Proceedings of the 2ⁿᵈ International Conference of the Journal Scuola Democratica

REINVENTING EDUCATION

2-5 June 2021

VOLUME III

Pandemic and Post-Pandemic Space and Time

Page intentionally left blank

Proceedings of the 2nd International Conference of the Journal Scuola Democratica
REINVENTING EDUCATION
VOLUME III
Pandemic and Post-Pandemic Space and Time

How to cite a proceeding from this Volume. APA citation system:

Author, N., Author, S., (2021). Title, in *Proceedings of the 2nd International Conference of the Journal Scuola Democratica "Reinventing Education"*, VOL. 3, *Pandemic and Post-Pandemic Space and Time,* pp-pp

Quality ECEC in Italy: Teaching and Learning in the New 0-6 System 978

Reinventing the Curriculum and its Practices 1016

Pedagogy meets Architecture and Digitalisation 1048

Educating in the Cooperative Model through a Structural Dialogue Between Face-to-Face and Digital Environments

Isabel Alfano, Alessio Ceccherelli, Luca Fratepietro, Marco Serra and **Andrea Volterrani**
University of Rome Tor Vergata, alfanoisabel9@gmail.com
University of Rome Tor Vergata, alessio.ceccherelli@uniroma2.it
ARCI Campania, lukafratepietro@gmail.com
Mycro Working, markoserra@gmail.com,
University of Rome Tor Vergata, andrea.volterrani@uniroma2.it

ABSTRACT: *This abstract presents the European Coopcamp project, launched in March 2020 in 5 countries: Belgium, Italy, Poland, Spain and Sweden. The project aims at proposing a training course in high schools to improve the knowledge and values of the cooperative model (mutuality, democracy, participation) and related skills (Fazzi, 2019). Very rarely, a cooperative economic model is a choice for young people. However, they are a particularly suitable target group for a business model that focuses on personal skills rather than on the availability of capital. In a preliminary research phase, a questionnaire was administered to some of the project partner schools, based upon the experiences of previous projects and the EntreComp framework. The analysis of the results contributed to the design and implementation of a training package, taking into account three main conceptual pillars: 1. a narrative framework on cooperative values in line with young people's imagination; 2. a gamified structure eliciting interest in content and training activities; 3. the design of experiential learning activities based on problem-solving, challenges and simulations, to be carried out either face-to-face or online. All this, by using a digital tool created specifically for the project, with the function of providing teaching materials, guiding groups of students and teachers in scheduled meetings and keeping track of the training process. The choice of this approach is due to two main reasons. On the one hand, the choice was made to stimulate students' interest by going towards their habits and imagination (Bolin, 2017), betting on the meaningfulness of learning experiences (Ausubel, 2000). On the other hand, it is necessary today to rethink training interventions in media education and media construction of reality framework (Couldry, Hepp, 2017). To facilitate learning, technological tools are embedded into a constructivist and collaborative logic, focusing on the quality and quantity of interactions: between students and teachers and between students themselves. In concrete terms, the digital tool consists of an online learning environment that gradually indicates the activities to be carried out, guiding teachers and students in their learning process. The online environment is not seen as a 'mere' expansion and continuation of what happens in the face-to-face context; it enhances the offline experience by guiding the educational process, just as a dashboard to refer to in order to conclude the learning path. The project is currently in a pilot phase.*

Actual testing will take place in schools in the project partner countries by April 2021. So far, about 150 groups of students and 50 teachers registered in the online environment, exploring sections and functions of the digital tool.

KEYWORDS: *Storytelling, Gamification, Cooperation, Entrepreneurship, Digital.*

Introduction

The Coopcamp project started in March 2020 in 5 European Countries: Belgium, Italy, Poland, Spain and Sweden. It aims at improving the knowledge of cooperative model values and competencies among scientific and technical secondary high school students. Since this working model focuses on personal skills rather than the availability of capital, the idea is that young students should be put in a position to understand its peculiarities, because it fits particularly well this specific target. Nevertheless, the cooperative economic model is very rarely a choice for young people. The result is that, after leaving school, they often enter weak and precarious forms of employment. Research carried out in May 2019, when the project was being written, showed relatively high youth unemployment rates in the project partner countries (between 12% and 34%). Since then, the rate has increased further (between 13% and 40%). A second problem concerns the quality of employment itself, both in terms of the quality of the contracts offered to young people and in terms of satisfaction: in 2016, 16% of employed 15-34 year-olds stated that their main job did not correspond to their wish and level of education. Furthermore, students in technical high schools are a particularly vulnerable group in terms of risk of unemployment, low quality or unsatisfactory employment pathways. Although they possess relevant technical skills and competencies, they often lack a sense of entrepreneurship (specifically of cooperative entrepreneurship) and need a business infrastructure requiring relevant financial capitals to get started. The central point of the project is to enable these students to get to know and understand concretely an alternative model to the dominant capital-based way of doing business.

Answering this question has meant first of all a rethinking of the cooperative theme within educational systems. This rethinking is based on two main guidelines: the methods of communication best suited to the target audience, and the most effective teaching methods for achieving the educational objectives. Schools were chosen to facilitate the integration of the learning experience into the standard education process. The design of the activities took several issues into account. Firstly, they should not interfere negatively with existing educational pathways. Therefore, emphasis was placed on an approach that gradually progressed from theoretical and notional elements to concrete and contextualised tools, such as the business plan and the development

of the business model, going so far as to ask for the use of specific instruments (e.g., the business model canvas). The learning experience made use of a gamified digital environment, which acted as a guide to the training process. The Coopcamp project is a first attempt to connect young people with alternative and sustainable business models.

1. The methodological framework

The first action of the project was a preliminary local questionnaire addressed to teachers in the target schools. The objective was to assess the gaps in local educational programmes about the available cooperative training courses, to have an adequate picture of the situation in which the training programme will be delivered. The construction of the questions was based on the EntreComp framework and the results of previous projects (ECOOPE, EMISE+), investigating different aspects: the presence of curricular or extracurricular training programmes dealing with cooperative and entrepreneurial topics, the use of active methodologies/approaches (e.g., cooperative learning, mind mapping, team building, peer education, flipped classroom, game-based learning), the treatment of cooperative values (mutuality, democracy, participation), the presence of internship activities, the collaboration with organisations, institutions or companies, the development of some soft skills (e.g., communication, teamwork, problem-solving, creativity, leadership, time management). Seventy-five schools participated in the survey, reporting experience from 94 different courses or teaching modules. The results were unexpected in many ways, as the vast majority of schools (between 80% and 90%) stated that they already have courses on cooperative entrepreneurship and use cooperative teaching methodologies. The situation was very heterogeneous in the different partner countries, and, after the experimentation, it became evident that the criticalities were wider than declared. The percentages drop considerably concerning the presence of practical internships in enterprises (47%) and cooperatives' involvement (52%), one of the strengths of the project, at least in theory, because then the pandemic situation greatly reduced the possibilities for practical training.

In addition to the analysis of these results, the training course was also designed taking into account the most common youth imagination. Collective imagination can be defined as a symbolically and socially shared configuration of meaning (Ragone, 2016), built on a cycle of constant reformulation of individual and collective memory. To work on it is necessary to consider the composition of the archive of images in the present time (Durand, 1972), narratives capable of giving new meanings to archives of archetypes and myths (Tarzia *et al.,* 2020), and the recurring social and symbolic representations (Santambrogio, 2006), as well as the aspects that could become part of the imagination and replace common sense (Jedlowski, 2008). These aspects were discussed with university

students slightly older (23-24 years old) than the target group of the project, who participated in brainstorming and operational meetings, contributing to an initial definition of the story's characters, the first draft of the narrative structure and its subsequent development. The cooperative model was the approach of this work, with weekly internal meetings and a monthly discussion with the other project partners, who provided constant feedback on the storytelling, gamification, and training activities. This was partly due to the context of the project, partly to the need to move the meetings online: the digital and networked medium somehow induced participation and sharing, providing the infrastructural and conceptual framework (De Kerckhove, 1991).

2. Face-to-face and digital environments: a mutual support

The core of Coopcamp action is the development and implementation of a course that takes into account three main conceptual pillars:
1. an interactive training based on a specific narrative framework on cooperative values understandable by young learners and in line with their imagination;
2. a blended experience (online and offline), under the form of a gamified structure eliciting interest in content and training activities;
3. the design of concrete experiential learning activities based on problem-solving, challenges and simulations, to be carried out either face-to-face or online.

The reason for this approach is two-fold. On the one hand, the choice was made to stimulate the students' interest by matching their habits and imagination, betting on learning experiences' meaningfulness (Novak, 2002; Ausubel, 2000). On the other hand, we believe that, in today's society, any educational initiative must use a media education framework (Rivoltella, Rossi, 2019), where old and new media are used consciously and wisely (Prensky, 2011). Different media are incorporated within a constructivist and collaborative instructional design (Rosen, Salomon, 2007; Hattie, 2009), focused on the quality and quantity of interactions: among students, and between students and teachers. The training framework is experiential and encourages peer activation to foster knowledge retention and sedimentation.

The course makes use of a digital tool, designed and realized within the project, consisting of an online learning environment that guides teachers and students in their learning journey. Here they can find teaching materials, learning verification activities, monitoring tools and spaces for uploading the training activities' outputs. The activities were designed to be carried out both in face-to-face and online situations through synchronous communication tools, depending on the schools' possibilities and the pandemic restrictions. Online and offline activity dialogue constantly, in an experiential continuum between the virtual and

physical dimensions, making explicit the close relationship between them. Today we don't live online and offline, but 'onlife' (Floridi, 2015): the distinction between the different environments is no more useful nor effective and it is no longer reasonable to ask whether you are online or offline. The traditional logic of blended learning takes on a particular value for learner involvement (Halverson, Graham, 2019; Hrastinski, 2019). The online environment is not seen as a 'mere' expansion and continuation of what happens in the face-to-face context; it reinforces the offline experience by guiding the educational process. Not a repository. Not an additional action space. But a structural part of the process.

The activities in the digital environment must be conducted in a group, to let students directly experience the cooperative dynamics. The group makes its decisions together but delegates a representative who loads the students' outputs, responds to the questionnaires and takes the quizzes.

2.1. First pillar: the narrative

The cooperative narrative is the first conceptual pillar. The story is divided into seven chapters and is focused on a group of students, designed on their proximity to the project's target audience. They are the protagonists of a journey (Vogler, 2007) that takes them from a familiar context (their school and homes) to a wider context, moving from specific actions to actions that affect and involve the whole local community in which they live. The initial scenario refers to narrative situations reminiscent of teen dramas, a theme that has become very popular in recent years, especially on recent production and distribution platforms (e.g., Netflix, PrimeVideo, Sky, DisneyPlus, ApplePlus). As the story evolves, the narrative action shifts towards situations more related to cooperative themes, trying to meet the educational needs of the project without losing the main theme of the adventure.

The storytelling has two main functions: thematic and structural. The first is to provide historical and conceptual information on the distinction between the cooperative model and the capitalist model, taking into consideration aspects such as the involvement of people (cooperation), mutual support (mutuality), the relationship with the territory (territorial rootedness), and the valorisation of differences (multiculturalism). The second function is to provide coherence (Bruner, 2003) between the various dimensions of the training package. Both the gamified approach and the training activities have a close relationship with the story; at some points, they depend directly on it, in a logic of gradual discovery and progression from theoretical notions to practical tools.

2.2. Second pillar: the gamified learning path

Each chapter of the story corresponds to a phase of the learning process and a challenge. The challenges are based on key topics of the cooperative model: Cooperative values, Team working, Mutuality,

Community development, Democracy, Entrepreneurship, Planning and management.

The digital environment is thus divided into seven sections, plus one dedicated to the Final Event at the end of the course, with a certificate of participation to download. The work sections are structured as follows:

- The storytelling chapter.
- *Support material for student activities*: links and resources for students.
- *Support material for the teacher/facilitator* (not visible to students): resources for guiding teachers in the training activities.
- *Students' outputs*: the place to upload the training activities' output, designed as challenges/games. Depending on the situation of the school where the training is conducted, there are:
  - o two face-to-face challenges/games related to the section topic;
  - o an online challenge/game as an alternative to face-to-face ones.
- *Experience evaluation maps*: for each training activity, there is a quick survey to gather students' evaluation in terms of Engagement, Participation, Fun, Emotional Involvement.
- *Assessment Test*: a short quiz on the primary study resources.
- *Training Diary* (not visible to students): a logbook for teachers/facilitators to note the activities done by their groups of students.

All these elements take into account both the digital tool and the training experience carried out in face-to-face or online situations over nine meetings (the presentation of the project and the tool, the seven challenges, the final event). Whenever possible, on-site visits were made to the cooperatives, but unfortunately the pandemic has greatly reduced this possibility. The preliminary questionnaire showed a general absence of internships in the surveyed courses, and the possibility to see live how cooperatives work would have allowed to situate learning in a real context, facilitating the beginning of a process of direct observation of competencies in action in co-operative workers (Lave, Wenger, 1991). Experience is a testbed for pedagogical design and must be planned, conducted and subsequently observed in a way that can be integrated with student development. The experience is not meaningful in itself: it must be embedded in a developmental plan that gives it meaning, through analytical and reflective moments to integrate it with what has gone before and what develops after. As well as being enjoyable, the experience must be able to influence subsequent experiences and actions (Dewey, 1938).

This is one of the reasons why it was decided to use the gamification logic for the Coopcamp digital tool, referring to game design's structural elements: levels, scores, rankings, rewards, rules (Kalmpourtzis, 2019).

Each resource and activity are associated with points. The digital environment is the same for all schools in the five partner countries, although there is the possibility of downloading a package to install in your own school. The more the groups of students interact with the environment, the more they can increase the score and climb the ladder of all the teams participating. After performing the evaluation test of a section, the system issues a badge. In addition to the 7 section badges, the system allows the acquisition of 10 extra badges, associated with some playful or merely informative micro-activities (i.e., glossary terms on cooperative themes, videos, games based on cooperative topics). The collection of all the badges is a further boost to explore the environment and discover new information. However, it should not be assumed that the gamified experience is reduced to these elements (Kapp, 2012).

2.3. Third pillar: the experiential training activities

The whole training package takes into account the game design approach, even in its different activities, because it is in the coherence of the whole that it is possible to facilitate and stimulate involvement. The training activities are designed for face-to-face situations, although the pandemic situation required the alternative of online versions. They consist of active educational challenges linked to the topics of each section. There are two games for each topic: the first one is based on a fantasy context, the second one tends to a real situation. For example, in Challenge 5 (Democracy), the first game requires students to play the town councillors of Lone Island (location of the story), whilst, in the second game, they must present and democratically choose the community development project for their school/territory from those developed in Challenge 4 (Community development). In this way, students are called upon to apply theoretical notions and tools in the real contexts in which they live, increasing the meaningfulness of their learning (Novak, 2002).

The role of the teachers is fundamental in this stimulating action. They have the function of accompanying students in a reflection on the educational content of the activities and of stimulating the achievement of the learning outcomes. Every game is provided with a guide for teachers and material to print or share with students. The structure of this material is more or less the same: Before starting, Name of the game, Main instructions, Goal, Additional tips for the teacher/facilitator (if present), Materials and tools needed for the activity, Students' output, Debriefing, Learning outcomes, Recommended Timing, Digital environment tips (for online version). At the end of each game, learners are invited to return to the digital tool to upload the outputs (i.e., photos or digital documents produced during the training), respecting the integrated blended approach of the training model.

3. Evaluation Survey Results

About 170 groups of students and about 50 teachers have registered in the online environment and explored the digital tool's sections and functions. It is a good number, better than the expected amount of at least 120 students, but we hope it will grow also after the pilot phase. Due to COVID-19 restrictions, the project's last training meeting will be online, in August 2021, with one to three students per partners' territories. The scope is to compare and exchange the knowledge and competencies achieved and elaborate a business canvas for a European Coopcamp cooperative.

At the end of the training path, a questionnaire was submitted to the students to evaluate their learning experience in the digital environment. From the analysis of the responses (219), some interesting aspects emerged on which to reflect to further improve the digital learning environment. By comparing Figure 1 and Figure 2, we can see that at the end of the course, almost all of the students increased their knowledge (94,5%) about the world of cooperation and its principles, including those who stated to know quite much or very much about cooperatives.

FIG. 1. *Evaluation Survey Results*

how much did you know about cooperatives and cooperative principles when you started the course?
219 risposte

- Very much
- quite much
- not much
- nothing at all

43,4%   16%   11%   29,7%
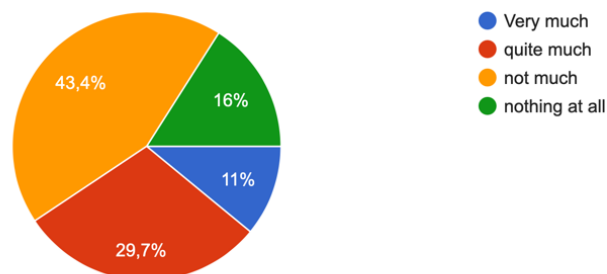
FIG. 2. *Evaluation Survey Results*

do you feel you increased your knowledge about cooperatives?
219 risposte

- very much
- much
- not much
- nothing at all

63%   31,5%
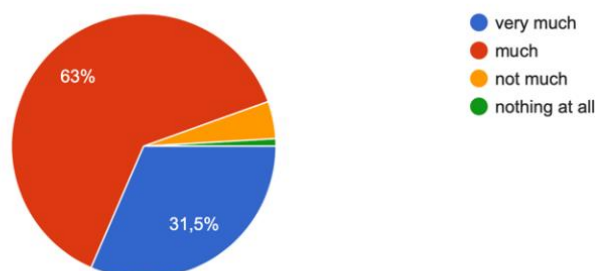
The improvements mainly regard the basic knowledge and some specific aspects about co-operatives, such as solidarity, democracy and sustainability (Figure 3).

FIG. 3. *Evaluation Survey Results*

what do you think you better know now?
219 risposte
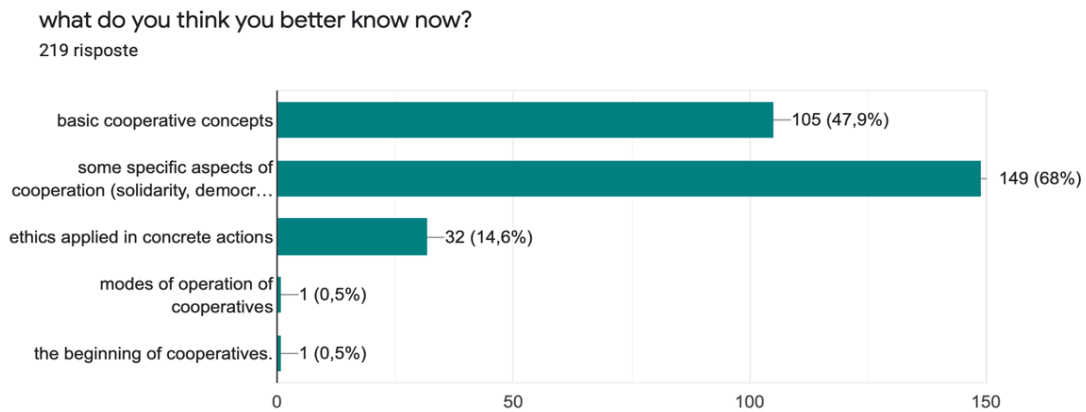
However, not only the cognitive aspects are perceived as improved by the respondents. Also, the metacognitive dimension is considered highly enhanced, with particular reference to the ability to link different matters (90% of positive responses, Figure 4), of transforming theory and ideas in practices (83% of positive responses, Figure 5 and 85% of positive responses, Figure 6), and to collaborate with other people (87% of positive responses, Figure 7).

FIG. 4. *Evaluation survey results*
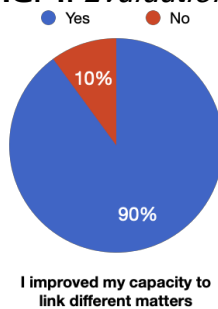
I improved my capacity to
link different matters

FIG. 5. *Evaluation survey results*

I improved my capacity to
apply what I learn in theory

FIG. 6. *Evaluation survey results*

I improved my capacity of
transforming ideas in
practices
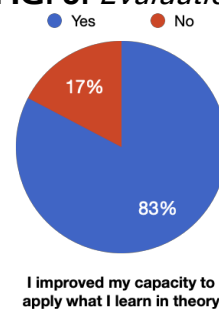
FIG. 7. *Evaluation survey results*
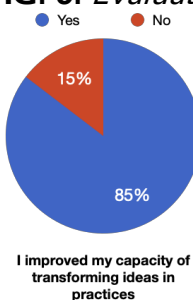
I improved my capacity to
collaborate with others
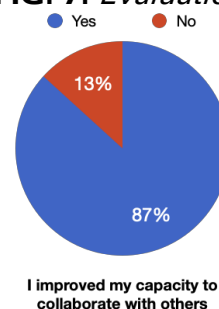
Other questions were aimed at investigating whether the gamified approach had a positive function in terms of learning and motivation. The responses show a general high appreciation, both about the approach (76% of positive responses, Figure 8) and to the capacity of stimulating learning (74% of positive responses, Figure 9). Overall, the course was perceived as adequate in terms of difficulty, enabling effective learning: only 26% find the course more difficult than expected (Figure 10).

FIG. 8. *Evaluation survey results*

the gamified approach was very useful

FIG. 9. *Evaluation survey results*

the challenges we met during the coursewere stimulating

FIG. 10. *Evaluation survey results*

the course was more difficult than expected
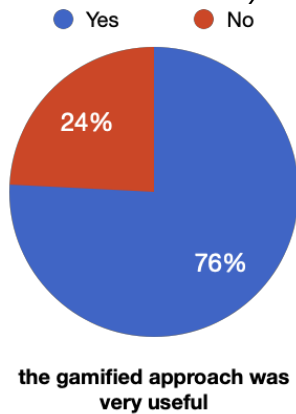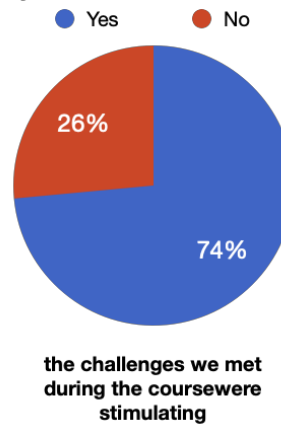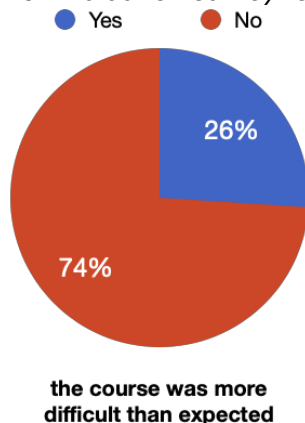
In their qualitative responses, students highlighted some aspects that may be useful in fine-tuning the digital learning environment, such as the need to make the objectives of certain challenges clearer and the possibility of more extensive explanations.

Apart from that, the students' comments are enthusiastic for several reasons. First of all, they express the fun they had in 'playing to learn', and in being involved in a way that had hardly ever happened before; then they show that they appreciated the possibility of working in groups in a different way than usual and with greater intensity and systematicity; finally, they underlined the opportunity to improve their use and knowledge of the English language. Many students also expressed their appreciation of the cooperative world, whose logic and dynamics they had so far barely known. Some criticisms also emerged, precisely

concerning what was generally considered a strong point (gamification and the English language). This confirms, if it were needed, that there is no one method that is good for all, and that in any case every educational path should be calibrated on different cognitive styles. This is a suggestion that could be taken into consideration for the development of the tool and the training activities, to be proposed also in an individual and 'traditional' way. But, in any case, the cooperative and experiential logic of the project leads to a different approach: the one that has been used and that on the whole turns out to be very effective.

Conclusion

It is possible to identify some aspects for reflection on possible new applications. The first concerns the importance of involving, in the construction of the training model, people whose imagery is 'close' to the future recipients of the training. This makes it possible to speak more coherent languages and use more coherent symbols. The second refers to the profound interweaving between storytelling, gamification and the values on which the training is built: being able to connect the values, without penalising the narrative form or trivialising gamification, is a great challenge that requires attention, but which in the end gives a lot of satisfaction, both on the side of the designer and of the user.

The last aspect to be stressed concerns the blended model. Building a continuum between the real and the digital world is not easy, because sometimes it can seem like a downward compromise. However, the challenge we have faced with the Coopcamp training model is to systematically and effectively bring the real and digital worlds together in a mutually supportive way.

References

Ausubel, D.P. (2000). *The acquisition and retention of knowledge: a cognitive view*, Dortrecht, Kluwer.

Bolin, G. (2017). *Media generations: experience, identity and mediatised social change*, London, Routledge.

Bruner, J.S. (2003). *Making Stories: Law, Literature, Life*, Cambridge, MA, Cambridge University Press.

Couldry, N., Hepp, A. (2017). *The mediated construction of reality*, Cambridge, Polity.

De Kerckhove, D. (1991). *Brainframes. Technology, mind and business*, Utrecht, Bosch, Keuning.

Dewey, J. (1938). *Experience and Education*, Indianapolis, Kappa Delta Pi.

Durand, G. (1972). *Le strutture antropologiche dell'immaginario*, Bari, Dedalo.

Fazzi, L. (2019). *Costruire l'innovazione nelle imprese sociali e nel terzo settore*, Milan, Franco Angeli.

Floridi, L. (2015). *The Onlife Manifesto. Being Human in a Hyperconnected Era,* Springer Science/Business Media.

Halverson, L.R., Graham, C.R. (2019). «Learner Engagement in Blended Learning Environments: A Conceptual Framework», *Online Learning Journal*, 23 (2). 145-178.

Hattie, J. (2009). *Visible learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement*. New York, Routledge.

Hrastinski, S. (2019) «What Do We Mean by Blended Learning?», *TechTrends*, 63, 564-69.

Jedlowski, (2008). «Immaginario e senso comune» in F. Carmagnola, V. Matera (eds) *Genealogie dell'immaginario*, Turin, Utet, pp. ??

Kalmpourtzis, G. (2019). *Educational Game Design Fundamentals. A Journey to Creating Intrinsically Motivating Learning Experiences*, Boca Raton, CRC Press.

Kapp, K.M. (2012). *The Gamification of Learning and Instruction: Game-based Methods and Strategies for Training and Education*, Hoboken, John Wiley & Sons.

Lave, J., Wenger, E. (1991). *Situated Learning. Legitimate Peripheral Participation,* Cambridge, Cambridge University Press.

Novak, J.D. (2002). «Meaningful learning: The essential factor for a conceptual change in limited or inappropriate propositional hierarchies leading to empowerment of learners», *Science Education*, 86 (5), 548-71.

Prensky, M. (2011). *From Digital Natives to Digital Wisdom. Introduction.* http://marcprensky.com/writing/Prensky-Intro_to_From_DN_to_DW.pdf

Ragone, G. (2016). «Storytelling, immaginari, heritage», in S. Calabrese and G. Ragone (eds). *Transluoghi: Storytelling, beni culturali, turismo esperienziale*, Naples, Liguori.

Rivoltella, C., Rossi, G. (2019). *Il corpo e la macchina. Tecnologia, cultura, educazione*, Brescia, Morcelliana.

Rosen, Y., Salomon, G. (2007). «The differential learning achievements of constructivist technology intensive learning environments as compared with traditional ones: a meta-analysis», *Journal of Educational Computing Research*, 36 (1), 1-14.

Santambrogio, A. (2006). *Il senso comune. Appartenenze e rappresentazioni sociali*, Bari-Rome, Laterza.

Tarzia, F., Ilardi, E., Ceccherelli, A. (2020). «Immaginario o immaginari? Europa e America a confronto. Due casi: il ritorno dell'eroe e la figura del Supereroe», *H-ermes. Journal of Communication*, 17, 157-80.

Vogler, C. (2007). *The Writer's Journey: Mythic Structure for Writers*, San Francisco, Michael Wiese Productions.