

Digital literacy rights and online risks: which has the upper hand?

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SUMMARY. 1- Introduction. 2- The legal nature and content of the digital literacy rights in Brazil. 3- Digital literacy rights and online risks and their relation with equity and equality. 4- Recommendations for public authorities. 5- Conclusions.

Abstract

The right to education in an information society comprises digital education rights related to access, inclusion and quality in the use of ICT in teaching and learning. More specifically, these rights include rights in digital education, which encompass digital literacy rights, or media literacy rights, i. e. methodology and understanding of ICTs to use them in a safe, conscious and responsible way. Digital education rights also allow the appropriate exercising of other rights mediated by the digital environment, such as access to information, to privacy and to data protection. Digital literacy rights, within this legal framework, are a fundamental right, intrinsic to the constitutional right to education, as recognized in the Brazilian Civil Framework for the Internet – Law 12.965/2014. Their absence increases inequality, as well as increasing exposure to situations of risk, especially among the poorest. The cooperation of different social actors will be necessary to raise the educational level together in a homogenous way in society.

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Keywords: Digital Literacy Rights. Online Risks. Brazilian Law

1. Introduction

Information and communication technologies (ICTs) mediate a large part of daily life, both in the public and private spheres, transforming the dynamics of personal, social and commercial relations. Education is no different: ICTs are ubiquitous and open up numerous opportunities for collaboration and interconnection, transforming learning and teaching, and creating new ways to provide teacher training and support. In sum, ICTs play a fundamental role in expanding access to education and in promoting equity in education.

This means that the right to education has been broadened to include a new set of rights: digital education rights, related to access, inclusion and quality in the use of ICT in teaching and learning. More specifically, these rights include rights in digital education, which encompass digital literacy rights, or media literacy rights, i.e. methodology and understanding of ICTs so that it may be used in a safe, conscientious and responsible way.

Digital education rights involve at least two central problems: (i) protection and (ii) inclusion. In any case, their promotion and protection are a matter of obtaining the change of legal and education conditions prevailing in the present moment through political action.

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Effective protection of these rights requires the strengthening of education rights and the obligations of those who process the internet, the free flow of information and the processing of personal data. ICTs also pose critical questions in education regarding quality, academic freedom, humanistic values and protection against online risks.

Regarding inclusion, the problems are related to disparities in access to the Internet and digital technology, as well as constraints on infrastructure, which lead to marginalization and exclusion, particularly in the developing world. That's why the declaration adopted at the Unesco International Conference on Information and Communications Technologies and Post-2015 Education affirms the need for a collective understanding of how to unleash the full potential of ICTs for education in order to achieve the UN Sustainable Development Goals. A commitment to the Incheon Declaration and the Education 2030 framework was once again asserted, this time for the use of technology to strengthen access to and inclusion in education. In short, governments must commit themselves to making access to Internet and to digital education equal, as pointed out by the UN Special Rapporteur to the right to education (K. Singh, 2016).

It is undeniable that the use of ICTs in education must always be conducted in conformity with the principles and norms of the right to education. However, this poses some questions: do digital education rights and digital literacy rights require specific regulation? Is web legislation, establishing rights and duties on the web and protecting the right to privacy, enough to guarantee consistent protection of digital education rights and digital literacy rights?

In the current Brazilian regulatory framework for the Internet and Data Protection (the Civil Rights Framework for the Internet, Law no. 12.965/2014; and the Data Protection Law, Law no. 13.709/2018) – the relations between online opportunities and risks are mediated either by educational rights or privacy rights, or by both.

28 We do not underestimate the importance of this legislation in establishing rights and duties in the web and in protecting the right to data privacy. However, it is not enough to guarantee a consistent and high level of protection to these new rights in demand for education: digital literacy rights, which encompass access to connectivity, digital skills and the right to use ICT in teaching and learning, as well the capacity to learn, communicate, participate and create online.

Digital literacy rights are complementary, closely interconnected and mutually influential. Their absence, individual or conjointly, implies digital exclusion at different levels, increasing the inequality gap that already exists in Brazilian society. Research demonstrates the relationship between social inequality and internet access in developing countries, so it is essential to discuss ways of increasing online access, especially among the poorest.¹

Online risks, at first glance, are those brought about by social media, such as illegal content or activities, sexual violence, bullying, offensive online content etc. Nonetheless, online risks also include threats to privacy and the potential for AI to manipulate choices in economic and political decisions².

The aim of this paper is to analyze the protection of these new rights in education in the Brazilian legal system. Part 1 covers the legal nature and content of digital literacy rights in Brazil; part 2 covers their relation with equity and equality. Finally, some recommendations for public authorities are made. This approach leads to the analysis of online opportunities and risks as a complex and multilevel phenomenon, taking into account that they coexist and are correlated.

1 Sorj, Bernardo; Remold, Julie. (2016) Exclusão digital e educação no Brasil: dentro e fora da escola. Boletim técnico do SENAC, v.31, n. 3, Retrieved from: <http://www.bts.senac.br/index.php/bts/article/view/327/310>.

2 One example when this happens is associated with the existence of filter bubbles, when an algorithm segregates those that have the same political position. This is an obstacle to creation of democratic space discussions on social networks on the internet, and young people should be made aware of this.

2. The legal nature and content of digital literacy rights in Brazil

Education in Brazil is compulsory, free and secular. The schooling system is decentralized and quite complex. As a Federal State, the Brazilian educational system comprises each of the 26 states and over 5,500 municipal systems, as well as those of the Union and of the Federal District.

According to the Federal Constitution, the right to education is a social and individual right (arts. 6 and 205). In relation to children, the right to education has priority (art. 227), based on the fundamental principles of non-discrimination and equality of educational opportunities, guaranteed by the Constitution (Article 206, I).³

Digital literacy rights are a fundamental right within this legal framework, intrinsic to the constitutional right to education, as recognized in the Brazilian Civil Framework for the Internet – Law 12.965/2014, art. 26:

“Article 26. The constitutional duty of the State in providing education for all includes learning for the safe, conscious and responsible use of the Internet as a tool for the exercise of citizenship, the promotion of culture and technological development.”

There is no clarity within the educational literature on the scope of the concept and content of digital literacy rights; furthermore, the expression includes competences that are variously referred to as computer literacy, ICT literacy, information literacy, media literacy, multimodal literacy (Cordes, 2009), among others.

In the judicial area, considering the broad content of the right to education and the objectives of the internet regulation in Brazil – promotion of internet access (art. 4º., I), to information, to cultural life and to participation in public affairs (art. 4º., II)⁴ - one can conclude that the following are included among digital literacy rights:

- a) Access to connectivity, acquisition of digital skills and the use of ICTs in teaching and learning, as also recognized by Unesco⁵;
- b) The capacity to learn, communicate, participate and create;
- c) The protection of rights mediated by the use of ICTs, such as the right to access to information, to privacy and to data protection.

In these terms, the guarantee of widespread and equitable connectivity combined with the development of digital skills, with which the learner knows how to use such tools, being able, for example, to produce formatted texts on a computer and make searches online. The use of ICTs in education allows the expansion of the right to education through technological tools, with the additional effect of personalizing teaching according to the needs of the user. The use of digital tools also feeds back into and strengthens digital abilities.

3 The main national sources of Brazilian Education Law are the Federal Constitution of 1988, the National Education Act of 1996 – NEA (Law no. 9.394/96) and the National Education Plan – NEP (Law no.13.005/2014), the latter having a ten-year duration. Many other federal laws enforce the right to education, namely: (a) the Child and Adolescent Statute – ECA (Law 8.069/1990), and procedural laws such as (b) the Civil Action Law (Law No. 7,347/1985), (c) the Administrative Probity Law (Law No. 8,429/1992). This framework sees education as an individual and a social right.

4 Art. 4º The discipline of internet use in Brazil aims to promote: I - the right of all to access the internet; II - the access to information, to knowledge and participation in the cultural life and in the handling of public affairs; III - the innovation and the stimulus to the broad diffusion of new technologies and models of use and access; and IV - the adoption of open technology standards that allows communication, accessibility and interoperability between applications and databases. Retrieved from: http://www.planalto.gov.br/CCIVIL_03/_Ato2011-2014/2014/Lei/L12965.htm.

5 UNESCO. (2018a) A Global Framework of Reference on Digital Literacy Skills for Indicator 4.4.2. *Information Paper* No. 51 June. Paris. UIS/2018/ICT/IP/51. Retrieved from <http://uis.unesco.org/sites/default/files/documents/ip51-global-framework-reference-digital-literacy-skills-2018>.

Another benefit is the increase in the capacity of young people to learn how to learn. The right to the beneficial use of ICTs promotes the capacity to form ideas, to experiment, to think or to make mistakes without observation or interference by others. It is a way of protecting other democratic freedoms, among which are: political participation, freedom of conscience, economic freedom and freedom from discrimination.

Additionally, for the right to be effective, there is a need for individuals to be able to use digital media in an active way, as those responsible for its creation, responsible sharing of content and maintenance of a socially healthy space on the web. This includes the possibility of creation of channels of political and social engagement (i.e. blogs), of collaborative work in digital platforms, the creation of new software and open educational resources. Such abilities involve the most superficial competences, such as the use of computers for the application of learning based games in the classroom, for example, to the most complex, such as the understanding of how the recommendation algorithm on YouTube works, and how to administer the personal data collected by various applications, so that the user can fully use their right to data protection, as provided in the law.

The result of this is the development of what has been denominated “digital citizenship”, in other words, the responsible and appropriate use of technology, being aware of appropriate behavior, of rights and duties inherent in the online environment⁶.

In summary, from a legal point of view, the exercise of the right to digital literacy requires means (access) and modes (training). More specifically, digital literacy rights encompass the ability to make informed decisions about what we do and what we encounter online, to recognize how networked technology affects our behavior and perceptions, to create and effectively communicate with digital media tools (Livingstone, S. and Helsper, E. J., 2010). In that sense, digital literacy rights also require analytic skills (Koltay, 2011).

30 The right to digital literacy is also activated by the exercise of other rights mediated by new technologies. Among these rights, there are in particular the right to access to information (CF, art. 5º, XIV), the right to privacy and data protection (CF, art. 5º, X). The internet has a vast repository of information accessible to those with connectivity, with specific education needed to find, interpret and use reliable data extracted from the worldwide network of computers⁷. In parallel, it is necessary to understand, in each case, the potential and risks in online conduct, such as the possible moral and legal repercussions of a determined post on the internet.⁸

It is important to be aware that the use of ICT creates a large volume of personal data produced in the course of educational training. In fact, the use of ICTs in education produces digital traces of its users, as they interact with devices and electronic platforms. As such, the protection of digital literacy rights is also intrinsically linked to the protection of data collected by the use of ICTs in education (i.e., data relating to the deficiencies in teaching that the student confronted at a stage of their education, which can cause difficulties in seeking professional employment in the future). In this context, the recent Data Protection Law (Law no. 13709) – which aims to protect Brazilian citizens from privacy and data breaches, establishes special conditions applicable to children’s data: “Article 14. The processing of personal data of children and adolescents shall be carried out in their best interest, pursuant to this article and the pertinent legislation.” The problem is that the definition of online privacy is relative and personal consent does not impede online risks.

6 Rios, Maria de Fátima Serra. (2018) Digital literacy in elementary school: the educational intentionality of its pedagogical design. Thesis of Doctorate in Education. 188p. University of Sao Paulo. Sao Paulo.

7 Sturges, P., & Gastingier, A. (2010). Information Literacy as a Human Right. *Libri: International Journal of Libraries and Information Services*, (3), 195. Retrieved from <https://search.ebscohost.com.sbxproxy.fgv.br/login.aspx?direct=true&db=edsgao&AN=edsgcl.241246263&lang=pt-br&site=eds-live>.

8 5 Rights Foundation (2019). Towards an internet safety strategy. Report. January. Retrieved in: <https://d1qmdf3vop2107.cloudfront.net/eggplant-cherry.cloudvent.net/compressed/c1c90b5e630cd6bac92b6ad41afab22d.pdf>.

On the other hand, the use of ICT in education brings the possibility to collect and interpret educational data, which permits the comprehension of the learning process challenges for those who are developing their digital literacy.

In sum, digital literacy rights are composed of different literacies; it is a multifaceted right, as is the nature of technological development in which it is inherent. Naturally, these rights require funds, infrastructure, equipment, trained teachers and different learning strategies depending on students' age and background - to promote inclusive and equitable quality education and promoting lifelong learning opportunities for all – as emphasized in Sustainable Development Goal 4 (SDG 4).

3. Digital literacy rights and online risks and their relation with equity and equality

Digital literacy is an evolving concept, and ICT could result in further educational deprivation and in a tremendous form of exclusion if not well applied in all places⁹. Thus, the discussion of the online risks in light of digital literacy rights allows us to be aware that the crucial aspects here are equity and equality – both political issues rather than legal.

In general, the same regional and socio-economic disparities observed in traditional education are present in digital education in the Brazilian context.

In this respect, one can observe the following data:

- a) The International Telecommunication Union (ITU) survey database for 2014–2016 revealed that most adults in low and middle-income countries could not perform even the most basic ICT functions, like copy and paste. Brazil is in this cluster.
- b) In 2016, according to a survey developed by ICT Kids Online Brazil, 10% of the Brazilian population aged 9 to 17 years - 5.2 million children - were non Internet users, and of these, 2.9 million had never accessed the Internet. An estimated 1.4 million children are in rural areas and 2.4 million in classes D and E had never accessed the Internet – corresponding to 27% and 22% of children, respectively.
- c) The main reason for not using the Internet was lack of Internet availability in the household (11%). Another relevant factor is the lack of skills for using the Internet: 6% said they did not know how to use it, especially younger children and those belonging to economic classes D and E.¹⁰
- d) The same survey estimated that about eight out of ten children aged 9 to 17 years were Internet users (82%), corresponding to 24.3 million users throughout the country. Of these, 91% accessed the Internet via mobile phones. Exclusive Internet use through these devices was mentioned by 37% of Internet users in this age group, especially in classes D and E (61%), in rural areas (54%), and in the Northern region (52%)¹¹.
- e) Paradoxically, mobile phones make up for the lack of digital infrastructure, both in public and private Brazilian schools, for carrying out general activities in addition to pedagogical activities. In 2016, 51% of public school students and 60% of private school students reported using mobile phones for school activities at their teacher's request.

These findings not only show the inequalities mentioned before, based on regional disparities and social economic differences, but also point to various problems:

9 UNESCO (2018b) - Building tomorrow's digital skills. What conclusions can we draw from international comparative indicators? Working papers on education police 6. Paris.

10 ICT KIDS ONLINE BRAZIL - Survey on Internet use by Children in Brazil. 2016 (2017) / Núcleo de Informação e Coordenação do Ponto BR. -- São Paulo : Comitê Gestor da Internet no Brasil, Pg. 211. Retrieved from: https://cetic.br/media/docs/publicacoes/2/TIC_KIDS_ONLINE_2016_LivroEletronico.pdf.

11 Above.

- a) First – Internet access via cell phone prevents the development of basic ICT skills. That is: the lack of capacity to perform basic ICT skills could potentially grow.
- b) Second - The use of cell phones exacerbates the overexposure of children and adolescents to online risks.
- c) Third - Although digital skills are associated with both opportunities and risks encountered online, users with low economic status are particularly prone to suffer from the risks.

2. The components of this vicious circle share a common underlying feature: a lack of coordinated policies. In other words, balanced and convergent actions that fully enable advancement in the process of ICT appropriation in education and in social life.

Because of this, there is a contradiction between increasing internet access (via cell phone), including in remote regions, accompanied by the increasing risks associated with a lack of digital literacy.

Online risks are often those provoked by social media, such as illegal content or activities, sexual violence, sexting, bullying, offensive content online etc. Online risks can also include threats to privacy and the ability of Artificial Intelligence (AI) to manipulate choices in economic and political decisions. Besides inadequate data protection, the potential use of ICT as an empowerment tool for the privileged, the commercialization of education through digital technology and the risks posed to the pedagogical freedom of teachers and educators by the use of algorithms associated with artificial intelligence are also harmful.

If it is necessary to be aware of the online risks that most people face while using the Internet at school or at home, children are less aware of the risks and unable to correctly assess the long-term effects of these risks, such as data eternalization and digital reputation.

The risks associated with Internet use by children and teenagers present different natures: a) content risks, which place children as recipients of media content; b) contact risks, which place children as participants in interactive situations; and c) conduct risks, which place children as actors in interaction situations (Livingstone, Kirwall, Ponte, & Staksrud, 2014; Livingstone & Haddon, 2009).

Brazil has roughly 30 million children from 9 to 17 years old. According to the 2016 ICT Kids on line Brazil survey, they are subjected to general online risks such as:

- a) exposure to advertising on video websites, which has increased from 48% in 2013 to 69% in 2016.
- b) exposure to sensitive topics such as self-harm (53%);
- c) exposure to content of a sexual nature (18%);
- d) 23% of children suffer exposure to offensive treatment, exchanging messages of a sexual nature, and contact with unknown people online;
- e) Finally, another type of risk is the exposure of children to intolerance and hate speech online: 41%, which corresponds to ten million children throughout the country.

These numbers matched with other research carried out in Europe in 2014, where children identified the issues that concerned them on the internet. In first place was pornography (named by 22% of children who mentioned risks), in second came cyber-bullying (19%) and in third violent content (18%). These were the principal online risks that children identified¹².

Risks can reach children anywhere, anytime, regardless of frontiers, protection systems or legislation. It is not just children who are victims. Despite major regional inequalities, the use of the Internet is increasingly commonplace, and the exchange of personal data between public and private actors, including citizens, associations and undertakings across the planet has increased.

12 Livingstone, S., Kirwil, L., Ponte, C., & Staksrud, E. (2014). In their own words: What bothers children online? *European Journal of Communication*, 29(3), 271–288. <https://doi.org/10.1177/0267323114521045>.

As such, the concept of literacy as a right has become much more complex. It encompasses not only basic skills - like reading and writing - but the mastery of digital skills to understanding the convergence of algorithms and artificial intelligence, and to identify fake information, sometimes produced by machines, as already mentioned¹³.

Taking the US Children's Online Privacy Protection Act – COPPA into account, many bills in Brazil likewise intend to minimize risks by establishing legal protection for children (PL 1746/2015)¹⁴. Another initiative is the creation of a National Registry of Internet Access, in which all users must register their identity. The registry will also include a list of sites that publish inappropriate content for children and adolescents (PL 2390/15).

In short, online risks present social, legal, political and institutional problems that states cannot cope with alone. For all these reasons, society takes on renewed importance in online risk prevention. We are all stakeholders in this matter and need to correct the asymmetry of power that currently exists in regulation of new technologies.

Parents also need to learn about online risks they may face, and ways to prevent them. This includes emphasis on media literacy and critical thinking. Parental mediation of Internet use, in particular, is especially relevant since they are subject to public policy intervention. The literature has already demonstrated that there is a relationship between age, gender, parental mediation and online risks: the younger the children are, the greater the online risks without the intermediation of their parents¹⁵.

On the side of the usual educational agents (governmental authorities, families and schools), society has a fundamental responsibility to prevent online risks, considering that the “digital tsunami” is so powerful that legal measures and policies are unable to keep pace with it. The demand for social responsibility – which is part of SDG 4 (accountability in education)¹⁶ - assumes special relevance in countries with socioeconomic disparities, lack of educational resources and where even adult basic digital skills are very low, such as in Brazil.

In this sense, articles 205 and 227 of the Brazilian Constitution require the cooperation of society, beyond just the parents, in the education and broad protection of children and adults. This leads to our last point, which is a series of recommendations to public authorities regarding the protection and guarantee of digital literacy rights as the only way to make good use of the internet and take advantage of its opportunities.

4. Recommendations for public authorities

In order to promote the right to education in a healthy way, we argue that the use of technological tools in the educational environment can no longer be dismissed, but should be promoted according to constitutional norms. Students need to be well-prepared to face the challenges of today's information society.

13 Knight, W. (2019). An AI that writes convincing prose risks mass-producing fake news. MIT Technologic review. Cambridge.: <https://www.technologyreview.com/s/612960/an-ai-tool-auto-generates-fake-news-bogus-tweets-and-plenty-of-gibberish/>.

14 Retrieved from: <https://www.camara.leg.br/proposicoesWeb/fichadetramitacao?idProposicao=1301102> Access in 09/04/2019.

15 Cabello-Hutt, T., Cabello, P., & Claro, M. (2018). Online opportunities and risks for children and adolescents: The role of digital skills, age, gender and parental mediation in Brazil. *New Media & Society*, 20(7), 2411–2431. <https://doi.org/10.1177/1461444817724168>.

16 Additionally, the UNESCO 2017 GEM Report recognizes that ICT and digital literacy skills are commonly acquired outside formal education, e.g. in the community or workplace, and throughout life. UNESCO. (2017) Accountability in education: meeting our commitments. *Global education monitoring report – GEM REPORT 2017/8*. Pg. 172. Retrieved from: <http://unesdoc.unesco.org/images/0025/002593/259338e.pdf>.

Technology is more than an instrument for the activation of rights to education, but a mode (training) through which students can learn to deal critically with technology itself. In this way, digital literacy is guaranteed and, in counterpart, assures better quality education in general. Educational actions in this sense allow digitally literate children and young people to navigate the online environment safely, strengthening the protection of various other fundamental rights that are today continually violated online, such as privacy, intimacy and honor.

In conclusion, we argue that public policies must provide ICT access and, in parallel, promote the development of digital skills among those who are already connected, in order to enact what is provided in art.27 of the civil framework of the internet (Law 12.965/2014) with the possibility of reducing regional disparities and promoting digital inclusion:

Art. 27. Public initiatives to promote digital culture and promote the internet as a social tool shall:

I - promote digital inclusion;

II - seek to reduce gaps, especially between different regions of the country, regarding the access and use of information technology and communication; and

III - promote the production and dissemination of national content.

Furthermore, considering that the impact of ICTs on children's rights is yet to be understood and analyzed in depth, joint research and collective understanding of ICT risks are needed to shape guidelines, standards and regulations. It is also important to build cooperation both domestically and globally, as well as capacities to close knowledge gaps.

Ultimately, to achieve the best conditions for the development of digital skills, public authorities must pursue efforts in basic and further education.

34 Ultimately, to ensure that these policies are as relevant as possible, they must be designed in collaboration between governments, education and training institutions, NGOs, businesses, and especially, must always consider the important role of the family in this process.

5. Conclusion

This article proposes that the right to digital literacy, as a type of educational right, as well as reducing educational inequalities, diminishing exposure to online risks and at the same time guaranteeing the appropriate exercise of rights mediated by the online environment, such as access to information, to privacy and to data protection, for example.

We concluded that the use of ICTs in education must always be conducted conforming to the principles and norms of the right to education. However, do digital education rights and digital literacy rights require specific regulation? Is web legislation, establishing rights and duties on the web and protecting the right to privacy, enough to guarantee a consistent protection to digital education rights and digital literacy rights?

The questions are related. The answer to the first is affirmative, given that in the case of the second, the answer is negative. In our understanding, web legislation does not deal specifically with educational rights, and there is a need, therefore, for greater understanding and refinement of the problems relating to digital literacy rights. The problem is the practical effect of these measures and their adequacy to the rule of law, as happens with web legislation itself, which constitutes the theme for another article.

It is difficult to find anyone who argues that the Internet should not be regulated in any way. Throughout the world, judges increasingly face the challenge of regulating conduct on the network. Many other questions arise: Who is responsible for the actions of AI? How should liability be determined for their

mistakes? Can a legal system designed by humans keep pace with activities produced by AI capable of outthinking and potentially outmaneuvering them?

We have failed to fully reckon with the consequences of this new technological revolution, and its culmination may be a world relying on machines powered by data and algorithms and ungoverned by ethical or philosophical norms. In short, online risks present social, legal, political and institutional problems that the states alone cannot cope with. For all these reasons, society takes on renewed importance in online risk prevention. We are all stakeholders in this matter, and need to correct the asymmetry of power that currently exists in the regulation of AI.

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