v14i09.7978.

Kondoyianni, A., Lenakakis, A. & Tsiotsos, N. (2013). Intercultural and lifelong learning based on educational drama. Propositions for multidimensional research projects. *Scenario*, (2), 27-47. Retrieved from https://www.researchgate.net/publication/305055167_Intercultural_and_Life-long-Learning_Based_on_Drama-in-Education_Prepositions_for_Multidimensional_Research_Projects

Kotsidis, K., & Anastasiades, P. (2025). E-learning open seminar on "Human–centered artificial intelligence in education: From theory to practice". *International Journal of Educational Technology and Learning*, *18*(1), 35–40. https://doi.org/10.55217/101.v18i1.901 .

Kotsidis, K., & Dima, A. (2025). Integrating AI Tools and Drama Pedagogy in Digital Classrooms to Foster Critical Thinking and Inclusion in Primary Education. *Advances in Mobile Learning Educational Research*, *5*(2), 1524-1535. https://doi.org/10.25082/AMLER.2025.02.008.

Lenakakis, A. (2024). The contribution of drama/theatre pedagogy in revealing and enhancing the social role of art in education. In V. Pavlou (Ed.), *Critical arts education for sustainable societies: A handbook for arts educators* (pp. 83-93). Frederick University. https://doi.org/10.1080/14452294.2021.1978145

Liu, H., Wei, H. & Yao, Z. (2024a). Research on multicultural drama education based on self-determination theory: A case study of Hamlet. *Modern Management Science & Engineering*, *6*(2), 160-170. https://doi.org/10.22158/mmse.v6n2p160.

Liu, W., Huang, R., Wang, J., Chen, Y., Ohashi, T., Li, B., Liu, Y., Qiu, D., Yu, R., Zhang, J., Al Mahmud, A., & Leifer, L. (2024b). Empathy design thinking: Cultivating creative minds in primary education. *Frontiers in Education*, *9*. https://doi.org/10.3389/feduc.2024.1376305.

Ma, X., Zhao, H., Guo, Z., Guo, Y., Liu, G., & Jiang, B. (2025). CO OPERA: A human AI collaborative playwriting tool to support creative storytelling for interdisciplinary drama education. *Cornell University*, *1* (1), 1-9. https://doi.org/10.48550/arXiv.2506.00791.

Marrone, R., Taddeo, V., & Hill, G. (2022). Creativity and artificial intelligence - A student perspective. *Journal of Intelligence*, *10*(3), 65. https://doi.org/10.3390/jintelligence10030065.

Mavroudis, N. (2020). Drama in education as an educational tool for the management of cultural diversity in primary schools. *International Journal of Learning and Development*, *10*(4), 95-108. https://doi.org/10.5296/ijld.v10i4.18136.

Mavroudis, N., & Kondoyianni, A. (2020). Drama in education: Its effectiveness in the acceptance of racial diversity in a multicultural classroom. *Scholars Journal of Arts, Humanities and Social Sciences*, *8*(9), 482-488. https://saspublishers.com/article/970/10.36347/sjahss.2020.v08i09.008

Milošević, D., & Maksimović, J. (2020). Methodology of comparative research in education: role and significance. *International Journal of Cognitive Research in Science, Engineering and Education (IJCRSEE), 8*(3), 155-162. https://doi.org/10.23947/2334-8496-2020-8-3-155-162.

Nicholson, H. & Bond, E. (2017). *Theatre and education.* Bloomsbury Publishing. Retrieved from https://books.google.ro/books/about/Theatre_and_Education.html?id=BTtGEAAAQBAJ&redir_esc=y

Popov, A., & Karásek, M. (2021). Dramatising cultural diversity: Youth theatre as a performance of local memory and identity in a multiethnic environment. *Slovak Ethnology, 69(*3), 325-342. https://doi.org/10.2478/SE-2021-0022.

Shneiderman, B. (2022). *Human-centered AI.* Oxford University Press. Retrieved from https://books.google.ro/books/about/Human_centered_AI.html?id=YS9VEAAAQBAJ&redir_esc=y

Stampfl, R., Geyer, B., Deissl-O'Meara, M., & Ivkić, I. (2024). Revolutionising role-playing games with ChatGPT. *Advances in Artificial Intelligence and Machine Learning; Research, 4* (2), 2244-2257. https://doi.org/10.48550/arXiv.2407.02048.

Tang, K. S., & Putra, G. B. S. (2025). Generative AI as a dialogic partner: Enhancing multiple perspectives, reasoning, and argumentation in science education with customized chatbots. *Journal of Science Education and Technology, 5*(2), 1524-1535. https://doi.org/10.1007/s10956-025-10240-1.

Thomas, J., O'Mara-Eves, A., & Brunton, G. (2014). Using qualitative comparative analysis (QCA) in systematic reviews of complex interventions: a worked example. *Systematic reviews, 3*, 67. https://doi.org/10.1186/2046-4053-3-67.

Yampolskiy, R. V. (2024). *AI. Unexplainable, Unpredictable, Uncontrollable* (1st Ed.). Chapman & Hall. https://doi.org/10.1201/9781003440260

UNESCO. (2024). *Artificial intelligence and the futures of learning*. https://www.unesco.org/en/digital-education/ai-future-learning.

Urmeneta, A. & Romero, M. (Ed.) (2024). *Creative application of artificial intelligence in education*. Palgrave Macmillan. Retrieved from https://doi.org/10.1007/978-3-031-55272-4_1

Vinchon, F., Lubart, T., Bartolotta, S., Gironnay, V., Botella, M., Bourgeois-Bougrine, S., Burkhardt, J., Bonnardel, N., Corazza, G. E., Glăveanu, V., Hanchett Hanson, M., Ivcevic, Z., Karwowski, M., Kaufman, J. C., Okada, T., Reiter-Palmon, R., & Gaggioli, A. (2023). Artificial intelligence & creativity: A manifesto for collaboration. *The Journal of Creative Behavior, 57*(4), 472-484. https://doi.org/10.1002/jocb.597.

World Economic Forum. (2024, December 20). *The art of being human: Creativity's role in the 'intelligent age'*. https://www.weforum.org/stories/2024/12/art-of-being-human-creativity-digital-age/

Zhang, J., Xu, J., & Li, M. (2025). The impact of educational live action role-playing games on social–emotional competence: a mixed-method study with Chinese college students. *Frontiers in Psychology, 16*. https://doi.org/10.3389/fpsyg.2025.1538761.

Zhou, M., & Peng, S. (2025). The usage of AI in teaching and students' creativity: The mediating role of learning engagement and the moderating role of AI literacy. *Behavioral Sciences, 15*(5), 587. https://doi.org/10.3390/bs15050587.