

Ecology of citizenship: game eSports and socialization between the real and the virtual

Walter Savarese d'Atri ¹ and Antinea Ambretti ² *¹

¹ PhD student at Unipegaso University ; walter.savaresedatri@unipegaso.it

² Associate Professor at Unipegaso ; antinea.ambretti@unipegaso.it

* Correspondence: waltersavaresedatri@unipegaso.it

Abstract In a complex and global view of citizenship, based on the awareness of interdependencies and aimed at overcoming the fragmentation of knowledge (Morin, 2007), play and sport have a significant role in socialization processes, both in reality and virtually. Play, understood as a means of learning and inclusion, facilitates cooperation, conflict management, and the construction of individual and collective identities, promoting the development of conscious citizenship (Pasinato, 2022). Sport, always connected to the body, today opens up to hybrid dimensions such as eSports, which redefine the relationship between play-sport, technology, and social interaction (Matteucci, 2024). In the dialogue between traditional games and eSports, new educational and social challenges emerge: managing time and emotions, the ability to cooperate in hybrid environments, and the need for a shared ethic that governs both the physical and virtual worlds. From this perspective, traditional games and eSports (Yodovich et al., 2025) are complementary to a single ecology of play, in which real and digital spaces intertwine, giving rise to forms of sociality and learning capable of supporting active, inclusive, and aware citizenship (TuoZZo, 2022). Recent Istat and IIDEA data (2024) confirm that the current challenge must consist in creating educational paths capable of actively implementing ecological citizenship (Schenetti, M. et al., 2024).



Copyright: © 2026 by the authors.
Submitted for possible open access
publication under the terms and
conditions of the Creative Commons
Attribution (CC BY) license
(<https://creativecommons.org/licenses/by/4.0/>).

Keywords: ecology of the person, sport games, eSports

1. Introduction

In line with the 2030 Agenda for Sustainable Development, the article highlights the educational implications of citizenship ecology, emphasizing the educability potential of real and virtual sports gaming activities as an original educational and social tool for promoting well-being, inclusion, and sustainability. In recent decades, profound social, environmental, and technological transformations have redefined the forms of civic participation, also attributing a role to informal, community, and digital contexts in the expression of citizenship from an ecological perspective. The promotion of active and responsible citizenship, based on the integration of human

¹ The article is the result of a joint collaboration among the authors. However, Walter Savarese d'Atri wrote paragraphs 3.1, 3.2, 3.3 and Conclusions; Antinea Ambretti wrote paragraphs 1, 2 and is scientific coordinator of the research.

rights, environmental protection, and social justice, is conceived as an educational approach inspired by the ecological paradigm of social sciences (UNESCO, 2015), which interprets human phenomena as the result of interdependent relationships between individuals and contexts (Bronfenbrenner, 1979), highlighting the interdependence of norms, values, practices, and social actors, where every individual action contributes to strengthening or weakening the overall balance. This vision of co-participation strongly resonates with the United Nations 2030 Agenda for Sustainable Development, which promotes an integrated approach to development based on the five “Ps”: People, Planet, Prosperity, Peace, and Partnerships. In particular, Goal 11 emphasizes the importance of inclusive, safe, and resilient cities and communities, where citizens’ participation represents a key factor for sustainability. At the same time, Goal 4.7 highlights the role of education in promoting global citizenship and the appreciation of cultural diversity.

The ecology of citizenship can be understood within a cross-cutting framework in light of the 17 Sustainable Development Goals, particularly with regard to reducing inequalities (Goal 10), gender equality (Goal 5), health and well-being (Goal 3), and climate action (Goal 13).

It follows that key concepts such as:

- eco-citizenship, understood as the adoption of sustainable and responsible lifestyles;
- global citizenship, based on the recognition of universal rights and planetary responsibilities;
- interdependence, which emphasizes the inseparable link between humans, the environment, and communities;
- participation and responsibility, based on educational, social, and institutional partnerships can only find a natural expression in play activities in all their forms.

Giocosport activities and Esports find a proper place in the 2030 Agenda; sport is recognized as a strategic educational and social tool, particularly in relation to Goal 3 Good Health and Well-being (WHO, 2018).

Physical activity contributes to ensuring social sustainability and represents an essential dimension of the ecology of citizenship, concerning the ability of communities to maintain conditions of equity, inclusion, and cohesion over time. From the perspective of the ecology of citizenship, sport promotes processes of social inclusion, reduction of inequalities, and active participation, contributing to the building of social capital and mutual trust (Putnam, 2000).

2 . Gaming, eSports: a hybrid declination of the ecology of citizenship

The game in its many forms and types, represents a symbolic space regulated by cultural meanings, shared norms and forms of belonging. In the didactic-educational field, play is recognized as a privileged training device for cognitive, emotional and social development (Vygotsky, 1978; Bruner, 1986). However, the contingency, the plurality of intelligences that are put in place during gaming activities has alerted ex-

perts in the field to research, and not least to the hybridization, of forms of play, as many multiple and versatile that range between the real and virtual worlds.

The spread of video games and eSports has actively contributed to a revision of the traditional paradigm of learning through play. Today, the educational potential of virtual gaming is such that it has contributed to a transformation of playful practices, placing them increasingly within digital and connected environments. eSports, understood as organized competitive video game practices, are not limited to a recreational dimension but constitute true social ecosystems, characterized by communities of practice, differentiated roles, shared rituals, and specific communication codes (Taylor, 2012). From the perspective of socialization processes, digital gaming and eSports promote forms of interaction mediated by digital means that contribute to the construction of both individual and collective identity.

Within the ecology of citizenship, eSports can be seen as new spaces of digital citizenship, where dynamics of cooperation, regulated competition, and mutual responsibility are experimented with.

From an educational perspective, gaming and eSports can contribute to the development of civic and social skills such as respect for rules, fair play, teamwork, and conflict management, which are central elements for active and responsible citizenship (Salen & Zimmerman, 2004). In this view, education in gaming and eSports takes on strategic importance in promoting sustainable citizenship even in digital environments, in line with the 2030 Agenda goals related to health and well-being (Goal 3), quality education (Goal 4), and reducing inequalities (Goal 10). Digital gaming and eSports as laboratories of ecological citizenship.

Digital games and eSports represent emerging environments for socialization and participation, functioning as true educational ecosystems (Gee, 2003). These environments offer significant opportunities for citizenship education, as they require adherence to shared rules, peer collaboration, and responsible conflict management (Salen & Zimmerman, 2004).

Within the ecology of citizenship, eSports can be interpreted as laboratories of digital and ecological citizenship, where practices of social and relational sustainability are experimented with. The cooperative dimension of many online games allows the development of forms of collective responsibility and systemic awareness, central elements for addressing the challenges of ecological transition (Bronfenbrenner, 1979). However, these spaces present challenges, such as the energy consumption of digital infrastructures, inequalities in access, and toxic communication dynamics. This makes critical education in digital gaming necessary, oriented towards sustainability, inclusion, and participatory governance of gaming environments (Kowert & Quandt, 2016). From this perspective, integrating play into educational and training contexts represents a pedagogical strategy consistent with the ecological transition, as it promotes the development of an aware, participatory citizenship oriented towards the common good.

3. Sports Participation and eSports: Comparative Analysis of Data from Italy, Europe, and Global Markets

3.1 Italy

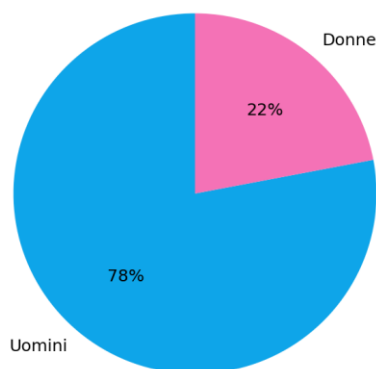
Data relating to traditional sports practice and those related to eSports consumption show differences in terms of age, gender, and infrastructure, both within

the Italian landscape and in comparison between our country and the others examined in the research. National data on participants in traditional sports activities in 2024 (Istat) tell us of significant differences, with the Center leading (41.5%), followed by the Northwest (33.3%) and the Northeast (31%), while the South and the islands lag behind (27.9%). Compared to these data, those related to eSports, although not publicly accessible (only through OIES), show a totally reversed situation, with Campania and Sicily being the most active regions in organizing events and competitions (eSerieA, regional cups, LND initiatives). Campania hosts series such as the Coppa Campania eSport, eSerieE, and numerous FITP events with 150 or more participants in Naples alone. The Campanian capital has a professional team, “Napoli eSports,” ranked among the top EA FC teams worldwide. In Sicily, events like the Sicilia Game Expo have reached 19,400 attendees in 2 days, suggesting a high number of players. Other regions such as Lombardy, Lazio, Emilia-Romagna, and Piedmont are represented through various teams in national competitions (Torneo delle Regioni, eSerieA). Overall, the eSports sector in Italy is in a phase of consolidation in 2024, as highlighted by the research “Esports in Italy and the World” conducted by the Italian Esports Observatory (OIES) and YouGov, a research institute active in 55 countries around the world. According to research carried out by Deloitte in collaboration with IIDEA, over 7 million viewers followed at least one piece of esports content in 2024, with a tendency to concentrate in small to medium-sized urban areas. The last similar research dated back to 2022, therefore in a post-pandemic period, and the results are in line with that year, while the peak was reached in 2020. However, the data says little about the trend because it was during the height of the pandemic. It is, therefore, a phenomenon Esports that is gradually capturing more and more interest from a broad audience, especially among the younger generations. Enthusiasts, on the other hand, meaning those who watch Esports content at least once a week, numbered around 3.3 million in Italy. In absolute terms, regarding traditional sports, in 2024, about 21.5 million Italians practiced at least one sport in their leisure time, either continuously (28.7%) or occasionally (8.7%), which is roughly 37.5% (in 1995 it was 26.6%). The increase in sports participation has concerned almost exclusively continuous types of activity, which grew by almost 11 percentage points (it was 17.8% in 1995), while occasional participation has remained fairly stable throughout the period. The passion for sports is a distinctive trait of younger people and reaches its highest levels among 11-14-year-olds (in 2024, 75.6%, of which 66.7% participate continuously and 8.9% occasionally). Starting from age 15, interest in sports begins to decline, although the proportion of participants remains high until age 24 (66.1% among 15-17-years and 53.9% among 18-24-years), then gradually decreases in older age groups. Sports participation falls to 23.3% among 65-74-year-olds and is 8.1% among those aged 75 and over. As for eSports, the research conducted by Deloitte in collaboration with IIDEA allows us to outline the profile of eSports spectators: 78% are men and only 22% are women (Table 1), and they are mainly Millennials (ages 25-44) at 47%, while Gen Z members (ages 16-24) make up 19%. Notably, in contrast to Europe, a significant 34% of viewers are over 35 years old (see Table 2). Fans are further categorized as hardcore (those consuming more than 10 hours of content per week), heavy (between 7 and 10 hours), regular (between 4 and 6 hours), and occasional (1 to 3 hours per week). The platforms where users most commonly watch eSports events and competitions are, as one might easily expect, YouTube (47%) and Twitch (43%). The most used

social platforms by enthusiasts are instead TikTok and, surprisingly, Twitter/X. Users choose content based on a specific game. The report shows that in Italy the most followed games are League of Legends and Valorant by Riot Games (both at 80%), followed by EA Sports FC at 60%, Rocket League and Fortnite (40%), and then there are other important games like Call of Duty and Street Fighter at 20% .

Table 1 Gender distribution (Italy 2024)

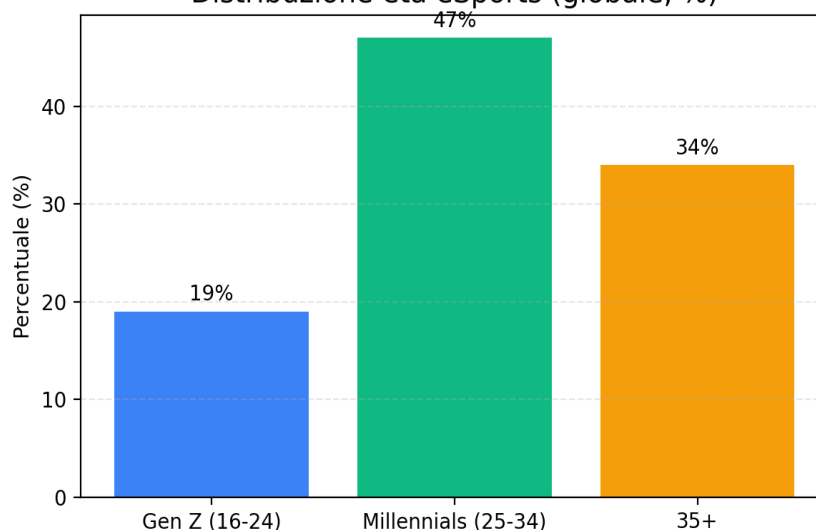
Ripartizione di genere — Italia (2024)



Fonti paese: vedi doc (OIES/YouGov; UKIE/YouGov; IMH; Statista)

Table 2 — Age distribution of eSports viewers (global%)

Distribuzione età eSports (globale, %)



3.2 Italy and Europe

Data (Statista) highlight significant differences between Italy and the main European countries both in terms of traditional sports participation and the world of eSports. Starting with this area, a bird's-eye overview shows that there are about 150 million spectators in the main European countries (United Kingdom, Germany, France, Spain, and Poland), with Poland recording, according to the Deloitte report and YouGov data, the fastest growth. Spain has the largest share of regular and paying viewers. Italy is the third country in terms of weekly audience (24% of viewers have followed at least one event in the last 6 months). The most marked differences compared to other countries, which are more standardized, are recorded by Italy in two parameters: only 22% of fans are women, compared to the European average of 31%; in Italy, those over 35 are much more present than in other European countries. In other European countries, with the exception of the United Kingdom (83% men), the male/female ratio is much more balanced in Germany (48% women, 52% men) and in France (49% women, 51% men). In traditional sports, an EI-PA study (2025) confirms that sports participation is highest in the countries of Northern and Central Europe, while it declines in the South and East. Obviously, since we are dealing with macro-areas, both the data on participants in traditional sports and those related to eSports (but especially the former) are linked to the persistence of significant socio-economic disparities and sports infrastructure. The European average for people participating in sports activities is 44%, with Nordic countries and the United Kingdom (63.7%), France (58%), Spain (55%), and Germany (52%) above the average, and Italy (37.5%) and all other countries below. Regarding gender gaps, they are progressively decreasing in France and Germany, while more pronounced in Southern European countries.

3.3 Asia and the Americas (North and South)

The Asian market represents the largest segment of the global market with 350 million eSports viewers, accounting for over 57% of global viewers and showing the fastest growth. On this last point, growth, it is followed by the American market and then the European one, although, at present, the latter has about 150 million viewers (concentrated in Germany, France, the United Kingdom, Italy, and Spain) compared to 111 million in the American market (611 million total). Total eSports viewers are then evenly divided between regular fans (302 million) and occasional fans (308 million). The American market is dominated by the USA with a very active streaming community, especially on Twitch and YouTube Gaming, while Brazil and Mexico are two countries on the rise, particularly in mobile and regional tournaments. In Asia, the market is dominated by China, while the mobile component is very strong in the Philippines. Regarding the audience, the gender distribution is very similar to that of Europe, with 65-70% men and 30-35% women, and the prevalent age ranging from 18 to 34 years old (60% of the audience). In China, female participation is growing rapidly (although still low compared to the European average, around 25%), while in Korea it is very high compared to the rest of the world, with 54% of women reporting that they play. Regarding age, significant differences are observed with South Korea, which peaks between 20 and 29 years old, and the Philippines, where most users are very young. As for traditional sports, the situation is different. In 2024, 247.1 million Americans, about 80% of the population, partici-

pated in at least one sporting activity, and about 170 million are regular participants. Moving to Asia, over 50% of the population regularly practices sports, while the percentage drops to 49.6% in China, which is still higher than the European average, which, due to significant socio-economic disparities, stands as we have seen at 44%.

Conclusions

Grassroots sports play a crucial role not only on a biopsychosocial level (physical health, mental well-being, social cohesion) but also as social capital and civic infrastructure capable of reducing inequalities and promoting integration. At the European level, it is estimated that about 44% of the European population engages in sports or fitness activities at least once a week, with significant north-south differences and gender gaps that are gradually diminishing. Outside Europe, the USA reached a historic participation record in 2024 (80%; 247.1 million individuals), while in China the participation rate in sports & fitness reached 49.6% in 2024, and more than 400 million people are estimated to be involved in outdoor activities, with winter sports experiencing particularly strong growth. This research highlights three key messages. First, Italy is experiencing long-term growth, but a significant territorial gradient remains, calling for infrastructural and community policies, especially in the South and Islands. Second, Western Europe maintains good levels of practice with decreasing gender gaps, particularly in France and Germany, but the adolescent period remains a critical stage to monitor. Third, the USA and Asia show different models but are commonly based on widespread infrastructures and flexible formats, with lessons that can be transferred to the European and Italian context. The significant point to consider, as it recurs in all European countries, but especially in Italy, is that growth peaks in participation occurs between ages 11 and 14, followed by a marked decline due to factors such as leaving school clubs, early specialization, psychosocial changes, and economic constraints. National data also indicate that weekly frequency and club membership vary according to the availability of facilities, income, and urban context (metropolitan concentration). The Italian territorial dualism between center/north and south/islands aligns with the European differences observed between a very active northwest and a decidedly lagging southeast. In Italy, the Center and North exceed the national average, while the South/Islands face a deficit reflecting socio-economic, urban, and infrastructural differences. The experiences of countries with a high rate of club membership (e.g., Germany) or with targeted national strategies (UK) suggest that combinations of local policies, associative networks, and incentives can help bridge part of the gap. The reduction of the gap (e.g., France) shows the effectiveness of inclusive policies (schedules, spaces, "women-only" programs, perceived safety) and low-threshold formats (walking, running, outdoor fitness) that meet female demand. In order to prevent dropout during adolescence and to close the gender gap, it is advisable to adopt multi-sport models, flexible and non-competitive programs, and bridging pathways between schools, communities, and sports clubs. Especially in the South and on the islands, the need to implement local facilities (open school gyms, safe cycle and pedestrian paths, small-scale sports facilities) to support informal and low-threshold practice is evident, along with providing tax and contribution incentives for associations and sports volunteering, derived from German and British best practices, to expand access and prevent early dropout. In Italian eSports, as we have seen, the scenario is reversed, with the south and the islands leading the way with

more fans, very active clubs, and a greater number of tournaments and initiatives. This is probably because while traditional sports rely mainly on facilities (which are lacking in the south and the islands), eSports depend on streaming platforms and publishers. However, the trend worth reflecting on is that of two growing phenomena: traditional sports (21.5 million participants, 37.5%) have grown by 11 percentage points over the last 30 years, while eSports, with 7.3 million spectators, represent a market that is rapidly consolidating. Overlaying the data, it becomes clear that this is fertile ground for implementing educational and inclusive policies, especially since the audience is mainly young people (traditional sports 11-14 years old, eSports 18-34). Furthermore, two other factors should make us recognize the opportunity that these two sectors offer from an educational and inclusion perspective. The first is that these are two areas in constant expansion; the second concerns the profile of eSports users: they are people who show a greater sensitivity than the national average on issues of social inclusion and sustainability. eSports fans are more attentive to purchasing sustainable forms of energy and respecting the LGBTQ+ community, where this audience has a higher degree of familiarity and friendships. Policies should focus on expanding the base in eSports, where the audience is still predominantly male (while it is much broader in traditional sports), and on improving physical facilities (sports centers and parks) in the South and on the islands, as well as policies aimed at preventing early dropout. Possible solutions could include the creation of hybrid infrastructures such as school gyms open to the public and small eSports arenas, or public outdoor spaces combined with inclusive gaming areas. Additionally, non-competitive multi-sport programs, school-club partnerships, and digital skills workshops with the creation of school/territorial teams that pay attention to wellbeing could be considered.

References

- Bronfenbrenner, U. (1979). *The Ecology of Human Development*. Cambridge, MA: Harvard University Press.
- Bruner, J. (1986). *Actual Minds, Possible Worlds*. Cambridge, MA: Harvard University Press.
- Gee, J. P. (2003). *What Video Games Have to Teach Us About Learning and Literacy*. New York: Palgrave Macmillan.
- Matteucci, I. (2024). *Il corpo dell'atleta nello sport elettronico: verso forme uniche di incorporazione tra reale e virtuale*. Sociologia Italiana.
- Morin, E. (2007) *L'anno I dell'era ecologica. La Terra dipende dall'uomo che dipende dalla Terra*. Roma: Armando Editore.
- ONU (2015). *Transforming our World: The 2030 Agenda for Sustainable Development*. New York: United Nations.
- Ostrom, E. (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press.
- Pasinato, S. (2022). *Quando il gioco incontra la teoria: un percorso ludico per coltivare il piacere di apprendere*. Università di Padova.
- Putnam, R. D. (2000). *Bowling Alone. The Collapse and Revival of American Community*. New York: Simon & Schuster.
- Schenetti, M., Milazzo, C., & Mancini, C. (2024). *Educare alla cittadinanza terrestre: legami e connessioni per un cambiamento possibile*. *Attualità Pedagogiche*, 6(2), 144-154.

Taylor, T. L. (2012). *Raising the Stakes: E-sports and the Professionalization of Computer Gaming*. Cambridge, MA: MIT Press.

Tuozzo, M. (2022). *Sport e cittadinanza. Norme, pratiche e ostacoli*. ActionAid Italia.

UNESCO (2015). *Global Citizenship Education: Topics and Learning Objectives*. Paris: UNESCO.

Vygotskij, L. S. (1978). *Mind in Society*. Cambridge, MA: Harvard University Press.

Webography

www.eipa.eu

www.istat.it