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## THE IMPORTANCE OF OPENNESS WITHIN DIGITAL LITERACY

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### The importance of Digital Literacy in European policy

Equipping European citizens with the digital competences required by today's knowledge society is at the core of the EU strategy, as shown by a number of initiatives undertaken by EU institutions. In 2006, the European Parliament and the European Council recognized Digital Competence as one of the eight key competences that every European citizen should master (EC, 2014); and – together with language, literacy and numeracy – as one of the four foundational skills for learning. Furthermore, enhancing Digital Literacy is one of seven pillars in the European Commission's 2010 Digital Agenda for Europe. More recently, in 2011 the European Commission launched a project called DigComp to develop a Digital Competence Framework, which resulted in 2014 in a proposal for a taxonomy of Digital Competences for all European citizens (Ferrari et al., 2013), that is now being developed also for educators (DigCompEdu). Beyond this, work is being done at the EU level including the definition of indicators for the "safety" domain, the review of the DigComp framework on a regular basis regarding updated skills/competence needs, the identification of the digital skills requirements of different jobs and the expansion of the survey of schools on ICT in education on problem-solving (<https://ec.europa.eu/digital-agenda/en/pillar-6-enhancing-digital-literacy-skills-and-inclusion>).

### Digital Literacy: a permanently evolving concept

Digital Literacy means different things to different people, along a *continuum* that goes from instrumental skills in the use of ICTs, to productive and creative competence and efficiency, to social and participation attitudes. Further, Digital Literacy seems clearly transversal to all domain of activity of a contemporary citizen, who should be able to make a "confident, critical and creative use of ICT to achieve goals related to work, employability, learning, leisure, inclusion and/or participation in society" (Ala-Mutka, 2012; p.1). To further complicate the picture, reading the body of research that has emerged in recent years in the field, one gets exposed to concepts such as information literacy, 21<sup>st</sup> Century literacy and Media Literacy, which are all connected to the idea of *being able to meaningfully act in a digital society*, still tackling the problem from different angles. For example: is Media Literacy, intended as the basic capacity to be able to make sense of messages coming from the – increasingly digital – media that surround us, a part of Digital Literacy, or is Digital Literacy that component of Media Literacy that has to do with decoding and interacting with digital media?

In the last years the European Policy Network on Literacy (ELINET) has been advocating for a holistic view of Digital Literacy that goes well beyond the capacity to use ICT devices (Lemos & Nascimbeni, 2016), in line with the approach adopted by Jisc in the UK: “Digital literacy looks beyond functional IT skills to describe a richer set of digital behaviours, practices and identities” (Jisc, 2014). Specifically, ELINET noted that, even if policy and practice are clearly moving from the original concept of Digital Competence (intended merely as the capacity of use ICT) to a more holistic idea of Digital Literacy that encompasses digital citizenship and media literacy, still, the two concepts are sometimes used interchangeably, and this is creating some confusion.

In order to move towards a shared understanding of Digital Literacy, a first question to be tackled is the relation between Literacy – in the classic meaning – and Digital Literacy: is digital literacy just literacy in a new format? Along with Chase and Laufenberg, the ELINET position is that “digital literacy is not a new literacy. This is to say, if digital literacy is simply reading and writing in a digital environment, there is no need for the new terminology. (...) Let us then accept digital literacy as a genre, a format and tool to be found within the domain of standard literacy, rather than a concept standing at odds” (Chase and Laufenberg 2011: 535) and that the ICT revolution bring new problems and possibilities into the picture: “To read digitally, students and teachers must learn to read beyond the printed page. They must learn to read across all those platforms which they can use to create.” (Chase & Laufenberg, 2011; p.536). An important differentiation between classic and digital literacy has to do with the concept of *transliteracy*: to read and write digitally, one must learn to create and interpret texts in diverse modes (such as static and moving images and icons, spoken and written language, screen layout), and to navigate texts across diverse digital platforms which offer a variety of learning opportunities, formats for creation, and spaces for expression that were not previously available. A second important theme is that Digital Literacy, being a complex and socio-culturally sensitive issue, should be regarded as a set of social and sense-making competences associated with interacting with a range of digital devices, where the central issue is about the diverse literacies needed to communicate and collaborate with others and to find and make sense of the available information. Digital Literacy is in fact much more than the capacity to use ICT tools, and it should rather be considered as a set of competences associated with interacting with digital tools, where the central issue is about communicating and collaborating with others and making sense of the available information (Lankshear & Knobel, 2008).

### **Introducing openness as a core component of Digital Literacy**

In order to support this holistic understanding of Digital Literacy, one needs to take into account the change in knowledge production, management and consumptions that we have been witnessing in the last couple of decades, mainly connected with the pervasiveness of ICT (how should the concept of reading and writing adapt to a society where knowledge supports are being constantly and increasingly dematerialised?) and with the raise of social online practices (how to deal with the need to be able to work with less and less words, as Twitter or Five Sentences are pushing us to do?) (Five Sentences is “a personal policy that all email

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responses regardless of recipient or subject will be five sentences or less.” See <http://five.sentenc.es>). In an increasingly connected society where sharing is becoming in many cases the norm, we believe that a fundamental component of Digital Literacy should be “the capacity to work in the open”, sharing beyond our circles the knowledge we produce and making use of knowledge produced by others, in a transparent and traceable way. Learn how to work (but also play, communicate and participate) in the open implies a fundamental changes in daily practices that deals with online identity building, trust dynamics and knowledge management capacity, and has a terrific potential for change, since it can help us (and our societies) to enable meaningful participation, to produce visible progress and to build on the *openness momentum* (OpenMatt, 2016). “The value creation of tomorrow is born out of the mobility of people, knowledge, and energy. People operate from within their social networks with the same objective of goal sharing. Knowledge is also shared, and results in new value creation.” (Moravec, 2013; p.233). We cannot dream of open societies, open innovation and open education if we do not acquire the basic capacity to adopt open approaches in our daily activities: acquiring these basic capacities means becoming openness literate.

In order to understand whether (and to which extent) *openness-related competences* are included in existing Digital Literacy approaches, we will briefly analyse two well-known Digital Literacy frameworks: the one by JISC, the UK national agency in charge of ICT in education, and the one from the Mozilla Foundation – a pioneering institution working on the relation between internet and society. What these frameworks do is basically to regroup in a logical way all the components that need to be there if we want to have digitally literate citizens. Without going in details into the way the different components are described in the two frameworks, we have been looking for the potential impact of these frameworks in developing the capacity to “work in the open”, by searching for the way each component of the frameworks (being a skill, an area of activity, or something else) is thereby declined in terms of sharing, open licensing etc.

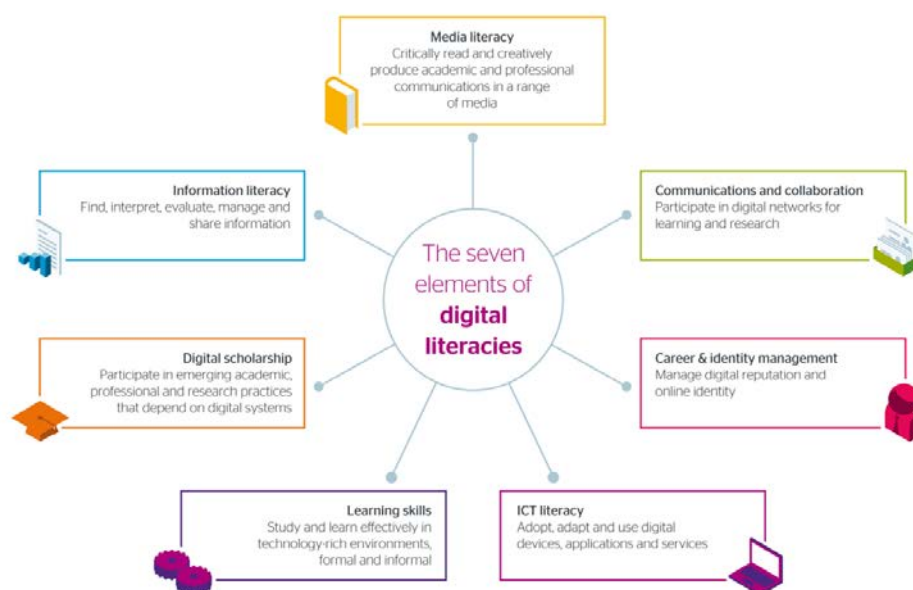


Figure 1. The seven elements of digital literacy (Source: Jisc, 2014)

The seven elements of the Jisc Digital Literacy framework presented in the above figure depict a holistic view of Digital Literacy and include some important elements that are normally absent from the classic narratives of Digital Literacy, such as Identity Management and Digital Scholarship. Further, the model has the merit to decisively move away from an understanding of Digital Literacy in terms of ICT skills, that is present as just one of the seven components of the framework. Still, the framework considers communication and collaboration as one of the seven dimensions and not as an activity that is by nature transversal to all the other components, and by doing so it somehow fails to represent that in contemporary society every activity – especially but not only when mediated by the web and social media – potentially embeds some kind of collaboration and communication and therefore is permeated by some kind of *sharing culture*, that should better be represented as a transversal dimension.

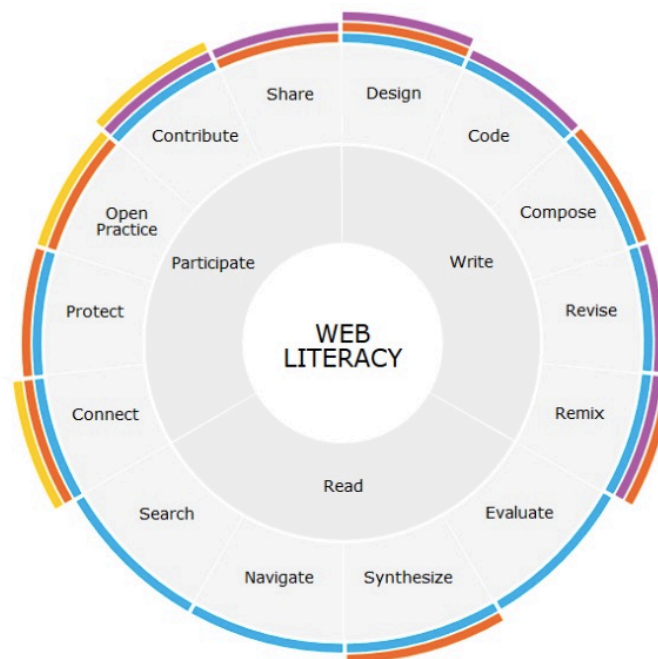


Figure 2. Web literacy as seen from the Mozilla Foundation (Source: Mozilla Foundation, 2016)

The Mozilla Web Literacy Framework crosses the “activities” (presented in the above figure) with four so-called 21<sup>st</sup> century skills: problem-solving, communication, creativity and collaboration, and by doing so it embeds collaborative activities across all the components of the framework, as proven by the fact that most of the activities in the model (such as for example Remix, Revise, Share and Connect) are by definition collaborative activities. Still, it also refers to *Open Practices* as a stand-alone area of activity, defining it as “Using and contributing web resources to keep the web transparent and universally accessible to all” (Mozilla Foundation, 2016). Again, having such a category risks to pass the message that openness-related competences are confined to one specific dimension of Digital Literacy, losing its transversal importance. On the other hand, “new media literacies should be seen as social skills, as ways of interacting within a larger community, and not simply an individualized skill to be used for personal expression” (Jenkins et al., 2006; p.20).

Apart from these minor critiques, an in-depth analysis of the two frameworks reveals that they are fully in line with the holistic understanding of Digital Literacy that is required to build active and participative citizens that we have presented at the beginning of the paper.

### Openness within Digital Literacy for educators: the DigCompEdu framework

Such a holistic view of Digital Literacy is particularly important in the education field, where using ICT can be understood as both instrumental to general learning purposes and as an area of reflection per-se. By using ICT in any subject, teachers and pupils can in fact develop the necessary ICT skills that today's society requires and at the same time they can build competence in areas such as critical appraisal of sources and an understanding of the social significance of digital technology (Sobi, 2013). Along these lines, we argue that being able to *work in the open* should not only be a fundamental literacy requirement for citizens, but also a prerequisite for teachers at all educational levels, especially if we want our schools to work in a connected way, learning across cultures and through collaboration. Already in 2006, Jenkins noted that collaboration is potentially the most radical element of new literacies, and might have an important impact on the transition from education to working life: "Schools are currently still training autonomous problem solvers, whereas as students enter the workplace, they are increasingly being asked to work in teams, drawing on different sets of expertise, and collaborating to solve problems" (Jenkins et al., 2006; p.20).

A number of national competence frameworks exists that focus on defining what should be the digital competences of educators in contemporary societies, most of these being based on the UNESCO ICT Competency Framework for Teachers (UNESCO and Microsoft 2011). An important recent development in this domain is the DigCompEdu project by the Joint Research Centre of the European Commission in Seville, that aims to develop a digital competence framework for educators at European level, with the aim to inform and reinforce national initiatives in the field under a common umbrella.

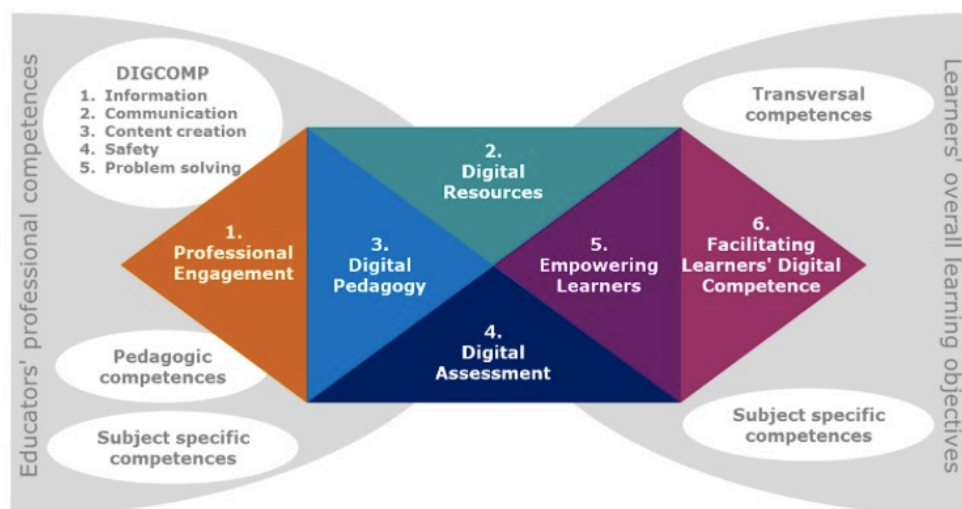


Figure 3. The DigCompEdu framework (Source: JRC Seville, 2017)

As shown in the figure above, the framework, that at the moment is undergoing a public consultation, aims to “bridge” the needed competences of 21<sup>st</sup> century educators (on the left in the figure) with the learning objectives of the learners (on the right), and suggests to do so by working the competences needed: (a) to work effectively in an ICT-rich professional environment (b) to find, create and share digital resources, (c) to effectively use digital tools for teaching and learning, (d) to enhance learning assessment through ICT, (e) to empower learners and to foster learners-centred strategies through the use of digital tools and (f) to create digital literacy among learners, in terms of active citizenship and media literacy.

By reading in details all the 23 competences connected with these six areas, which are all described in terms of sub-activities and proficiency descriptors, we find that collaboration (among teachers, with students, with parents and with other stakeholders) inspires the whole framework. This is a fundamental prerequisite for such a framework to be able to enhance open culture among teachers and ultimately to build that capacity to *work in the open* that we have described above. Hopefully, when this framework will be launched, it will be able to inspire national and institutional teachers’ training initiatives to move away from activities centred on learning how to use ICT towards activities aiming at understanding what kind of collaborations can be fostered by ICT, regardless of the technology we might adopt, and what this means for both teachers and students in terms of knowledge ownership, transparent collaboration and open digital identity management.

### **Conclusions: how to introduce Openness within Digital Literacy in education**

The DigCompEdu seems to be an important step in the right direction for stakeholders to understand the importance of embedding openness as a key feature of collaboration within Digital Literacy practices. Still, research need to further inform present and future policies in this evolving field, along three interrelated dimensions of literacy practice (Green & Beavis, 2012). First, an *operational dimension* that includes the skills and competences that enable individuals to read, write and interact across a range of platforms, tools and media (here again the transliteracy concept), including making meaning with and from diverse modes such as spoken and written language, images, sounds, videos. Second, a *sociocultural dimension* that refers to developing a repertoire of digital literacy practices in specific social and cultural contexts, such as constructing and/or maintaining effective social, educational and/or professional relationships online. Third, a *critical dimension* that recognises that meaning-making resources are selective and often operate as a means of social control and social exclusion (Spitzer, 2016). This last point is particularly important for two reasons. First, because the risks for physical and mental health connected to the use of the internet and social media are seldom studied from a literacy perspective. Evidence seems to suggest that there is a growing number of children and adolescents who have had negative experiences whilst using the web (Holloway et al., 2013; Spitzer, 2016), even if observers tend to disagree on the reasons for this (Boyd, 2014). Online risks include personal data management, privacy issues, online reputation management, internet addiction, cyberbullying, reduction of attention span (Sparrow, Liu, & Wegner, 2011) and consequent decline in learning performance

(Livingstone, Mascheroni, & Staksrud, 2015). Second, because improving Digital Literacy levels would be a cost effective way to support the integration of minority communities such as for example migrants: online resources would build on their current digital skills and competences, support literacy acquisition in the new country, as well as direct them and others to wider community resources such as classes and local libraries.

In conclusion, we argue that contemporary Digital Literacy initiatives, building on efforts such as the ones by jisc, Mozilla or the European Commission, should aim at transforming citizens – and educators – into critically literate actors able not simply to participate competently in digital practices but also to transform these practices actively and creatively, in a collaborative and open way.

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