

Digital citizenship skills as an essential factor in Lifelong-Lifewide-Lifedeeep Education

La competenza di cittadinanza digitale come dimensione irrinunciabile per una Lifelong-Lifewide-Lifedeeep Education

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abstract

Within the theoretical framework of Lifelong-Lifewide-Lifedeeep Learning, lifelong education is now viewed as an individual and social learning process lasting an entire lifetime, involving various aspects of life and different formal, informal and non-formal agencies within the community. The web and online information, communication and knowledge exchange locations are additional social and cultural contexts for education and social experience, for the acquisition of the knowledge, abilities and skills required for active citizenship, social inclusion and the improvement of the learning and professional experiences of the individual and the community. Starting from these assumptions and considering the European DigComp 2.1 framework as one of the possible theoretical and operating schemes of reference, we discuss the concept of digital competence as a strategic opportunity for promoting digital citizenship skills, with a view to individuals' active, informed, reflective, critical, empowering participation in their own learning process and in social and political life in the learning society.

Keywords: lifelong learning, adult education, learning society, digital citizenship, DigComp 2.1

L'educazione permanente, all'interno del framework teorico del Lifelong-Lifewide-Lifedeeep Learning, viene intesa oggi in quanto processo educativo, individuale e sociale, che si estende per tutto l'arco della vita interessando diverse dimensioni esistenziali e coinvolgendo differenti agenzie formali, informali e non formali del territorio. Il web e gli spazi di informazione, comunicazione e di negoziazione della conoscenza online rappresentano ulteriori ambienti sociali e culturali di formazione e di esperienza sociale per l'acquisizione di quelle conoscenze, abilità e competenze volte alla cittadinanza partecipata, all'inclusione sociale e al miglioramento dell'esperienza formativa e professionale del singolo e della collettività. Partendo da questi presupposti e considerando come uno dei possibili riferimenti teorico-operativi il framework europeo DigComp 2.1, si approfondisce il concetto di competenza digitale in quanto punto strategico per la promozione della competenza di cittadinanza digitale, in vista di una partecipazione attiva, informata, riflessiva, critica ed emancipativa al proprio processo di apprendimento ed alla vita sociale e politica nella learning society.

Parole chiave: Educazione permanente, Educazione degli adulti, Learning Society, Cittadinanza digitale, DigComp 2.1.

1. Concept of lifelong learning and adult education

Within the theoretical framework of Lifelong-Lifewide-Lifedeeep Learning, lifelong education is now viewed as an individual and social learning process lasting for an entire lifetime, involving various aspects of life and different formal, informal and non-formal agencies within the community (Alberici, 2005; 2008; Forquin, 2005; Dozza, 2012; Dozza, Ulivieri, 2016; Loiodice, 2009; 2014; Baldacci, Frabboni, Margiotta, 2012; Biasin, 2012; Costa, 2016; Federighi, 2018).

Drawing on Dozza, we can define adult education as “an area of knowledge and research focusing on men’s and women’s education in adulthood: a *state* and condition of life considered central to the *lifetime* and the educational process [...]” (2018, p. 87).

The European Council was already encouraging a consistent interchange between the three main contexts in which learning may occur as long ago as 2002, and nowadays the process of education in adulthood, and in all other phases of life, must, more than ever before, become a dynamic *continuum* of formal, non-formal and informal learning, aiding citizens and helping to create the conditions which will enable them to gain personal, social and professional knowledge, skills and competences of use in every area of their lives.

In this perspective, adulthood becomes a period of permanent, broad, deep learning with regard to identity, social engagement and employment, which plays a fundamental part in building an active citizen who is able to contribute to society’s economic and political progress (Alberici, 2005). Under this approach, each adult is at the centre of their own educational and career process, engaged lifelong-lifewide-lifedeeep in building and rebuilding their horizons of meaning and existence throughout their lives, in order to manage the complexity of the present time (Bauman, 2000), and plan the future in the most sustainable way possible: “the possibility/need to keep learning and training as part of a lifelong process becomes the framework within which people are able to rethink and redesign the human condition itself, and their own existence in time and space” (Loiodice, 2017, p. 5).

Margiotta, partly adopting Amartya Sen’s theory of capabilities, underlines the advisability, with regard to learning and training for the consistent construction of the individual’s adult career, of shifting the focus of active welfare from a framework of workfare to one of learnfare. Con-

sidering the ever-increasing tendency towards job insecurity, the learnfare framework takes learning as the basis for social policies, with a view to social inclusion and employment, in line with the welfare reform aims of the Lisbon strategy: “learnfare aims to ensure that the State invests in every single citizen as a vital resource for its own maintenance and development, and thus guarantees individuals real access to learning opportunities, provided they are consistent with the individual’s life plans” (2018, p. 4).

2. The new media as cultural and social environments

In today’s knowledge society, the digital media appear to be having an increasingly important and pervasive effect on the individual and social, cultural, economic and political cognitive processes which take place in the various formal, non-formal and informal contexts of human experience. They play a role in modifying the individual and social ways in which reality is experienced and knowledge is conceptualised, since they are a constituent, structural part of today’s postmedia society and are *crossmedially* present in such an immanent, *convergent* way (Jenkins, 2006) in our lives that they have now become an integral part of it.

Digital media support, expand and amplify our reality and experience in such a ‘natural’ way that they blend into our daily lives. They know how to be invisible (Eugeni, 2015), discreetly present in our environments. They are becoming smaller and smaller, and can be portable, or even wearable like jewellery (Mernissi, 2002); however, this does not mean that their impact is also smaller than that of traditional media. Rivoltella accordingly underlines the transformation of the media from “apparatus (televisions, editorial teams and devices with their physical size and volume) to [genuine] dimensions of life itself” (2018, p. 8).

As a consequence, the differentiation between the real and the virtual, meaning between offline and online experience, within the existential dimension of our daily lives, becomes more and more blurred.

According to Rossi, “both the real and the virtual worlds are ‘players’ with which people interact and in which they are reflected in relation to intrapsychic processes. Or they are *boundary objects*, through which relations with others are formed [...] The virtual world becomes the space in which the body and the environment are dynamically represented, and

through which individuals dialogue with themselves and others” (2014, p. 10). For the contemporary citizen, digital technologies are no longer merely tools, means for communicating and interaction with others; they become *digital artefacts* (Rossi, 2016) and genuine cultural and social *environments*, not detached from but seamlessly connected to real environments, within which individuals live, acquire information, interact, collaborate and produce culture.

The intermingling of the two experiential dimensions creates hybrid, multifaceted spaces-environments. They represent new horizons of sense for study and fresh opportunities for the resignification of meanings and of the person’s individual and social identity, which pedagogy is obliged to investigate.

3. Educating for Digital Citizenship

The interconnection between the virtual and real worlds, and the consequent possibility of switching seamlessly between them, enables people to take possession of additional space-time for the acquisition of knowledge, in a new, broad, deep dimension for experience and learning. In this inclusive perspective, proposed by the Lifelong-Lifewide-Lifedep Education framework, education in digital competences becomes an essential learning dimension for citizens of the learning society.

In the *European Council Recommendations on key competences for lifelong learning*, citizenship competence is defined as the “ability to act as responsible citizens and to fully participate in civic and social life, based on understanding of social, economic, legal and political concepts and structures, as well as global developments and sustainability” (European Council, 2018, C189/10). This definition presupposes that the exercise of full citizenship also requires knowledge of, the ability to use, and critical skill in the interpretation of, the messages conveyed by the media, and their role in society.

The web and online information, communication and knowledge exchange locations are additional contexts for education and social experience for the acquisition of the knowledge, abilities and skills required for active citizenship, social inclusion and the improvement of the learning and professional experiences of the individual and the community. Within them, citizens are able to engage in rich cognitive and relational ex-

changes, enabling them to grow their reflexivity, their intellectual autonomy and their capacity for critical self-sufficiency by experiencing, modelling and creating knowledge and individual and social identity.

The term *Digital Citizenship* has been part of our cultural and pedagogical vocabulary for several years, and there are various Italian and European projects, both inside and outside the formal education system, which aim to promote citizens' digital citizenship. Within today's complex, transient society, *Digital Citizenship Education* means *first and foremost* providing citizens with the guidance tools and critical skills they need to navigate digital environments in an ethical, aware way. Here, the term Digital Citizenship refers to each citizen's right-duty to access and take possession of the new digital environments with competence and a critical approach, personalising them with a view to satisfying their social, political and identity needs, using them responsibly and ethically and actively contributing to making these environments as inclusive, safe and participatory as possible, for both themselves and others.

Once they have acquired the specific knowledge, abilities and critical competences, citizens of the learning society are enabled to find out about, communicate, participate in and experience their communities' social, political and economic life directly and actively also through the digital media, expanding the choices available and their radius of social and decision-making influence in the various areas of their lives.

4. Digital and general competences for Digital Citizenship Education

Starting from the assumption that the acquisition of digital and media competences is fundamental for the correct, critical and responsible use of the web and the new environments connected to it for learning, working and actively participating in society (Jenkins, 2009), it is worth recalling some of the main European institutional documents linked to ICT as a citizenship tool.

In the European context, while the *European Pillar of Social Rights* (European Commission, 2017) sets out to identify fundamental rights with the view to achieving effective social, educational and employment results as part of a lifelong learning approach and considering the transformation of the social, technological and economic context, there are various European Union documents which recognise the advent of the

knowledge society and highlight the need for all citizens to acquire digital competence as part of lifelong learning.

In particular, the *European Council Recommendations on key competences for lifelong learning* (European Council, 2018, C189/1) contribute, with other measures, to the identification of the *general skills* considered strategic in ensuring “everyone [the] right to quality and inclusive education, training and lifelong learning in order to maintain and acquire skills that allow full participation in society and successful transitions in the labour market” (European Council, 2018, C189/1).

In line with the *Recommendations* contained in the European Commission communication *A New Skills Agenda for Europe* (European Commission, 2016) and the *Europe 2020* strategy (European Commission, 2010), every citizen needs these lifelong learning skills starting from early childhood, “for personal fulfilment and development, employability, social inclusion, sustainable lifestyle, successful life in peaceful societies, health-conscious life management and active citizenship” (European Council, 2018, C189/1). They must be acquired and developed in a lifelong learning perspective, through various learning programmes and pathways offered not only in formal but also in non-formal and informal contexts.

Amongst its *key competences* with regard to its strategies for lifelong learning for all EU citizens, the *European Council Recommendation* includes not only citizenship skills (see previous section) but also digital competence: particular emphasis is placed on the importance for every citizen of familiarity with and the ability to use the new digital technologies relating to the web both for the acquisition of occupational skills and for the promotion of truly active, participatory citizenship. Digital competence is considered to include *knowledge* of the media and their functional use at different levels, *skills* in using them for one’s own learning, recreational and working purposes, avoiding or dealing with possible problematical situations, and awareness of the ethical *principles* to be borne in mind.

As well as digital literacy regarding both the use of ICT and the construction of culture, there is the awareness of the need to educate citizens in the critical, responsible use of digital environments, combating the herd instinct and approaches dictated by the market or current fashions. There is an insistence on the *logos* suffix of the term “techno-logical” (Guerra, 2002), and thus on the importance of educational reflection on

the cultural model underlying technology itself, which should be investigated by considering the multiple implications of any given technological tool within our daily lives, irrespective of the reasons for its creation.

On this subject, Prensky distinguishes between the concepts of *digital wisdom* and *digital cleverness*: “the digitally wise [...] know that just knowing how to use particular technologies makes one no wiser than just knowing how to read words does. Digital wisdom means not just manipulating technology easily or even creatively; it means making wiser decisions because they are enhanced by technology. Therefore, the digitally wise look for the cases where technology enhances thinking and understanding” (2009, pp. 6-7).

A digitally wise person is a citizen who has his hands on the tiller and sails the digital sea with competence, responsibility and ethics. This cultural transformation has generated the awareness amongst educationalists of the need for today’s citizens who wish to play an active part in the construction of their knowledge and identity as social beings to acquire and construct the digital know-how required for a *critical, competent* and *ethical* approach to the new challenges of on-line life.

In line with the above, over the years the concept of digital competence has been enriched in both institutional documents and the scientific literature, and has been integrated with general competences such as those in the cognitive (critical thought, problem-solving abilities...), participatory (communication competence, the ability to develop arguments, and to collaborate constructively) and citizenship (constructive participation in democratic decision-making processes), etc. areas.

In particular, as well as specifying that the eight competences must be considered to be interconnected, the *European Council Recommendation* refers to a number of factors necessarily embedded in each of them: critical thinking, problem solving, team work, communication and negotiation skills, analytical skills, creativity, and intercultural skills.

Some time ago, Jenkins (2009) recommended a systemic approach to media literacy for young people, in which specific media literacy skills were interwoven with social and soft skills. According to Jenkins, the eleven media literacy skills are: *play*, the capacity to experiment with one’s surroundings as a form of problem-solving; *performance*, the ability to adopt alternative identities for the purpose of improvisation and discovery; *simulation*, the ability to interpret and construct dynamic models of real-world processes; *appropriation*, the ability to meaningfully sample

and remix media content; *multitasking*, the ability to scan one's environment and shift focus as needed to salient details; *distributed cognition*, the ability to interact meaningfully with tools that expand mental capacities; *collective intelligence*, the ability to pool knowledge and compare notes with others towards a common goal; *judgement*, the ability to evaluate the reliability and credibility of different information sources; *transmedia navigation*, the ability to follow the flow of stories and information across multiple modalities; *networking*, the ability to search for, synthesize, and disseminate information; and *negotiation*, the ability to travel across diverse communities, discerning and respecting multiple perspectives, and grasping and following alternative norms.

This kind of approach to digital competence, together with the guidelines proposed by the European Union, appears opportune for the education of a citizen who is able to navigate the web in a critical, participatory way. Thus the meaning of digital competence is shifted from mere technical skill to digital citizenship skill, which automatically implies both techno-logical and general competences.

This is the gnosiological standpoint that has constantly guided the creation by the European Union's *Joint Research Centre* (JRC) of the *Digital Competence Framework for Citizens* (DigComp), from its initial 2013 version to the current 2.1 version, issued in 2016.

The *Digital Competence Framework for Citizens* (Carretero, Vuorikari, Punie, 2017) is intended to support member States in the planning and implementation of projects and activities for the improvement of European Union citizens' digital competences with a view to the construction of a citizenship which is also digital. DigComp 2.1 is a complete, detailed framework including five competence areas and twenty-one specific competences (Tab. 1: 5 DigComp 2.1 competence areas and the 21 specific competences), for each of which it identifies eight proficiency levels, grouped into four steps: *foundation*, *intermediate*, *advanced* and *highly specialised*. It also provides examples of use and a variety of activities, in both learning and employment contexts, for each of the different competences, considering one of the eight different proficiency levels.

DigComp 2.1 (2017)	
1. Information and data literacy	1.2 Browsing, searching and filtering data, information and digital content 1.2 Evaluating data, information and digital content 1.3 Managing data, information and digital content
2. Communication and collaboration	2.1 Interacting through digital technologies 2.2 Sharing through digital technologies 2.3 Engaging in citizenship through digital technologies 2.4 Collaborating through digital technologies 2.5 Netiquette 2.6 Managing digital identity
3. Digital content creation	3.1 Developing digital content 3.2 Integrating and re-elaborating digital content 3.3 Copyright and licences 3.4 Programming
4. Safety	4.1 Protecting devices 4.2 Protecting personal data and privacy 4.3 Protecting health and well-being 4.4 Protecting the environment
5. Problem solving	5.1 Solving technical problems 5.2 Identifying needs and technological responses 5.3 Creatively using digital technologies 5.4 Identifying digital competence gaps

Tab. 1. 5 DigComp 2.1 competence areas and the 21 specific competences

Since further discussion of the DigComp 2.1 framework is not possible here, and we wish to proceed to its (far from exhaustive) conceptualisation, we identify three of the many possible intentional directions to be followed for the achievement of Digital Citizenship: a) *effective, efficient* use of digital environments to acquire information with a view to the realisation of one's own virtual repository of information and digital resources for various purposes, while being fully aware of the need to adopt a critical approach, always assessing the reliability, accuracy and ethics of the resources used; b) *reflective, critical, responsible, ethical* use of digital environments, in integration with real ones, for communicating, negotiating, building and co-building one's knowledge in both an individual and a social dimension, with the view to constructing one's own life and career e-portfolio, bearing in mind and understanding the mechanisms and logic underlying the digital media; c) *original, creative, fresh*

use of digital environments to enable oneself and others to explore, simulate, and invent knowledge and express individual digital identities, aware of the potentials and sum of the possible consequences for oneself and others.

5. Digital environments as a tool for educational empowerment towards Digital Citizenship

We have analysed the scientific literature and European Union documents to discuss the assumption that digital environments may be of assistance for the realisation of active citizenship and social inclusion, cooperation with other people and creativity in achieving personal, social and professional aims, under a lifelong learning approach.

The same inclusive optic is assumed by the Global Competence Framework (OECD PISA, 2018), which defines the global competence as “the capacity to examine local, global and intercultural issues, to understand and appreciate the perspectives and world views of others, to engage in open, appropriate and effective interactions with people from different culture, and to act for collective well-being and sustainable development”. The acquisition of this multidimensional competence, closely related to that of Digital Citizenship, presupposes the development of four dimensions in order to be able to be effective in an informed, critical, competent and inclusive manner within our individual and community everyday life: “the capacity to examine issues and situations of local, global and cultural significance; the capacity to understand and appreciate different perspectives and world views; the ability to establish positive interactions with people of different national, ethnic, religious, social and cultural background or gender; the capacity and disposition to take constructive action to word sustainable development and collective well-being” (pp. 7-8).

Such considerations are in line with the goals of the 2030 Agenda for *Sustainable Development* (United Nations, 2015)¹ and, in particular, with some of the seventeen *Sustainable Development Goals* (SDGs) most close-

1 Which reworks and supplements the previous 2000 United Nations *Millennium Development Goals* document.

ly linked to education for sustainable development catering for all citizens of member states. Within a multidimensional, multi-faceted approach, “the Sustainable Development Goals and targets are integrated and indivisible, global in nature and universally applicable, taking into account different national realities, capacities and levels of development and respecting national policies and priorities” (United Nations, 2015, p. 13). An analysis of the document reveals that the goals most closely associated with Digital Citizenship within a Lifelong-Lifewide-Lifedep Learning approach appear to be:

- Goal 4. *Quality education* – Guarantee quality, fair, inclusive education and lifelong learning opportunities for all;
- Goal 5. Gender equality – Achieve gender quality and empower all women and girls;
- Goal 8. Decent work and economic growth – Promote inclusive and sustainable economic growth, employment and decent work for all;
- Goal 10. Reduced inequalities – Reduce inequality within and between countries.

Information and education technologies are considered here: as *tools* for access to resources (informative, educational and economic; as necessary *means* to the acquisition of specific professionally qualifying knowledge, skills and competences; and as *environments* with regard to the “[provision of] safe, nonviolent, inclusive and effective learning environments for all” (United Nations, 2015, target 4.a, p. 17).

They are also considered, and this is the most innovative interpretation, as *enabling* and *empowering* tools for all citizens, and in particular for various minorities and/or disadvantaged groups (children, the young and women; people with disabilities; categories specifically vulnerable at the social level; immigrants; the populations of developing countries, etc.) with a view to their effective, decision-making participation at all levels of life: school, training, family, work, policies, leadership, the economy and society, to promote their empowerment and inclusion.

From this perspective, the new digital media can be seen as environments for empowerment at the individual, social and political level, enabling the exercise of broad and deep citizenship (Fabbri, 2009). The concept of empowerment is applied within education to individual, social and political education projects intended to empower the target sub-

jects through their active participation in the educational event, and the promotion of individuals' capacity to become a resource, and to gradually transform themselves into the protagonists of their own paths towards the construction of identity, autonomy and the planning of their own lives in the various contexts, ages and environments of life (Fabbri, 2005).

From this viewpoint, they offer contemporary citizens, who inhabit the knowledge society on a daily basis, opportunities, integrated with those in the non-virtual world, for the improvement of their cultural and professional knowledge, at both the individual-reflective and the social-participatory levels.

In this context, Rivoltella talks about *community technologies* and refers to media and technologies as possible “devices via which the community's problems can be identified and also resolved through the preparation of tools which function as both *citizenship devices* and *catalysts of sociality* and relational networks at the various levels (family, school, groups, geographical area)” (2017, p. 6). Ravanelli and Ceretti suggest a pedagogy of the oppressed operating through digital culture, with a view to creating a *digital-critical pedagogy*: “equality, the democratisation of access, the right to free speech, and the achievement of political participation interface with ‘multidimensional’ literacy as a means of awareness-raising, as envisaged by Freire” (2017, p. 160).

The acquisition of digital citizenship competences as a multidimensional competence – technical, techno-logical and general competence – therefore aids the individual and social appropriation of new alphabets and empowering communications strategies, and new, inclusive spaces where the present can be inhabited and experienced, with a view to individual, social and political empowerment, looking to the future with the increasingly pressing aim of inclusion and sustainability in mind.

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