Inquiry into Cyber-safety

Thank you for the invitation to contribute to the Australian Parliament's Joint Select Committee on Cyber-Safety inquiring into cyber-safety issues affecting children and young people.

The response from the Australian Council for Educational Research (ACER) below focusses on the major issues that affect the appropriate use of the internet by young people, especially their safety online. In this response, ACER has drawn on global views and Australian research relevant to the questions and issues that the inquiry seeks to address.

This response from the Australian Council for Educational Research does not address all of the issues that were listed in the advice request that was received although it does address a number of them.

Current situation

The online environment in which children are currently engaged includes many facets. In this response about the current situation, the Australian Council for Educational Research has concentrated on some differences in the use of media by children and the goals of education in order to demonstrate the need for education to engage with the internet and its services, as well as other digital technologies.

Online environment

The current situation or environment in which young people use the internet is complex and can include a variety of places and situations such as at home under supervision, at home in isolation, at school (supervised/isolated), possibly work which is usually part-time, in libraries, art galleries, museums and other public institutions, internet cafes, public hotspots, in public places (in company/isolated), on public transport, in shops and more. The list of places and situations in which young people can access the internet and its services is almost endless and so it is quite difficult to be definitive. However, a separation between the place of an interaction and the space in which it occurs can be helpful to discuss communication behaviours. People's interaction with information conveyed in print and information conveyed through online media is markedly different as can be seen below.

Print

An article in the New York Times on August 8, 2009 proclaimed a headline '*In a Digital Future, Textbooks are History*'. This bold claim is supported throughout the article by a number of instances where school districts in the USA have replaced school textbooks with online information and information on CDs. For example, California has announced that science and mathematics would be free as open source digital versions (Lewin, 2009) and President Obama has announced a proposal to invest in 'free online courses as part of his push to improve community colleges' (Lewin, 2009).

The digitisation of and access to information, including previously printed materials, can be expected to increase into the future and so the skills to produce and access online information will be essential for education and training. This may be even more so as the release and take-up of digital pads and ereaders, such as the iPad, Kindle, Nook and BeBook, become more common. In fact, ereaders and digital-pads may have distinct physical advantages for students in them not having to carry heavy loads of books and laptop computers. Heavy loads of books and computers carried by students, on their way to and from school and travelling between classes, are known to have caused serious skeletal damage to a number of young people.

Online usage

The use of the internet is almost ubiquitous in Australia although access devices vary widely. The recently released research about *The Internet use in Australia* (Ewing & Thomas, 2010) stated that:

> By international standards Australia's level of internet use is very high. In terms of home access, the vast majority of connections are now broadband (94.2%).
>
> (Ewing & Thomas, 2010, p. v)

The most used internet service is email and messaging, and internet telephone calls are becoming very popular although there remains some caution with online shopping (Ewing and Thomas, 2010). The use of mobile phones to access the internet is increasing. Students are high users of the internet according to Ewing and Thomas (2010). Their research found that 'the vast majority [of] students (98%) use the internet indicating that computer and internet skills have become essential (Scott& Ewing, 2010, p. 2).

Two further reports are of interest here in considering the online use of the internet by young people. The first is the use of mobile phones by teens as reported by Lenhart (2009) from the Pew Internet and American Life Project and secondly, the use of the internet by teens in Australia as reported by the Australian Communications and Media Authority (ACMA) (2009). These two reports are important because they

indicate a high level of usage and access to the internet. In addition, there is a high level of consumption of internet services by youth in the USA and Australia as a regular part of their daily lives confirming the report by Ewing and Thomas (2010) above.

Lenhart (2009) reports that:

> The Project first surveyed teenagers about their mobile phones in 2004 when a survey showed that 45% of teens had a cell phone. Since then mobile phone use has climbed steadily among teens to 63% in 2006 and 71% in 2008.
>
> (Lenhart, 2009, p. 1).

In Australia ACMA (2009) reports that:

> The internet is a regular part of the everyday lives of children and young people aged eight to seventeen years, and it is used regularly within both school and home environments. (ACMA, 2009, p. 5).

The ACMA (2009) report goes on to elaborate the uses of the internet as finding information, for academic purposes and social networking which becomes regular from age 12 years upwards.

These two surveys which are confirmed by a range of similar reports indicate that the use of the internet by young people using a range of devices to access and use the internet has become a regular part of daily life. Concomitantly, the argument that the skill level of teens using the internet increases with age would seem to be stating the obvious. However, the sophistication and depth of young people's skills in using the internet remain an issue for debate in education.

Educational goals

The goals of education have been stated quite succinctly by the Australian Ministers of Education and Training. The *Melbourne Declaration on Educational Goals for Young Australians* (Ministerial Council for Employment, Education, Training, and Youth Affairs, 2008) provides the articulation of the educational goals for students in schools in Australia. These goals provide a mandate and guide for schools in the curricula that are necessary to teach and assess. The Melbourne declaration made four important points about information and communications technologies (ICT) which are:

- Young people need to be highly skilled in the use of ICT (p. 5)
- Schooling should also support the development of skills in areas such as social interaction, cross-disciplinary thinking and the use of digital media, which are essential in all 21st century occupations. (p. 5)
- Successful learners have the essential skills in literacy and numeracy and are

creative and productive users of technology, especially ICT, as a foundation for success in all learning areas (p. 8)

- As a foundation for further learning ... the curriculum will include practical knowledge and skills development in areas such as ICT and design and technology.

(MCEETYA, 2008, p. 13).

The Melbourne Declaration is clear that 21st century skills are needed for the use of ICT, digital media, social interaction, literacy, numeracy, creation and production, and design.

Skills for the 21st Century

A number of international groups have crystallised the skills that are needed for students in the 21st –century. Perhaps the best known is the US based *Partnership for 21 Century Skills* (2009) project reported by Brooks-Young (2010). The *Partnership for 21 Century Skills* (2009) states that the following skills are needed for the 21st century and therefore need to be taught in schools. They are:

- Core subjects and 21st Century themes
- Learning and innovation skills
- Information, media, and technology skills, and
- Life and career skills.

(Brooks-Young, 2010, p. 6).

The work of the *Partnership for 21 Century Skills* project supports the intention of the *Melbourne Declaration on Goals for Young Australians* (2008) quoted above in that digital technology skills, that is ICT skills, are essential for future teaching and learning. If the goals of education have been articulated by the Melbourne Declaration and the need for 21st century skills, then the question of learning performance using the internet follows.

A recent research report from the OECD using 2006 data from the Programme for International Student Assessment (PISA) is informative here. The report *Are the New Millennium Learners Making the Grade?* (2010) from the Centre for Educational Research and Innovation (CERI) at the OECD states that 'With the right skills and background, more frequent computer use can lead to better performance. (OECD, 2010, p. 13). The report goes on to state that:

> The analysis of PISA data shows that for educational performance, computer use amplifies a student's academic skills and competencies.

(OECD, 2010, p. 13).

Several bodies, including the US Department of Education, have reported improved performance being associated with computer use and ICT use in the last few years. The management of ICT use is therefore important in schools.

Abuse of children online

An appropriate starting place in discussing the abuse of children online is identification of the actual risks. This is then followed in this response by information about the incidence of those risks to children, especially cyber-bullying and then privacy.

Online risks

There would appear to be a number of cyber-risks associated with accessing information and interacting online using the internet. McGrath (2009, p. 4) categorises the following as potential cyber-risks for young people:

- Cyber-exploitation which includes manipulation for financial or sexual ends
- Cyber-attack is usually a 'one-off' act of aggression, denigration or nastiness
- Cyber-bullying are repeated attacks that cause distress against an individual or group.
- Unacceptable or inappropriate use of technology which includes offensive, self-risking, illegal, unethical or uncritical behaviour.

Online abuse

There has been considerable attention in the media over the years to the risks of using the internet since the World Wide Web (WWW) became public in 1993 with the release of the WWW browser, Mosaic. Pegrum (2009), similarly to McGrath (2009) categorises these risks as cyberporn, cyberpredation and cyber-bullying.

On the incidence of cyberporn, to which children could potentially be exposed, Pegrum (2009) reminds the reader of the results of the US State Attorneys General investigation conducted in 2008 by the Internet Safety Technical Task Force. They found that 'younger children... are most likely to encounter it through offline sources including magazines, TV and the movies'. (Pegrum, 2009, p. 68).

On the incidence of cyberpredation, Pegrum (2009) again reflects on current statistics when he states that 'statistics show a steady overall decline in sexual offences against children, ' and further '90 to 94 per cent of solicitations of minors where the approximate age of the sexual solicitor is known come from other minors or young adults' (Pegrum, 2009, p.68).

However, both McGrath (2009) and Pegrum (2009) emphasise the increasing incidence of cyber-bullying and the need to make the net safer for young people. The prevalence of mobile technologies and access to the internet as well as text, audio and visual applications have increased the potential and capacity for cyber-bullying to occur. Cyber-bullying can often contravene reasonable expectations for privacy.

Privacy

Communication is a fundamental aspect of social interaction (Rettie, 2005). Researchers in the US and UK have identified new types of presence or 'being there' behaviours that can result from the use of mobile communication devices such as mobile (cell) phones. One type of behaviour where communication occurs at the same time and in the same space but at different locations, as in a phone call, has been called copresence (Rettie, 2005, p. 20). The incidence of copresence behaviour has grown with the increased use of mobile technologies. This has been extended further by Gergen (2002, p. 227) who introduces the term 'absent presence' where the speaker may be physically present but their engagement is with another person in a different place. Researchers suggest that the mobile phone extends the domain of 'absent-presence' because it increases conflicting concurrent interactions (Gergen, p. 227). These two types of behaviours which have increased as a result of the use of mobile communications will impact the intensity of the social interactions of young people as well as present new behaviours in school situations. The implications for online privacy, taking into account these new types of behaviours, needs to be explored thoroughly and extensively. However, young people require regular instruction and modelling on how to protect their online identity and privacy.

Australian and international responses to cyber-safety issues: the role of schools, families and the community

The role of schools, parents and the community is inextricably intertwined in the international and national responses to cyber-safety issues. For that reason the role of parents, carers and the community have been combined in this response.

Again the Australian Council for Educational Research would point to research when discussing how to safely manage the use of the internet in schools and for young people. The Office for Standards in Education, Children's Services and Skills (OFSTED) in the UK has a responsibility to inspect schools for achievement of standards on a regular basis. As part of their inspections OFSTED undertook a survey of 37 schools in 2009 to evaluate the extent to which the schools taught pupils to adopt safe and responsible practices in using new technologies, and how they achieved this. OFSTED reported that the:

21 most effective schools had a well-considered active approach to keeping students safe when they were online and helping them to take responsibility for their safety. There was a close relationship between the provision that the schools made and the pupil's knowledge and understanding.   (OFSTED. 2010, p. 4).

The report discusses the fact that the successful schools had multilayered (teachers, parents, students) managed approaches where there were fewer inaccessible sites whereas 'locked-down' systems were less effective in helping the students to learn to use the internet safely and responsibly. Although the 'locked-down' systems kept the students safe at school they [the students] were 'more vulnerable overall' (OECD, 2010, p. 4).

The recent report by the National Telecommunications and Information Administration (NITA), Online Safety and Technology Working Group (OSTWG) (2010) to the US Congress corroborated the OFSTED research report. The OSTWG received a large range of submissions and heard from a large number of online safety and children's expert witnesses in preparation of their report. The OSTWG reported that a multilayered approach is required from schools, parents and the community to establish accepted online behaviour and that young people do need to be taught digital literacy skills. If this is the case then the ways to support schools need to be considered.

Ways to support schools

There is a need to consider the barriers to the take-up of the internet by schools and especially teachers, in addressing the issues associated with support for schools. Although Freebody, Reimann and Tui (2008) suggest that 'The generally low adoption of ICT (especially in the middle secondary years) is by no means specific to Australia' (p.4), this by no means signals a lack of interest by teachers to use ICT in curriculum. In fact, Freebody et al (2008) nominate technological reliability, limited access and limited bandwidth as barriers. Bingimlas (2009, pp. 237-240) reviewed the literature and suggested that lack of teacher confidence, lack of teacher competence, resistance to change and negative attitudes were major barriers that could be attributed to teachers, whereas lack of time, lack of effective training and lack of accessibility and technical support could be attributed to schools. Pierce and Ball (2009) also noted that the 'professional development of teachers needs to address attitudes and perceptions as well as technological skill development' (Pierce & Ball, 2009, p. 315).

The two issues that emerge from the literature and research consistently are a lack of teacher confidence and the need for the professional development of teachers in the use of ICT. If schools are to be supported to implement online safety instruction for

students and assist students to develop appropriate online behaviours then these two issues need to be addressed regularly in schools. That is, professional development focussed on teacher's perceptions about the use of ICT in curriculum needs to be addressed and also technological skills coaching needs to occur at the school level. Confident teachers familiar with the uses and the concerns about using ICT will assist students to effectively develop online safety strategies and behave appropriately and responsibly when using the internet.

One example of support for schools is the *Cyber-Safety and Wellbeing Initiative* being undertaken by the Alannah and Madeline Foundation. This project is focussed on a whole school approach called the eSmart Schools Framework which has been piloted and a report will be given shortly to the Department of Education, Employment and Work Relations (DEEWR). The Framework supports a whole-school approach to the problem of cyber-safety and the initiative also provides a suite of tools to assist schools.

The role of parents, families, carers and the community

The role of parents, families, carers and the community has been alluded to above, so it will not be repeated in detail here. Suffice to say that the role of these stakeholders is to supervise and assist students to learn online safety strategies as well as model them and to help students to learn to behave appropriately online. Parents, families, carers and the community need to be engaged in regular support to assist young Australians to protect themselves and be safe online as well as to develop responsible behaviour. This will require community support programs for parents and students in libraries, meeting places and community groups, as well as regular dialogue between parents, carers and families about suitable strategies for online protection and responsible behaviour.

The support of schools parents, families, carers and the community need to be part of a multilayered approach to effectively manage online safety, consistent with the literature and the research.

Summary

In summary, ACER would argue that international and Australian research indicates the following which have been grouped in four sub-headings – environment, managing online safety in education, improving online safety in schools and user responsibility.

The environment

- Young people are regular users of the internet and its services,
- There is a wide range of devices available to access the internet although home computers and mobile devices dominate,
- The internet is essential to achieve the goals of education and to develop 21st century skills in order to support a robust skills-based economy, and
- The use of digital technologies and the internet are essential for teaching and learning to improve student learning performance.

Managing online safety in education

- Online safety requires a multilayered and managed approach,
- A multilayered approach includes regular instruction in online safety and responsible online behaviour,
- A multilayered approach includes teachers, parents and the community understanding online safety, promoting acceptable online behaviour and adopting responsible online standards,
- A managed approach in schools includes staff, parents, students, online user policies and agreements, regular instruction in online safety and responsible behaviour, and clear consequences for inappropriate online behaviour consistent with the law and school policies,
- Remote technical solutions such as blocking and filtering are ineffective due to proxy sites, cloud services, mobile devices and readily available circumvention advice, and
- Technical solutions can be effective if applied at the user level.

Improving online safety in schools

- Addressing the issues of a lack of teacher confidence and time in professional development is effective,
- Professional development on the issues associated with the integration of ICT with curriculum is effective, and
- Professional development of teachers about online safety and suitable online behaviours is effective.

User responsibility

- The node for online safety and responsibility for acceptable online behaviour is at the user node (home, school, library, laptop, mobile, ...), and
- Policies affecting online safety and acceptable online behaviour for young people need to be focussed at the user node to be most effective.

Bibliography

ACMA. (2009). Click and connect: *Young Australians' use of online media. 02: Quantitative research report*. Canberra: Australia.

Alannah and Madeline Foundation. (2010). *Cybersafety and Wellbeing Initiative*. Retrieved June 16, 2010, from http://www.amf.org.au/Cybersafety/.

Bingimlas, K. (2009). Barriers to the Successful Integration of ICT ion Teaching and Learning Environments: A Review of the Literature. *Eurasia Journal of Mathematics, Science & Technology Education*. 5(3), pp 235-245.

Brooks-Young, S. (2010). *Teaching with the Tools Kids Really Use: Learning with Web and Mobile Technologies*. Thousand Oaks: Corwin.

Ewing, S., & Thomas, J. (2010). *CCi Digital Futures 2010: The Internet in Australia*. ARC Centre of Excellence for Creative Industries and Innovation. Swinburne University of Technology, Hawthorn.

Freebody, P., Reimann, P. & Tiu, A. (2008). *Alignment of perceptions about the uses of ICT in Australian and New Zealand schools: Improving the Uptake of ICT in schools*. Centre for Research on Computer Supported Learning and Cognition, faculty of Education and Social Work, The University of Sydney: Australia.

Gergen, K. J. (2002). The challenge of absent presence. In C. A. Grant & G. LadsonBillings (Eds.), *Dictionary of multicultural education*. (pp. 227-241.) New York: Oryx Press.

Lenhart, A. (2009). *Teens and Mobile Phones Over the Past Five Years: Pew Internet Looks Back*. Washington: Pew Internet and American Life.

Lewin, T. (2009). In a Digital Future, Textbooks are History. *The New York Times*. Retrieved August 10, 2009, from http://www.nytimes.com/2009/08/09/education/09textbook.html?_r=5&th&emc=th

Ministerial Council for Employment, Education, Training, and Youth Affairs (MCEETYA). (2008). *Melbourne Declaration on Educational Goals for Young Australians.* Melbourne: MCEETYA. Retrieved May 20, 2010, from http://www.curriculum.edu.au/verve/_resources/National_Declaration_on_the_Educational_Goals_for_Young_Australians.pdf.

McGrath, H. (2009). *Young people and technology: A review of the current literature (2nd edition)*. Melbourne: The Alannah and Madeline Foundation.

National Telecommunications and Information Administration (NITA). (2010). *Youth Safety on a Living Internet: Report of the Online safety and technology Working Group*. Washington: NTIA.

Organisation for Economic Co-operation and Development (OECD). (2010). *Are the New Millennium Learners making the Grade?: Technology use and educational performance in PISA*. Paris: CERI, OECD.

Office for Standards in Education, Children's Services and Skills (OFSTED). (2010). *The safe use of new technologies*. Manchester: UK.

Pegrum, M. (2009). *From Blogs to Bombs: The Future of Digital Technologies in Education*. Perth: UWA Publishing.

Pierce, R. & Ball, L. (2009). Perceptions that may affect teacher's intention to use technology in secondary mathematics classes. *Educational Studies in Mathematics*. 71(3). pp. 299-317.

Rettie, R. (2005). Presence and Embodiment in Mobile Phone Communication. *PsychNology Journal* 3 (1), pp. 16-34. York: Oryx Press.