Acting as ethical and responsible digital citizens: The teacher's key role

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The global information society was eagerly awaited in the 1970s and joyously celebrated in the 1980s, but as the new millennium loomed closer, it began to be viewed with distrust and trepidation. In the 21st century, it's a fact of life that's impossible to escape or ignore. And it poses a growing concern for educators: the issue of digital citizenship.

What is digital citizenship?

The term *digital citizenship* is a melding of two concepts: *citizen* and *digital*. According to the *Grand dictionnaire terminologique* (GDT, *Office québécois de la langue française*, *Gouvernement du Québec*, Canada), a *citizen* is an individual who benefits from certain rights and must fulfill certain duties in a democratic community.[1] Extending the concept, the *Thésaurus de l'activité gouvernementale* (*Gouvernement du Québec*, Canada) defines *citizenship* as a legal status that guarantees the enjoyment of civil liberties and the vote.[2] When this is combined with the term *digital*, which, according to Wikipedia, *"usually refers to something using digits, particularly binary digits […] in technology and computing,"*[3] we get *digital citizen* and *digital citizenship*.

The term *digital citizen* was coined in the education field over a dozen years ago. Since then, it has accumulated layers of definitions. For example, UNESCO draws its definition from the book *Digital Citizenship: The Internet, Society, and Participation* (Mossberger et al., 2007),[4] as follows: *"A digital citizen is a person who uses the Internet regularly and effectively. In qualifying as a digital citizen, a person generally must have extensive skills and knowledge in using the Internet*

through computers, mobile phones, and web-ready devices to interact with private and public organizations (Karen Mossberger, 2007).[5] In this sense, digital citizenship means having the right equipment and the skills to use it.

Mossberger and Tolbert (2008) also place great weight on engagement and active participation: *"A digital citizen utilizes information technology in order to engage in society, politics, and government participation."*[6] Other authors have built on this groundwork to develop educational approaches to digital citizenship. For instance, Ohler (2010) proposed that, in a world where anything is possible, cybernauts should make enlightened choices, add new material, and maintain a sense of responsibility, community awareness, and self-regulation.[7]

In the book *Digital Citizenship in Schools,*[8] Mike Ribble lays out nine elements of digital citizenship to help teachers understand emerging technology issues, including misuse and abuse. The nine elements are reiterated on the Digital Citizenship site, as follows:[9] 1) digital access (full electronic participation in society), 2) digital commerce (electronic buying and selling of goods), 3) digital communication (electronic exchange of information), 4) digital literacy (process of teaching and learning about technology and the use of technology, 5) digital etiquette (electronic standards of conduct or procedure, 6) digital law (electronic responsibility for actions and deeds, 7) digital rights and responsibilities (those freedoms extended to everyone in a digital world, 8) digital health & wellness (physical and psychological well-being in a digital technology world, and 9) digital security (self-protection, or electronic precautions to guarantee safety).

Jones and Fox (2009),[10] writing for the Pew Research Center,[11] point out that, compared to their older counterparts, young people use the Internet more for personal communication, entertainment, social networking, gaming, virtual worlds, blogging, and instant messaging. This suggests that while the upcoming generations are savvier with their gadgets and keener on new technologies, they're at greater risk for both receiving and perpetuating harmful Internet behaviors, from mean jokes to criminal activity. Along with other digital skills, therefore, they'll need to recognize the difference between innocuous fun and reprehensible behavior, including sabotage and bullying. Some countries have enacted laws to punish Internet wrongdoers. For example, in Canada's cyberbullying legislation, *"It is an offence under Canada's* Criminal Code *to share intimate images of a person without the consent of the person in the image."*[12] Youth, parents, and schools alike should be aware of the legal consequences of Internet behavior as well as the measures that are available to protect online privacy (e.g., Canada's *Digital Privacy Act*, 2015).[13]

In recent years, our research team[14] has investigated a number of issues of digital citizenship in education. We have argued for the need to prepare ethical and responsible citizens to participate in the digital age. We have demonstrated the importance, for both teachers and students, of acting ethically and responsibly while taking into consideration the social, cultural, and philosophical diversity of all stakeholders in the digital society, as well as the social, economic, environmental, and professional contexts of those who interact online. We have underscored that both teachers and students should be aware of how digital use can impact their own and others' physical and psychological well-being. And joining an expanding chorus of voices, we have advocated for a better understanding of issues related to the commodification of personal information, the impact of digital advertising, and the credibility of websites. Furthermore, we have called for the development of critical thinking and both ethical compliance and awareness of the laws in force, including digital copyright laws.

Digital citizenship issues and education

The take-away from the multilayered definitions of digital citizenship is that this is a complex issue that is undergoing change. Moreover, it's a timely and imperative issue that must be taught at school. Studies in the field, including by our team, clearly show that countries increasingly tend to regard digital citizenship as a core area in their digital competency frameworks. Digital citizenship and the ability to use digital tools effectively and appropriately serve as the basic foundation for all the other digital competencies.

It's a common complaint that classrooms and education systems haven't changed all that much. For all intents and purposes, teachers still attempt to transmit knowledge that is thought to be important. And although the knowledge transition methods have evolved, many authors conclude that, when all is said and done, knowledge transmission remains the goal. Yet digital technology seems to have overturned traditional teaching methods. The one-directional, top-down model of force-feeding information to students who know little about the subject is on its last legs. One explanation is the brisk rise of learning networks. For example, Wikipedia, an online encyclopedia whose authors form a network of digital citizens, can stand proudly next to the most prestigious hard copy encyclopaedia (e.g., *Encyclopedia Britannica*), with its stable of designated scholars.[15] The Wikipedia adventure is producing new teaching sources and spearheading new ways of learning. Meanwhile, fake news sites are beginning to lose their clout. Why? Because unlike formerly, the networked life requires a high level of digital aptitude. Witness the fact that Google, which is barely 20 years old, adroitly handles 6 billion queries a day.

In sum, if they are to act as responsible, clear-headed, and ethical digital citizens, students will need to acquire a full quiver of skills at school. They'll use digital technology not just for gaming and socializing, but to learn and discern. Beyond basic online searches for information, they'll be armed with the digital and technological skills required to engage, create, collaborate, and communicate in a digital world. And who knows what new skills will be the must-haves of tomorrow?

Acting as an informed digital citizen: knowing how to use social networks and understanding how they work

In the new digital reality, students must learn to think critically. Social networks and web browsers are particularly worrisome in terms of privacy and safety issues. For Sandra Wachter at the Oxford Internet Institute, *"Citizens should not need to rely on the 'ethical conscience' of tech companies to know their fundamental rights are protected."*[16] "Free expression" on social networks is all fine and good, but what if it foments controversy and division? For a case in point, just take a glance at the headlines in the United States. At the same time, the radicalism that's defiling the world has been blamed largely on algorithm-backed recommender systems. Based on covisitation counts, repeat buying, and prior viewing history, these filter engines encourage users to stay in their information bubble so that their opinions are never challenged. These may appear to be harmless nudges in a useful direction, but they act to foster a silo effect, or isolation and reinforcement, as opposed to sharing and enrichment fuelled by diverse viewpoints. The recommender systems work by applying mathematical and psychological models, algorithms, and heuristics in order to reduce cognitive dissonance as far as possible. Developed by Festinger[17] over half a century ago, cognitive dissonance theory proposes that people tend to seek consistency by eliminating the distance between incompatible beliefs or actions. In other words, birds of a feather flock together.

Still, the social networks themselves are not the real villains in this story. The real problem is the questionable uses they are put to, and more importantly, the failure to understand these uses. Accordingly, in the wake of recent revelations, Facebook has changed its mission from *"making the world more open and connected"*[18] to a more empowered vision: *"give people the power to build community and bring the world closer together."*[19]

If we really want to prepare young people to become ethical and responsible digital citizens, teachers must continue to play a leading role. Too often our youth are left to themselves, endlessly connecting on all manner of devices and social networks in blissful ignorance of what's under the hood. Schools can no longer shut their eyes to this benightedness. In less than two decades, the major cyber players—Google, Facebook, YouTube, Snapchat, Instagram, and Wikipedia—have dominated the global market, and new entrants are capturing masses of young people daily. Schools can't afford *not* to teach digital citizenship. Moreover, the teaching should go beyond a nuts and bolts approach: it should lever the full educational potential of digital technology. This means that, in the information and social networking age, the teacher's role has become even more important. Preparing students to act as ethical and responsible citizens in the information society will also go some way toward helping them understand and respect themselves as human beings. At the end of the day, digital citizens are also human beings.

Notes

1   « individu qui bénéficie de droits et qui doit s'acquitter de certains devoirs dans une collectivité démocratique » : http://www.granddictionnaire.com

2   « *Qualité juridique qui garantit à son titulaire la jouissance des libertés publiques et l'électorat [...]* ». http://www.thesaurus.gouv.qc.ca/tag/terme.do?id=2547

3   https://en.wikipedia.org/wiki/Digital#Technology_and_computing

4   Mossberger, K., Tolbert, C. J., & McNeal, R. S. (2007). *Digital Citizenship: The Internet, Society, and Participation*. MIT Press.

5   https://en.unesco.org/sites/default/files/knowledge_socities_policy_library.pdf

6   Mossberger, K. & Tolbert, C. (2008). Digital Citizenship: The Internet, Society and Participation. MIT Press.

7   Ohler, J. B. (2010). *Digital Community, Digital Citizen*. Corwin Press.

8   Ribble, M. (2011). *Digital Citizenship in Schools*. International Society for Technology in Education.

9   http://digitalcitizenship.net

10   Jones, S. and Fox, S. (2009). Generations Online in 2009. *Pew Internet & American Life Project.* Accessed at: http://www.pewinternet.org/2009/01/28/generations-online-in-2009/

11   http://www.pewresearch.org/

12   https://www.publicsafety.gc.ca/cnt/ntnl-scrt/cbr-scrt/cbrbllng/prnts/lgl-cnsqncs-en.aspx

13   *Digital Privacy Act*. S.C. 2015, c. 32. https://laws-lois.justice.gc.ca/eng/annualstatutes/2015_32/page-1.html

14   Karsenti, T.; Poellhuber, B.; Michelot, F.; Tremblay, C.; & Parent, S. (2018). *Vers de nouvelles compétences numériques.* Presentation at the 5th International Education Conference, Montreal (Canada), May 4, 2018.

15   See Karsenti, T. (2006). Wikipédia contre Britannica. *Autre Forum, 10*(1), 30-31.

16   Source : https://twitter.com/TheEconomist/status/993013879277015040

17   Festinger, L. (1962). *A Theory of Cognitive Dissonance* (Vol. 2). Stanford University Press.

18   Source: https://www.facebook.com/notes/mark-zuckerberg/bringing-the-world-closer-together/10154944663901634/

19   Source : https://www.bloomberg.com/news/articles/2017-06-22/zuckerberg-s-new-mission-for-facebook-bringing-the-world-closer

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