MIKE RIBBLE argues that though the take up of new technologies has brought about changed 'landscapes' for education, not all users have had an opportunity to teach and to learn about what is considered appropriate use.

Technology has changed education. From filmstrips to the internet there has been a continual increase in the association of technology to schools. Within the last two decades digital technology has steadily become a way of life for children and adults alike. As in any major shift in technology, there is a time between the first introduction and when it becomes mainstream.

It is almost impossible to read a paper, magazine or story on the internet, watch a show on television or the internet, that doesn't talk about changes or issues with these new technologies. Because of their availability it makes social networking sites or microblogging interesting to technology users but most especially to children. These sites open up the world to our children; it provides them a window to what others are doing, as well as an outlet for their own expression. A major imperative for schools and families is to impart the understanding of how to be a responsible user. What our students need is an understanding of 'digital' citizenship.

What is digital citizenship? It has been defined as the norms of appropriate, responsible behaviour with regard to technology use. Digital citizenship does not just set down rules that must be followed. Instead it provides a framework from which technology users can begin to define the issues with technology and how to deal with them. Digital citizenship divides the new technology into nine elements. Within each of these elements there is a supporting theme for educators for considering digital technologies and its appropriate use.

- 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 its uses
- Digital Etiquette: electronic standards of conduct or procedure

- Digital Law: electronic responsibility for actions and deeds
- 7. Digital Rights and Responsibilities: freedoms extended to everyone in a digital world
- 8. Digital Health and Wellness: physical and psychological well-being in a digital technology world
- Digital Security (self-protection): electronic precautions to quarantee safety

These elements provide a roadmap of how to begin discussing the issues of technology with others. Users need to comprehend how these elements create a framework for understanding technology use, and they need to have some idea of the issues that affect students. The nine themes may then be elaborated as below.

Digital Access Issues of equity include having regular access to technologies, such as a computer in the home; the limits imposed by personal disabilities, such as color blindness or sensitivity when viewing some flashing websites; the effects of non-access to high-speed connectivity because of location or financial factors

Digital Commerce Issues for buying and selling in an online environment include the possibility of identity theft (especially in non-secure sites); users dealing

with credit card transactions; discernment and power of marketing to identify the best prices or sites for purchasing items

Digital Communication Issues for the exchange of information and appropriate delivery considering mobile phone, instant messaging (IM), blogging, etc., and when to use them; monitoring responsible use of technology; identifying when to use or avoid using certain digital communications

Digital Literacy Issues for teaching and learning about and with the technology; providing good technology role models; extending the learning to include accurate research skills to acknowledge the creator of information

...some countries have rules/policies/laws that state that once someone creates something unique it belongs to that person under copyright. But now with the ability to see, share and copy information easily it makes enforcement more difficult. Many have argued that once the information is accessible it belongs to everyone.

Digital Etiquette Issues of formal and informal usage; being aware of how your actions could be interpreted by others; the use of mobile devices in public spaces; understanding the language of the sms; the potential permanency of such records

Digital Law Issues of ownership; individual responsibility to reference ownership; violation of copyright and identity; cyber bullying or stalking

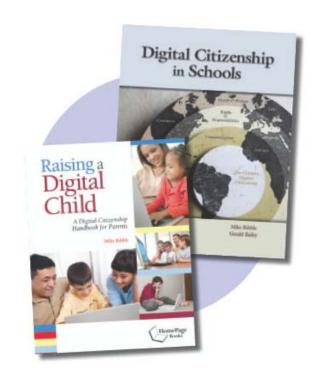
Digital Rights and Responsibilities Issues of duty of care; keeping technology safe; adhering to individual rules and policies; confidentiality

Digital Health and Wellness Issues related to personal wellbeing as in physical use and ergonomically safe practice; identifying the warning signs of inappropriate usage

Digital Security (self-protection) Issues related to virus protection; generating accurate information; ensuring proper protection; keeping the protection up-to-date to avoid unwarranted infiltration

How have these issues been received by others?

Educators are becoming more concerned about how they and their students are using technology. With the use of computers and many of the Web 2.0 tools in every classroom, teachers and students are



collaborating to gain common understandings about usage including appropriate time on task and sharing of skills.

In the summer of 2007, the International Society for Technology in Education (ISTE) released their updated National Educational Technology Standards (NETS) for students. One of the reorganised standards included digital citizenship. Digital citizenship was identified again in 2008 with the release of their new NETS for teachers. Prior to 2007, the focus had been on the practice of legal and ethical behaviour. While they still see these areas as important, they also saw that the issues had expanded to take account of new understandings, functionality and capabilities. With the advent of each new device and technical tool, the need for standards grow even more extreme.

The digital technologies today require users to not only think about how they interact with those around them, but they also need to think internationally as well. Every country takes a different view of technology use. Some have very lenient laws and policies. For example some countries have rules/policies/laws that state that once someone creates something unique it belongs to that person under copyright. But now with the ability to see, share and copy information easily it makes enforcement

more difficult. Many have argued that once the information is accessible it belongs to everyone.

Everyone has a right and a responsibility

Education professionals, as well as parents, have a responsibility to help the next generation be prepared to use technology in a responsible manner. The nine elements outlined help educators and parents alike to define and discuss the issues that are affecting their students and children. With the access to technology that people have today, everyone needs to know and understand the issues and how technology may affect them.

The role of the parent

The following questions are offered to help parents take a role in the guidance of their children about responsible technology usage.

Digital Access Can all technology users participate in a digital society at acceptable levels if they choose? (Discuss censorship and appropriate access to sites.)

Digital Commerce Do technology users have the knowledge and protection to buy and sell in a digital world? (Discuss the real world principles and transfer this financial literacy to safe online practice.)

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Digital Communication Is there an understanding of the various digital communication methods and when each is appropriate? (Discuss the ever changing nature and functionality of the tools.)

Digital Literacy Have technology users taken the time to learn about various digital technologies and when their use is appropriate? (Discuss understandings that relate to multi-literacy and the basic skills to create in these new formats.)

Digital Etiquette Do technology users consider others when using digital technologies? (Discuss the audience, purpose and context for all communication and collaboration.)

Digital Law Are technology users aware of rules, policies, or laws that govern the use of digital technologies? (Discuss the need for academic citations, plagiarism, cyber stalking and new rules to govern each.)

Digital Rights and Responsibilities Are technology users ready to protect the rights of others and to defend their own digital rights? (Discuss cyber safety, cyber bullying and costs to society.)

Digital Health and Wellness Do technology users consider the risks (both physical and psychological) when using digital technologies? (Discuss safe practice in the context of broader wellbeing.)

Digital Security (self-protection) Do technology users work to protect their own information and that of others? (Discuss specific examples such as need for pin numbers and passwords, and trade marking.)

Be aware, be smart

Technology provides many opportunities for users to learn and expand their horizons beyond what they have known. But students need to learn what will be expected of them and others when using these technologies. It is important for educators and parents to be working together to identify the issues and begin discussing how to best prepare the next generation. The future is here today and we need to begin the process for shaping it.

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http://www.digitalcitizenship.org



Mike Ribble has worked at almost every level of education during his career. He has presented at several conferences in the United States of America and internationally.



Planning for change benefit learner

ALISON MCALLISTER was in attendance at 'The ICT in Learning Symposium', where leading thinkers across the education sectors met to discuss and debate the many issues that face education in the effective integration of information and communication technology (ICT).

 $m W_{
m e}$ are living in a world where rapid change is the order of the day, and considerable change for education is occurring in the area of information and communication technologies. A significant current development in ICT is the growth of Web 2.0 tools and services, such as blogs, wikis and video sharing sites, which support individual participation in formal and informal networks online.