

# From literacy to fluency to citizenship: Digital Citizenship in Education

Netsafe

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## **About Netsafe**

Netsafe is an independent non-profit organisation with an unrelenting focus on online safety and security. Its purpose is to enable all New Zealand internet users to confidently access digital opportunities and prevent online harm.

Call Netsafe toll free from anywhere in New Zealand on 0508 NETSAFE or email [queries@Netsafe.org.nz](mailto:queries@Netsafe.org.nz).

# Summary

**There has never been a greater need for schools to take a proactive approach towards a whole school community promotion of digital citizenship, including online safety and wellbeing, than there is now.**

The internet affords new ways of working and learning, and in turn, new challenges are emerging and evolving for young people 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 (Statistics NZ, 2013).

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 is a powerful enabler of inclusion in social, cultural 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.

Netsafe asserts that it is time to seek a definitive statement for digital citizenship and its relationship to 'digital literacy' and 'digital fluency'. Netsafe's view is that 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.

This paper is Netsafe's initial contribution to achieving this aim. In this paper, Netsafe presents a revised model of digital citizenship which asserts that digital citizenship combines the *confident, fluent use and combination* of three key elements:

- **Skills and strategies** to access technology to communicate, connect, collaborate and create;
- **Attitudes, underpinned by values** that support personal integrity and positive connection with others;
- **Understanding and knowledge of the digital environments and contexts** in which they are working, and how they integrate on/offline spaces;

and then *critically*:

- 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.

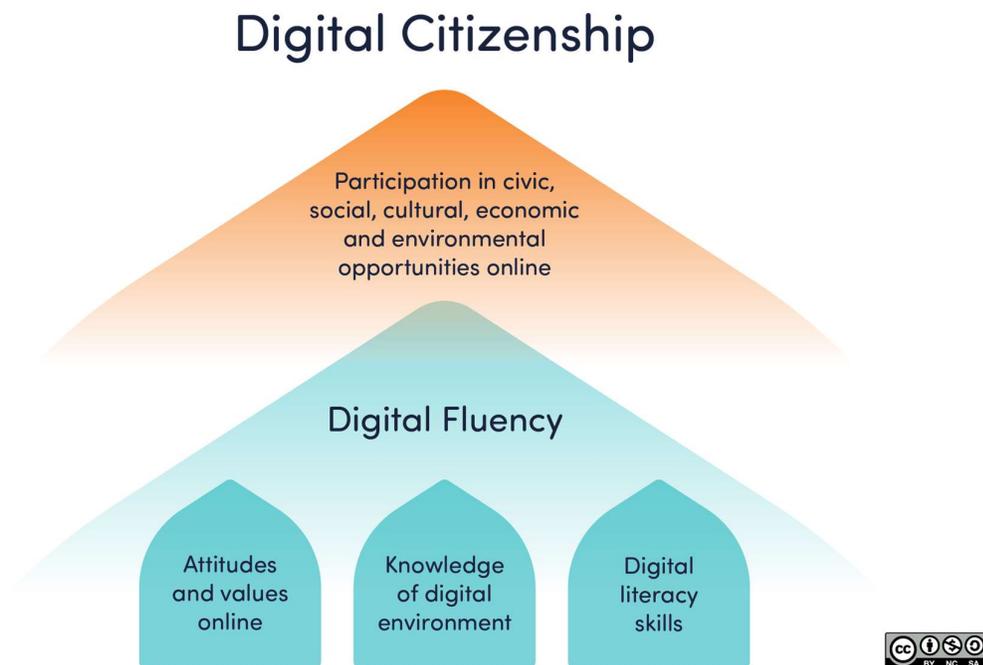
In this paper, Netsafe also outlines:

- Principles and a framework to underpin and support the development of digital citizenship within and across the schooling sector; and
- The need and imminent development of process indicators to guide schools' practice.

## Netsafe's revised model of digital citizenship

In summary, 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 is a powerful enabler of inclusion in social, cultural and civil society.

Diagram 1: A definition of digital citizenship — Netsafe (2016):



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.

The white paper provides a detailed explanation of the model and principles.

## Emerging challenges

**The way we use the internet is producing new and evolving challenges for 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 'sexting' are bringing a broad challenge of technology-mediated sexual peer pressure that is linked to sexual 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 e.g., 'sextortion' where someone who shares sensitive and personal images online is blackmailed for more explicit material. With the threat to release this content hanging over them, an increasing number of people report being coerced into, for example, providing more explicit content (Wittes, et al. 2016).

**Education system policy has encouraged schools' uptake of digital technology. This further emphasises the need for schools to be supported through a sustained approach to develop and maintain a safe and secure digital learning environment.**

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<sup>5</sup> and promotional<sup>6</sup> 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.

**Young people access the internet with increasing frequency via multiple access points and a continuing trend towards mobile access (Statistics NZ, 2013).**

In general, an increase in online access and activity increases the frequency of exposure to risk (Reddington, 2005; Livingstone & Haddon, 2009b). Young people are differentially vulnerable to risk

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<sup>5</sup> Risk is mediated by protection, support or intervention

<sup>6</sup> Resources and interventions lead directly to healthy development required to self-manage online challenges

and its outcomes, depending on a range of factors such as age, gender and cultural context (Ringrose, Gill, Livingstone, & Harvey, 2012). Overall the body of research indicates that young people are being exposed to an increasing volume of more complex risks, resulting in an overall increase in harmful outcomes experienced.

Further, adults and young people typically participate in the online environment in very different ways. Their views of the online experience also differ in important ways around the perception and management of online risk. Narrowing this gap is important if approaches to online safety are to be effective (Family Online Safety Institute, 2012).

**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. Combinations of approaches to device management (such as 'BYOD' and trust-purchased devices) have typified the sector's response to technology use in recent years (Johnson et al. 2014). In terms of online safety and security capability and preparedness, most schools now have basic protections in place such as content filtering, user agreements and basic or occasional programmes on digital literacy and safety.

However, the ongoing rapid rate of technological change means that it has been increasingly hard for schools to keep pace.

**Netsafe's operational experience suggests an urgent 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 collapse of traditional institutional boundaries (Kaye, 2015) creates opportunity but also challenge for schools who now need to adjust to a new reality where the distinction between personal and school devices or internet connection is rapidly diminishing (Ministry of Education, 2015).

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

**There is now a greater need for schools to take a proactive approach towards a whole school community awareness of digital citizenship, online safety and wellbeing.**

## An ideal future?

Everybody desires a meaningful and safe online/offline environment for 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 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 BoTs

**Leaders have a confident understanding of cybersafe/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.

**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 'pile on'.

# What is digital citizenship?

## The case for consensus

**With new initiatives coming on stream in New Zealand (such as digital technology in the curriculum; the focus on digital fluency), the time is right to make clear what is understood 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 (House of Representatives, 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 agrees.

**Netsafe’s view is that 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. This paper is Netsafe’s initial contribution to achieving this aim.**

## The nature of digital citizenship: Values and facts

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:

1. Certainty about the relevant *knowledge* that informs digital citizenship; and
2. 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, 2013; 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 ‘knowledge’ and ‘values’ might be important for digital citizenship. For example, the New Zealand Curriculum outlines the values and key competencies - and by 2018, digital competencies will also be addressed in the Technology/Hangarau Matihiko learning

area. The purpose of education in terms of economic, personal and social development is defined in the vision statements and principles.

This way of thinking about digital citizenship underpins the new model from Netsafe.

## Why Netsafe?

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 and gained good traction within the education system. For example, just one year after its 2010 release roughly one-in-five primary schools and secondary schools were promoting digital citizenship concepts (Johnson, Hedditch & Yin, 2011) and by 2014, 60% of principals reported their school had provided digital citizenship resources (Johnson, Wood & Sutton, 2014).

The model is deliberately noted in the Law Commission's work on harmful digital communications (2012, p. 19; 157), the Bullying Prevention and Response: A Guide for Schools (2015b), 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.).

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" (House of Representatives, 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).

As an independent non-government organisation, Netsafe's can effectively present an independent view that is representative of the community that it serves and more quickly respond to the needs of its key stakeholders.

## Netsafe's model of digital citizenship

**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 is a powerful enabler of inclusion in social, cultural and civil society.**

Building on Netsafe's earlier definitions of digital citizenship (Netsafe, 2010), an updated model has been developed. This model adapts key frameworks from the Organisation for Economic Co-operation and Development (OECD, 2016), from Westheimer & Kahne (2004), and incorporates the Ministry of Education's position on digital literacy and digital fluency (Ministry of Education, 2016).

Netsafe asserts that digital citizenship combines:

The *confident, fluent use and combination* of:

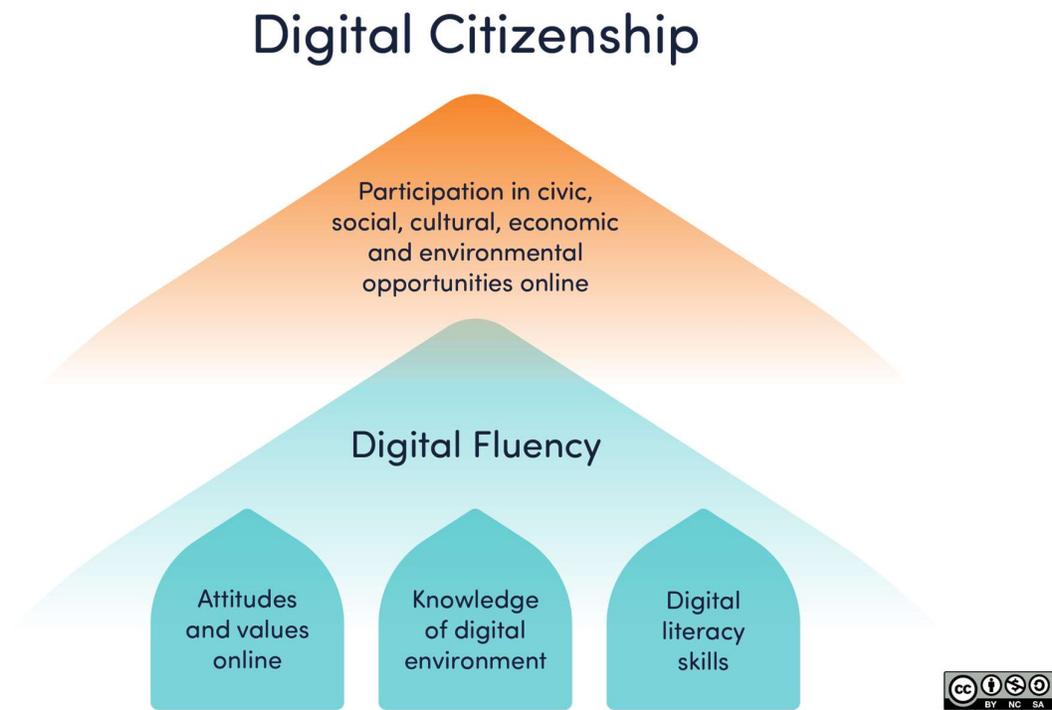
- **Skills and strategies** to access technology to communicate, connect, collaborate and create;
- **Attitudes, underpinned by values** that support personal integrity and positive connection with others;
- **Understanding and knowledge of the digital environments and contexts** in which they are working, and how they integrate on/offline spaces;

and then *critically*:

- 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.

Defined in this way, digital fluency is a set of competencies and dispositions — while **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. This is visualised in diagram 1, below:

Diagram 1: A definition of digital citizenship — Netsafe (2016):



## The relationship between online safety and digital citizenship

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 **skills and strategies** to minimise and manage risks;
- **Understanding** the affordances and constraints of digital environments;
- A community-led approach to **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 effective 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* 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).

## Key principles to underpin 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’ (New Zealand Curriculum, 2007) and underpinning principles in the Te Marautanga o Aotearoa (Ministry of Education, 2007 — Te āhua o ā tātou ākonga, p. 5).

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<sup>7</sup>
2. **Whānaungatanga** | An unbounded, coherent home-school-community approach is central to the development of digital citizenship and online safety management<sup>8</sup>
3. **Manaakitanga** | Approaches to digital citizenship are inclusive, responsive and equitable in design and implementation<sup>9</sup>
4. **Wairuatanga** | Digital citizenship in action positively contributes to wellbeing and resilience development enabling safer access to effective learning and social opportunities<sup>10</sup>
5. **Mahi tahi** | Digital citizenship development and online safety incident management are fostered through partnership approaches, coherent systems and collaboration<sup>11</sup>
6. **Kotahitanga** | Evaluation and inquiry underpin the ongoing design of digital citizenship approaches, based on rich evidence from young people and their whānau.<sup>12</sup>

## The knowledge required to be a digital citizen

There are many resources available that focus on the varying skillsets people need to learn in order to become digitally fluent. They range from ‘skill drilling’ and one-off modules related to using technology to understanding how to respond to different digital challenges (e.g. what to do to keep information safe).

Technology is to be embedded as a strand of the technology learning area in the New Zealand Curriculum, and as a whenu within the Hangarau Wāhanga Ako of Te Marautanga o Aotearoa<sup>7</sup>. This sends a powerful signal of government direction; now the challenge is to ensure it is applied in effective, citizenship-led contexts.

<sup>7</sup> 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.

<sup>8</sup> 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.

<sup>9</sup> Manaakitanga — the process of showing respect, generosity and care for others; including all.

<sup>10</sup> Wairuatanga - This focuses on care for others’ spirit, safety and wellbeing in the context of history, knowledge, customary practices, philosophies and spiritualities and their transmission from one generation to the next.

<sup>11</sup> Mahi tahi describes the unity of a group of people working collaboratively towards a specific goal or on a specific task.

<sup>12</sup> Kotahitanga — unity, togetherness, solidarity, collective action.

<sup>7</sup> Ministry of Education. (2016). <http://www.education.govt.nz/news/digital-technology-to-become-part-of-the-new-zealand-curriculum-and-te-marautanga-o-aotearoa/>

# Creating the right environment for developing digital citizenship: *Protect and promote*

## Understand the relationship between risk and harm

Supporting young people 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).

## Effective strategic approaches

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.

## The need for process indicators to guide digital citizenship implementation

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.

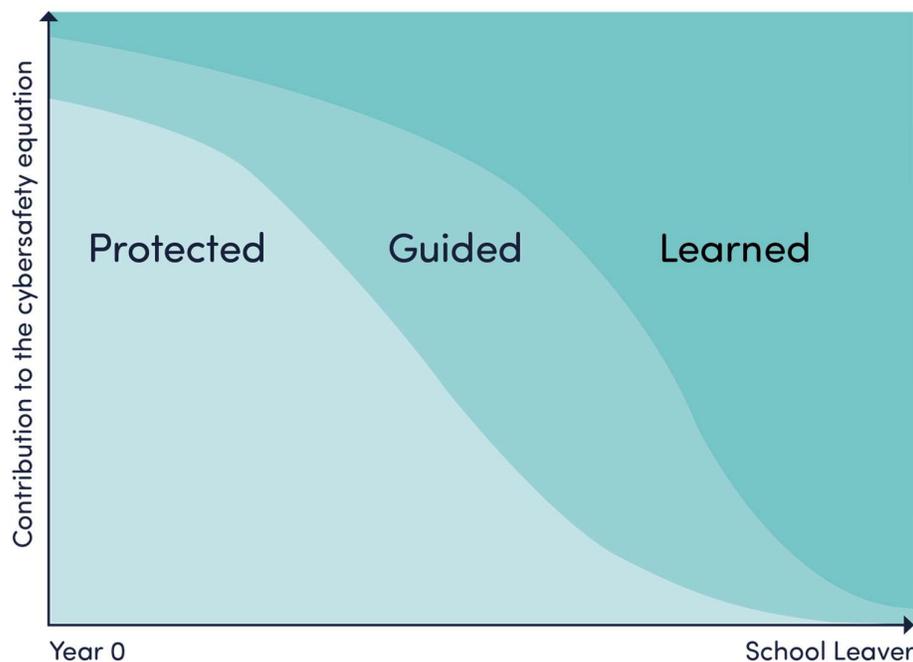
The desired outcomes are expressed in the New Zealand curriculum documents. Netsafe are developing process indicators, adapted from the Education Review Office guidance to support wellbeing (ERO, 2016a) and the School Evaluation Indicators (ERO, 2016). They are underpinned by the same guiding principles and will be ready to trial in 2017.

These process indicators balance promotion of safe and responsible behaviours and with management of the inevitable digital challenge. The focus is on increasing learner preparedness, whilst over time reducing external protections.

## Underpinning assumption: Learn—Guide—Protect

A vital starting point is the identified needs of your community and learners - the Netsafe Learn-Guide-Protect offers an underpinning assumption. [The Learn-Guide-Protect framework](#) is organised into three overarching 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.



The framework asserts that the younger the student, the more important the protective measures so that young students can safely explore a wide range of online experiences. Teacher guidance will lay the foundation for online safety skills. As students mature, the need for self-managing opportunities grows while the effectiveness of protective measures drops off markedly. There is a greater need for guidance and support to offer regular opportunities for active participation as digital citizens in a wide range of meaningful contexts.

## 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.

Stay up-to-date with how the ideas in this paper are developing by subscribing to Netsafe's newsletter at [netsafe.org.nz](https://netsafe.org.nz). Policy advisors, interest groups and researchers are welcome to contact us for further discussion and collaboration.

If your school would like to request direct support, or participate in the pilot phase of the Netsafe capability tool in 2017, please contact Karen Spencer, Director of Education: [karens@Netsafe.org.nz](mailto:karens@Netsafe.org.nz).

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