CIVIC EDUCATION BETWEEN DIGITAL PLATFORMS AND NEW FORMS OF CITIZENSHIP: A CASE STUDY

L'EDUCAZIONE CIVICA TRA PIATTAFORME DIGITALI E NUOVE FORME DI CITTADINANZA: UN CASO STUDIO

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ABSTRACT

The Italian context, law no. 92/2019 introduces the transversal teaching of Civic Education that focuses on participatory citizenship for the conscious and responsible use of digital technologies. This article aims to report the intermediate results of a digital civic education course involving 60 students and 15 teachers at a technical high school that experimented with the use of FirstLife as an open source civic participation platform.

Nel contesto italiano la legge n.92/2019 introduce l'insegnamento trasversale dell'Educazione civica che guarda alla cittadinanza partecipativa per l'uso consapevole e responsabile delle tecnologie digitali. Il presente contributo ha l'obiettivo di riportare i risultati intermedi di un percorso di educazione civica digitale che coinvolge 60 studenti e 15 docenti di un istituto tecnico superiore che ha sperimentato l'uso di FirstLife come piattaforma open source di partecipazione civica.

KEYWORDS

civic education; digital platforms; digital skills, datification.
Educazione civica; piattaforme digitali; competenze digitali; datificazione

1. Introduzione[1]

As recent systematic reviews have highlighted (Richardson et al., 2021), there is no overall consensus about what Digital Citizenship means and how educational policies and programs can foster it. This issue seems to be the result of two different and intertwined tendencies.

First, the debate about the concept of citizenship has grown in strength and extent in recent decades for many reasons (for an overview, see Leydet, 2017), two of which have been the recognition of the internal diversity of contemporary liberal democracies and the pressure of globalization phenomena on sovereign territorial institutions. From the perspective of digital transformations, the latter has increased its pace thanks to the advent of Infosphere and Hyperhistory, as described by Floridi (2014). It can be suggested that by reshaping personal and social membership, digital ecosystems pose new challenges (and opportunities) to the traditional relational fabric of democracy and its embedded conception of citizenship.

Resuming the theses expounded by Turilli and Floridi (2009), it might be highlighted that at the core of this transformation stays digital entities that can be understood as computational artefacts, which are systems for storing, duplicating, validating, communicating, and modifying digital information flows, composed of hardware and software, which can interact either under the direction of humans or autonomously. Nonetheless, these computational artefacts also possess inherently social characters on two fronts. Their design, understood as the definition of the purposes and functionalities, results from a decision-making process that includes the intentions and actions of multiple individuals and groups (engineers, decision-makers, businesses, etc.). However, in various ways, their use is dependent directly or indirectly on the intentions and actions (and other intentional aspects such as emotions or beliefs) of multiple individuals and social groups. Here, we intend to stress the term 'social' to overcome a technicist categorization of these objects, unilaterally centred on 'objective' dimensions (Emilio, 2021). Therefore, according to this understanding, the political transformations due to datafication (Barassi,

[1] - a Adamoli Matteo i paragrafi n. 2, n. 6 e n. 7;

- a Carraro Elisa il paragrafo n. 4

- a Emilio Marco il paragrafo n. 1

- a Mason Eloeh e Sonia Migliore il paragrafo n. 5

- a Miatto Enrico i paragrafi n. 3 e n. 7;

2016) and capitalism surveillance (Zuboff, 2019) are not mere technical products but social ones.

Moreover, some recent theoretical researchers in the field of ontology have suggested that a helpful concept to understand digital artefacts better is the idea of capacity (Massin & Koslicki, 2022). In other words, on the one hand, digital artefacts confer on humans new social and relational capacities; on the other hand, digital artefacts have capacities only insofar as some individuals or groups have the capacity to use them (Massin & Koslicki, 2022, p. 6).

To sum up, the intentional designs and uses of digital artefacts within digital ecosystems produce (or by-produce) specific new social capacities that reshape our traditional understanding of democratic societies.

Second, due to the growing inequalities in democratic societies and populisms (Martinelli, 2016), the traditional consensus about the role of education as critical in creating democratic citizens has been questioned. Against this background, by analyzing the many conflicting approaches to democratic education, some researchers (Sant, 2019) have emphasized the possibility of opening up Dewey's theses about democracy and education (Dewey, 1916/2018) and overcoming the current troubles of Liberal Democratic Education by focusing on more promising models such as Deliberative Democratic Education, Participatory Democratic Education and Critical Democratic Education, that, in a variety of ways, focus on promoting deliberative practices, real opportunities for students of taking action, and on social transformation aimed at defending a "thick normative democracy in which all humans have equal and real opportunities to be agents of social transformation. [Where] social transformation is not conceived as neutral, but rather it is committed to the value of equality that underpins critical democratic educators' ethical demands" (Sant, 2019, pp. 674–675).

In this context, the research on the project "We&Here", is based on two main insights. In the first place, it has echoed the theses of Iyad Rahwan (Rahwan, 2018), who proposes a shift in the role of social actors in defining the design of computational artefacts that he calls *society-in-the-loop*. The intuition behind this direction is to structurally include involved actors: educators, students, researchers, teachers, principals and social workers within the decision-making and evaluation process of social computational artefacts employed in digital civic education programs.

Furthermore, following Moonsun Choi (2016), we subscribe to a pluralistic and multidimensional view of digital citizenship where four main interwoven categories

are at play: Ethics, Media and Information Literacy, Critical Resistance and Participation and Engagement (Choi, 2016, p. 584). In brief, we claim that programs in civic digital education, if they aim at coping with current challenges to democratic citizenship brought by datafication, demand to simultaneously and coherently intervene in different areas of students' skills related to multiple dimensions of being a digital citizen.

2. The 'We&Here' digital civic educational project in the framework of the Italian school context

Starting from the theoretical foundations and the critical reflection on mainstream digital platforms (Adamoli & Miatto, 2022), the Interdisciplinary Research Group on Digital Identities of the IUSVE and the Social Computing Group of the Department of Computer Science of the University of Turin designed a research path around a training cycle on Digital Civic Education for secondary schools.

A training cycle on Digital Civic Education was proposed to 60 students at the Technological Institute of the Salesian Institute of San Marco in Venice through an educational experiment on the FirstLife platform, an open source digital platform for civic participation.

The course was designed in collaboration with the reference teachers and was divided into four sessions with the aim of promoting digital citizenship skills in the students' local communities and in relation to civic education in school.

In the Italian school context, the themes of citizenship intertwined with digital have been introduced at the legislative level starting with Law No. 107/2015 with the aim of achieving «an open school, as a permanent laboratory for research, experimentation and didactic innovation, participation and education for active citizenship, to guarantee the right to study, equal opportunities for educational success and lifelong education of citizens»[2]. Following this law, known as the "Buona Scuola", and its implementing decrees, the "Piano Nazionale per la Scuola Digitale (PNSD)" launched by the Miur in 2008 as a pillar of the digitization process was consolidated. The legislation focused not only on technological and instrumental aspects but on educational innovation and the development of digital skills. The "Buona Scuola" marks a paradigm shift that sees students and teachers

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[2] Legge 13 luglio 2015, n. 107.

at the center in the development of information and digital literacy skills in order to develop a critical spirit capable of reading, interpreting and using the new languages within the media ecosystem (Rivoltella, 2020).

These new regulations have also found space within the "Digital Civic Education Curriculum" promoted by the Miur (2018) and built with the support of over one hundred bodies and organizations involved in media education with the aim of implementing it throughout the school curriculum, from pre-school to secondary school. The Syllabus is divided into five parts and deals with media education, information education, implications regarding the phenomenon of platform datafication and the topic of creativity linked to technologies understood as digital artefacts. The Curriculum introduces the concept of digital civic education as «a new dimension that updates and complements civic education, aimed at further consolidating the school's role in the formation of citizens capable of active participation in democratic life»[3].

The theme of citizenship within the digital transition becomes an integral part of the teaching of civic education with Law No. 92 of 20 August 2019, "Introduction of the school teaching of civic education"[4]. The law declines civic education as a cross-curricular teaching by tying it to the three thematic cores of knowledge of the Italian Constitution, in-depth study of sustainable development and finally digital citizenship. The latter is understood as «the ability of an individual to make conscious and responsible use of virtual means of communication»[5]. Article 5 of law no. 92/2019 lists the essential knowledge and skills that students must achieve in relation to their school level. From the perspective of this contribution, it is useful to highlight the skills concerning the appropriate use of digital technologies and the management and protection of data produced by the same technologies with the aim of protecting oneself and others. At the end of the second cycle, students are expected to be able to «exercise the principles of digital citizenship, with competence and coherence with respect to the integrated system of values that govern democratic life»[6].

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[3] MIUR - Ministero dell'Istruzione e dell'Università (2018). *Curriculum di Educazione Civica Digitale,* p. 4.

[4] Legge 20 agosto 2019, n. 92. *Introduzione dell'insegnamento scolastico dell'educazione civica.*

[5] Decreto Ministeriale del 22 giugno 2020, n. 35, *Linee guida per l'insegnamento dell'educazione civica* ai sensi dell'articolo 3 della legge 20 agosto 2019, n. 92", p. 2.

[6] Allegato C, *Integrazioni al Profilo educativo, culturale e professionale dello studente a conclusione del secondo ciclo del sistema educativo di istruzione e di formazione* (D. Lgs.

These normative references are grounded at the European level in the Digital Agenda for Europe (2010), which included the improvement of digital literacy, skills and inclusion among the European Union's growth objectives to be achieved by 2020. At this stage, among the strategies activated by the EU to develop the digital competences of European citizens, the Digital Education Action Plan (2021) aims to promote the development of a highly efficient digital education ecosystem and the improvement of competences and skills for digital transformation. The tool used to achieve these goals is the Digital Competence Framework for Citizens, also known by the acronym "DigComp", which has been providing a theoretical and practical framework for the development and measurement of digital competences for more than a decade. The latest update of the Digital Competence Framework for Citizens, in 2022, focuses on the new development areas of the digital transition with the aim of supporting citizens' knowledge, skills and competences to deal critically and confidently with the most widespread digital technologies and emerging ones such as the metaverse and artificial intelligence systems (Vuorikari, Kluzer & Punie, 2022).

Within this context, the framework for supporting educational organisations in the development of digital competences was designed and is called the European framework for digitally competent educational organisations (Devine, Punie & Kampylis, 2015). The framework provides guidelines to support schools and universities in the development of specific digital competences within the member states.

3. Research methodology

The research design is based on a case study (Yin, 1994; Stake, 1995) involving two third classes of a secondary technical institute with a graphic design address in Veneto and reaching 60 students.
The research involved the use of a questionnaire administered at the start and end of a teaching action structured over four meetings and lasting a total of 16 hours, designed as part of a broader civic education course.
The objective of the course is to accompany students in developing a digital competence aimed at participatory citizenship for the appropriate use of digital technologies (Buckingham, 2019) and the management and protection of data produced by the same technologies (Selwyn, 2022).

226/2005, art. 1, c. 5, Allegato A) *riferite all'insegnamento trasversale dell'educazione civica*, p. 7.

Through the use of FirstLife, an open source digital platform for civic participation, the students experimented with the construction of a participatory digital map, starting from their knowledge of the area in which they live and their needs.

The questionnaire administered allowed for a social and civic use of a digital media specifically designed for this purpose, using the Google Modules digital platform. In order to investigate the students' initial digital skills, an online self-assessment questionnaire was administered to them, developed from the one devised at European level as part of the Digital Education Action Plan (2018) Self-reflection on Effective Learning by Fostering the use of Innovative Educational Technologies (SELFIE).

The issues investigated were the following:
1. adequacy and safety of infrastructure and equipment;
2. use of digital technologies for teaching and learning;
3. students' digital competences.

Some items related to digital skills developed at school and everyday digital uses and habits were added. The double administration of the questionnaire, at the beginning and at the end of the training course, was preceded by a pilot phase in which the instrument was tested.

The "We&Here" educational path proposed to the students, on the other hand, worked on four specific modules that investigated the following elements:
1. perceived needs in relation to the living area and in the neighborhoods around the school.
2. ways of experiencing these needs in the territory of life;
3. possible actions to modify the living environment and respond to the needs that emerged also through interaction with digital platforms.
4. possible logics of the digital platforms in dialogue with the institutions present in the area of life to respond to the needs highlighted.

4. SELFIE questionnaire and results

The results of the SELFIE questionnaire[7], as a self-assessment tool adapted to the present case study, made it possible to probe some aspects of digital competence

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[7] https://education.ec.europa.eu/selfie

in relation to participatory citizenship for the appropriate use of digital technologies and the management and protection of data produced by the same technologies. In brief, we present below the data that emerged from the questionnaire.

Out of 60 students involved, 51 completed the questionnaire, of whom 49% were female and 51% male.

The responses show that the most used devices by the young people surveyed are the smartphone, chosen by all students, the tablet, chosen by 75.5% of students, and the computer, chosen by 73.5% of students. The most used social media are Instagram with 100 percent of choices, Whatsapp with 95.9 percent, TikTok with 89.8 percent, YouTube with 75.5 percent, and other social media such as Telegram, Snapchat, and BeReal with a choice between 35 percent and 45 percent.

Most students find it extremely likely or very likely to use technology for educational activities at school (92 percent) and at home (83.7 percent). However, the number of students who say it is extremely likely or very likely to use technology with an entertainment purpose increases (95.9 percent). 24.5 percent of students say it is completely unlikely or not very likely to participate in activities in which they do not use technology, outside of the school setting.

In general, students perceive high availability at school of Internet access, use of technological tools - computers, tablets - and technical assistance, with medium to high values (strongly agree and agree) ranging from 73.5 percent to 85.7 percent.

67.3 percent of students say with medium-high values (strongly agree and agree) that they actively participate in their own learning using digital platforms, in different school settings: for career guidance (69.4 percent), for creative activities (79.6 percent), for group work (85.7 percent), during the course of different subjects (81.6 percent). At the same time, however, only 57.1 percent of students say that they participate more thanks to technological devices, and only 53 percent say that the proposed activities with technology meet their needs.

There is a difference in technology use between school and home: only between 26% and 40% of students say they learn in the school setting how to behave safely and responsibly online. Between 53% and 79% of students do this independently at home, while 87.7% of students say they develop digital skills specific to their field of study at school.

Starting also from this data and through the application of the FirstLife civic platform, it was possible both to reconstruct the incoming level of digital competence of the students and to implement the above-mentioned educational course.

5. FirstLife, open source digital platform for civic participation

The FirstLife platform is a geo-referenced civic social network with a local dimension, developed by the Computer Science Department of the University of Turin (Antonini et al., 2016; Boella et al., 2019). FirstLife creates continuity between digital space and territorial space, and between online communities and territorial communities oriented towards civic participation. The aims are: to support, promote and activate civic participation initiatives in a given geographical context (neighborhoods, city, etc.), to foster synergies and coordination, to generate awareness in citizenship with respect to their territorial context and to a conscious use of digital technologies.

FirstLife combines the geographic metaphors typical of volunteer geographic information (VGI), crowdmapping and community mapping platforms with those typical of social networks, in order to make the former more interactive, and to bring the latter back to the scale of local communities. The possibility of coordinating with respect to a given territory is represented by the map metaphor, integrated with metaphors and functionalities such as noticeboard and post, typical of social networks (Boella et al., 2019).

The interface consists of a map, centered on the geographical area of interest, flanked by a notice board that collects "cards" corresponding to the individual "entities" that users create on the map. These can represent physical locations, events, news, stories, and coordination groups. Each entity is provided with chat functions, exchange of attachments, polls, to encourage discussion and exchange on the mapped territorial issues.

The platform has been active since 2013 in research projects on urban commons (Iaione, 2016), on the co-production of public services (Clifton et al., 2020) and civic technologies (Certomà & Corsini, 2021), on the implementation of the "15 Minute City" model (Moreno et al., 2021). It is used at European and local level and in international cooperation projects (Boella et al., 2018; Rapp et al., 2019).

A specific strand of research supports school-based paths for civic and digital education. In 2016, the "TeenCarTo" project (Pettenati & Dansero, 2017), with the Educational Services of the City of Turin, involved secondary schools in decision-making processes related to the city's Adolescent Plan. The classes mapped more than 2500 places and events, showing the urban resources and criticalities of the present but also the future prospects. The "TeenCarTo" project laid the foundations for using FirstLife as a method and tool to support European recommendations and Italian regulations on digital and civic education (see previous chapter).

6. The FirstLife application in the 'We&Here' digital civic education project

For use in the educational pathway covered by this case study, the mentioned FirstLife features and entities were supplemented with new elements. In terms of working method, the classes first of all identified the needs of their age group with respect to the geographical area of interest. During the first focus group, the three most felt needs emerged from the students, on which they subsequently worked by surveying the area's present and missing resources on the map, then making proposals. The three needs identified were: safety when moving to places of aggregation; the need for autonomy and movement; the need for common meeting places and socialization linked to the presence of events suitable for young people. The critical issues that the students expressed most concern the need for safety. In one class, the experience was shared of how some places are experienced as unsafe due to decay, dirtiness and the presence of subjects perceived as deviant.

Subsequently, the students, divided into groups according to their geographical areas of residence or greater frequentation, mapped the places and events responding to the needs that emerged through FirstLife. Seventeen places for young people, three places concerning safety and nine places concerning mobility were identified. In total, twenty-eight public and sixteen private places were mapped. In addition to the possibility of exchanging images and media content, great emphasis was placed on text, storytelling and writing skills. The digital "entities/cards" enabled the students to narrate their experiences in the area from a more personal and emotional perspective.

In the third meeting, the "group" entities were created on the map and each group worked to bring out the territorial "fullness" and "emptiness", i.e., the presence/absence of resources in the territory in response to the needs identified through the creation on the map of the "I need" entities. In this phase FirstLife was used as a visual explication tool through the mapping activity and then moved on to the creation of a meaning map that promoted reflection on the contents by the students.

Starting from this analysis, the groups indicated project proposals on the map (through the "I take part" entities), with the aim of experimenting the transition from online interactions to interactions on the territory and thus developing participation and potential concrete actions. One class focused on the theme of mobility, putting forward proposals that would respond to the need for safety and autonomy in travelling, while the other class worked on actions to be promoted for the creation of opportunities and places for youth aggregation. On the first topic, six proposals were made concerning mobility in which the students expressed improvements on public transport. In the second case, the classes tried to imagine

redeveloped public spaces or to invent new meeting places that meet their needs and passions.

This imaginative exercise, based on the three needs most frequently expressed by the students, is now the subject of a discussion with the institutions and stakeholders in the area, who are called upon to reason together with the students on possible solutions in a logic of participation and active citizenship. This phase of the case study, which is still in progress, involves setting up a number of working tables.

7. Conclusions

In the analysis of the first research outcomes, the potential and limitations of using digital platforms and artefacts in citizenship education were highlighted. FirstLife, in fact, ranks among the non-commercial civic technologies that can be defined as digital participatory platforms (Falco & Kleinhans, 2018) or urban digital platforms (Chiappini, 2020). As emerged from the case study considered, unlike the most widespread digital platforms, it privileges the local and proximity scale and the lived, public and collective interest dimension of contributions, as opposed to private interests, individual preferences, and extemporaneous comments. This feature of the platform allowed the students to map the places close to them and the events responding to their identified needs.

In this way, the participants were able to experience skills both on a technical/semiotic level (using the platform, choosing images, uploading files) and on a critical and ethical level (mapping places, emerging personal and collective needs, reflecting on spaces). Parallel to a participative use of the platform, the students worked in groups, reinforcing transversal skills through a cooperative style typical of school training practices (Nigris, Negri & Zuccoli, 2007). The digital artefacts created by the students allowed them to understand the transition from online interactions to real interactions on the ground, making themselves an active part of a public debate that otherwise would not have seen them as protagonists (Ranieri, 2019; Rivoltella & Rossi, 2020).

The work on an open source civic participation platform has enabled students to experiment with digital skills that take into account, on the one hand, the necessary exclusion of any form of advertising or user profiling while respecting the data and identities of participants, and on the other, the search for opportunities to express active and innovative forms of citizenship through digital technologies. In terms of research in the field of media education, this case study gives an account of the potential of open source platforms for civic education, leaving open lines of

investigation linked to the role that active teaching practices can play in the training of citizens capable of facing technological and digital challenges for an active and participatory citizenship.

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