netsafe

From literacy to fluency to citizenship

DIGITAL CITIZENSHIP IN EDUCATION

Foreword

Netsafe first published this version of its digital citizenship model in 2016. At the time, a range of related terms – such as digital competency, literacy and fluency – were being used by policy makers and practitioners, sometimes interchangeably. There was a need for greater clarity for schools as they looked to develop effective learning opportunities for their students. The definitive statement of digital citizenship in this paper - and its particular relationship to digital literacy and digital fluency – provides this. It is still relevant today.

The consultation on the introduction of Digital Technologies and Hangarau Matihiko in the curriculum highlighted the need for a consensus view of the values, aims and knowledge underpinning these terms (Ministry of Education, 2017a; Chen, 2017; Netsafe, 2017a). Now that curriculum implementation is underway there is an opportunity for citizenship, ethics, privacy, security and safety to be given the attention they deserve.

We know digital citizenship isn't restricted to the technology curriculum learning area. With this in mind, this curriculum initiative is situated within the broader implementation of digital technologies across the New Zealand Curriculum and Te Marautanga o Aotearoa. Also, the ubiquity of digital technology in the lives of young people, their family and whānau and in the life of schools is creating an array of challenges to wellbeing/hauora. These challenges demand a well-grounded, proactive and whole school community approach to developing digital citizenship. Further, the concepts and the qualities of digital citizenship reflect the current government's intent to include human and social capital in its policy making (Ardern, 2018; Makhlouf, 2017).

Schools, of course, have not been standing still. Since Netsafe published its first work on digital citizenship in 2010 the proportion of schools promoting digital citizenship has consistently increased. However, challenges remain. Netsafe's research findings and its experience from working with schools clearly shows that we all need to do more to support the development of digital capabilities and confidence in our children, young people, and where possible, our wider community.

At the same time, it is no longer possible to think exclusively about 'digital' or 'analogue', or 'virtual' and 'face-to-face'. As young people's behaviour crosses the online and offline boundary, this means that digital citizenship cannot be an 'add on' to existing teaching approaches or delivered in isolation as a curriculum topic. To reflect young people's real-world experience, it needs to be integrated into all policy, planning and practice. All too often, unless the role of digital technology is explicitly included in these processes, its potential negative and positive impacts are left to chance and overlooked.

This is why Netsafe believes that the ideas discussed in this paper have an important role in challenging and supporting the work of educators, service providers, policy makers, and researchers.

Executive summary

The internet affords new ways of working and learning, and in turn, new challenges are emerging and evolving for children and those who support them. Young people are accessing the internet with increasing frequency via multiple access points with a continuing trend towards mobile access. At the same time, education system policy has encouraged schools' uptake of technology. Schools and their communities are increasingly reliant on digital technology which has created a more complex environment to keep safe and secure. There is an ongoing need for sustained and dedicated support so schools can provide safe and secure digital learning environments.

Digital citizenship has the potential to be a powerful enabler of inclusion in social, cultural economic, and civil society. Becoming a digital citizen is 'part of who we all are' in school; it should be planned for, and addressed, through multiple contexts including structured activities and wherever there is a meaningful opportunity to talk and learn about being online.

Therefore, understanding what is a 'digital citizen' precedes endeavours to develop the concepts and qualities in our children and young people. The intention of this paper is to provide a definition of digital citizenship and the principles that underpin and support its within and across the education sector. It also outlines why Netsafe believes digital citizenship is important and signposts tools and resources that schools can use to get started.

Defining digital citizenship

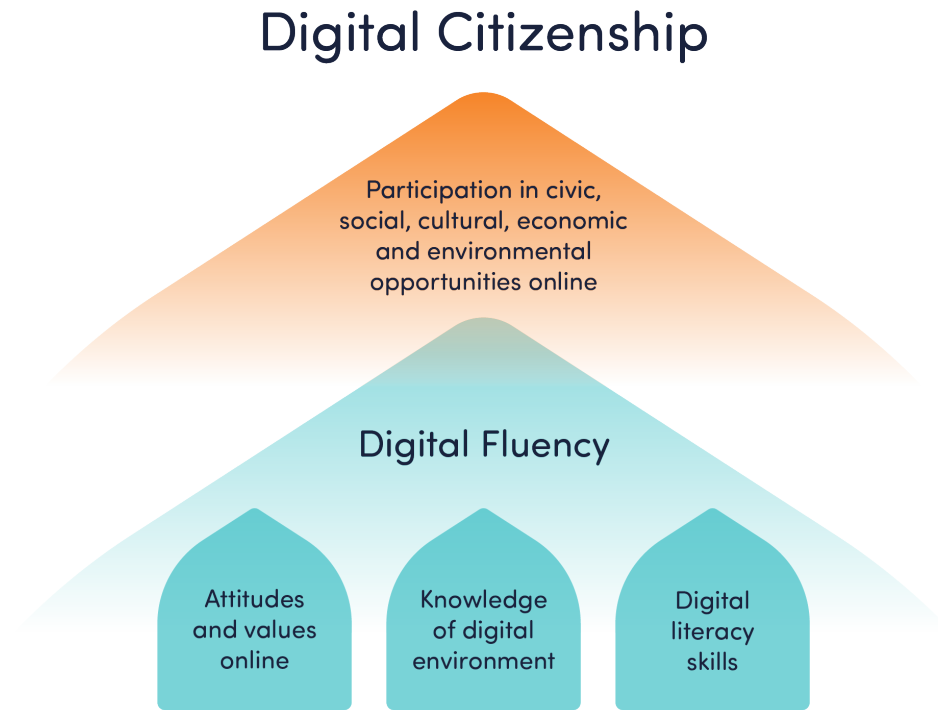Netsafe defines digital citizenship as the confident, fluent use and combination of:

1. **Skills and strategies** to access technology to communicate, connect, collaborate and create;

2. **Attitudes, underpinned by values** that support personal integrity and positive connection with others;

3. **Understanding and knowledge** of the digital environments and contexts in which they are working, and how they integrate on/offline spaces;

and then critically:

4. The **ability to draw on this competency of 'digital fluency' to participate** in life-enhancing opportunities (social, economic, cultural, civil) and achieve their goals in ways that make an important difference.

Digital citizenship model

Netsafe defines a digital citizen as someone who can fluently combine digital skills, knowledge and attitudes in order to participate in society as an active, connected, lifelong learner.

Digital Citizenship

Participation in civic, social, cultural, economic and environmental opportunities online

Digital Fluency

Attitudes and values online

Knowledge of digital environment

Digital literacy skills

Principles of digital citizenship

Netsafe advocates for the following six principles to underpin approaches to the development of digital citizenship:

1. **Ako** | Young people are "active agents" in the design and implementation of digital citizenship, including approaches to online safety

2. **Whānaungatanga** | An unbounded, coherent home-school-community approach is central to the development of digital citizenship and online safety management

3. **Manaakitanga** | Approaches to digital citizenship are inclusive, responsive and equitable in design and implementation

4. **Wairuatanga** | Digital citizenship in action positively contributes to wellbeing and resilience development enabling safer access to effective learning and social opportunities

5. **Mahi tahi** | Digital citizenship development and online safety incident management are fostered through partnership approaches, coherent systems and collaboration

6. **Kotahitanga** | Evaluation and inquiry underpin the ongoing design of digital citizenship approaches, based on rich evidence from young people and their whānau.

Contents

Young people and online challenge

Young people access the internet with increasing frequency via multiple access points and a continuing trend towards mobile access.

The way we use the internet is producing new and evolving challenges for children and young people and those who support them. Specifically, social media and user-generated platforms have increased conduct concerns, including bullying, the production of inappropriate digital footprints, and the challenges that arise from criminal enterprise in an increasingly digitally reliant world (Livingstone & Haddon, 2009).

Practices, such as sharing nude or semi-nude images, are bringing a broad challenge of technology-mediated sexual peer pressure that is linked to coercion, harassment, bullying and even violence with girls being most adversely affected (Ringrose, Gill, Livingstone, & Harvey, 2012). Further, creating and sharing self-produced sexual content increases opportunities for sexual exploitation through non-consensual sharing of intimate images e.g., 'sextortion' (Wittes, et al. 2016).

In the New Zealand context, almost 3 in 10 teens are aware of someone else who has received nude or nearly nude content they did not ask for, and almost a quarter are aware of someone being asked for nude or nearly nude content of themselves (Netsafe, 2017b). Further, Netsafe (2018) has also found some gender differences in how New Zealand teens use digital technology, participate online, and their preferences for specific social media tools. Overall, young New Zealanders are confident users of technology, however, Māori and Asian teens report being less confident about their digital competencies than other ethnicities. This suggests issues related to developing digital literacy still affect a young generation of New Zealanders.

Online safety is no longer an exercise in protecting people from dangers online or reducing reputational risk for schools.

Internationally, there has been a shift in policy and practice away from protective safety-based approaches towards more holistic and strengths-based solutions. Evidence (Kia-Keating, Dowdy, Morgan, & Noam, 2011; Priebe, Mitchell, & Finkelhor, 2013) indicates that effective online safety approaches should balance protective[1] and promotional[2] activity. This approach is exemplified by a focus on concepts of digital citizenship. However, while many schools are exploring this more balanced approach this is not yet consistently reflected across the sector. Many schools have an over reliance on interventions that focus on concepts of risk and safety, as opposed to an integrated and explicit strategy to foster online safety in the context of digital citizenship development.

In general, an increase in online access and activity increases the frequency of exposure to risk (Reddington, 2005; Livingstone & Haddon, 2009). Young people are differentially vulnerable to risk and its outcomes, depending on a range of factors such as age, gender and cultural context (Ringrose, Gill, Livingstone, & Harvey, 2012).

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[1] Where risk is mediated by protective interventions such as restricting or monitoring online access.

[2] Where interventions support the healthy development required to self-manage online challenges.

Netsafe (2018a) has found that 70% of 14 to 17 year-old New Zealanders have received an unwanted communication of some kind[3], with 28% of them reporting this had a negative impact on their daily activities (such as reducing online participation or being unable to sleep or eat properly). Further, it found that New Zealand adults and young people participate in the online environment in different ways (Netsafe 2018a & 2018b). In another study, with the Ministry for Women (2017), it was found that 16 to 17 year-olds perceived those in older generations (parents, teachers etc.) to be relatively illiterate about young people's online lives. This reflects research from the US that found significant differences in how parents and children perceived and managed online risk (Family Online Safety Institute, 2012). Narrowing this gap is important if approaches to online safety are to be effective.

Schools and their communities are increasingly reliant on digital technology. This has created a more complex environment to keep safe and secure.

Schools, and communities of schools, have embraced the opportunities presented by technology to offer increased connectivity, creativity and inclusive learning. Many are managing the use of a combination of student and school (owned or leased) devices for learning. In terms of online safety and security capability and preparedness, most schools have basic protections in place such as content filtering, user agreements, policies and basic or occasional programmes on digital citizenship, literacy and safety. However, over half (56%) of principals report "potential risk and harm" is a barrier to the use of technology (Johnson, Maguire & Wood, 2017).

Netsafe's research findings and operational experience indicate an ongoing need to align technology uptake in schools with a greater understanding of the related safety risks and issues to ensure the capability exists to manage them effectively.

In addition to developing their own capability, schools increasingly find themselves taking a lead role in supporting their community's capability development. The ease of online access challenges traditional institutional boundaries creating opportunity, and also challenge, for schools needing to adjust to a new reality where the distinction between personal and school devices or internet connection is rapidly disappearing (Ministry of Education, 2015a). This means there is a greater need for schools to take a proactive approach towards a whole school community awareness of digital citizenship, online safety and wellbeing.

Simply, it is easy to bring digital technology into schools and start to use it, but it is much more challenging to do so effectively.

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[3] Ranging from less serious incidents (such as being contacted by someone they don't know) to more serious incidents (such as being stalked or repeatedly threatened online).

What is digital citizenship?

The case for a consensus

The implementation of Digital Technologies and Hangarau Matihiko in the curriculum provides a contemporary context for asking what we mean by 'digital citizenship' and its relationship to 'digital literacy' and 'digital fluency'.

Internationally, there have been multiple viewpoints on the relationship between 'digital citizenship', 'digital literacies' and 'digital fluencies'. The Education and Science Committee's comment in its inquiry into 21st century learning environments and digital literacy (Education and Science Committee, 2012) noted that there are several "definitions of digital literacy; the basic premise is that students will be able to come through our education system with an ability to navigate new technology and have the skills that are required of them in the modern world". Netsafe believes this point is still just as relevant in 2018. The proliferation of terms and abstract concepts does not help schools.

A consensus view of the values, aims and knowledge underpinning these terms is required.

The nature of digital citizenship

Digital citizenship is an abstract, socio-cultural concept constructed from a combination of 'values' and 'facts'. So, while there cannot be *one* objective digital citizenship model, Netsafe, and the broader sector, can look for:

- Certainty about the relevant knowledge that informs digital citizenship; and

- Consensus on the relevant societal norms and values and purpose of a digital citizenship model.

There are many definitions and frameworks dedicated to describing what digital citizenship looks like (e.g., Couros & Hilderbrandt, 2015; Netsafe, 2010; 21st Century Reference Group, 2014). While existing models have gone some way to help offer a new direction, there is still overlap in places. For example, it has been suggested that digital fluency is synonymous with digital citizenship (Wenmoth, 2015) or that the disposition to combine knowledge of 'how' and 'when' with skills ('what') is sufficient for young people to be successful and safe online (Ministry of Education, 2016).

However, there is also agreement around what skills, knowledge, attitudes and values might be important for digital citizenship. For example, the purpose of education, in terms of economic, personal and social development, is defined in the New Zealand Curriculum's vision statements and principles. Further, the Digital Technologies and Hangarau Matihiko curriculum content contributes to students developing the knowledge and skills they need as digital citizens and as users of digital technologies across the curriculum. They also provide opportunities to further develop their key competencies ('Technology in the New Zealand Curriculum', 2017).

This way of thinking about digital citizenship underpins Netsafe's model.

Netsafe's digital citizenship model

Digital citizenship has the potential to be a powerful enabler of inclusion in social, cultural, economic and civil society.

Netsafe defines a digital citizen as someone who can fluently combine digital skills, knowledge and attitudes in order to participate in society as an active, connected, lifelong learner. Netsafe's digital citizenship model builds on its earlier work (2010) and draws from frameworks from the Organisation for Economic Co-operation and Development (OECD, 2016), Westheimer & Kahne (2004), and incorporates the Ministry of Education's position on digital literacy and digital fluency (Ministry of Education, 2016).

Digital citizenship definition

Netsafe defines digital citizenship as the confident, fluent use and combination of:

1. **Skills and strategies** to access technology to communicate, connect, collaborate and create;

2. **Attitudes**, underpinned by values that support personal integrity and positive connection with others;

3. **Understanding and knowledge** of the digital environments and contexts in which they are working, and how they integrate on/offline spaces;

and then critically:

4. The **ability to draw on 'digital fluency' competency to participate** in life-enhancing opportunities (social, economic, cultural, civil) and achieve their goals in ways that make an important difference.

Defined in this way, digital fluency is a set of competencies and dispositions, and **digital citizenship is a high-level outcome of achieving digital fluency** applied through multiple contexts. The concept of citizenship itself can be thought of in personal, participatory and justice-oriented terms (Westheimer & Kahne, 2004), and it aligns strongly with the vision and principles of the New Zealand Curriculum and Te Marautanga o Aotearoa.

Digital citizenship model

Digital Citizenship

Participation in civic, social, cultural, economic and environmental opportunities online

Digital Fluency

Attitudes and values online

Knowledge of digital environment

Digital literacy skills
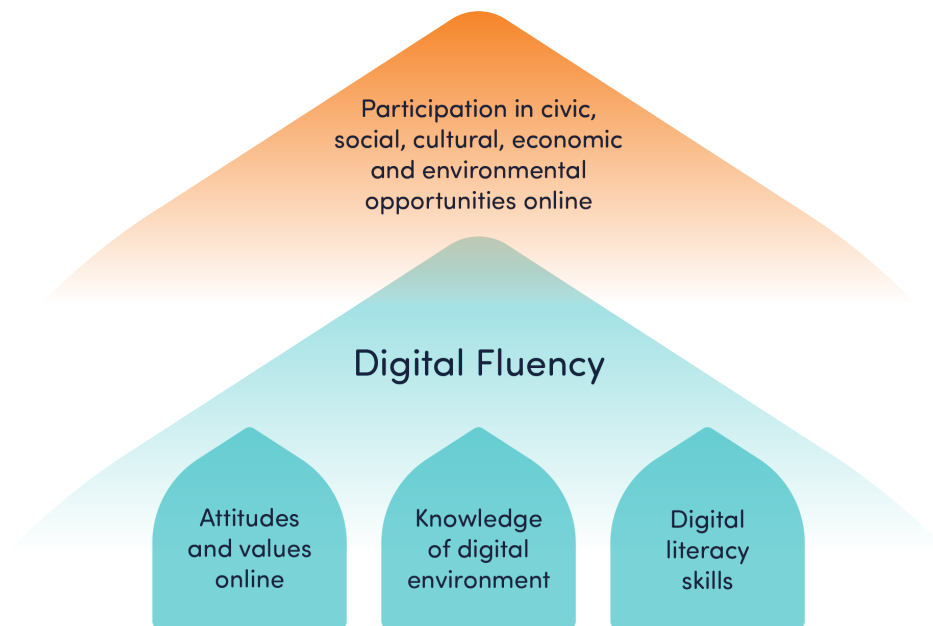
Relationship between online safety and digital citizenship

The model does not prescribe a specific set of digital competencies and dispositions for schools to teach and for students to learn. It is designed to provide a framework for schools to organise curriculum planning and delivery around, enabling them to reflect the qualities and emphasis that is important to their communities. This approach reflects the intent and design of the New Zealand Curriculum and Te Marautanga o Aotearoa.

In relation to Netsafe's main area of focus: Online safety is a specific outcome of being digitally fluent across digital skills, knowledge and values. Therefore, an individual or community's approach to effective management of risk and harm associated with online safety is founded on:

- Putting in place the **skills and strategies** to minimise and manage risks;

- **Understanding** the affordances and constraints of digital environments;

- A community-led approach to fostering **attitudes** that promote wellbeing, resilience and a positive approach about the many benefits brought by technology;

- The community **working together** to identify the risks, and potential for harm, online; and

- Recognising the importance of **embedding digital literacy skills** in effective teaching and learning programmes.

Digital citizenship as an outcome of learning

Internationally, there is strong support for technology-mediated learning and schools are increasingly seeking to prepare young people to work in future-focused ways. While technology does not replace effective curriculum and pedagogy, it provides an enabler and catalyst that can remove barriers to access and create possibilities for innovation.

Arguably, developing as a 'digital citizen' is an *implicit* learning outcome that is strongly signalled in the vision and values of the New Zealand curricular documents. It can be addressed in multiple contexts, wherever there is a meaningful opportunity to talk and learn about being online.

The underpinning theory related to digital citizenship is similar to that of the 'key competencies'; learners' developing 'capabilities for living and lifelong learning' that are now frequently mediated by online environments. These capabilities are intertwined with notions of identity, wellbeing and safety, while the values that underpin concepts of digital citizenship range from entrepreneurial and economic, to access, equity and inclusion (OECD, 2015).

Principles underpinning digital citizenship

The New Zealand education system is focussed on realising the vision of students as connected, active participants in society, as described in the three curriculum documents (New Zealand Curriculum, Te Marautanga o Aotearoa and Te Whāriki). These visions are supported by a clear set of values, a future-focused range of competencies that describe the capabilities needed to be 'active, connected, lifelong learners' and underpinning principles in the Te Marautanga o Aotearoa (Ministry of Education, 2007 & 2017b).

Netsafe advocates for the following six principles to underpin approaches to the development of digital citizenship:

1. **Ako** | Young people are "active agents" in the design and implementation of digital citizenship, including approaches to online safety[4]

2. **Whānaungatanga** | An unbounded, coherent home-school-community approach is central to the development of digital citizenship and online safety management[5]

3. **Manaakitanga** | Approaches to digital citizenship are inclusive, responsive and equitable in design and implementation[6]

4. **Wairuatanga** | Digital citizenship in action positively contributes to wellbeing and resilience development enabling safer access to effective learning and social opportunities[7]

5. **Mahi tahi** | Digital citizenship development and online safety incident management are fostered through partnership approaches, coherent systems and collaboration[8]

6. **Kotahitanga** | Evaluation and inquiry underpin the ongoing design of digital citizenship approaches, based on rich evidence from young people and their whānau[9]

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[4] Ako describes a reciprocal teaching and learning relationship "where young people are both teachers and learners". Ako recognises that the student's whānau is inseparably part of learning and teaching.

[5] Whanaungatanga describes the process of establishing links, making connections, and relating to the people one meets by identifying in culturally appropriate ways, whakapapa linkages, past heritages, points of engagement, and other relationships.

[6] Manaakitanga describes the immediate responsibility and authority to show care for emotional, spiritual, physical and mental wellbeing of others.

[7] Wairuatanga describes care for others' spirit, safety and wellbeing in the context of history, knowledge, customary practices, philosophies and spiritualties and their transmission from one generation to the next.

[8] Mahi tahi describes the unity of a group of people working collaboratively towards a specific goal or on a specific task.

[9] Kotahitanga describes unity, togetherness, solidarity, collective action.

What could the future look like?

Everybody desires a meaningful and safe online/offline environment for children, young people and their communities. Netsafe advocates for a 'prevention' approach for schools, shifting from individuals taking responsibility to community action.

FOR YOUNG PEOPLE

Becoming a digital citizen is 'part of who we are' in school. Its development is addressed in multiple contexts, wherever there is a meaningful opportunity to talk and learn about being online:

- The words of children, young people and their whānau are the starting point for planning, reviewing and developing curriculum programmes that address digital citizenship and online safety;

- Young people have the competencies to use the internet to achieve positive goals without fear that they will be targeted online for no apparent reason. They are free to speak, understanding the boundaries; and

- Young people act on their awareness of online challenges and are capable of taking preventative action to confidently manage challenge.

SCHOOL LEADERS, EDUCATORS AND BOARDS OF TRUSTEES

Leaders have a confident understanding of safe online/digital citizenship behaviour in a curriculum and school management context:

- Teachers weave it deliberately into the curriculum, across learning areas and 'higher learning' activities; and

- Educators are building their confidence and capability to help their students learn in the online environment regardless of their starting point.

SCHOOL COMMUNITIES

Communities, including parents and whānau, can support and model positive community behaviours alongside the school.

- They will know where to get advice and support - and can support their children with learning and living safely and meaningfully online; and

- People in the community will pause before using digital communication to hurt others - or they may intervene in the situation rather than ignore the behaviour or actively encourage the behaviour.

Creating an environment for developing digital citizenship

Understanding the relationship between risk and harm

Supporting children to negotiate the challenges they will encounter in the online environment requires an understanding of the complex relationship between the risk and the harm itself as reported by the target (Priebe, Mitchell, & Finkelhor, 2013). Exposure to risk does not necessarily lead to harm.

There may be good reasons to reduce risk (e.g., by restricting access to devices or online environment) because without risk there is no harm. But there are also good reasons not to reduce access: restricting children's online opportunities means that they cannot grow and learn in a risk-free environment (Ringrose, Gill, Livingstone, & Harvey, 2012) while greater use of internet and mobile technology can result in increased digital literacy and online safety (Ólafsson K., Livingstone S., & Haddon L., 2013).

Adopting an effective strategic approach

As noted above, effective online safety approaches balance **protective** and **promotional** activity (Kia-Keating, Dowdy, Morgan, & Noam, 2011). This integration of these approaches is conceptualised in a model that comprises two 'pathways':

1. **Protective**, which, when risk is mediated or buffered by protection, support or intervention, leads to a positive outcome; and

2. **Promoting**, by which resources and interventions lead directly to healthy development i.e. development of competencies and dispositions required to self-manage online challenges.

When applied to online risks, both pathways are needed (Priebe, Mitchell, & Finkelhor, 2013). The key to effective prevention is to develop safe and responsible online behaviours. A deliberate, planned approach is required that balances protective approaches, such as technical mediation of student online access, with strategies that promote safe, responsible and pro-social behaviours is required. There are no quick fixes.

Effective strategic planning and teaching approaches can build a sense of wellbeing and support across the school. It can also offer opportunities for young people to learn to manage themselves online collaboratively.

Balancing promotion and protection

Protections, such as content filtering or access control, that mediate children's online activity and not enough on their own. An effective prevention strategy involves active mediation approaches, such as discussing with students and others about their online activity, and more specifically, about safe and responsible use and the challenges they experience in the online environment (Duerager & Livingstone, 2012). Striking the right balance of promotion and

protection activities requires schools to consider factors such as students' ages, teacher capability and levels of community engagement.

Netsafe's Learn-Guide-Protect framework provides schools with a simple tool to foster discussion about the emphasis they are placing on each pathway.

It is organised into three themes:

1. **Learn**: Students develop the competencies and values to keep themselves and others safe online — promote;

2. **Guide**: The programmes, practice and resources put in place to support student learning and develop a culture of positive digital technology at school and in the wider community — promote; and

3. **Protect**: Technical methods to restrict or monitor online access and school developed policies that underpin a safe and secure digital learning environment.

LEARN–GUIDE–PROTECT: AN EXAMPLE

The chart (see right) is based on the assumption that protective measures are more important and effective for younger people.

Teacher and parent guidance provides the foundation for developing digital safety skills and knowledge.

As students develop and learn, the need for self-managing opportunities grows while the effectiveness of protective measures drops off.
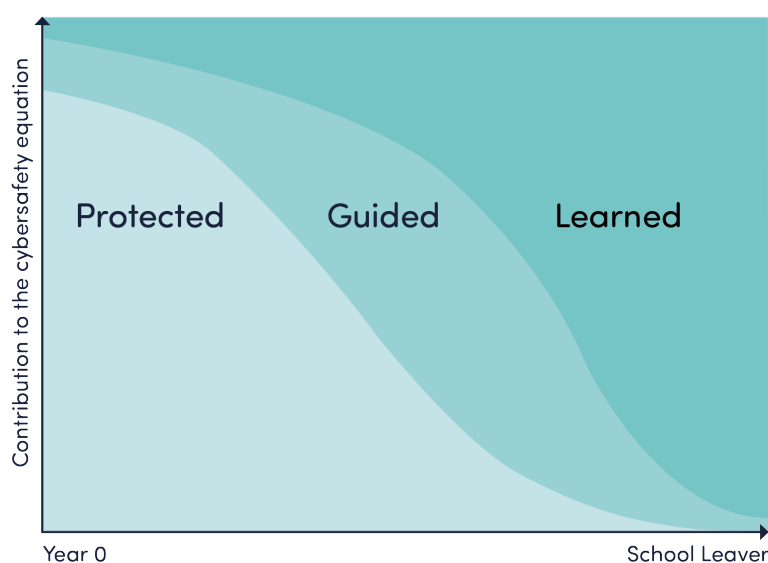
Implementation indicators for digital citizenship

Approaches to digital citizenship and online safety are best fostered in the context of effective and sustainable whole school practices, ongoing evaluation and all-of-community engagement. The desired outcomes are expressed in the New Zealand curriculum documents.

Netsafe has identified and developed effective practice indicators adapted from the Education Review Office guidance to support wellbeing (ERO, 2016b) and the School Evaluation Indicators (ERO, 2016a). The indicators are underpinned by the same guiding principles and are aligned to seven key areas: Ākonga-Students; Mahi ngātahi-Partnerships; Kaitiakitanga-Stewardship; Hautūtanga-Leadership; Marau-Curriculum; Te tū māia; Professional Confidence; Te aromātai-Inquiry and review.

The indicators balance promotion of safe and responsible behaviours with the need to actively manage and respond to a range of digital challenges. The focus is on increasing learner preparedness, whilst over time reducing external protections. The indicators have been incorporated into Netsafe's Safeguarding Review tool. This is a key component in the Netsafe Kit for Schools and is freely accessible to all schools and kura.

What schools and kura can do now

Netsafe continues to be the first port of call for New Zealand's education sector for advice and expertise related to online safety and digital citizenship.

Educators requiring support to manage incidents, such as online bullying, can contact Netsafe:-

- Call toll-free on 0508 NETSAFE (0508 638 723)
- Submit a report to netsafe.org.nz/report
- Email help@netsafe.org.nz

To find out about Netsafe's services for educators, for advice and guidance on how to get started with digital citizenship and to access tools and resources visit the Netsafe Kit at https://www.netsafe.org.nz/the-netsafe-kit-for-schools/

You can keep up to date with our other work with schools by subscribing to Netsafe's newsletter at https://netsafe.org.nz

About Netsafe and digital citizenship

Netsafe has led the way in New Zealand and overseas with its work defining digital citizenship.

Netsafe's digital citizenship model has been influential since its introduction in 2010, gaining good traction across the education system. Just one year after its release around one-in-five primary schools and secondary schools were promoting digital citizenship concepts (Johnson, Hedditch & Yin, 2011). Since then the proportion of principals reporting engagement with digital citizenship related approaches has continued to increase to around three-quarters of all schools (Johnson, Wood & Sutton, 2014; Johnson, Maguire & Wood, 2017).

Netsafe's model is specifically referenced in the Law Commission's work on harmful digital communications (2012, p. 19; 157), the Bullying Prevention and Response: A Guide for Schools (2015c), Ministry of Education funded services (e.g. the Connected Learning Advisory) and other government agencies such as the National Library ('Digital Citizenship in schools', n.d.). In 2017, Netsafe's revised model was included the New Media Consortium's Horizon Report on the five-year 'trend horizon' for schooling worldwide (Freeman et al., pp. 28-29).

The Education and Science Committee noted that Netsafe's model was "one definition of the skills that could underpin the NZ workforce of the future" and "we recommend that the Government consider reviewing these skills" (Education and Science Committee, 2012). Since then things have moved fast towards the raft of initiatives now in place from the Ministry of Education under the 'digital fluency' strategy (Ministry of Education, 2015b; Kaye, 2017).

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