

# **Internet Research Ethics: Digital Citizenship Education**

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# Internet Research Ethics: Digital Citizenship Education

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## Abstract

Our goal for this paper discusses the main research ethical concerns that arise in internet research and reviews existing research ethical guidance in relation to its application for educating digital citizens. In recent years we have witnessed a revolution in Information and Communication Technologies (ICTs) that has transformed every field of knowledge. Education has not remained detached from this revolution. Ethical questions in relation to technology encompass a wide range of topics, including privacy, neutrality, the digital divide, cybercrime, and transparency. In a growing digital society, digital citizens recognize and value the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they engage in safe, legal and ethical behaviors. Too often we see technology users misuse and abuse technology because they are unaware of what is appropriate. The true purpose of education in the digital age is to empower, researcher, educators, students, and families to be empathetic, responsible consumers and creators in the digital space and to maintain a community that values and practices positive digital citizenship. Educational and social science researchers should continue to seek better and more responsive guidelines that describe how to deal with ethical issues arising in various online research situations, contexts, and conditions and to educate the community by publishing and sharing their practices, findings, and solutions. Responsible practitioners, researchers and scholars need to become informed of current ethical best practices and make every effort to use appropriate ethical guidelines when designing and conducting research using the internet.

**Keywords:** *Internet Research, Research Ethics, Digital Citizenship, Education.*

## Introduction

The Internet is a global network, sharing the same protocol and linking universities, research communities, businesses and individuals worldwide. The global nature of the Internet becomes ever more valuable as more and more people have access to the Internet. It is an incredible source of information of all kinds; it enables a free flow of information to all citizens

of cyberspace in ways never before possible. However, owners of information (researchers, authors, artists, designers, etc.) have a right to be compensated for their work; indeed without any system to protect owners' rights, it would be hard to encourage such people to produce.

Researchers conducting internet research frequently encounter challenges in relation to research ethics review. Internet research can pose new challenges in relation to the ethical conduct of research and research ethics committees are frequently unsure how to adapt standard research ethical requirements to the realm of internet research.

### **Ethical Concerns in Internet Research**

The commonly accepted definition of Internet research ethics (IRE) has been used by Buchanan and Ess (2008, 2009), Buchanan (2010), and Ess & Association of Internet Researchers (AoIR) (2002):

*IRE* is defined as the analysis of ethical issues and application of research ethics principles as they pertain to research conducted on and in the Internet. Internet-based research, broadly defined, is research which utilizes the Internet to collect information through an online tool, such as an online survey; studies about how people use the Internet, e.g., through collecting data and/or examining activities in or on any online environments; and/or, uses of online datasets, databases, or repositories.

Current growth in social networking, online digital media production and consumption, and cloud and mobile computing makes the internet an exciting and engaging environment for formal and informal learning and playful interactions (Jacobsen, 2010; Thomas & Brown, 2011). Digital and social technologies tend to change how people of all ages learn, collaborate, play, socialize, access resources and services, and connect (Jacobsen & Friesen, 2011). Ongoing research is needed to better understand how and why people play and participate in online communities and join global collectives to work collaboratively to design, develop, implement, assess, and discuss their strategies, solutions, goals, and ideas and to build upon other's digital expressions and creations. Educational researchers both require and have designed new online research methods to study the use of the internet and digital media for connecting, communicating, teaching, and learning in both formal and informal environments.

When use of the internet became more widespread in the 1990s, researchers' attention began to be drawn to the research potential of this medium. This included a wide range of research concerns, from an interest in understanding the use of the medium and the new

possibilities of online activities and interaction that it created, to using it as a large and easily accessible repository of quantitative and qualitative data, and also to its potential as a novel medium for the recruitment of research participants and a medium for the fast and low cost delivery of surveys and other research instruments. At the same time, increasing attention was being paid to determining what constituted good ethical practice in social science research. Internet research was one emerging area of research and the development of guidelines on ethical issues in internet research soon followed.

The following section will provide a brief introduction to the main research ethical concerns arising in common forms of internet research, with particular emphasis on its potential impact on human participants. It is important to acknowledge the significant methodological variety in internet research; the concerns discussed here are necessarily selective. The underlying assumption of this paper is that the basic ethical concerns in internet research can be understood in terms of general research ethical concepts used in social science research (see also Elgesem, 2002). However, the various contexts of internet research raise some specific issues that require the reconsideration and problematisation of standard ethical practices; how much they stretch existing research ethical practices and requirements is open to debate (Frankel & Siang, 1999; Pittenger, 2003).

- ***The relationship between researchers, participants and online materials***

The internet allows researchers to reach large numbers of research participants who may be widely dispersed geographically, and to do so at a much lower cost than traditional research approaches (Frankel & Siang, 1999). This makes it a potentially very attractive medium for the recruitment of participants.

However, additional challenges arise when the relationship between researchers and participants is not established clearly from the outset, or when it uses channels that potential participants do not expect to be used for research. The internet makes it significantly easier for researchers not to have to present themselves as researchers in order to access interesting data. It facilitates easy access to vast amounts of materials that the authors may never have envisaged as permanently available, it allows researchers to view interaction without leaving publically visible trace of their presence, and it makes possible easy data mining by researchers in contexts dedicated to purposes far from research.

As Eysenbach and Till (2001) highlight in relation to qualitative health research, the role of researchers could range from (i) ‘passive analysis’, where researchers analyse the textual materials on specific internet sites without actively intervening in the context which they are analysing, (ii) ‘active analysis’, where researchers intervene actively in a particular context to evoke relevant responses, but without identifying themselves as researchers, and (iii) ‘forms of active recruitment’, where researchers identify themselves as such and use the internet as a medium of recruiting participants and collecting information, which are clearly identified as research activities.

While deception in relation to the ‘true role’ of researchers is not unique to the online environment and is not uncommon for example in certain types of ethnographic research, it is generally considered ethically problematic in contemporary research ethics and requires stronger ethical justifications (Pittenger, 2003).

- ***The blurring of the distinction between public and private information***

Usually, in traditional research ethics there is the assumption that a fairly clear distinction exists in ethical requirements between public and private information. Use of material that is in the public domain does not require individual informed consent, whereas research that collects data outside the public domain is considered private and permission needs to be sought from the originators of the data for any use of that data. However, the internet is a peculiar case because the boundaries between the public and the private are frequently blurred in the minds of users, especially in relation to social interactions and personal communications in a wide range of online contexts.

What characterises all such sites is that on the one hand, material is not only openly accessible but also archived over extended periods of time; on the other hand, people write their contributions often under the assumption of relative privacy and react negatively to perceived intrusions (Frankel & Siang, 1999; Sixsmith & Murray, 2001). Even for a more recent service like *Twitter* which, in comparison to the original chat rooms, is set up more clearly as a medium of individual public ‘broadcasting’, in practice the very same issues arise, as evident in a lively discussion on the topic in Zimmer (2010b) where respondents expressed strongly diverging views on whether research on contributions on public *Twitter* accounts would require consent by account owners.

- ***Concerns about informed consent***

Informed consent is one of the cornerstones of research ethics. Most research with human participants requires researchers to obtain participants' explicit consent to participate in the research, on the basis of a comprehensive process of information about the research project. In order to be able to give meaningful informed consent, participants need to (i) have the ability to reflect on the information, (ii) make their decision voluntarily without being put under any pressure to participate or make decisions quickly, (iii) have been given all relevant information on the research and its potential implications, (iv) have understood that information, (v) made a conscious decision to participate and expressed it unambiguously to the researcher. For the use of traditional research methods in an online environment, e.g., the recruitment of participants in an online environment for online surveys, online interviewing or online focus groups, the standard ethical requirements regarding consent apply. Conducting informed consent in an online environment poses some specific challenges: in the absence of face-to-face interaction it is more difficult for the researcher to ascertain whether the participant is in principle able to consent and has indeed understood the information provided to them (Frankel & Siang, 1999). However, these problems are not unique to the online environment, and challenges to achieving meaningful consent are present in most research settings (Walther, 2002).

- ***Confidentiality, anonymity and data management***

Confidentiality as an ethical concern is generally a strict requirement for anybody handling other persons' personal data, and strict legal requirements are in place in most jurisdictions. Researchers are not entitled to use or share potentially identifiable personal data without the participant's agreement, and uses of personal data for particular purposes have to be authorised by the participant. The requirement of confidentiality is closely related to that of anonymity, but they are not identical. Confidentiality is concerned with the issue of accessing and sharing personal information only on the basis of authorization by the person concerned, whereas anonymity is concerned with making sure the person whose data is being used is not identifiable to others from the research data. Confidentiality is also closely linked to the requirement of security of data storage.

One significant concern in relation to confidentiality is data security, beginning with the potentially unsecure transmission of electronic data, to lack of awareness of the kind of identifying information available to the researcher, to unintentional sharing of information e.g., through shared email accounts (Frankel & Siang, 1999), to finally the potential for

compromising confidentiality at a later stage of research through data multiplication, loss or insufficiently secure storage, or even the problematic legal status of certain computer files as public records (Pittenger, 2003).

- ***Vulnerability, risk and benefit***

Concern about participants' vulnerability is a particularly significant research ethical concern; prevention of harm to participants is generally considered to be the main rationale for the requirement of research ethics review. Internet research raises a number of concerns regarding vulnerability and harm, but also regarding potential benefit that other forms of research might not be able to achieve. Some of the concerns regarding risk of harm have already been addressed in the section on privacy and confidentiality. In addition, particular concerns regarding vulnerable participant groups arise. The internet is frequently used as a medium of support for persons who may be subject to mental or physical vulnerabilities, impairments or disabilities.

A particular area of concern in relation to harm is the issue of researching the internet use of minors. Vulnerable children and teenagers may use internet facilities in problematic or risky ways, from posting inappropriate photos or comments on social networking sites, divulging drug use or under-age sexual activity, to cyber-bullying, or the use of pro-anorexia, self-harm or suicide websites. On the one hand, achieving a better understanding of these phenomena through research is desirable; on the other hand, conducting research with minors on these issues could be considered ethically problematic. Difficulties regarding parental consent would be a significant obstacle to such research, not just because of general issues of anonymity, but especially because children may be very hesitant to even inform their parents about their internet presence and activities (Stern, 2004). Child protection concerns are an additional issue.

Child protection guidelines might require researchers to intervene if they become aware of children who are at risk of significant harm, but to do so in online contexts is likely to be extremely challenging. Even the prospect that child protection interventions might be attempted is likely to make potential participants extremely hesitant to allow researchers access. Moreover, accessing such sensitive materials without transparent and explicit consent would pose the familiar problems of privacy.

### **Digital Citizens**

Digital citizenship is a complex subject matter. It is the intent of the current guide to bring shape to this domain through questions and considerations that may be weighed by leaders.

Through this process, the current work will assist leadership and stakeholder decision-making, guiding the development of effective digital citizenship policies.

Digital citizens recognize and value the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they engage in safe, legal and ethical behaviors.

A digital citizen refers to a person utilizing information technology (IT) in order to engage in society, politics, and government. K. Mossberger, et al., (2011), define digital citizens as "those who use the Internet regularly and effectively" Ohler, Jason B.( 2015).

It is a concept which helps teachers, technology leaders, and parents talk about what all users should know regarding appropriate technology use. Digital Citizenship is more than just a teaching tool; it is a way to prepare researchers, students/technology users for a society full of technology. Too often we see technology users misuse and abuse technology because they are unaware of what is appropriate. Our goal for this paper is to help you become aware of what is appropriate and what could be harmful.

### **The Nine Elements of Digital Citizenship**

According to digitalcitizenship.net, the nine elements or themes, (2017), of digital citizenship are:

1. **Digital access: Full electronic participation in society.** This is perhaps one of the most fundamental blocks to being a digital citizen. However, due to socioeconomic status, location, and other disabilities- some individuals may not have digital access. Recently, schools have been becoming more connected with the internet, often offering computers, and other forms of access. This can be offered through kiosks, community centers, and open labs. This most often is associated with the digital divide and factors associated with such. Digital access is available in many remote countries via cyber cafés and small coffee shops.
2. **Digital commerce: Electronic buying and selling goods.** This is the ability for users to recognize that much of the economy is regulated online. It also deals with the understanding of the dangers and benefits of online buying, using credit cards online, and so forth. As with the advantages and legal activities- there is also dangerous activities such as illegal downloads, gambling, drug deals, pornography, plagiarism, and so forth.

3. **Digital communication: Electronic exchange of information.** This element deals with understanding the variety of online communication mediums such as email, instant messaging, Facebook messenger, the variety of apps, and so forth. There is a standard of etiquette associated with each medium.
4. **Digital literacy: Process of teaching and learning about technology and use of technology.** This deals with the understanding of how to use various digital devices. For example, how to properly search for something on a search engine versus a database. How to use various online logs. Oftentimes many educational institutions will help form an individual's digital literacy.
5. **Digital etiquette: Electronic standards conduct or procedure.** As discussed in the third element, digital communication, this is the expectation that various mediums require a variety of etiquette. Certain mediums demand more appropriate behavior and language than others.
6. **Digital law: Electronic responsibility for actions and deeds.** This is where enforcement occurs for illegal downloads, plagiarizing, hacking, creating viruses, sending spams, identity theft, cyber-bullying, and so forth.
7. **Digital rights and responsibilities: Those freedoms extended to everyone in a digital world.** This is the set of rights digital citizens have such as privacy, speech, and so forth.
8. **Digital health: Physical and psychological well-being in a digital technology world.** Digital citizens must be aware of the physical stress placed on their bodies by internet usage. They must be aware to not become overly dependent on the internet causing eye strain, headaches, stress problems, and so on.
9. **Digital security (or self-protection): Electronic precaution that help guarantee safety.** This simply means that citizens must take measures to be safe by practicing using difficult passwords, virus protection, backing up data, and so forth.

### **Educating Digital Citizens**

In a growing digital society, it is critical for all participants to develop the attributes and skills necessary to become responsible, respectful, productive digital citizens. The true purpose of education in the digital age is to empower, researcher, educators, students, and families to be empathetic, responsible consumers and creators in the digital space and to maintain a community that values and practices positive digital citizenship.

In recent years we have witnessed a revolution in Information and Communication Technologies (ICTs) that has transformed every field of knowledge. Education has not remained detached from this revolution. Ethical questions in relation to technology encompass a wide range of topics, including privacy, neutrality, the digital divide, cybercrime, and transparency. However, when we consider ethics and technology in relation to education, even more questions exist. Education is a key to the functioning of a democratic society.

### **Conclusion**

It is highly likely that the potential ethical problems will remain complex in the future. The current movement towards content and knowledge as a global public good could expand the access and opening up of education exponentially, a step that would bring with it a great deal of ethical questions, situations and questions that have not yet even been considered. Our concern for the technology = progress axiom notwithstanding, these innovations provide many positive opportunities for our lives and our communities.

Good ethical practices for internet research are complex. Those in the research community who undertake the development of better policy must consider the situational, contextual, and temporal aspects of IRE in the development of flexible, open-ended, and responsive guidelines that address the complexity and diversity of online research spaces.

Therefore, we are not suggesting the development of hard and fast decision rules, but the creation of systematic, collaborative, and multidisciplinary guidelines and frameworks (McKee & Porter, 2009), complex IRE cases for education and analysis, and open-access sharing of best practices that will aid researchers and REBs in open and transparent decision making for the conduct of ethical internet research. These guidelines should include contextual examples and exemplars of internet research from around the globe.

The following recommendations are valuable principles for action that should be taken into consideration when any decisions on the use of ICTs in the educational and social environments are taken by governments, companies, organizations, technicians, politicians, researchers, teachers, educators, or private citizens (Olcott Jr, Don, et al. , 2015) .

- Training in the responsible, secure and ethical use of technologies must reach all members of society. All individuals must be given quality training in accordance with their needs, interests, abilities and skills. All individuals require attention, especially

those in the less-privileged social groups who find themselves digitally excluded. This attention should continue until the situation is reversed.

- Education is based on values, and education is provided in, with and from values. Education in the ethical, responsible and safe use of digital technologies is not viable if values are not constantly and explicitly present in all education initiatives. Only by constructing individual and collective values in each and every child, adolescent and youth is it possible to create an ethically mature society. This training in values should be extended to the entire life cycle of all individuals.
- Technologies should be used appropriately (judiciously and respectfully), not just used. The appropriate use of technologies responds to criteria of sustainability, regulated consumption, respect for people and their rights, the satisfaction of basic needs (including education, communication and social involvement), and personal and collective well-being. Any excessive, inappropriate or harmful use, management or development of these technologies that negatively affects people immediately or in the future should be rejected.
- Individual and collective commitment determines the responsible and exemplary use of technologies. This commitment: (a) is based on values and duties; (b) requires awareness of one's use of technologies and of the consequences of one's decisions and actions; and (c) is made when an individual or group systematically makes a decision about technology and uses this technology in accordance with their answers to questions such as: how does my using it make me better?, how do it improve my performance?, how does it benefit and how is it detrimental to others?, how does it help others?, and what does it give to society?

Below we present a series of preliminary recommendations for policymakers and educators that are aimed at achieving progress in the ever-changing field of techno-ethics:

- Integrate global perspectives, best practices and lessons learned on the ethical uses of digital technologies so that they align with the cultural, social and ethnic norms of the community and of society in general.
- Promote the adoption and use of the Ethical Context Continuum (ECC) to facilitate dialogue between and commitment from local educators, businesspeople, community professionals, parents and government leaders regarding all potential ethical problems.

- Promote programs on the safe and responsible use of digital technologies directed at all groups and social sectors with deficiencies, shortages or specific problems.
- Develop and distribute a Code of conduct or Code of techno-ethics on the use of digital technologies that reaches out to a broad section of the community (education, business, government, services, and even religious organizations).
- Identify technologically responsible teaching centers. Recognize their work in society and extend this recognition to all entities, organizations or groups that demonstrate a responsible use of ICTs.
- Train, to an optimal level of digital competence, all professionals who participate in training, prevention and intervention programs on the correct use of digital technologies. In all cases include the ethical dimension of this competence in accordance with the functions and responsibilities of each professional.
- Help to define specific norms similar to those that are aimed at ensuring the quality of school textbooks.
- Involve teachers and education specialists in the development of educational technology (developers and engineers often work behind closed doors when developing their products).
- Revise teacher training programs to ensure that they include the positive use of education technologies.
- Introduce specific programs to eradicate plagiarism and academic fraud at teaching centers.
- Finance and directly support the development of education technology and ensure that it is free from commercial interests.
- Clearly define the scope of the use of digital technology in education. Identify where it provides added value and where it does not. Take special care to ensure that children and adults who are vulnerable are protected from unethical practices that use technology.
- Ensure that technology is not only adapted to education but that it is understood and used responsibly. Among other initiatives to promote the responsible use of technology, ensure that school curriculums promote awareness and reflection on the notion of privacy. Ensure that they provide information on personal data protection in a digital environment and that they discuss the tools available for ensuring this protection.

- Create an Observatory on the responsible use of technologies in society that will implement some of these recommendations as well as other specific ones such as: draw an exhaustive map of existing good practices in society regarding the responsible use of technologies; compile and disseminate specific online resources to promote responsible use; and carry out actions aimed at promoting greater awareness among the citizens. The power and potential of digital technologies are only surpassed by the power and potential of human beings. Ethical choices are made by people, communities, governments, companies, universities and societies. We all have a collective responsibility to ensure that the benefits derived from these innovations eradicate and control their negative uses and abuses in a balanced way. Politicians and educators have a fundamental role to play in educating the entire population in the appropriate uses of these innovations.

Educational and social science researchers should continue to seek better and more responsive guidelines that describe how to deal with ethical issues arising in various online research situations, contexts, and conditions and to educate the community by publishing and sharing their practices, findings, and solutions. Responsible practitioners, researchers and scholars need to become informed of current ethical best practices and make every effort to use appropriate ethical guidelines when designing and conducting research using the internet.

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