



Integration of LifeComp and DigComp 2.2 as a Theoretical Framework for Media Education

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Abstract. This essay critically discusses the ways in which DigComp 2.2 can be used as a theoretical framework to support media education programs in schools. Since 2006, digital competence has been one of the eight key competencies that were defined by the European Union for lifelong learning. As reported in the recommendations, these competencies are considered to be fundamental for each individual in a knowledge-based society.

DigComp focuses specifically on the acquiring of knowledge, recollection, comprehension, application, evaluation, and creation, without explaining the fundamental activities of critical analysis and reflection directly and extensively. The latter two dimensions form an integral part of the fundamental objectives of media education, which could enable students to make a truly conscious and responsible use of the new media.

The application of the DigComp 2.2 framework for cases of media education projects has highlighted some gaps related to well-being, self-regulation, awareness, responsibility and critical thinking.

In order to solve these gaps without abandoning the use of the Digcomp framework, it is proposed that it be integrated with the LifeComp framework.

Keywords: Media education · Digcomp · Digital competence · Media literacy

1 DigComp as a Theoretical Framework for Media Education? – Issues and Implications

This essay critically discusses the ways in which DigComp 2.2 (Digital Competence Framework for Citizens) can be used as a theoretical framework to support media education programs in schools¹. Since 2006, digital competence has been one of the eight key

¹ This contribution has been developed jointly by the authors. Andrea Garavaglia wrote paragraphs 1 and 3 while Livia Petti and Serena Triacca wrote paragraph 2. Paragraph 4 was jointly written by the authors.

competencies that were defined by the European Union for lifelong learning. As reported in the 2018 recommendations, these competencies are considered to be fundamental for each individual in a knowledge-based society.

DigComp is one of the most important frameworks used in various projects to help students achieve digital competence [1, 2]. It was released by the Joint Research Center and is mainly meant for use by government agencies, educational institutions, and enterprises.

The evolution and diffusion of new media have led to the emergence of a series of risks as well as opportunities [3] which substantially confirm the need to activate critical analytical skills and a profound reflection on the use of devices in students [4–6]. Such aspects concerning the principles of media education have already been elaborated in a previous research [7]. The spread and prevalence of digital media in the recent years make it seem like DigComp and media education can converge towards a singular aim of training responsible and aware citizens. However, an accurate analysis of the DigComp 2.2 framework indicates that the program does not allow the recognition of all the dimensions of media education [8, 9]. DigComp focuses specifically on the acquiring of knowledge, recollection, comprehension, application, evaluation, and creation, without explaining the fundamental activities of critical analysis and reflection directly and extensively. The latter two dimensions form an integral part of the fundamental objectives of media education which could enable students to make a truly conscious and responsible use of the new media.

This discrepancy is probably due to the fact that critical and reflective dimensions are included in three of the other seven key competencies (functional, alphabetical, citizenship, health, cultural, awareness, and expression) for the European lifelong learning framework of 2018 and require educational systems to propose the use of system-structured program-paths across several key competencies.

On the other hand, analyzing DigCompEdu could help identify the inherent competences that assist educators in facilitating the achievement of the learners' digital competence dimensions. This is a competence that was not sufficiently developed in DigComp, and is, hence, reinserted here, in place of safety dimension; it is a dimension that we could consider as an outcome of responsible use.

With a view to use DigComp in media education, the goal of this paper is to suggest solutions to avoid the reductionism of the development of media education skills to the dimensions of DigComp. On the downside, however, an extensive adoption of DigComp by educational programs could increase the risk of the disappearance of the reflexive critical dimension. These dimensions are fundamental elements that form the foundations of media education [10] and are included in the LifeComp Framework.

2 Application of DigComp as a Framework in Media Education Projects

In order to understand how the DigComp framework can be applied, two projects are analyzed below.

In recent years, many schools and academic projects in the Italian context that were aimed at developing digital competence explicitly refer to the DigComp framework,

considered the goal standard for digital training in the European context [11, 12]. We present below two media education projects: in one case the choice of adopting this framework was made by the research group and in the second, it was as requested by the Ministry. Projects refer to the most recent version of DigComp (2.1) at the time of implementation. The minor differences between versions 2.1 and 2.2 of DigComp do not affect the reflections and analysis described in this contribution.

2.1 The Project Digital Well-Being - Schools

The three-year project “Digital Well-being – Schools” was funded by a public-private agreement: on the one hand, the project won an Innovation Grant from the University of Milan-Bicocca and on the other Fastweb S.p.a. co-financed the project as part of its social responsibility activities.

The project has been carried out since the scholastic year 2016–17 with the purpose of offering media education training activities for upper secondary school students in Lombardy.

The first year was dedicated to the design of the project. The research group, formed by an inter-departmental team of the University of Milan Bicocca, created a teacher training course structured in four modules. These modules were designed to incorporate media education activities among students.

The training course aims to introduce the participating teachers to the main themes of citizenship, the use of new media by young people, and prompt “media awareness experiences” to be applied in the classroom. Specifically, 171 s classes from 18 schools were selected from the Milano and Monza-Brianza areas, according to Clustered Randomized Controlled Trial – CRCT [13].

In Table 1 are the training modules based on the main themes of DigComp.

Table 1. Description of the training course modules

Module	Topics	DigComp area (2.1 and 2.2)
Managing time and attention	Awareness of the time spent with digital devices (video games, social networks, smartphones...)	Safety (+ Problem solving)
Using online communication	Conflict simulation and management in social networks, digital identity, online reputation, and online collaboration	Communication and collaboration (+ Problem solving)
Finding and evaluating information online	Search for information, evaluation of the validity of sources, and knowledge management	Information and data literacy (+ Problem solving)
Creating online content responsibly	Making and sharing of content, authorship, copyright	Digital Content Creation (+ Problem solving)

The articulation of the format of the training course required an accurate analysis of the theoretical framework and of the recent innovations in the didactic field [14] which was necessary to outline the method, called HaDIMB, an acronym of the essential components on which it is based: Habit, Debriefing, Inverted Classroom, Microlearning and Blended learning. In Table 2 is the articulation of the training proposal.

Each module is divided into a theoretical part and an application part that contains the indications on the activities to be carried out in the classroom and on the specific media awareness to be developed. At the end of each module, teachers and students are invited to share a good practice and blend in with the classroom life (habit) to establish the achievement of digital competence.

Table 2. The HaDIMB method

Phase	Description
Online preparatory study	The use of online resources in self-training is foreseen for sensitizing participants to the main contents of the course
Face-to-face training	After the online moment in the classroom, the basic elements of the preparatory study are resumed and the lesson plan to be carried out with the students is explained. The moment is also fundamental for a comparison between participants and between trainers and participants
Online insight (optional)	Subsequently, teachers are invited to use some in-depth materials
Online design	Teachers can re-design the proposed lesson plan considering the specificities of their school context. This moment takes place online thanks to the support of an expert
Application of the lesson plan	It consists of the moment dedicated to the implementation of the lesson plan in the classroom with the students whose structure provides a first approach of the students to the dimension of competence through a presentation of the theme. Following this, it moves on to the performance of an activity that allows to understand the characteristics and the functioning of the specific aspect of the media that is addressed and finally at the time of debriefing, which is essential to achieve the awareness desired
Habit consolidation	The ultimate goal of the teaching experience is to establish virtuous habits (good habits), important elements for developing any competence. Since the training intervention has a limited duration (3 h), it becomes important to recall the established habits throughout the school year and promote reflection and awareness so that they become virtuous behaviors for students to be adopted not only at school but wherever they go in life

2.2 The Project Cogito Ergo Sum

Action #15 Innovative scenarios for the development of digital skills of the Italian National Plan for the Digital School (PNSD) aims to create, experiment, and make available 25 new innovative, structured, open curricula that are able to involve the extended school community.

On 23rd September 2016 the Italian Ministry of Education issued a call for the selection of digital curriculum projects on a specific thematic area conceived by state schools and educational institutions of all types and levels established in a network, with a minimum of three institutions including the leader (see Table 3)². As already anticipated, the government specifically requested that the projects refer to the DigComp framework.

Table 3. N. of projects eligible for funding for each thematic area

Thematic area	N.
Internet rights	2
Media (and social) education	3
Information literacy	3
STEM (digital skills for educational robotics, making, 3D printing, Internet of Things)	4
Big and open data	2
Coding	2
Digital art and culture	4
Education in reading and writing in digital environments	2
Digital economy	2
Digital entrepreneurship	1

“Cogito Ergo Sum” is the name of the proposal funded in 2020 at the Liceo Statale “Duca degli Abruzzi” (Treviso, Veneto region), engaged with state upper secondary education institutes “Giuseppe Verdi” (Valdobbiadene) and “Marco Casagrande” (Pieve di Soligo), which focuses on the topic of media education.

CREMIT (Research Center about Media Education, Innovation and Technology) of Catholic University of Milan is a partner of the project and is involved as an expert for the consultancy and validation of the curriculum model—articulated over the five-year period—and the didactic materials produced.

ESL (EAS in Italian)—Episodes of Situated Learning [15]—is the qualifying and distinctive methodological framework adopted here. It is based on three steps, i.e., anticipating, producing and reflecting. Anticipating is the step for activating the first appropriation of contents, producing is for working on constructs, and reflecting is for fixing the key-elements, favoring metacognitive processes and the development of awareness about what has been experienced and learned. In this sense, digital becomes a vehicle

² In Internet, URL: https://www.istruzione.it/scuola_digitale/curricoli_digitali.shtml.

to produce meanings, a specific object of reflection and an arena for activation in every phase of the lessons.

The curriculum—accompanied by a vademecum which illustrates its structure and topics (see Table 4)—consists of 90 h of lessons articulated in 30 ELS. The 30 lesson plans are equipped with resources, a glossary, and cards for the use of the suggested apps. Finally, 20 podcasts with a listening guide are proposed as transversal stimuli to several ESL to encourage reflection and discussion, starting from listening to some emblematic and current cases.

Table 4. Description of the digital curriculum

Target	Topic	DigComp area (2.1 and 2.2)
I–II class	1_1 Know and use the main communication and information sharing tools to interact and encourage inclusion as well	Information and data literacy Communication and collaboration
I–II class	1_2 Participate and inhabit the Net and communication environments	Communication and collaboration
I–II class	1_3 Awareness of own actions	Digital content creation
III–IV class	2_1 Digital ethics	Information and data literacy Digital content creation
III–IV class	2_2 Scripta manent: Raise awareness of the risks of computer traces in relation to privacy	Safety Digital content creation Problem solving
III–IV class	2_3 Consumer rights and duties	Communication and collaboration Safety Problem solving
V class	3_1 National and European law, transnationality of the Network	Communication and collaboration
V class	3_2 Digital culture and innovation	Communication and collaboration Digital content creation Problem solving

At the end of the first year dedicated to outlining the curriculum and the design of activities (SY 2020/21), the teachers of the leader school were trained in the ESL methodology; in turn, the Digital Team of the leader school took care of training the teachers of the two schools that are part of the network. An offer of online coaching guarantees teachers support in the experimenting phase of the curriculum (SY 2021/22). The coach is an expert of the research group whose function is halfway between that of the tutor and that of the consultant able to offer an external point of view and orientation.

2.3 Application of DigComp as a Framework for Media Education

The analysis of the two projects presented above focuses on identifying:

- the application of critical analysis to artifacts and media communication;
- the promotion of responsible acting on the network;
- the recognition of awareness dimension;
- the development of reflection.

In this contribution, we take into account two examples of activities, one for each project.

The first didactic proposal analyzed within the “Digital Well-being – School” project, “Create online content responsibly” (in Module 4 of the training course) concerns the third area of DigComp, i.e., “Creation of digital content”. Specific competences taken into consideration are the following:

- 3.1 Developing digital content
- 3.2 Integrating and re-elaborating digital content
- 3.3 Copyright and licences
- 5.2 Identifying needs and technological responses.

In fact, the module concerns the aspects of authorship of the Web, specifically the responsible production and publication, the promotion and sharing of contents considering objectives, and targets and problems related to copyright and privacy. To carry out this didactic proposal, a check-list created collaboratively in the classroom is used, paying particular attention to metacognitive and self-reflective processes related to the meaning of the content to be created and disseminated.

With reference to the description of the specific competence “3.1 Developing digital content” (create and edit digital content in different formats to express yourself through digital means) and “3.3 Copyright and licences” (understand how copyright and licensing apply to data, information and digital content), it emerges that DigComp was overly oriented towards avoiding legal problems and acquiring technical skills.

The second didactic proposal analyzed within the “Cogito Ergo Sum” project, “Netiquette for responsible prosumers” (proposed to students of the first and second grades), touches the second area of DigComp 2.1/2.2, i.e., “Communication and collaboration”. The specific competences taken into consideration are the following:

- 2.3 Engaging in citizenship through digital technologies
- 2.5 Netiquette.

The proposal focuses on the communicative and critical competence of the digital citizen as a prosumer. Students are invited to collect at least one netiquette of their social networks and online groups, producing a reflection on the motivations of netiquette by analyzing them. Then they produce a useful netiquette for different environments by leveraging the possibility of expressing one’s opinion in online spaces and promoting interventions capable of making the web more hospitable. Finally, the central aspects will be commented on to activate a more active way of experiencing communication, with an a posteriori lesson on prosumers, dimensions of citizenship, network communication.

Referring to the description of the specific competence “2.5 Netiquette” (to be aware of behavioral norms and know-how while using digital technologies and interacting in

digital environments. To adapt communication strategies to the specific audience and to be aware of cultural and generational diversity in digital environments) we can notice that DigComp was overly oriented to selecting the right digital service to participate in society and solving problems in netiquette management.

Analyzing the two projects, it emerges clearly that if the goal is to promote media education activities, DigComp is not a sufficient framework to guide the development of media skills.

The dimension of critical analysis is limited to the first area “Information and data literacy” and does not concern, for example, the online communication. The awareness dimension is flattened on the cognitive aspects regarding the know-how and the norms; it doesn’t dwell on the implications about the consequences of one’s own online behavior. The DigComp does not aim at promoting reflection; the term “reflection” does not appear in either DigComp 2.1 or 2.2.

In DigComp 2.2 there is little attention to the development of responsibility, especially in the examples of knowledge, skills and attitudes of the dimensions 2.3 “Collaborating through digital technologies” and 2.4 “Netiquette”.

The choice of methods adopted in the two projects (HaDIMB and ESL, as previously seen) is also significant and in line with the importance attributed to the dimensions of critical analysis which finds space within the preparatory phase of ESL. This is through problem solving, awareness and responsibility on which the final phase in HaDIMB invests with habit consolidation and reflection, stimulated through dedicated debriefing moments, as evident in both the projects.

3 A Proposal: Integration of LifeComp and DigComp as a Theoretical Framework for Media Education

The proposed solution emerges as an answer to cover the shortcomings left by the DigComp. The outcome highlighted that information literacy seems to be well-covered by the DigComp framework, while the dimensions of critical analysis, awareness and responsibility, as they are defined, do not allow for extensive and complete application.

This proposal was born with the intention of not abandoning the DigComp and trying to use the other frameworks proposed by the European Union. The framework that can be used for this aim is the recent LifeComp, published in 2020.

LifeComp is the European framework for Personal, Social and Learning-to-Learn key competence and is one of the eight European lifelong learning frameworks. An initial brief analysis of LifeComp enables us to understand the transversality of media education in relation to the eight European lifelong learning frameworks of competences:

- In the first area (Personal) of the LifeComp Framework, the dimensions of *wellbeing* and *self-regulation* are relevant for media education. These competencies integrate and complete the dimensions of DigComp [16].
- In the second area (Social), *communication* and *collaboration* are presented with a strong emphasis on *awareness*, *understanding* and *responsibility*, which are key elements of media education that are not included in DigComp.
- In the third area (Learning-to-Learn), *critical thinking* and *reflecting* are presented as key dimensions of the analysis and creative production of digital artefacts.

3.1 Wellbeing and Self-regulation

In various contributions, the well-being is considered one of the priority objectives of media education. One of the main ones is the dossier “Mapping Media Education Policies in the World” created by the United Nations, Alliance of Civilizations, UNESCO, European Commission and Grupo Comunicar [17]. The dossier analyzes the key elements for building up civic engagement, identity and media literacy and promotes a call through new media to rewrite the corporate responsibility to contribute to the wellbeing of society.

Another important contribution was produced by the Education Department of the Council of Europe in 2016 [18]: The Digital Citizenship Education (DCE) was a project aimed to set guidelines for the ministry committee of education of the member states to implement strategies to develop a democratic culture that respects human rights and cultural diversities. The wellbeing online was identified as a main domain in order to guarantee ethical behavior and empathy for positive online interaction based on positive online images of themselves and online interactions that are coherent and consistent.

In the LifeComp framework, one of the wellbeing descriptors is “Understanding potential risks for wellbeing and using reliable information and services for health and social protection” [19]. This is a relevant point of attention since the new media makes us responsible for actions concerning the dissemination of information that can harm social protection.

Many authors have stressed the importance of developing self-regulation processes. Among them Gonsalves emphasizes the importance of educating young people through slow process of self-regulation [4].

In the DigCompEdu, self-regulation appears as an activity among those considered for the collaboration dimension, specifically among peers [20]. With regard to this dimension, Salomon’s contribution emerges with importance, arguing that over time, the processes of media education and media literacy will be a part of the regulation and self-regulation process, both by the producers and by consumers of media productions [21].

Finally, Tisseron’s contribution is very relevant where self-regulation is one of the cornerstones of media education for children [6].

In the LifeComp framework, one of the self-regulation descriptors is “Understanding and regulating personal emotions, thoughts, and behaviors, including stress responses” [19]. A point of contact with many media education projects is the cyclical process of self-regulation, carried out through three main steps: establishing a desired state, comparing the current state with the desired one and applying a solution to modify the current state if it is not consistent with the desired one [22].

3.2 Awareness, Understanding and Responsibility in Communication

This is the dimension that the DigComp covers better than the others but in the transition from versions 2.0 to 2.1 [1], confirmed in version 2.2, we would probably have expected a greater depth with respect to the levels of competence concerning awareness and responsibility in communication. In the highly specialized level of proficiency of

communication competence in DigComp is not explained how to express a full awareness and responsibility.

On the other hand, in the LifeComp framework, the communication is a key competence of the social area. It is defined as “the use of relevant communication strategies, domain-specific codes and tools, depending on the context and content” [19] and the descriptors completely cover the awareness and understanding of interactions in different languages and socio-cultural contexts, with the aim of ensuring listening to others with confidence, assertiveness, clarity, and reciprocity.

3.3 Critical Thinking and Reflecting as Key Dimensions of Analysis and Creative Production of Digital Artefacts

Critical thinking is crucial in media education [23]. It looks at how we analyze, synthesize, and evaluate information and involves considering alternative ways of looking at a problem [24].

Different from our initial expectations, critical thinking in DigComp is present in a very limited way. It is identified in the information and data literacy competence, in the second point dedicated to evaluation data, information and digital content. Proficiency level 5–6 is defined as “critically assess the credibility and reliability of sources of data, information and digital content” [2].

The processes of analysis and critical thinking are therefore focused on the use of information while no equal attention is paid to the production of digital artefacts. In the dimension of DigComp “3. Digital content creation”, reflexive and critical thinking are not proposed in favor of the development of solutions to complex problems.

In the LifeComp framework, the L2.1 descriptor develops the awareness of potential biases in the data and one’s personal limitations while collecting valid and reliable information and ideas from a diverse and reputable source. On the other hand, the L.2.2 descriptor is concerned with comparing, analyzing, assessing, and synthesizing data, information, ideas, and media messages in order to draw logical conclusions.

4 Conclusions

This work suggests how to integrate DigComp and LifeComp in order to establish a more complete and enhanced framework for media education projects. One way to achieve integration is to consider the areas dedicated to communication and collaboration, then extend the key elements of the LifeComp in full to the other areas of the DigComp (Fig. 1).

In our opinion, this integration is necessary in cases where the grant calls establish the necessary use of the DigComp framework in the media education proposal, but it does not solve the problem of defining a definitive framework for media education.

An interconnection between the two frameworks is suggested in a note in the DigComp 2.2 report [24], referring to some examples of dimension 4 (knowledge, skills, attitudes).

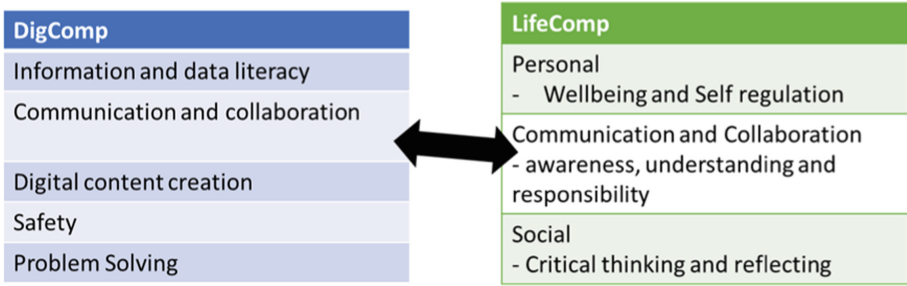


Fig. 1. Integration of DigComp and LifeComp for media education project

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References

1. Carretero, S., Vuorikari, R., Punie, Y.: DigComp 2.1: the digital competence framework for citizens with eight proficiency levels and examples of use. Publications Office of the European Union (2017)
2. Vuorikari, R., Kluzer, S., Punie, Y.: DigComp 2.2, the digital competence framework for citizens: with new examples of knowledge, skills and attitudes. European Commission, Joint Research Centre (2022). <https://data.europa.eu/doi/10.2760/115376>
3. Rivoltella, P.C.: Media education. Idea, metodo, ricerca. La Scuola, Brescia (2017)
4. Gonsalves, P.: Exercises in media education. Don Bosco Communications. Matunga, Mumbai (1995)
5. Hobbs, R.: Create to Learn: Introduction to Digital Literacy. Wiley-Blackwell, Hoboken (2017)
6. Tisseron, S.: 3-6-9-12. Apprivoiser les écrans et grandir. ERES, Toulouse (2014)
7. Masterman, L.: Teaching the Media. Commedia, London (1985)
8. Kačínová, V.: From a reductionist to a holistic model of digital competence and media education. Commun. Today **10**(2), 16–27 (2019)
9. Swertz, C.: DigComp 2.2 AT. Hintergründe und Kontexte. Medienimpulse **57**(1), 1–35 (2019)
10. UNESCO: Grunwald Declaration on Media Education (1982). http://www.unesco.org/education/information/nfsunesco/pdf/MEDIA_E.PDF
11. Menichetti, L.: La competenza digitale: dalla definizione a un framework per la scuola. Media Educ. **8**(2), 175–195 (2017)
12. Soriani, A., Trisolini, G.: Using blog and other on line tools for improving educators’ digital competences and professional development. Media Educ. **8**(1), 1–18 (2017)
13. Gerosa, T.: Il disegno sperimentale dell’intervento. In: Gui, M. (ed.) Benessere Digitale a scuola e a casa. Un percorso di educazione ai media nella connessione permanente, pp. 99–131. Mondadori Università, Milano (2019)
14. Garavaglia, A., Petti, L.: Sviluppo della proposta formativa “Benessere Digitale - scuole”. In: Gui, M. (ed.) Benessere Digitale a scuola e a casa. Un percorso di educazione ai media nella connessione permanente, pp. 73–98. Mondadori Università, Milano (2019)

15. Rivoltella, P.C.: Fare didattica con gli EAS. Episodi di Apprendimento Situato. La Scuola, Brescia (2013)
16. Soriani, A.: From media education to digital citizenship. Origins, perspectives and policy implementations in the school systems across Europe*. *Ricerche Di Pedagogia e Didattica-J. Theories Res. Educ.* **13**(3), 3 (2018). <https://doi.org/10.6092/issn.1970-2221/8557>
17. United Nations, Alliance of Civilizations, Grupo Comunicar, UNESCO, & European Commission: Mapping Media Education Policies in the World. In *Challenges* (2009). https://www.unaoc.org/images/mapping_media_education_book_final_version.pdf
18. COE: Competences for democratic culture. Living together as equals in culturally diverse democratic societies. Council of Europe Publishing (1991)
19. Sala, A., Punie, Y., Garkov, V., Giraldez, C.M.: LifeComp: the European framework for personal, social and learning to learn key competence. EUR 30246 EN, Publications Office of the European Union, Luxembourg (2020). <https://doi.org/10.2760/302967>. JRC120911
20. Redecker, C., Punie, Y., European Commission: Joint Research Centre: European framework for the digital competence of educators: DigCompEdu. Publications Office of the European Union (2017). <https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/european-framework-digital-competence-educators-digcompedu>
21. Salomon, E.: The role of broadcasting regulation in media literacy. In: United Nations et al (eds). Mapping Media Education Policies in the World, pp. 197–209 (2009)
22. Baumeister, R.F., Heatherton, T.F.: Self-regulation failure: an overview. *Psychol. Inq.* **7**(1), 1–15 (1996). https://doi.org/10.1207/s15327965pli0701_128
23. Rivoltella, P.C.: Nuovi alfabeti. Educazione e culture nella società post-mediale. Scholè Morcelliana, Brescia (2020)
24. Buckingham, D.: The Media Education Manifesto. Polity Press, Cambridge (1999)