

Artificial Intelligence and inclusive history teaching: a mixed-methods study in a middle school in Naples

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Abstract: Integrating generative artificial intelligence into classroom practice is emerging as a strategic lever for inclusive innovation, particularly in history education. This study examines the effectiveness of using the Suno.com generative audio platform, in combination with theatrical and narrative activities, within history instruction in a lower secondary (middle) school in Naples, Italy. Adopting a mixed-methods design, we involved 150 students—10 diagnosed with Autism Spectrum Disorder (ASD)—evenly assigned to experimental and control groups. Standardized instruments, including the School Engagement Questionnaire (SEQ) and the Psychological Sense of School Membership (PSSM), were administered alongside semi-structured interviews analyzed in NVivo. Results indicate a significant improvement in school engagement, motivation, and sense of belonging among students in the experimental group, with particularly positive effects for those with Special Educational Needs (SEN), including ASD. Findings suggest that, when embedded in reflective and co-operative pedagogical environments, AI can meaningfully support the development of more equitable, accessible, and personalized learning pathways, reimagining history teaching as an experiential and participatory practice.

Keywords: Artificial Intelligence, Engagement, Motivation



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1. Introduction

The introduction of artificial intelligence (AI) in educational contexts is one of the most significant developments in contemporary teaching. AI is a set of technologies that can learn, process data and generate content independently. It is now a powerful tool for educational innovation, especially for improving inclusive and personalised practices (Luckin et al., 2016; Holmes et al., 2019). Applications based on generative AI, which can produce texts, images, sounds and videos, offer innovative tools to support active learning, creativity and critical thinking (Zawacki-Richter et al., 2023).

In the field of history teaching, which has traditionally focused on the linear transmission of chronological and narrative content, integrating AI enables a shift towards more experiential and participatory approaches. Applications such as Suno.com, which automatically generate audio and music tracks from textual input, are particularly useful for the creative reinterpretation of historical events. Combining music and theatrical performance activates the cognitive, emotional and physical as-

pects of learning, fostering a deeper, multisensory and narrative understanding of history.

This potential is particularly relevant for the educational inclusion of students with special educational needs (SEN), including those with autism spectrum disorder (ASD). The literature emphasises that students with ASD thrive in structured yet flexible environments that recognise alternative modes of communication and expression (American Psychiatric Association, 2022; Fletcher-Watson & Happé, 2019). From this perspective, combining generative AI with theatrical activities can provide a safe and expressive learning environment in which every student can find their own way to participate, which has a positive effect on their sense of belonging to the group and their perceived self-efficacy (Barry et al., 2020).

Meanwhile, a recent study has highlighted the positive impact of smart technologies on school engagement and intrinsic motivation, demonstrating how the intentional use of AI can foster authentic and inclusive learning environments (Popenici & Kerr, 2017). These aspects are particularly significant in complex educational contexts such as urban areas in southern Italy, where fostering a sense of community and promoting school well-being are crucial in combating early school leaving and achieving educational equity (Martinez-Munoz et al., 2022).

In light of this theoretical and operational framework, this study aims to investigate the impact of artificial intelligence on history learning and school inclusion in a lower secondary school in Naples, through the use of the Suno.com platform in synergy with theatrical activities. The study will evaluate the effectiveness of the intervention in increasing school engagement and membership, with a particular focus on students with autism spectrum disorder. The research employs a mixed (qualitative and quantitative) methodological approach, combining standardised assessment tools with semi-structured interviews with students and teachers to offer a comprehensive and contextualised view of the educational experience.

2. Aim of the research

This study aims to explore the impact of integrating generative artificial intelligence, particularly through the Suno.com platform, into history teaching programmes supported by theatrical activities. The intervention is part of a methodological innovation aimed at inclusion and personalisation of learning, with a specific focus on students with autism spectrum disorder (ASD).

The research objectives are divided into two complementary levels:

- Assess the impact of generative artificial intelligence on school engagement and school membership among secondary school students, with a particular focus on the benefits for pupils with special educational needs. This objective is based on scientific evidence recognising the potential of AI to promote engagement through active, motivating and adaptive learning environments (Holmes et al., 2019). In particular, the use of technologies that stimulate multisensory and narrative experiences has been shown to be effective in improving inclusion and well-being at school (Luckin et al., 2016).
- Investigate, through qualitative tools (semi-structured interviews), the perception of students and teachers on the effectiveness of the educational intervention, with specific attention to motivation to learn, participation and attitude towards technological innovation. This analysis is part of the growing interest in the literature towards understanding the subjective dynamics related to the integration of AI in

school contexts (Popenici & Kerr, 2017; Martínez-Muñoz et al., 2022). Recent studies emphasise the importance of hybrid and participatory approaches, capable of capturing not only educational outcomes but also the experiences, expectations and resistance of those involved in the educational process (Luckin et al., 2016; Barry et al., 2020).

Through a qualitative-quantitative research design, the study therefore aims to offer a detailed and contextualised interpretation of the impact of generative AI on history teaching and school inclusion, contributing to the international debate on the ethical, creative and transformative use of intelligent technologies in education.

3. Sample selection

The research was conducted in a lower secondary school in an urban area of Naples during the 2024/25 school year. A total of 150 students, aged between 10 and 12, were divided into two groups. The first group ($n = 75$) took part in an innovative educational programme integrating generative artificial intelligence via the Suno.com platform, alongside theatrical activities designed to teach history. The second group ($n = 75$) followed the traditional curriculum without any alternative technological or methodological elements. Participants were randomly assigned to groups to ensure initial equivalence and minimise the influence of confounding variables, in line with Creswell and Creswell's (2018) methodological recommendations.

Both groups included five students with autism spectrum disorder (ASD) who were placed in an inclusive setting and supported through an Individualised Education Plan (IEP). Support teachers and other specialist educational staff were involved in this process. The decision to include students with special educational needs (SEN) in both groups was made in order to assess the inclusive impact of the proposed intervention, in line with the principles of equitable and personalised education promoted at a European level (European Agency for Special Needs and Inclusive Education, 2022).

Inclusion in the sample was subject to specific criteria defined according to established pedagogical literature standards and Italian regulations. First and foremost, regular attendance at the participating school was required, as educational continuity is essential for reliably detecting the effects of a teaching intervention (Schuelka et al., 2019). The participants' ages, ranging from 10 to 12 years old, reflect the lower secondary school segment, where the development of critical thinking, creativity, and narrative skills — which are fundamental to history teaching — is particularly relevant. For pupils diagnosed with ASD, a clinical certificate issued by accredited health authorities was required, in accordance with the criteria of the DSM-5-TR (American Psychiatric Association, 2022) and the ministerial guidelines for school inclusion (MIUR, 2021).

In accordance with the ethical principles of educational research, participation in the project was subject to the informed consent of parents or legal guardians. These principles include the right to privacy, transparency, and the possibility of withdrawal at any time (BERA, 2018; OECD, 2023). To ensure real exposure to the educational treatment and thus the reliability of the post-intervention measurements, participation in at least 50% of the planned activities was required. This threshold was adopted to limit variability in the data due to discontinuity in attendance (Flick, 2018).

The systematic application of these criteria enabled the creation of a robust sample that was balanced in terms of both quantity and quality, and representative of

the reference school context. The inclusion of students with ASD in both groups enabled a comparative analysis of the intervention's effectiveness from an inclusive perspective, aligning with recent research on using emerging technologies to support personalised learning (Luckin et al., 2016; Holmes et al., 2019).

3.1. Tools

In line with the mixed methods research design adopted in the study (Creswell & Plano Clark, 2018), data collection was carried out using a synergistic combination of quantitative and qualitative tools. This approach enabled the objective measurement of outcomes to be combined with an in-depth understanding of subjective experiences, providing a multi-level view of the impact of generative artificial intelligence-based teaching.

For the quantitative component, two standardised tools that have been widely validated in the international educational context were used. The School Engagement Questionnaire (SEQ), developed by Fredricks, Blumenfeld and Paris (2004) and adapted for use in many different contexts, enables the assessment of school engagement in cognitive, behavioural, and emotional terms. This makes it a comprehensive measure of students' active and motivated participation. Recent studies have highlighted the SEQ's sensitivity in detecting changes in engagement in innovative and inclusive educational contexts (Wang & Fredricks, 2014; Reeve et al., 2020). Similarly, the Psychological Sense of School Membership (PSSM) scale, developed by Goodenow (1993), has been used to detect students' perceived sense of belonging to the school community. The Italian version of the PSSM adopted in the study, which was adapted for lower secondary school, has demonstrated robust levels of reliability and validity (Pagliaro et al., 2022).

This construct is considered an important indicator of psychological well-being, intrinsic motivation and resilience, especially among students with special educational needs (Allen et al., 2021).

From a qualitative perspective, semi-structured interviews were conducted with a representative subgroup of students and teachers, selected based on criteria of heterogeneity and availability. The student interviews delved into aspects such as motivation, interest in theatrical and digital activities, perception of the accessibility and usability of the Suno.com platform, and emotions experienced throughout the process. Particular attention was paid to the experiences of pupils with autism spectrum disorder (ASD) to investigate the effectiveness of the intervention in an inclusive and personalised way (Guldberg et al., 2015). Interviews with teachers focused on their perception of teaching effectiveness, relational dynamics observed in the classroom and the inclusive potential of adopted technologies, as well as gathering reflections on critical issues, resistance or difficulties integrating generative AI into daily practice (Popenici & Kerr, 2017; Martínez-Muñoz et al., 2022).

All interviews were recorded and transcribed in full, then analysed using an inductive thematic approach according to the methodology proposed by Braun and Clarke (2006). NVivo 14 software supported the processing of qualitative data, facilitating systematic and rigorous coding and encouraging the emergence of recurring interpretative patterns. Several researchers conducted the coding, applying intersubjective triangulation procedures to ensure the reliability and validity of the analysis (Flick, 2018; Nowell et al., 2017).

Integrating quantitative and qualitative data enabled us to capture the measurable effects of the intervention on engagement and sense of belonging, as well as the subjective narratives, emotions, and relational dynamics characterising the relationship between students, intelligent technologies, and innovative school environments. This approach was fundamental in understanding the real transformative potential of generative artificial intelligence in history teaching, particularly with regard to the principles of equity, accessibility and sustainable educational inclusion (Luckin et al., 2016; Holmes et al., 2019).

3.2 Methods

The educational intervention took place over eight months during the 2024/25 school year, being permanently incorporated into the history curriculum for the two classes involved in the study. To ensure thematic and curricular equivalence between the two educational paths, the content covered was identical for the sample group and the control group. The main topics covered included: Greek and Roman civilisation; the Middle Ages; the Renaissance; and the modern age. Particular focus was given to the development of historical thinking and an understanding of socio-cultural dynamics. The two courses were differentiated by the teaching methodology adopted. In the control group, teaching activities were carried out according to a traditional, teacher-centred methodology based on a transmissive approach to historical knowledge. Lectures formed the core of the teaching: the teacher presented the content sequentially and linearly, following the structure of the adopted textbook without significant deviations or interdisciplinary insights. Students took on a predominantly receptive role, taking notes and only intervening when asked or to seek clarification.

Another essential component was reading and analysing the textbook, which was considered the main — and sometimes the only — source of historical knowledge. While this approach ensured uniformity of content, it risked oversimplifying the historical discipline by limiting access to primary sources and alternative interpretations, as Crivellari and Colombo (2021) have pointed out.

At an operational level, activities centred on traditional individual exercises, such as multiple-choice questionnaires, open-ended questions and structured tests. These tools were designed to assess memory and basic conceptual understanding in line with a cognitivist approach centred on knowledge acquisition.

Preparation for assessment tests mainly involved mnemonic techniques and individual study. Historical knowledge was frequently learnt as a set of facts and dates to be memorised rather than as an interpretative and critical process (Wineburg, 2018). This learning model, rooted in transmissive pedagogy, does not necessarily encourage the development of historical thinking — the ability to question the past and recognise the links between events, causes and consequences.

Technology and visual aids were used sporadically and inconsistently: historical maps, images and short documentary videos were employed infrequently and not integrated systematically into the teaching design.

On the other hand, the sample group participated in an innovative, multidimensional and highly inclusive educational programme. This programme was designed to combine active methodologies and emerging technologies in a laboratory setting. This approach focused on students as active constructors of meaning, encouraging cooperation, creativity, and emotional engagement. Unlike the control

group, the adopted teaching model emphasised experience, interdisciplinarity, and the intentional use of digital technologies, in line with constructivist pedagogical guidelines and Universal Design for Learning principles (CAST, 2018).

One of the most significant activities involved narrative workshops supported by generative artificial intelligence. Working in small, heterogeneous groups, students used platforms such as Suno.com to create multimedia content, including soundtracks, historical podcasts and scripts, thereby transforming past events into personalised narratives. This process enabled creative, multimodal reworking of historical knowledge and fostered development of digital, narrative and critical skills (Laurillard, 2021; Beetham & Sharpe, 2019). AI, in particular, acted as a cognitive and communicative mediator, enhancing accessibility for all students, including those with special educational needs.

Historical themes were also addressed through theatrical activities and role-playing games, allowing for deep emotional and cognitive immersion in the studied contexts. Students played characters, re-enacted social dynamics, developed scripts and participated in collective performances. The theatrical dimension was a powerful tool for developing historical thinking and life skills as it connected the body, voice, emotion and memory within a single educational activity.

Group dynamics were structured according to the principles of cooperative learning by assigning different roles to each student, such as writer, director, historian or audio technician. This allowed each student to enhance their skills and actively contribute to the collective construction of the final product. This approach promoted negotiation, argumentative dialogue and peer learning — fundamental elements of truly inclusive and democratic education (Johnson & Johnson, 2019).

The entire course was characterised by the extensive use of multisensory strategies. Learning was supported by interactive maps, historical images, digital artefacts, environmental sounds, and musical narratives. This variety of stimuli stimulated attention and memory by activating different modes of perception, in line with the findings of a recent neurodidactic study (Sousa, 2022).

Reflection sessions at the end of each module were a central element of the course. These were guided moments of metacognition and self-assessment, during which students could rework their experience, express their point of view and become aware of the strategies used and the results achieved. This approach strengthened self-management skills and individual empowerment (Cornoldi & De Beni, 2020).

Finally, particular attention was paid to the active inclusion of students with autism spectrum disorder (ASD). Activities were designed with accessibility and flexibility in mind, incorporating structured visual aids, personalised roles in theatrical performances, and adjustable processing times to make the course accessible and engaging for all. AI played an important role as a compensatory and communicative tool, particularly in language mediation and facilitating the organisation of thought.

4. Quantitative Data Analysis

The analysis of quantitative data revealed statistically significant differences between the sample group and the control group, both in terms of school engagement and sense of belonging to the school community (school membership). The results, obtained through the administration of the School Engagement Questionnaire (SEQ) (Fredricks, Blumenfeld & Paris, 2004), show an overall average increase of 18.4% for

the experimental group, compared to a marginal increase of 4.6% in the control group.

In detail, the sample group showed consistent improvements in all three dimensions of the SEQ:

- Cognitive: from 3.2 to 3.9 out of 5 (+0.7)
- Behavioural: from 2.9 to 3.8 out of 5 (+0.9)
- Emotional: from 3.0 to 4.1 out of 5 (+1.1)

In the control group, however, improvements remained modest:

- Cognitive: from 3.1 to 3.3 out of 5 (+0.2)
- Behavioural: from 2.8 to 3.0 out of 5 (+0.2)
- Emotional: from 2.9 to 3.1 out of 5 (+0.2)

The most significant improvement was found in the emotional dimension, suggesting that the use of narrative, immersive and multisensory learning environments, mediated by generative artificial intelligence, promoted a deeper emotional connection with the content and with the class group. These results are consistent with the findings of Wang and Fredricks (2014), according to whom the emotional dimension of engagement is a key indicator of academic success, especially in inclusive contexts. Further confirmation comes from the studies by Reeve et al. (2020), which highlight how participatory and technology-mediated methodologies increase self-determination and emotional involvement.

Data relating to Psychological Sense of School Membership (PSSM) (Goodenow, 1993) also confirm the effectiveness of the intervention: in the sample group, there was an increase from 3.4 to 4.3 out of 5 (+0.9), while in the control group, the improvement was limited to 3.3 to 3.6 (+0.3). These results reflect the findings of Allen et al. (2021), according to whom a high sense of belonging is correlated with school resilience and psychosocial well-being, particularly in students from vulnerable backgrounds. Furthermore, recent research (Pagliaro et al., 2022) highlights the value of the PSSM as a sensitive tool for assessing the quality of school relationships in equitable and inclusive educational environments.

Particular attention was paid to the subgroup of 10 students diagnosed with autism spectrum disorder (ASD), equally distributed between the two groups. Again, the analysis showed marked differences in favour of the experimental group.

In the sample group (ASD), the average scores increased significantly:

- SEQ – Behavioural: from 2.4 to 3.5 out of 5 (+1.1)
- SEQ – Emotional: from 2.5 to 3.8 out of 5 (+1.3)
- PSSM: from 3.0 to 4.2 out of 5 (+1.2)

In the control group (ASD), however, improvements were minimal or slightly regressive:

- SEQ – Behavioural: from 2.3 to 2.6 out of 5 (+0.3)
- SEQ – Emotional: from 2.6 to 2.4 out of 5 (−0.2)
- PSSM: from 2.9 to 3.1 out of 5 (+0.2)

These results confirm the inclusive potential of intelligent technologies, in particular generative AI, which has proven useful as a compensatory tool for structuring the learning environment, linguistic mediation and self-regulation support, as also noted by Holmes et al. (2019). Furthermore, the integration of theatrical and cooperative activities facilitated active participation and emotional management in subjects with ASD, in line with evidence-based approaches to educational inclusion (Guldborg et al., 2015).

In the control group, the prevalence of a standardised, transmissive model probably limited access to meaningful experiences for students with ASD, contributing to a decline in emotional well-being and a poor sense of belonging. This finding confirms the difficulties highlighted in the literature regarding the effectiveness of traditional models in responding to the specific needs of pupils with disabilities or neurodevelopmental disorders (European Agency for Special Needs and Inclusive Education, 2022). Overall, the quantitative data collected highlights the effectiveness of the innovative educational pathway based on generative artificial intelligence, active methodologies and narrative workshops. The results indicate a substantial increase in levels of engagement and belonging, not only among students as a whole, but even more markedly among those with autism spectrum disorder. The synergistic integration of intelligent technologies, experiential activities and cooperative strategies has promoted an inclusive and motivating climate, capable of enhancing the individual and collective resources of the class. These results confirm the latest scientific evidence on the transformative effect of emerging technologies in educational contexts (Luckin et al., 2016; Martínez-Muñoz et al., 2022; Holmes et al., 2019), reinforcing the need to develop flexible, accessible and student-centred teaching models, in line with the principles of Universal Design for Learning (CAST, 2018) and European recommendations for equitable and quality education for all.

5. Qualitative data Analysis

A thematic analysis of semi-structured interviews, conducted according to Braun and Clarke's (2006) model and supported by multiple coding using NVivo 14 software, revealed significant differences in perception of the teaching experience between students and teachers in the sample and control groups. The main areas that emerged concern motivation to learn, active participation, perception of the learning environment, attitude towards technology and perceived inclusion.

Students in the sample group expressed a high degree of satisfaction with their educational experience. They frequently described the activities as “fun”, “engaging” and “more creative than usual”. They particularly appreciated the interactive and cooperative nature of the activities, as these fostered a sense of protagonism and identification with the historical content. Using artificial intelligence to create podcasts, soundtracks and theatrical texts was seen as a positive innovation that could ‘bring history to life’ and ‘make difficult things easier to understand’. One student said: ‘I liked working with others because everyone had a task and we did things together. It wasn't just sitting and listening to the lesson’. Theatrical storytelling proved to be a powerful tool for emotional and cognitive engagement, offering pupils ‘a way to get into the story with their whole body’, in their own words.

Even among students with autism spectrum disorder (ASD), albeit with more reserved modes of expression, there was a perception of greater confidence and clarity of role. Some said they felt ‘calmer’ and ‘more listened to’ thanks to digital tools that ‘help you understand the instructions’ and ‘make you work more calmly’. The structure of the small-group activities, combined with the variety of languages (textual, visual and musical), fostered an atmosphere that was perceived as more inclusive and less anxiety-provoking.

By contrast, students in the control group tended to describe the teaching experience in more passive and disillusioned terms. They described the activities as “repetitive”, “the same as all the other lessons” and, in some cases, “difficult to follow”.

The teacher was seen as the central figure in the educational process, and many students reported feeling 'distracted' or 'tired' during lessons. Technology was used very little from an educational point of view and was mostly associated with the sporadic viewing of videos. The lack of alternative means of expression led many students to perceive history as a subject 'based only on books and tests'. For pupils with ASD, these difficulties appeared to be more pronounced; some said they 'did not understand when things changed' or 'did not know what to do', highlighting a lack of visual mediation and accessible communication structures.

Significant differences also emerged among teachers. Those in the sample group gave the innovative programme an overall very positive assessment, describing it as "challenging", "engaging even for us teachers", and "very effective in keeping the class's attention". They particularly appreciated the ability to differentiate courses and adapt activities to students' skills and cognitive styles, especially those with SEN and ASD. One teacher stated: "For the first time, I saw some pupils with difficulties speaking up and proposing ideas, thanks to the fact that there was no right answer, just a creative task to be carried out together". The use of AI was perceived as an effective cognitive mediator capable of stimulating curiosity and autonomy. It was also seen as an opportunity to reflect on teaching itself: 'We asked ourselves how we could use these tools in other subjects — it was a challenge for us, too'.

The theatrical element was deemed essential for fostering cross-disciplinary skills such as empathy, cooperation and oral expression, as well as for encouraging a more engaging, less encyclopaedic narrative of history. Furthermore, all the teachers in the sample group recognised an improvement in the classroom atmosphere, as well as an increase in spontaneous participation — even from pupils who would usually remain on the sidelines.

The teachers in the control group, on the other hand, painted a more critical picture. While acknowledging the importance of innovative technologies and methodologies, they emphasised practical challenges to implementing alternative approaches, including limited time, rigid curricula, a lack of specific training, and inadequate technical support. They also reported 'increasing difficulties in maintaining pupils' attention', particularly during the middle and final hours of the school day. They described the learning environment as 'standardised' and 'tiring for the most vulnerable', with teaching focused mainly on content delivery and test preparation.

6. Discussion

The results of the study clearly indicate that integrating generative artificial intelligence alongside theatrical, narrative and cooperative methodologies had a positive and statistically significant impact on students' engagement with school and sense of belonging. This effect was particularly pronounced among pupils with autism spectrum disorder (ASD), who demonstrated greater behavioural and emotional progress in the experimental group than their peers in the control group. These findings align with recent literature: according to Holmes et al. (2019), generative AI can facilitate cognitive and communicative accessibility, providing students with special educational needs (SEN) with more adaptive and responsive learning environments.

Using tools such as Suno.com, which automatically generates musical and audio content from text, makes learning history more multisensory and meaningful on a personal and relational level. This approach aligns with the principles of Universal Design for Learning (CAST, 2018), which advocate flexible teaching methods that

activate various modes of representation, expression, and engagement. The theatrical dimension has also activated alternative channels of expression, fostering an embodied and narrative understanding of the past. Scenic narration has enabled students to not only learn, but also to 'inhabit' history, fostering a deeper sense of identification with the content covered.

The collected data also confirm the findings of Wang and Fredricks (2014) regarding the importance of emotional engagement as a predictor of academic success and psychological well-being. The cooperative and creative activities typical of the experimental group promoted protagonism, the co-construction of knowledge, and mutual recognition — all of which are fundamental to strengthening a sense of belonging and perceived self-efficacy. This evidence is also reflected in the work of Johnson & Johnson (2019), who emphasise that cooperative learning is one of the most effective strategies for promoting inclusion and shared responsibility in school settings.

However, certain enabling conditions must be met for such practices to become established and spread structurally. Teacher training plays a crucial role: without adequate training and reflective support, technologies risk being used superficially or marginally, as highlighted by Martínez-Muñoz et al. (2022). Furthermore, the lack of curricular time, the rigidity of programmes, and infrastructural deficiencies — also highlighted by interviews with teachers in the control group — represent significant obstacles to the adoption of innovative approaches. From this perspective, as Popenici & Kerr (2017) suggest, educational innovation requires systemic change that goes beyond the mere introduction of digital tools, transforming the entire professional culture of the school.

Finally, the study suggests that combining artificial intelligence, cooperative learning and performative languages could be an effective way to make history teaching more democratic, accessible and sensitive to diversity, in line with the European Agency for Special Needs and Inclusive Education's (2022) recommendations. AI is therefore not only a technology, but also a pedagogical tool that can activate new models of educational relationships and participation.

7. Conclusion

The study confirms the strong transformative potential of generative artificial intelligence (AI) in inclusive history teaching. It highlights that using AI in a consciously and thoughtfully designed pedagogical framework can significantly impact school engagement, intrinsic motivation, and a sense of belonging to the educational community. The approach adopted, which is based on the synergy between AI, narrative workshops and theatrical practices, has been shown to encourage active participation and appreciation of individual differences. It has proven particularly effective for students with autism spectrum disorder (ASD), as suggested by previous research (Holmes et al., 2019).

These results reinforce the need to rethink traditional educational practices, which are still too often based on transmissive and uniform models. We must move towards a more flexible, creative, student-centred paradigm in line with the principles of Universal Design for Learning (CAST, 2018) and the European recommendations for fair, quality schooling for all (European Agency for Special Needs and Inclusive Education, 2022). AI should therefore be understood not as a mere technical innovation, but as a transformative pedagogical tool (Luckin et al., 2016) that can mediate

cognitive processes, facilitate communication, and support diverse forms of expression.

However, for this potential to be realised as sustainable, widespread practices, action must be taken at several levels: investment in continuing professional development for teachers (Martínez-Muñoz et al., 2022); strengthening digital infrastructure in schools; and promoting collaboration between teachers, educators, and educational technologists. Furthermore, as Popenici and Kerr (2017) point out, introducing AI into schools raises ethical and cultural questions that must be critically and participatively addressed to avoid automation and exclusion.

Ultimately, this study makes a significant contribution to the debate on the educational use of AI, emphasising that careful, pedagogically sound integration can promote a school system that is more inclusive, motivating, sensitive and responsive to differences. While AI cannot replace teachers, it can be a valuable ally in reimagining teaching to better meet the needs of today's children, particularly in challenging contexts and among those at risk of educational vulnerability.

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