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ESPORTS IN THE FLIPPED INCLUSION MODEL: INTERNATIONAL LINES OF RESEARCH

ESPORTS NEL MODELLO FLIPPED INCLUSION: LINEE INTERNAZIONALI DI RICERCA

Tonia De Giuseppe[1]
The University of Salerno (Italy)
tdegiuseppe@unisa,it

Julie Delello[2]
The University of Texas at Tyler (Texas)
jdelello@uttyler.edu

Felice Corona[3]
The University of Salerno (Italy)
fcorona@unisa.it

Abstract

Cross-media technologies, which externalize and speed up cognitive abilities through social networks and play platforms, contribute to the co-generation of complex forms of exchange, interaction, collaboration and co-production of thoughts in action. The social restrictions from the COVID-19 pandemic crisis has underscored the need for social connectivity in web-public contexts and for the continuation of playful-recreational and work interfaces. This immersive approach has highlighted the educational need to reconsider the uses of such shared gaming spaces. This includes the reflection on eco-sustainability regarding the immersive mass application of mediums and playful typizations such as electronic sports (eSports) with a highly attractive potential for impact on lifestyles, which require careful reinvestment in a pedagogy of authentic time. Flipped inclusion, experimented at the University of Salerno since 2014 for its design mission of systemic inclusiveness, with a modular and recursive organization which, in retracing the perspective of computational thinking and the transversal network approach, represents a possible model of application of gamification logic in academic teaching through eSports. This is where the epistemological assumptions of the new multidimensional study of the University of Salerno lie, which was born as a segment of international research on eSports in the academy, coordinated by The University of Texas at Tyler.

Le tecnologie crossmediali, che esternalizzano e accelerano le capacità cognitive attraverso i social network e le piattaforme di gioco, contribuiscono alla co-generazione di forme complesse di scambio, interazione, collaborazione e coproduzione di pensieri in azione. Le restrizioni sociali dovute alla crisi pandemica COVID-19 hanno sottolineato la necessità di connettività sociale in contesti web-pubblico e per la continuazione di interfacce ludico-ricreative e lavorative. Questo approccio immersivo ha evidenziato la necessità educativa di riconsiderare gli usi di tali spazi di gioco condivisi. Ciò include la riflessione sull'ecosostenibilità per quanto riguarda l'applicazione di massa immersiva di medium e tipizzazioni ludiche come gli sport elettronici (eSports) con un potenziale di impatto molto attraente sugli stili di vita, che richiedono un attento reinvestimento in una pedagogia del tempo autentico. Inclusione capovolta, sperimentata all'Università degli Studi di Salerno dal 2014 per la sua missione progettuale di inclusività sistemica, con un'organizzazione modulare e ricorsiva che, nel ripercorrere la prospettiva del pensiero computazionale e l'approccio di rete trasversale, rappresenta un possibile modello di applicazione della logica di gamification in insegnamento accademico tramite eSports. È qui che risiedono i presupposti epistemologici del nuovo studio multidimensionale dell'Università degli Studi di Salerno, nato come segmento di ricerca internazionale sugli eSports in Accademia, coordinato dall'Università del Texas a Tyler.

Keywords

Esports, flipped inclusion, students, media
ESport, inclusione capovolta, studenti, media

1 Tonia De Giuseppe has curated Paragraph 2. Flipped Inclusion between the Benefits and Risks of Esports: new perspective research
2 Julie Delello has curated: Introduction- Increasing Student Engagement and Achievement Through Esports
3 Felice Corona has curated Paragraph 1. ESports as a Means of Social Connection

Introduction

Increasing Student Engagement and Achievement Through Esports

Esports is loosely defined as competitive video gaming but also "a form of sports where the primary aspects of the sport are facilitated by electronic systems; the input of players and teams as well as the output of the eSports system are mediated by human-computer interfaces" (Hamari & Sjoblom, 2017, p. 213). Globally, there are millions of eSports spectators and viewers and experts predict that such gaming will continue to proliferate (McGrath, 2019). Much of the rise in eSports gaming is due to the prevalence of immersive, multiplayer, online games with advanced functionalities. Additionally, eSports is cutting across platforms, allowing for students to use both mobile devices, PCs, and consoles in cloud-based, augmented and virtual reality environments (Cumello, 2019). This highlights the educational interest in academic teaching in a dynamic e-training use through eSports, to promote methods of productive and prosocial co-management focused on balanced competitiveness and ecological-systemic development economies.

The value of eSports, as competitive games, consists precisely in getting involved, knowing that by respecting the rules and the preparatory steps, by strategically activating decisive skills, it is possible to pursue goals.

Through a resilient approach, which is placed in balance between the acquisition of declarative and procedural knowledge, instrumentally applied to progress with knowledge conditional on the development of strategic-predictive thinking (Cangià, 2003), eSports represent educational innovations to be explored. In fact, some of the video game categories in eSports reach high levels of complexity, with integrations of different media. As hypermedia, they allow to reach high levels of immersion and interaction with and in contents that require learning of rules, mechanisms and dynamics, time control. For example, in role-playing games, it is necessary to learn how to use different items present; in strategy games, it is necessary to manage resources and objects and in managerial games, it is important to understand and learn how to interact between variables.

It is also appropriate to consider the architecture of video games in eSports to understand criteria and principles that are not unrelated to most educational theories and utilize didactic-educational applications. The educational value of eSports is based on cognitive and affective mechanisms (Chatfield, 2011) promoted by electronic games such as uncertainty, capable of promoting progress and evolution of processes; the value of rewarding a key element of intrinsic motivation is investment in decision-making competence, which encourages us to assume positions of responsibility and define task priorities. There are several trends across the US right now in terms of eSports. There is a limited amount of research done in the area of eSports. Most of this research is anecdotal.

The teams of the University of Tyler (Texas) and University of Salerno (Italy) team up for a global study on eSports. We is looking at how eSports can increase student achievement and engagement.

The hope is to look at each county's data independently and then do a cross cultural comparison of eSports from each nation. We are looking at how students spend their time, playing, competing or just watching; what types of games they play, and also the personal and academic benefits and risks across gender and classification specifically.

Currently, our research team is analyzing the initial survey. In addition, we are looking at the differences and similarities between the US and Italian students.

1. ESports as a Means of Social Connection

Cross-media technologies, which externalize and speed up cognitive abilities through social networks and play platforms, contribute to the co-generation of complex forms of exchange, interaction, collaboration and co-production of thoughts in action. These are also termed are psycho-technologies (De Kerckhove, 2014), which, in affecting the mind and perceptions, allow you to amplify effects and or extend psychic-sensorial faculties, interacting with the mental structure in an analog way.

Overcoming the perspective of reductionist cognitivism, it is possible to support proactive vision also of video-playful cross-media, according to which online actions guarantee practices with thoughts in extension, acts in potential, through socio-technical devices external to the human body. Games are an example of such a "manifestation of popular art, social, collective relationships, at the impulse or the main action of a culture. Like institutions, they are extensions of social man and body politics, [...] they are extensions of the animal organism" (McLuhan, 2008, p. 250). And, according to such an approach, the technological, artificial, central nervous system represents a strategic tool to contribute to the co-construction of digital citizenship. However, it is contextually entangled with training dilemmas deriving from the need for education in conscious, prosocial, and inclusive management of cross-media applicability. This includes the reflection on eco-sustainability regarding the immersive mass application (Gee, 1990) of mediums and playful typizations such as electronic sports (eSports) with a highly attractive potential for languages, interactive communicativeness and impact on lifestyles, which in the cross-media societies of knowledge require careful reinvestment in a pedagogy of authentic time (De Giuseppe, 2018).

Starting from international research and its exploratory analysis on the use of eSports in academia, promoted, coordinated, and directed by The University of Tyler (Texas), a multi-perspective study has been launched which involves the application of the flipped inclusion model to promote system learning in the academy, through the use of eSports, such as learning by gaming (Clark et al. 2013) while fostering the formation of inclusive personalities and inclusive contexts. We are mostly in the presence of simulating life processes, which by applying the thought of Dewey (1984), represent new ways of experiencing life processes. The interest in eSports is based on an educational level on multi-perspective and multi-dimensional levels of reflection (De Giuseppe, et al., 2020). Known in Italy as electronic sports linked to a video game, eSports are based on the competitive element organized between video gamers and practiced in physical and non-physical environments, with different consoles and platforms for offline and online championships or trade shows. They represent a communicative-socio-psycho-educational alternative for investing in playful / re-creative competitive-managerial-managerial approaches: they constitute an interesting training opportunity for the activation of collateral learning and learning by doing processes rooted in decision-taking and problem-solving process perspectives. The Flipped Inclusion model invests in the co-construction of multi-stimulus virtual environments, to promote prosocial generalization processses (Baer, & Deguchi, 1985), also through processes of metacognition paths on the mass video-media cultural phenomenon. At the base of the Flipped Inclusion are pursued the four focuses of gamification: 1) Commitment (Engagement), 2) Autonomy (Autonomy), 3) Mastery (Mastery) and 4) Progression (Progression), organized according to the EISE matrix, with objectives for levels of increasing complexity)" (in De Giuseppe & Corona, 2020, p.67).

2. Flipped Inclusion between the Benefits and Risks of Esports: new perspective research

Technological accessibility has generated virtual extensions of space and time, body and perceptions, determining trans-dimensional forms of communicativeness, as an alternative expression of being in conjunction and being in a relationship of thought. In fact, the new models of self-affirmation are connoted, as phenomenological constructs of collective and networked corporeality, which in making use of virtual spaces for work and playful-expressive confrontation highlight new needs and new perspectives that intersect with the field of educational research. Having said that, it is possible to grasp a phenomenological dualism of meanings of eSports as a possible educational avant-garde, to be valued in what are the proactive and prosocial training perspectives, but equally pervasive to the point of requiring an educational intervention, aimed at managing the possible forms of drift.

In fact, the inability to confuse plans and levels between realities in the dualism that is no longer dichotomous, of real-virtual, online-offline, is accompanied by the difficulty of an emotional-relational nature, which facilitates escape mechanisms from authentic time and a

spatiality of bodies in relation, with the risk of leading to addictive accommodation.

The COVID-19 pandemic crisis has accelerated the awareness of being ubiquitously interconnected, for which the optional has become a necessity. In fact, the social isolation and restrictions from the pandemic has underscored the need for social connectivity in web-public contexts and for the continuation of playful-recreational and work interfaces. This immersive approach, perceived as the only possible unavoidable surrogate for social contact in the pandemic crisis phase, however, has highlighted the educational need to reconsider the uses of such shared gaming spaces.

Flipped inclusion, experimented at the University of Salerno since 2014 for its design mission of systemic inclusiveness, with a modular and recursive organization which, in retracing the perspective of computational thinking and the transversal network approach, represents a possible model of application of gamification logic in academic teaching through eSports. This is where the epistemological assumptions of the new multidimensional study of the University of Salerno lie, which was born as a segment of international research on eSports in the academy, coordinated by The University of Texas at Tyler. Compared to the axiological-phenomenological and methodological dimensions that are intended to be explored on the online / offline ludo-typing theme, it does not lie only in the identification of the value structures that define its contours and field of application, but above all on how the sporting game in its variants cross-media of eSports can represent the vehicle through which to develop divergent thinking and managerial skills in managing emerging complexities, through the architecture of games, as a generative-speculative medium.

To frame the problem investigated in the multi-perspective study being carried out at the University of Salerno (Corona & De Giuseppe, 2019), organized in collaboration with The University of Texas at Tyler, the research conducted by the World Health Organization was taken into consideration (WHO, 2014) regarding the health implications of excessive use of the Internet and electronic devices. In particular, we start from the evidence relating to the risks associated with the unconditional and pervasive use of technologies, which permeates every area of the newspaper (WHO, 2014), which is also confirmed in the data on Internet users in Europe, which constitute on average 70% (Istat, 2018). The deviant elements connected to the phenomenologies of addiction (De Giuseppe, 2020) from uncontrolled use and implications from excessive use of the Internet, electronic devices for health, in the online / offline variants, are also highlighted in the 11th edition of the *International Classification of Diseases* (WHO, 2020) relating to mental illnesses as well as in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) by the American Psychiatric Association (APA, 2013). Additionally, the American Psychological Association (2013) classified Internet Gaming Disorder (APA, 2013), in section three of the manual, calling it a "new phenomenon" and a condition needing further research for possible inclusion as a future disorder.

The complexity of the challenges in eSports lies in the ability to compete, face challenges (Faggioli, 2011), manage anxiety, successes and failures, aspire and contribute to progress. However, the pitfalls that are hidden in the excesses of emotional state (Meneghelli, 2013), recall as an emergency the need for educational interventions to support a balance of eco-sustainable, individual and collective well-being.

ESports allow you to establish a competitive relationship, activating attentional resources and skills for managing the problems located, through the generative activation of an experiential flow (Csíkszentmihályi, 1991) involving, capable of motivating to: 1)

to focus; 2) to precede by metacognition; 3) to produce knowledge of feasibility, 4) to experiment. In fact, among the educational advantages offered using video game technologies reside in being active and proactive agents of medium literacy both to experience high learning through virtual environments, so immersive as to allow enhanced ways of knowing and learning, naturally implemented by the body (Berthoz, 2011). It is a question of using systematic procedures that generate in turn processes of refinement of game skills and mental and physical mastery which also allow to stimulate intrinsic motivations and emotional emergencies, through

immersion and abstraction by correlating condition and action, control, and management of the management of events and emerging issues.

Starting from the international research with The University of Texas at Tyler, a multi-perspective study was activated that provides for the application of the flipped inclusion model to promote system learning in the academy, with eSports, such as learning by gaming (Clark et al. 2013) and encourages the formation of inclusive personalities and inclusive contexts. The multidimensional didactic-educational study on eSports is examining the extent of the playful-pervasive phenomenon of video games which, through electronic interaction devices in competitive eSport games, online and offline, on the screen, have determined a change in the lifestyle of young and old, influencing their activities and habits and sometimes structural incidence on life times. To understand the video gaming phenomenon, it is necessary to abandon the tendency to consider video games as a rather simple type of activity, and to rethink them as tools of complex modalities that require commitment, energy and learning.

For the management of video game phenomena and web addiction (De Giuseppe, 2020a), the new research line of the flipped inclusion model is aimed at the experimental application of gamification practices (which borrow dynamics of encouragement from the game) or game-based learning (Barab et al., 2009) (video games / role-playing games, which offer training contents), such as digital didactic strategies of simulated processes (Falloon, 2010) with immediate feedback (Gee, 2005), which would allow an anchorage to interpretative theories , starting from the phenomenologies of cross-media (Corona & De Giuseppe, 2019). The actions focus on the organization of the media literacy process which implies the mastery of a certain semantic domain (Gee, 2005) to produce new statements, with grammar and syntax sense in the alphabetic domain and "to learn in a meaningful way" (Gee, 2004, p.101). In this regard, the research questions guiding this study are:

RQ1. Can the flipped inclusion model promote inclusive processes, personalities and inclusive contexts through eSports?

RQ2. Does the learning by gaming of the flipped inclusion model favor media education for prosocial-ecological-systemic play?

To answer these questions, this study will be undertaken in several phases. Phase one will involve the exploratory macro-analysis on the use of eSports in academic populations followed with the second phase, which will investigate the interventions in flipped inclusion, with the use of eSports in the academic field, to promote forms of system learning in learning by gaming mode using game mechanics (Kim et al., 2009). These include challenges, levels, rankings, and within-level cooperation between teams. Phase three will involve the periodic collection of population-based data using validated and standardized tools for data collection. Phase four will include observations and the use of internal university registry systems to understand the phenomenological impact of playful-expressive, cross-media tools for the promotion of inclusive personalities and contexts. Each of these paths in flipped inclusion through eSports and game mechanics (Kim et al., 2009), will follow the modular and recursive EIPS macro-phases of the model, as described by De Giuseppe (2020b):

E) Explore - Gamified learning paths through eSports - to explore virtual context problems
I) Idea- Gamified evaluations with performance statistics
P) Project - solution strategies
E) Experiment - Cooperative learning gateway

The educational investment in eSports promoted by the flipped inclusion model (De Giuseppe & Corona, 2020) focuses on the activation of prosocial processes inclusive of learning media education located in learning by doing, as a participatory simulation of social functioning, organized as simple paths (Sibilio, 2014), applied to gamification / game base learning

to generate predictions, with constant checks between the theoretical correspondence and the emergence of a phenomenon. By paying attention to timing and control of habits, reuse of semiotic domains, attribution of meaning / image of action (Gee, 2005), inclusive experiential learning contexts (micro, exo, meso and macro) are co-designed, structured top down in the process and made usable and traceable through the support of digital languages, in a bottom up mode. The design architecture of Flipped Inclusion is organized following integrated management training courses, offline and online, of learning (to support the acquisition of knowledge); practice (for an exchange in search of solutions), offline and online / formal, non-formal and informal (De Giuseppe, 2020).

Conclusions

The trend of the results collected highlight the need to deepen the fields of investigation on eSports in the academy, to manage aspects of video game phenomenologies, highlighted for their impact on health and well-being highlighted (WHO, 2014, 2018; APA, 2013), and at the same time investing and experimenting in new avant-gardes of inclusive research with online and offline eSports (De Giuseppe, 2020) within the academy.

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