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# Games, Emotions, Virtual Worlds: Old and New Frontiers of Learning Processes

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# Games, Emotions, Virtual Worlds: Old and New Frontiers of Learning Processes

*Pier Paolo Bellini*

Abstract. Play represents a major field of interdisciplinary inquiry, bringing together perspectives from psychology, pedagogy, sociology, cognitive science, and anthropology. This article examines its implications for contemporary learning processes, with particular attention to the emerging context of virtual reality and the metaverse. From a sociological perspective, it explores how gamification and immersive environments are transforming educational practices by reshaping motivation, social interaction, and knowledge construction. Through a critical review of the literature, the study discusses the educational potential and limitations of key concepts such as Serious Games, intrinsic and extrinsic motivation, embodied cognition, emotional engagement, presence, and digital platforms. It argues that immersive technologies can enhance participation, experiential learning, and cognitive engagement by integrating bodily experience and emotions into educational processes. At the same time, these technologies raise important challenges related to platformization, digital inequality, commercialization, technological dependence, and the risk of reducing learning to entertainment or information consumption. The article further examines the concept of digital capital and reflects on the broader social implications of virtual learning environments, emphasizing that access to innovative technologies does not automatically translate into greater educational equity. It concludes that the educational value of the metaverse depends not on technological innovation alone but on the development of critical pedagogical approaches capable of integrating immersive experiences while preserving meaningful learning, social inclusion, and human-centered educational values.

Keywords: Edutainment, Serious Games, Embodied Cognition, Metaverse

## 1. Introduction

«At least for now, the Metaverse is only a theory» (Ball 2022, p. 47). This somewhat paradoxical statement, coming from one of the leading experts on the metaverse, calls for explanation in two directions: first, a literal one (what theory are we talking about?); second, a technical one. At present, many technological issues remain unresolved - or are only partially solved - so that the existing metaverse can only be considered a small prototype of what may become achievable in the near or distant future in the field of immersive communication.

Technically, the metaverse implies the usability of a shared 3D virtual reality, accessible and inhabitable by anyone, anywhere, through readily available tools, enabling real-time interaction, persisting without interruption, providing a concrete sense of "presence" in shared spaces, and guaranteeing the same rights in force in the real world.

We are still far from the realization of such a project, though many aspects are already reality. For decades, the primary motivation for building a virtual world has been gaming, «which explains why the Metaverse is often mistakenly described as a gaming or entertainment experience» (ibid., p. 55).

This paper aims to analyze, from a sociological perspective, the role of gamification and immersive environments in learning processes, based on the assumption that these technologies do not merely enhance motivation but profoundly reconfigure the ways in which socialization, meaning-making, and access to educational opportunities are shaped within digital societies. Accordingly, it explores how playful and immersive experiences contribute to redefining learning processes as social phenomena, and what tensions emerge between emotional engagement, technological control, and critical education.

The proposed line of inquiry unfolds through successive stages: an interdisciplinary theoretical synthesis drawing on sociology, pedagogy, and media studies; a critical reinterpretation of gamification as a social device rather than merely a pedagogical tool; and a sociological reading of the metaverse as a space of socialization and the production of inequalities.

In the face of the rapid and structural transformation of learning environments, a conceptual synthesis now appears both possible and necessary, providing the foundation for a renewed and more adequate analytical perspective.

## 2. Platforms and Education

The metaverse is a platform - currently perhaps the most advanced one. Within the contemporary landscape, many scholars foresee an increasing

diffusion of digital platforms in education, as they are assuming an ever more central role in teaching and learning, a trend that has accelerated significantly in the wake of the pandemic. Indeed, «expressions such as the *"platformization of education," "platform pedagogies," "platform teachers,"* and *"platform classrooms"* have emerged» (Cornali & Prunotto, 2024, p. 93).

The debate, of course, concerns the implications of the progressive relocation of learning practices into remote digital environments, and particularly into immersive ones. As we shall see, according to Umberto Eco's still insightful distinction, the *"apocalyptic"* stand opposed to the *"integrated,"* each side advancing legitimate arguments. Among the former, scholars such as Neil Selwyn argue that the commodification of education through digital technologies risks reducing learning to a mechanical process of *transfer*, in which content is consumed rather than deeply understood. The growing dependence on digital technologies in education may transform learning into a process of information consumption rather than genuine comprehension. In this context, «the development of critical thinking—a cornerstone of both cognitive development and sociocultural learning—could be undermined, as students may become more focused on efficiently retrieving information than on engaging with it in a meaningful way» (Yildiz, 2025, p. 979).

Some studies suggest that when individuals are confronted with difficult questions, they «are primed to think about computers and that when people expect to have future access to information, they have lower rates of recall of the information itself and enhanced recall instead for where to access it» (Sparrow, 2011, p. 776). The Internet has become a primary form of external memory, in which information is collectively stored outside ourselves, and the emergence of Artificial Intelligence is paradoxically multiplying the risk of a decline in cognitive capacities.

Others point out that the platformization of education may progressively shift educational systems «away from democratic and public values and toward a privatized techno-commercial architecture» (Farinella & Carbone, 2025, p. 130). On the side of the *"integrated"* are, certainly, the advocates of so-called *gamification*.

## 3. "Serious Games"

The metaverse has found its primary experimental field in online digital gaming; its current developments still bear the imprint of this origin and employ it for educational purposes. Let us then delve into this peculiar human inclination to "pretend," along with its motivations, opportunities, and risks.

Play is a way of engaging with reality in a subjective form, reshaping it at will through imagination. As Freud argued, in terms of the projection of desires, «play is a triumph over reality and may be defined as "a phantasmatic

activity ignited upon real objects"» (Abrunzo, 2021, p. 71). Play constitutes a separate space, carved out from reality, an autonomous territory distinct from everyday life. Reality enters into it transformed but must maintain some connection with it. In fact, «play disappears if everyday reality intrudes too massively, just as it vanishes if it is absent altogether. The appeal of play lies precisely in its being on the boundary of what could be true but is not, with the full awareness of the player who conducts it» (ibid., p. 70).

Jane McGonigal, Game Designer and Director of Game Research & Development at the Institute for the Future (IFTF) in Palo Alto, California, pioneered research on alternate reality games designed to address real-world problems and improve people's lives. In her view, the relationship between reality and play is inverted: the former must yield to the latter, since players legitimately feel that the real world is "lacking something". «Reality is not designed to maximize our potential. Reality was not designed from the ground up to make us happy» (McGonigal, 2011, p. 9).

Piaget defined play through specific criteria: it must (1) be spontaneous, (2) have its own intrinsic purpose, (3) strongly motivate participants, and (4) generate pleasure in execution (Abrunzo, 2021, p. 72). While animals too are capable of play, in humans it assumes distinctive functions: it can become a means of understanding the world, a driver of active learning, and a generator of multiple potentials which, «if appropriately nurtured, translate into healthy human development and remarkable cognitive, relational, and creative skills» (Travaglini, 2021, p. 10).

For children, play fosters cognitive, social, and sensorimotor skills: they learn to master their bodies, orient themselves in space and time, manipulate and construct, build relationships, and communicate. For adults, instead, «play implies pleasure and is connected with leisure, rest, distraction, and relief from daily concerns and tasks; for the child, however, play is life itself» (Abrunzo, 2021, p. 69).

In online gaming, video games have become "social spaces": «Play is the new social. Children grow up learning and socializing through games and avatars, and these experiences persist into later life, much as earlier generations retained memories of instant messaging on mobile phones or Messenger» (Carciofi, 2022, p. 147). Some even claim that the social bonds fostered in gaming environments are stronger than those in physical reality: compared with games, «reality is disconnected. Games build stronger social ties and lead to more active social networks» (McGonigal, 2011, p. 124).

This enthusiastic perspective has inspired researchers and educators over the last decade to investigate the educational potential of games, especially as the student population of gamers has grown. Concerns over negative influences are decreasing. The *Serious Games Initiative* «introduced the concept of "Serious Games" (SG), and "Serious Educational Games" (SEG) as

those explicitly designed for teaching and learning purposes» (Cheng et al., 2015, p. 18). *Game-based learning* has thus become a widespread pedagogical approach, sometimes adapting entertainment games «with or without modifications, to achieve educational purposes» (Travaglini, 2021, p. 74).

## 4. From the ludic to the ludiform

*Gamification* - «the art of extracting fun and engaging elements from games and thoughtfully applying them to productive or real-world activities» (Almeida et al. 2023, p. 5) - enhances motivation through rewards, feedback, and challenges designed to be intrinsically engaging. This heightened involvement «can lead people to devote longer attention to tasks, since they are more likely to focus on activities they find rewarding and enjoyable» (Flavián et al., 2024, p. 7).

In essence, gamification seeks to enhance people's motivation to carry out various tasks. Generally, two types of motivation are distinguished: intrinsic and extrinsic. The former involves no compensation or reward beyond the action itself, which is perceived as interesting and enjoyable. By contrast, extrinsic motivation refers to situations in which people perform activities to obtain a desired outcome beyond the activity itself (e.g., higher income). «Gamification is therefore intrinsically related to this latter type of motivation» (Mogavi et al., 2022, p. 2).

Gamification incentives such as competition and performance-based rewards have been widely criticized. When gamification becomes the sole aim of activity execution, rather than a means to motivate broader learning or performance, students may «fixate excessively on gamification and become distracted from learning» (Mogavi et al., 2022, p. 2).

The issue of using play for "other purposes" remains entirely open: the problematic shift is that from the *ludic* to the *ludiform*, that is, «from play to activities that maintain the main features of play but are more structured and socialized than the most genuine and spontaneous ludic activity» (Travaglini, 2021, p. 63).

This raises a complex, perhaps irresolvable issue: a theoretical and practical short circuit. If play must have its own intrinsic purpose, how can it remain play if designed to achieve other ends? If the child should "just" play, why should learning be of concern? And until what age can we "trick" them - without running the risk that later, it will be they who "trick" us? Jean Baudrillard, with caustic irony, argued that Disneyland exemplifies the «degeneration of childishness. A world that pretends to be childish to make us believe that adults exist elsewhere, in the 'real' world, hiding the fact that true childishness is everywhere, in the adults themselves who come here to

play at being children in order to deceive themselves about their real childishness» (Baudrillard, 1981, trans. 2009, p. 75).

It is significant that the first major reflection on play, Johan Huizinga's *Homo Ludens* (1938), after defining play as a foundation of civilization and human societies, ultimately identifies its pathological condition in modernity. What we witness today is no longer genuine play but rather *puerilism*, «a mixture of adolescence and barbarity [...] characterized by an insatiable craving for trivial amusement and crude sensationalism, together with a complete lack of humor, decency, and fair play» (Huizinga, 1955, p. 205).

This tendency is taken up more recently by Zygmunt Bauman, who highlights the gradual emergence of the modern mantra according to which *"this is nothing but a game"* becomes a way of escaping the contradictions of everyday life. As he observes, «'We are adults; let us part as friends,' says the player who withdraws from the game of marriage. [...] The mark of postmodern maturity is the willingness to embrace play wholeheartedly, as children do» (Bauman, 1999, p. 48).

## 5. Mind and Body in Learning Processes

Immersive digital experiences demand a reconsideration of the relationship between body and learning. Contemporary cognitive science widely recognizes that our bodily experience is inseparable from our cognitive processes: this is the paradigm of embodied cognition, which assigns a central role to the body in the development of knowledge. It is not simply a matter of the body being "involved", but rather of the fact that «perception, action, and bodily states interact in shaping cognitive processes, including learning» (Lindgren & Johnson-Glenberg, 2013, p. 445).

This paradigm highlights how cognition emerges through interaction with the physical and social environment, where the body functions as mediator. A key notion is that of "situatedness": learning is not an abstract mental process but takes place in specific contexts, situations, and environments. In this sense, the body is a "filter" through which knowledge is acquired.

Embodiment also implies that gestures, posture, movement, and sensory engagement all influence thought processes. For example, manipulating virtual objects in a learning activity allows students to consolidate abstract concepts through concrete bodily actions. The same applies to emotions, which - far from being "obstacles" to cognition - are essential to the learning process.

In a virtual learning environment such as the metaverse, participants actively engage with ongoing activities rather than acting as passive recipients of information. Body and environment therefore work together to shape our cognitive and educational experiences. From this perspective, *habit* «is the body becoming implicit knowledge. Pierre Bourdieu (1992) moves in the

same direction with the concept of *habitus*, understood as a system of durable and transferable dispositions that structure action» (Gallese, 2026, p. 29).

The metaverse can therefore enable students «to immerse themselves in a broader socio-cultural context, fully mobilize their sensory-motor systems and interact with the environment in an embodied manner, in order to better facilitate their cognitive formation» (Zhang, 2024, p. 200).

## 6. Emotions and Rationality in Learning Processes

Emotions play a decisive role in learning, not only as motivators but as genuine components of knowledge acquisition. Educational psychology increasingly emphasizes the link between affective engagement and cognitive performance. A student emotionally involved in an activity tends to achieve deeper and longer-lasting learning outcomes than one who participates passively.

Virtual environments are particularly effective at generating emotional involvement, because they offer immersive, personalized, and interactive experiences. The "sense of presence" in VR can create a strong emotional bond with the learning content, leading to higher levels of attention and motivation.

However, excessive emotional intensity may backfire, producing anxiety, disorientation, or dependence. As several scholars warn, «when the emotional load of the experience exceeds the learner's capacity for regulation, the learning effect can be compromised» (Maghaydah et al. 2024, p. 5). Hence the need for careful educational design: not every "immersive" or "exciting" experience necessarily translates into effective knowledge acquisition.

A crucial element, therefore, is the mediation of the teacher, who should not be replaced by technology but rather repositioned as a guide, facilitator, and interpreter of experiences. Only in this way can the emotional power of the metaverse be harnessed for authentic learning, without lapsing into pure entertainment or addictive engagement.

## 7. Face-to-Face and Distance Learning

"Social technology" - that is, the construction of relationships through and within the digital sphere - achieves its highest level of efficacy when it is capable of generating a "sense of presence". Yet this raises delicate and intricate questions regarding everyday human experience: what does it mean to "be present"? Does presence coincide with the physical location of our body? What do we imply when we reproach someone for "not really being there"?

David W. Schloerb, an engineer at MIT, introduced a distinction between "physical presence" and "subjective presence". The former refers to "the existence of an object in a specific spatiotemporal region", while the latter is defined as «the perception of being located in the same physical space in which a given event occurs, a process unfolds, or another person is situated» (Riva & Gaggioli 2019, loc. 1260). The two Italian psychologists, well-known for their research on immersive communication, highlight a range of colourful definitions of presence: "a psychological state in which the virtuality of experience is not recognized"; "the sensation of being in a virtual environment rather than in the place where the subject's body is physically located". In this view, "reality" - conceived as a set of externally existing objects endowed with well-defined spatial properties - is opposed to the "digital environment," understood as the simulation of those objects. Within this framework emerged what has become the most widely accepted definition of presence in the technological domain: «the perceptual illusion of non-mediation. In practice, according to this definition, one is present within a virtual environment when one no longer perceives the technology that has generated it» (ibid., loc. 1270).

From this perspective, authenticity is linked to individual perceptions and experiences of an object or event «rather than being an objectivistic determination formed by judges or independent experts» (Flavián et al. 2024, p. 3). As Carciofi (2022, p. 71) notes: «If the self experiences the sensation of being immersed in a situation ('being there'), this means that the mind has activated that particular cognitive-sensorial mechanism referred to as presence».

Crucially, contemporary virtual environments (unlike their 2D predecessors) are able to induce such sensations by stimulating the so-called GPS neurons, identified by Nobel laureates May-Britt and Edvard Moser. When individuals operate in multiple locations simultaneously (e.g., videoconferencing), their *actual* location is determined by the space within which they are able to move, not merely the one they see. These "non-places" (Augé) fail to leave lasting traces in consciousness or spatial memory. By contrast, «both virtual reality and augmented reality - the two core technologies of the metaverse - are capable of activating GPS neurons and rendering the subject present in digital spaces» (Mazzarella, 2022, loc. 1361-1373). By engaging these neurons, the brain interacts with the physical space inhabited by the subject, records it, and ultimately constructs autobiographical memory around such "lived places". Put simply, each individual "is" somehow the places they have inhabited. The metaverse, therefore, has the potential to generate such places.

But how does this occur? Why do we experience presence in virtual reality? As Riva and Gaggioli (2019) explain, «the answer is straightforward:

virtual reality employs simulation mechanisms remarkably close to those employed by the human mind». More precisely, «at the foundation of virtual reality is not a simulation of reality per se, but a stimulation of neural expectations» (Lanier 2017, p. 64). The experience of embodiment itself is the result of a simulation constructed by the mind; the metaverse operates analogously. Presence, in this sense, «is generated by the metaverse's capacity to anticipate how the mind simulates reality and to generate digital content consistent with such anticipations» (Mazzarella, 2022, loc. 1397).

The task of a VR system, then, is to bring the nervous system beyond a threshold such that the brain, for a time, accepts the virtual world as more immediate than the physical one. Cognitively, reality can be understood as the brain's expectation of the immediate future. In VR, «the brain is persuaded, for a period of time, to expect virtual rather than real stimuli» (Lanier 2017, p. 66).

Alongside this functional "sympathy" between brain and VR, a further condition is required for presence to be experienced: the virtual environment must allow the user to navigate, select, move, and manipulate objects intuitively. Presence is therefore tied «to the capacity to successfully perform actions in an environment, whether physical or digital. […] The sense of presence serves several critical functions, the most important of which is to verify whether our actions have produced the intended result» (Riva & Gaggioli 2019, loc. 1270, 1291).

Finally, the social dimension remains central. In everyday life, individuals rarely attend to shifts in perceptual states that accompany encounters with others. Yet, as Lanier (2017, p. 263) observes, «the heart of the virtual reality experience is interactivity».

If communication technologies and mobile internet once shifted connectivity from places to persons, and if individuals are now «less bound to family, neighborhood, and small-group networks, and increasingly oriented toward larger, more diverse personal networks characterized by weaker social cohesion» (Bentivegna & Boccia Artieri 2019, loc. 708), then the metaverse, from this perspective, must be seen as offering a universal environment for social relations - relations that will be increasingly realistic, increasingly expansive, yet also increasingly subject to processes of manipulation and control.

## 8. Digital Capital

From a sociological perspective, increasing access to technology is potentially fundamental for promoting educational equity. Government programs and public–private partnerships «can play a pivotal role in providing

the necessary infrastructure and resources to underserved communities» (Yildiz, 2025, p. 985).

In reality, however, with the advent of new immersive technologies, it is not only unrealistic to expect a reduction in the digital gap - traditionally studied in relation to access to the internet - but the opposite may occur. As Carciofi notes, «the Metaverse may dramatically exacerbate the digital divide. The Metaverse may have a profound impact on a new level of socio-economic inequalities» (Carciofi, 2022, p. 177).

Knowledge Gap Theory emerged as a scientific response to the naïve belief that mass media could inform all citizens equally. Instead, it demonstrated how the dissemination of information through media can generate forms of social inequality. While early research on the digital divide focused primarily on material access to the internet—that is, the distinction between the *haves* and the *have-nots*— «a second line of research introduced a conceptual shift toward the actual use of digital technologies and internet access. […] Ultimately, a new form of inequality, the digital one, is added to existing inequalities, affecting individuals' life chances» (Bentivegna & Boccia Artieri, 2019, pos. 4468, 4617).

Numerous studies have examined how the digitalization of educational processes affects social inequalities. Research in this field has focused primarily on the impact of the digital divide and on issues of access and competence, often conceptualized as *digital capital* (Ragnedda, Ruiu, & Addeo, 2020).

As Gillespie (2017) effectively highlighted, the very term *platform* is loaded with semantic ambiguity. The metaphor underlying it suggests a level playing field in which everyone enjoys the same opportunities—a flat surface, not an inclined one, where the ball moves according to neutral and unmanipulated physical rules. This "naïve" representation tends to obscure the problematic aspects of platform structures, which «actually turn out to be centralized, not flat, ultimately an arena where subjects with sometimes conflicting objectives operate and where the responsibilities of the actors can be obscured» (Cornali & Prunotto, 2024, p. 104).

As is becoming increasingly evident, digital technologies in education are not neutral but political. They embody assumptions and visions about the future of society, since their design, promotion, and use are all arenas in which power struggles take place. Consequently, «the use of digital technology in education is therefore being rightly framed against long-standing and entrenched terms of struggle over the distribution of power» (Selwyn & Facer, 2014, p. 491).

This raises the question of whether concepts such as Pierre Bourdieu's *Cultural Capital* should now be reconsidered in light of the new virtual environment. In other words, should *Digital Capital* be regarded as a new form of

discrimination between social classes? While acknowledging the undeniable role that digital literacy plays in shaping inequalities of access to culture, evidence suggests that ICTs do not operate «as a determining factor in explaining the perpetuation of structural divisions within schools, such as the choice of school programmes, in the same way that Cultural Capital does. […] In addition, scant evidence supports the hypothesis that digital skills directly and positively influence academic performance and educational achievement» (Pitzalis & Porcu, 2024, p. 18).

It may therefore be argued that immersive technologies such as the metaverse could improve educational and social accessibility for students with disabilities. Providing an engaging learning environment through virtual and augmented reality «can help students with autism, special needs, and social interaction difficulties to improve their interpersonal and learning skills» (Maghaydah et al., 2024, p. 4).

In practice, however - as will be discussed later - the situation appears more complex. Today, individuals with low levels of education and people with disabilities are widely considered digitally disadvantaged. Research consistently shows that they «are less likely to use the Internet overall, in any environment, than people that are employed or high educated» (van Deursen & van Dijk, 2014, p. 508). Several studies on the technological experiences of university students with disabilities have also found that social media «did not necessarily overcome issues of offline disabilities, but instead often exacerbated the boundaries of disability» (Selwyn & Facer, 2014, p. 489).

## 9. Conclusions

The relationship between games, emotions, virtual worlds, and learning processes is complex, ambivalent, and still in evolution. On the one hand, play in its digital and immersive forms offers unprecedented opportunities for motivation, creativity, and participation. On the other hand, it entails significant risks: reduction of intrinsic motivation, manipulation through extrinsic rewards, compulsive behaviors, and the blurring of boundaries between education and entertainment.

From a sociological perspective, the metaverse represents a privileged observatory of contemporary transformations. It reveals the ongoing reconfiguration of the boundaries between reality and fiction, between body and technology, between education and play. What emerges is not the simple "replacement" of reality by virtual worlds, but rather their intertwining into hybrid, situated, and emotionally charged learning experiences.

The challenge, therefore, lies not in rejecting or celebrating the metaverse in itself, but in designing educational pathways capable of critically inte-

grating its potential while limiting its risks. The ultimate aim is to transform virtual immersion into genuine understanding, play into authentic growth, and emotional engagement into durable knowledge.

Already fifteen years ago, Sherry Turkle reflected on the emerging revolution of "simulation" and the discomfort it provoked within academic and professional contexts. Simulation, she argued, demands immersion - and this immersion renders us more vulnerable. What Turkle termed "the discomfort of simulation" marks a paradigmatic shift: why, she asks, should we focus on the unease it generates? Today, we observe the world through the lens of simulation: «Discomfort makes us think about what simulation leaves out; it allows us to uncover deeper truths» (Turkle, 2009, pp. 23, 20).

Turkle further notes that those who voiced concern about simulation often risked being dismissed as nostalgic or as engaging in reactionary resistance. The discomfort of simulation arises when professionals across domains «begin to feel a growing urgency to preserve what they considered "sacred spaces"—places where technology ought not encroach upon traditions intimately linked to their core values» (ibid., p. 21). Within scientific research, the increasing reliance on virtual realities—realities that are, in effect, manipulated constructs authored by others—raises the critical issue of their "legitimacy": «Students had no choice but to trust the simulations, which meant they had to trust the programmers who had designed them» (ibid., p. 34).

As Jaron Lanier observed, «Virtual reality will test us» (2017, p. 14) - particularly in relation to a foundational decision that precedes the risks of virtual experiences: «The human capacity to "see without perceiving". Looking without truly seeing, he suggests, is a mode of vision that remains fixated on surfaces. In the daily flow of urban life, individuals become mere "surfaces"; each "urban wanderer" moves within a continuous parade of appearances, where everyone is on display while walking. […] The surfaces where strangers transform have no "behind" or "natural underneath," no depth to which they belong» (Bauman 1999, pp. 92, 94).

Turkle ultimately concludes that «simulation should not replace reality, but rather reveal it» (2009, p. 102). This optimistic stance is, in fact, echoed even among some of virtual reality's most enthusiastic advocates. Lanier (2017, pp. 311, 357) argues that:

«At the heart of both science and art lies a reverent sensitivity toward the mystery that surrounds life. Yet tools that operate through binding information risk dulling this sensitivity. When we begin to believe that what can be programmed reflects a comprehensive understanding of human potential, we lose sight of the mystery that lies at the threshold of all things. […] Once we realize that bits possess no inherent meaning, it becomes easier to improve computers—because the only valid criterion left is to design them

in service of human beings. This way of thinking elevates the status of the human. There must be something special about us».

Sensation, emotion, and reason are components of a unified whole that defines what it means to be human. To dismantle this whole is to risk its erasure. The central issue, then, is not the investigative tool itself, but the kind of invitation. Reality invites us toward depth—a depth perhaps unreachable, but essential. It is, arguably, the only invitation capable of preserving human dignity. Any representation of reality, regardless of its form, must refrain from aspiring to "de-fine" it exhaustively.

Ultimately, the metaverse and gamification should not be understood merely as innovative educational tools, but as genuine socio-technical dispositives that redefine the forms of educational participation, the boundaries between learning and entertainment, and the conditions of access to knowledge. Understanding their implications means situating immersive learning within the broader structural transformations of digital societies and thereby fostering a critical and informed reflection on both their extraordinary potential and their possible pitfalls - as has always been necessary whenever revolutionary innovations have reshaped human experience.

## References


Abrunzo, R. (2021). Il gioco nell'intervento neuro e psicomotorio in età evolutiva. *Il TNPEE*, *3/1*, 69-84.

Almeida, C., Kalinowski, M., Uchôa, A. & Feijó, B. (2023). Negative Effects of Gamification in Education Software: Systematic Mapping and Practitioner Perceptions. *Information and Software technology,* 156, 107142, 1-74

Ball, M. (2022). *The Metaverse and How It Will Revolutionize Everithing*. New York: Liveright Publishing Corporation. [It. Transl. Metaverso. Cosa significa, chi lo controllerà e perché sta rivoluzionando le nostre vite. Milano: Garzanti, 2022]

Baudrillard, J. (1981). *Simulacres et simulation*. Paris: Éditions Galilée. [It. Transl. Simulacri e imposture. Milano: Pgreco Edizioni, 2009]

Bauman, Z. (1999). *La società dell'incertezza*. Bologna: Il Mulino.

Bentivegna, S. & Boccia Artieri, G. (2019*). Le teorie delle comunicazioni di massa e la sfida digitale*. Bari: Laterza.

Bocci, F., Del Fante, E, Ferrari, A., Micalizzi, A. & Sarini, M. (2024). *Video Game Therapy. Teoria e pratica clinica*. Milano: UTET.

Bonacini, E. (2020). *I musei e le forme dello storytelling digitale*. Roma: Aracne Editrice.

Bonacini, E. (2021). *Digital storytelling nel marketing culturale e turistico. Manuale pratico con esempi applicativi*. Palermo: Flaccovio.

Bourdieu, P. & Wacquant, L.J.D. (1992). *Réponses. Pour une anthropologie réflexive*. Paris: Éditions du Seuil.

Carciofi, A. (2022). *Vivere il metaverso*. Macerata-Milano: ROI Edizioni.

Cheng, M-T, Lin, Y-W & She, H-C (2015). Learning through playing Virtual Age: Exploring the interactions among student concept learning, gaming performance, in-game behaviors, and the use of in-game characters. *Computers & Education*. 86, 18-29.

Colazzo, S. & Maragliano, R. (2022). *Metaverso e realtà dell'educazione*. Roma: Edizioni Studium.

Colliver, Y. & Veraksa, N. (2019). The aim of the game: A pedagogical tool to support young children's learning through play. *Learning, Culture and Social Interaction*. 21, 296-310.

Cornali, F. & Prunotto, D. (2024). Resources for Educational Guidance: A Look at the Features and Uses of Digital Platforms. *Italian Journal of Sociology of Education*, 16(1), 87-112.

D'Angelo, P. (2020). *La tirannia delle emozioni*. Bologna: Il Mulino.

Farinella, D., Carbone, S. (2025). The Use of Digital Technologies for an Inclusive School: Some Suggestions From the COVID-19 Pandemic Experience. *Italian Journal of Sociology of Education*, *17*(1), 129-154.

Flavián, C., Ibáñez-Sánchez, S., Orús, C. & Barta, S. (2024), The dark side of the metaverse: The role of gamification in event virtualization, *International Journal of Information Management*, *75*, 102726, 1-13.

Gallese, V. (2026). *Il sé digitale: Dai neuroni specchio alla mediazione tecnologica*. Milano: Raffaello Cortina Editore.

Gillespie, T. (2017). *The Platform Metaphor, Revisited. The Humboldt Institute for Internet and Digitalisation*. Retrieved from: https://www.hiig.de/en/the-platform-metaphor-revisited/.

Han, B.C. (2023). Die Krise der Narration. Berlin: Matthes & Seitz. [It. Transl. La crisi della narrazione: Informazione, politica e vita quotidiana. Torino: Einaudi, 2024]

Huizinga, J. (1955). *Homo Ludens. A Study of the Play-Element in Culture*. Boston: Beacon Press.

Jabar, B.A., Azmi, M., Hernando, G., Moniaga, J.V. & Alpaullivarez, A.A. (2022). The Social Impact of VR Technology on Society: A Systematic Literature Review, *Jurnal Teknik Informatika*, 14 (2), 57-62. 10.31937/ti.v14i2.2778.

Lanier, J. (2017). *Dawn of the New Everything*. New York: Henry Holt and Company. [It. Transl. L'alba del nuovo tutto. Milano: il Saggiatore, 2019]

Lindgren, R. & Johnson-Glenberg, M. (2013). Emboldened by Embodiment: Six Precepts for Research on Embodied Learning and Mixed Reality, *Educational Researcher*, 42/8.

Maghaydah, S., Al-Emran, M., Maheshwari, P. & Al-Sharafi, M.A. (2024), Factors affecting metaverse adoption in education, *Heliyon* 10, e28602.

McGonigal, J. (2011). *Reality Is Broken: Why Games Make Us Better and How They Can Change the World*. New York: Penguin Press. [It. Transl. La realtà in gioco. Perché i giochi ci rendono migliori e come possono cambiare il mondo. Milano: Apogeo Education, 2011]

Mhalla, A. (2024). *Tecnopolitique. Comment la technologie fait de nous des soldats, Paris: Éditions du Seuil*. [It. Transl. Tecnopolitica: Come la tecnologia ci rende soldati, Torino: ADD editore, 2024].

Mogavi, R.H., Guo, B., Zhang, Y., Haq, E.U., Hui, P. & Ma, X. (2022). *When Gamification Spoils Your Learning: A Qualitative Case Study of Gamification Misuse in a Language-Learning App*. L@S '22, June 1–3.

Pitzalis, M. & Porcu, M. (2024). Digital Capital and Cultural Capital in education: Unravelling intersections and distinctions that shape social differentiation. *British Educational Research Journal*, *50*, 2753-2776.

Ragnedda, M., Ruiu, M.L. & Addeo, F. (2020). Measuring digital capital: An empirical Investigation. *New Media & Society*, *22*(5), 793-816.

Riva, G. & Gaggioli, A. (2019). *Realtà virtuali. Gli aspetti psicologici delle tecnologie simulative e il loro impatto sull' esperienza umana*. Firenze: Giunti Psychometrics.

Selwyn, N. & Facer, K. (2014). The sociology of education and digital technology: past, present and future. *Oxford Review of Education*, Vol. 40, No. 4, pp. 482-496.

Slater, M. & Sanchez-Vives, M.V. (2016). Enhancing our lives with immersive virtual reality. *Front. Robot. AI*, *3*, 74.

Sparrow, B. (2011). Google Effects on Memory: Cognitive Consequences of Having Information at Our Fingertips, *Science, 333*, 776-778.

Travaglini, R. (2021). *Pedagogia del gioco e educazione. Sviluppo, apprendimento, creatività*. Milano: FrancoAngeli.

Turkle, S. (2009). *Simulation and its discontents, Cambridge: MIT Press Massachusetts Institute of Technology*. [It. Transl. Il disagio della simulazione. Milano: Ledizioni, 2011]

Yildiz, T. (2025). The Future of Digital Education: Artificial Intelligence, the Metaverse, and the Transformation of Education, *İstanbul Üniversitesi Sosyoloji Dergisi*, *44*(2), 969-988.

van Deursen, A.J. & van Dijk, J.A. (2014). The digital divide shifts to differences in usage, *New media & society*, *16*(3) 507-526.

Zhang, C. (2024). *The Future of Education: Applications of Virtual Reality and the Metaverse*. Proceedings of the 2nd International Conference on Machine Learning and Automation.