THE EXPERIENCE OF DIGITAL CITIZENSHIP IN A SECONDARY SCHOOL CURRICULUM

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STATEMENT OF ORIGINAL AUTHORSHIP

This thesis contains no material published elsewhere or extracted in whole or in part from a thesis by which I have qualified for or been awarded another degree or diploma.

No parts of this thesis have been submitted towards the award of any other degree or diploma in any other tertiary institution.

No other person’s work has been used without due acknowledgement in the main text of the thesis.

All research procedures reported in this thesis received the approval of the relevant ethics committees (see Appendix A).

Signature:

Date: November 2016
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Reach high, for stars lie hidden in your soul.
Dream deep, for every dream precedes the goal.
Mother Teresa

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ABSTRACT

The emergence of the global digital world has created large-scale transformation in how individuals and societies function. Citizenship in twenty-first century society now includes digital citizenship – which is described in the research as the norms of appropriate, responsible behaviour regarding technology use. The rapid change of digital technologies has generated a need for new ways to develop responsible citizens. Schools are being challenged to address an increasing range of broader societal issues that influence individuals' responsible citizenship such as cyber bullying and identity theft. The research problem addressed in this thesis concerns how learning communities cultivate responsible citizens. How this issue has been addressed is by school leaders implementing digital citizenship teaching and learning opportunities in the curriculum. The research purpose is to explore how students, teachers and leaders of one secondary school experience a curriculum that integrates digital citizenship.

Three specific research questions focus the conduct of this study:

1. How do members of a secondary school community experience a curriculum that integrates digital citizenship?

2. How do members of a secondary school community engage with a curriculum that integrates digital citizenship?

3. How does a curriculum that integrates digital citizenship influence members of the school community?

Case study is the methodology adopted for the research. Participants are purposely selected from the student, teacher and leader body of a Catholic secondary college in Queensland. In total, 300 participants are involved. Data are gathered through focus group interviews, individual interviews, online questionnaires and participant observation. For the purpose of the research, the Constant Comparative Method of data analysis is applied.
This research generates 10 conclusions:

First, Ribble and Bailey’s Nine Elements Framework (2007; updated by Ribble, 2011) offers a productive strategy for school educators to conceptualise the issues concerning digital participation. It provides a defensible framework to prepare curriculum that incorporates digital citizenship themes. Staff and students confirm that a common language for digital citizenship is productive, however the Nine Elements Framework and digital citizenship terminology may be more meaningful for staff than students.

Second, it is appropriate for digital citizenship teaching and learning opportunities to be included in school curriculum. Participants consider digital citizenship as a necessary and relevant focus for schools.

Third, a curriculum that integrates digital citizenship promotes online behaviour standards in schools. Participants consider the integrated curriculum a relevant educative approach for developing staff and students’ capacities for responsible online participation.

Fourth, there is a need for government informed leadership to school systems and schools concerning digital citizenship. Direction on the relationship between digital citizenship and Australian education priorities is required. The deficit of leadership is problematic for school staff striving to facilitate curriculum that integrates digital citizenship.

Fifth, schools and families share responsibility for developing students’ digital citizenry. Staff and students consider that digital citizenship is productively developed when parents and teachers cooperatively guide the process.

Sixth, there is a deficit in teacher knowledge and confidence in teaching digital citizenship. There is a need for more and improved quality teacher education concerning digital citizenship.
Seventh, a curriculum that integrates digital citizenship opportunities is a preferred teaching and learning model for staff and students. Contextualising digital citizenship learning in an established educational program encourages a school-wide digital citizenship focus. The integrated curriculum generates connections for students between online and offline contexts.

Eighth, a curriculum that integrates digital citizenship is a productive approach to the enculturation of digital citizenship in a school community. Contextualised teaching of digital citizenship develops five areas of school life: digital citizenship awareness; common language concerning the digital context; professional expectations; staff and student interactions, and practice.

Ninth, specialised professional development is critical for all school staff facilitating digital citizenship education. Staff members require initial and ongoing education concerning the digital context and digital citizenship themes. The development should particularly engage with Australian Curriculum digital citizenship requirements and implications; and how students approach, value and relate to digital technologies.

Tenth, in a school where digital citizenship is a curriculum priority it is productive for school-based and system accountability processes to include digital citizenship themes.
LIST OF ACRONYMS

AC Australian Curriculum
ACARA Australian Curriculum, Assessment and Reporting Authority
ACMA Australian Communications and Media Authority
ACU Australian Catholic University
AGQTP Australian Government Quality Teacher Program
AICTEC Australian Information and Communications Technology in Education Committee
AUP Acceptable Use Policy
BCE Brisbane Catholic Education
BYOD Bring Your Own Device
CCA Constant Comparative Analysis
CIDC Curriculum that integrates digital citizenship
DC Digital citizenship
DCMC Digital Citizenship – Making the Connections
DER Digital Education Revolution
EDC Ethics and Digital Citizenship Course
HOC Hands on a Camera Project
ICT Information and communication technology
ISTE International Society for Technology in Education
KLA Key Learning Area
MCEETYA Ministerial Council on Education, Employment, Training and Youth Affairs
NBN National Broadband Network
NETS National Educational Technology Standards
NETS-T National Educational Technology Standards for Teachers
NETS-S National Educational Technology Standards for Students
OECD Organisation for Economic Cooperation and Development
PDAs Personal data assistants
SI Symbolic Interactionism
SLT Senior Leadership Team
WSIS World Summit on the Information Society
WWW World Wide Web
CHAPTER 1: THE RESEARCH PROBLEM IDENTIFIED

1.1 Introduction

I have been involved with the education sector since 1999 in a variety of roles across teaching, middle leadership, and senior leadership. In 2009, I commenced the part-time middle leadership position of Director Special Projects at St Eliza’s College\(^1\) (hereinafter referred to as ‘the College’). In this role, I manage important projects for the College.

In 2009, the College introduced a 1:1 laptop program for all students and staff. With the resultant increased technology use, the misuse and abuse of technology in the College intensified.

My experience with digital citizenship (DC) began in response to the need for the College to explore new ways to develop responsible contemporary citizens. In a search for a proactive holistic framework for digital participation, I identified the concept of “digital citizenship” in the American research literature (Ribble & Bailey, 2007). Digital citizenship is defined as “the norms of appropriate, responsible behavior with regard to technology use” (Ribble, 2011, p. 10). In contrast, the College had concentrated on student use of the laptops, and professional learning that concerned applications or effective pedagogical practices for technology integration. What was missing from the College’s approach was an accompanying focus on responsible and effective technology use.

Accordingly, a project to develop and implement a curriculum that integrates digital citizenship (CIDC) was initiated. I am interested in how stakeholders experience and engage with that curriculum, and how such an educational initiative influences the College community.

1.2 Research Problem Identified

By 2010, the College was operating over 1100 computers. Indeed, in twelve months the College had transitioned from a learning environment with three computer

\(^{1}\) St Eliza is a pseudonym used to protect the anonymity of the real College involved in the research.
laboratories to one where all staff and students had a laptop with them for each lesson.

After the laptop program was introduced, staff were increasingly addressing technology related incidents. In 2010, a College Peer Relationships Survey (St Eliza’s College) reported that 42% of student respondents had witnessed or experienced a form of cyber bullying. In addition, 10% of respondents often experienced bullying through the cyber medium (refer to section 2.3.5.2 for elaboration). This challenge existed despite a comprehensive suite of Information and Communications Technology (ICT) Acceptable Use Policies (AUPs), Agreements, Handbooks and student information sessions concerning cyber safety. To conclude, something that had previously been a relatively minor issue for the College became a focus of concern for the whole community.

Research confirmed that the College’s experience of increased inappropriate digital technology use among students was widely experienced in other settings (Bennett, 2005; Ribble & Bailey, 2004). It was from this context of inappropriate usage that the Digital Citizenship – Making the Connections (DCMC) project began in 2011. The aim of the project was to integrate DC teaching and learning into the College curriculum. The rationale was to develop students' capacities to responsibly and effectively participate in digital community. The College implemented its inaugural curriculum that integrates digital citizenship (CIDC) for Years 8 and 9 students in 2012.

“Curriculum” is a contested concept and embraces multiple definitions. These range from the totality of a student’s educational program to planned learning experiences. Indeed, there is an established lack of consensus concerning the meaning of the term “school curriculum” (Brady & Kennedy, 2014, p. 3). “A quick survey of a dozen curriculum books would be likely to reveal a dozen different images or characterizations of curriculum. It might even reveal more, because the

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2 For the purposes of this research, cyber safety refers to the protection of children when they are online. Cyber safety information addresses online dangers to children, such as exposure to illegal or inappropriate material, stranger danger, identity theft, invasion of privacy, harassment and cyberbullying. (Commonwealth of Australia, 2010, p. 5).
same author may use the term in different ways” (Schubert cited in Brady & Kennedy, 2014, p. 3).

A review of the literature identifies conflicting definitions of school curriculum. Certain perspectives focus on students’ holistic educational experience. They include the official educational program together with the hidden curriculum that “flavour[s] classroom life” (Stenhouse, 1975, p. 40). Other definitions establish curriculum as a school’s planned learning experiences. In some instances, these experiences relate to content only, while others conceptualise planned learning experiences as the combination of content and pedagogy. Table 1.1 offers a summary of divergent definitions concerning curriculum.

<table>
<thead>
<tr>
<th>Table 1.1 A Selection of Curriculum Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition of Curriculum</td>
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</tr>
<tr>
<td><strong>Curriculum is the planned composite effort of any school to guide pupil learning toward predetermined learning outcomes.</strong></td>
</tr>
<tr>
<td><strong>Curriculum encompasses all learning opportunities provided by the school.</strong></td>
</tr>
<tr>
<td><strong>Curriculum is all the planned experiences provided by the school to assist the pupils in attaining the designated learning outcomes to the best of their abilities.</strong></td>
</tr>
<tr>
<td><strong>Curriculum is a structured series of intended learning outcomes. Curriculum prescribes (or at least anticipates) the results of instruction.</strong></td>
</tr>
<tr>
<td><strong>A curriculum is the means by which the experience of attempting to put an educational proposal into practice is made publicly available. It involves both content and method, and in its widest application takes account of the problem of implementation in the institutions of the educational system.</strong></td>
</tr>
<tr>
<td><strong>A curriculum is an organized set of formal educational and/or training intentions.</strong></td>
</tr>
<tr>
<td><strong>[Curriculum is]...an interrelated set of plans and experiences that a student undertakes under the guidance of a school.</strong></td>
</tr>
</tbody>
</table>

(Source: Adapted from Brady & Kennedy, 2014, p. 3 and Stenhouse, 1975, p. 4).

In this research, curriculum is understood as the combination of content (particularized in the Australian Curriculum and College work programs) and teacher
pedagogy. The rationale for this is that the CIDC involves teachers engaging students in contextualized learning about digital citizenship themes.

Consequently, the purpose of this research is to explore how members of a secondary school community experience a curriculum that integrates digital citizenship.

1.3 Research Design

The research design focuses on three specific research questions that are generated and justified in the literature review (Chapter Three):

1. How do members of a secondary school community experience a CIDC?
2. How do members of a secondary school community engage with a CIDC?
3. How does a CIDC influence members of the school community?

Given the purpose and interpretive nature of the research, the research design detailed in Table 1.2 was generated.

Table 1.2 Summary of the Research Design

<table>
<thead>
<tr>
<th>Epistemology</th>
<th>Constructionism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical perspective</td>
<td>Interpretivism</td>
</tr>
<tr>
<td></td>
<td>Symbolic Interactionism</td>
</tr>
<tr>
<td>Methodology</td>
<td>Case study</td>
</tr>
<tr>
<td>Participants</td>
<td>Purposive selection</td>
</tr>
<tr>
<td>Data Gathering Strategies</td>
<td>Focus group interviews</td>
</tr>
<tr>
<td></td>
<td>Individual interviews</td>
</tr>
<tr>
<td></td>
<td>Online questionnaires</td>
</tr>
<tr>
<td></td>
<td>Participant observation</td>
</tr>
</tbody>
</table>

1.3.1 Epistemology

Epistemology provides a philosophical foundation for explaining how knowledge is generated and determined to be ‘valid’ (Crotty, 1998; O'Donoghue, 2007; Schnelker, 2006). Constructionism is one theoretical assumption that explains the relationship

---

3 Community is defined in this research as the students, teachers and leaders of a secondary school.
between the researcher and the knowledge that is the research product (Gough, 2002). It assumes that human knowledge is constructed through social interaction, and not 'discovered' (Crotty, 1998). Since this research concerns how students, teachers and leaders of a secondary school experience a CIDC, Constructionism is adopted as an appropriate epistemology (Feast & Melles, 2010).

1.3.2 Theoretical Perspective
A theoretical perspective is an approach to understanding and explaining human society (Crotty, 1998). Interpretivism is adopted as the theoretical perspective for this research as it seeks to understand socially constructed experiences – what people think, and how they form their ideas about their experiences (Neuman, 2006; Thomas, 2009). Indeed, students, teachers and leaders interact and interpret the research phenomenon from different perspectives (Candy, 1989).

1.3.2.1 Symbolic Interactionism
The particular lens chosen to offer a focused understanding of the theoretical perspective is Symbolic Interactionism (SI). SI is a theoretical explanation within the Interpretivist perspective concerning how humans relate with their reality (O’Donoghue, 2007). It postulates that an appropriate approach to understanding knowledge generation is through interpreting human personal and interpersonal relations, especially in context and culture (Charon, 2010). SI focuses on the symbols, language and actions that humans use to create culture. Given the research purpose, SI conceptualises the research to acknowledge the interconnectedness of global, digital society and education.

1.3.3 Methodology
A research methodology justifies the choice and use of data gathering strategies in a research design (Crotty, 1998; O’Donoghue, 2007). The methodology adopted for this research is case study. Case study enables the researcher to understand how participants experience a phenomenon as it “…investigates a contemporary phenomenon within real-life context” (Yin, 1994, p.13). In this research, the phenomenon is a CIDC, and the context is a secondary school that has implemented the curriculum. Given the purpose of this research is to explore how participants
experience a curriculum initiative, an illuminative model curriculum evaluation (Parlett & Hamilton 1972; 1987)\textsuperscript{4} is adopted for this research.

1.3.4 Participants
There are three groups of participants in the research – students, teachers and leaders of the College. All participants volunteered. As suggested by Creswell (2012), some participants were purposely selected for their knowledge of a CIDC. Leaders include Curriculum Leaders and members of the Senior Leadership Team (SLT). Student participants are enrolled in Years 8 or 9 at the time of data gathering.

1.3.5 Data Gathering Strategies
The data gathering strategies adopted for this research are:

- Focus group interviews \((n = 8\) with 48 participants)
- Individual, in-depth, semi-structured interviews \((n = 19)\)
- Online questionnaires \((n = 2\) with 100 participants); and
- Participant observation \((n = 8\) involving 4 teachers and 145 students).

1.4 Significance of the Research
This research is significant for four reasons.

1.4.1 Relevancy
The first reason concerns relevancy. A search of the literature identifies limited empirical studies concerning school curricula that address digital citizenship. The studies focus on the development and validation of a Technology Leader’s Guide for implementing DC in schools (Ribble, 2006); developing and testing a DC guide for teachers at a global academy (Pescetta, 2011); the effectiveness of a short-term DC program in a Year 9 Technology course (Boyle, 2010); the design of a stand-alone DC program for Years 5 and 6 students (Cunha, 2012); the relationship between school leaders’ beliefs and the implementation of a DC curriculum in schools (Suppo, 2013), and on the association between Catholic educators’ perceptions of the influence of Catholic identity and their ability to promote and model DC (Miani, 2015). What is yet to be explored is how members of a school community experience a

\textsuperscript{4} Parlett and Hamilton’s illuminative model of program or curriculum evaluation is a seminal text (1972).
curriculum that integrates digital citizenship teaching and learning opportunities. Consequently, it is timely for research to explore students’, teachers’ and leaders’ experiences of an educative approach to DC curriculum in schools.

1.4.2 Emerging Scholarship Area

The second reason this research is important is that it is situated in an emerging scholarship area. Literature tends to examine one or more of the following:

- DC definitions (Gibbs, 2010; Ohler, 2010; Ribble, 2006; Ribble, 2011; Ribble & Bailey, 2007);
- suggested pedagogical frameworks and approaches for teaching DC in schools (Brooks-Young, 2010; Churches, Crockett & Jukes, 2010; Ohler, 2010; Ribble & Bailey, 2007);
- guides for teaching DC in schools (Cunha, 2012; Pescetta, 2011; Ribble, 2006; Ribble & Bailey, 2007);
- rationales for teaching DC in schools (Hollandsworth, Dowdy & Donovan, 2011; Ribble, 2011);
- challenges to embedding DC in school curricula (Bennett, 2005; Brooks & Holford, 2009; Farmer, 2010; Hollandsworth et al., 2011), and

There is limited research examining the influence of discrete DC programs on students’ normative technology use (Boyle, 2010), and teacher perspectives on a guide for teaching DC (Pescetta, 2011). What further invites research is how members of a school that implements DC across its curriculum experience it.

1.4.3 The Ethos of St Eliza’s College

The third reason this research is important concerns the ethos of St Eliza’s College. The school leadership believes that its structures and values nurture the holistic formation of students. Students live in concurrent physical and digital communities. Therefore, the holistic development of students includes preparing them for appropriate engagement in digital community. Situating the research in the context
of a Catholic school that operates a 1:1 laptop program for students, may offer explanations concerning how a CIDC influences students' formation.

1.4.4 Educational Practice
The final reason this research is important concerns its potential to inform educational practice. By exploring the influence of a curriculum that espouses to integrate DC on a school community, education systems and school leaders may evaluate the relevance to their communities. In addition, teachers may identify how a CIDC influences their pedagogical practice, and researchers may generate further understandings concerning DC education.

The significance of this research is presented diagrammatically in Figure 1.1.

Figure 1.1 Significance of the Research

1.5 Outline of the Thesis
An outline of the structure of the thesis is presented below:

Chapter One: The Research Problem Identified
This chapter introduces the research context, design and significance.
Chapter Two: Defining the Research Problem
This chapter offers a context and justification for the research problem. It presents a summary of the global and national contexts concerning digital technologies, together with an overview of the influence of increased technology use in schools. The chapter also documents the local context of a secondary school operating a 1:1 laptop program and an approach to developing responsible citizens in the Network Age.

Chapter Three: Literature Review
This chapter reviews the literature that identifies and illuminates the issues underlying the research purpose. It generates and justifies three specific research questions that focus the conduct of the research design.

Chapter Four: Design of the Research
This chapter explains and justifies the research design adopted for the study. It presents the data gathering strategies used for the research and justifies the participants in the study. Data analysis is also explained and justified.

Chapter Five: Presentation of the New Understandings
This chapter presents and explains new understandings generated from an analysis of the data.

Chapter Six: Discussion of the New Understandings
This chapter discusses issues generated from a synthesis of the new understandings presented in Chapter 5. It situates the new understandings in the context of other research.

Chapter Seven: Conclusions and Recommendations
This chapter presents the conclusions and recommendations from the research. It also demonstrates contributions to scholarship through new knowledge, practice and policy.
CHAPTER 2: DEFINING THE RESEARCH PROBLEM

2.1 Introduction
The purpose of this chapter is to offer contextual explanation and justification for the research problem underpinning this thesis.

2.2 Conceptualising the Research Problem
The conceptualisation of the research problem is diagrammatically represented in Figure 2.1. The diagram presents a structure for the social and educational contexts explored in the generation of the research problem.

Contemporary schools operate in a digital, global world where information communication technologies are ubiquitous. An understanding of the expanding presence and influence of these technologies in society, and particularly on the education context, contributes to an appreciation of the research problem. It is within these global, national and local contexts that the research problem concerning students’, teachers’ and leaders’ experiences of a curriculum that integrates digital citizenship (CIDC) emerges.

Figure 2.1 Conceptualisation of the Research Problem
2.3 Research Context

In order to appreciate the research problem a review of the international and national contexts and associated literature is appropriate.

2.3.1 The Network Age

The twenty first century has witnessed a new paradigm of human history concerning communication. The rapid and constant technological developments of the 2000s initiated a world: “driven by advances in speed, capacity and mobility – as well as by the functional mutations sure to arise when a communications system is both ubiquitous and always on” (Rosenburg, 2004, p.164). Indeed, the increasing presence and use of digital technologies in society generated a new period in history known as the Digital Age, Information Age or Network Age.

Two noticeable new influences on global society in the Network Age are the Internet and the World Wide Web (WWW). “The Internet is the single most important development in the history of human communications since the invention of ‘call waiting’” (Jukes, McCain & Crockett, 2010a, p. 57). Prior to 1995, the Internet and the WWW were largely the domain of military and academic organisations (Green, Brown, & Robinson, 2008; Solomon & Schrum, 2010). Indeed, in 1990 there was less than 300 WWW users globally (Jukes et al., 2010a), and approximately fifty Web servers worldwide in 1992 (Green et al., 2008).

However, the launch in 1994 of the web browser, Netscape Navigator, transformed Internet use. The web browser facilitated global access to the WWW (Jukes et al., 2010a). It became easy and affordable to use. As a result, technology “entered into public consciousness” (Jukes et al., 2010a, p. 57). By 2002, there were in excess of 24 million web servers and 600 million global Internet users (Green et al., 2008)

---

5 The Internet – “is a worldwide collection of computer networks that allows individuals to share data from one computer to another. This collection of computer networks is made up of various types of specific computers or groups of computers that are located at places such as schools, businesses, and the government. In essence, the Internet is a network of networks” (Green, et al., 2008, pp. 125-126).

6 World Wide Web (WWW or the Web) – “is another Internet resource that allows you to access data over the Internet” (Green, et al., 2008, p. 128). “The concept of what has become the Web was outlined in a proposal written in 1989 and is credited to Tim Berners-Lee. A working prototype of Berners-Lee’s system was first used in on a single Web server in Switzerland in 1991. In late 1991 the Web server was made available to the general public” (pp. 2-3).
(refer to Figure 2.2 and Table 2.1). Accordingly, society was transformed and placed on a trajectory for ubiquitous digital technology use.

**Figure 2.2  Internet Users in the World**

(Source: Data obtained from Internet Live Stats, 2016)

**Table 2.1  Internet Users as a Percentage of World Population (2000 – 2016)**

(Source: Data obtained from Internet Live Stats, 2016)
2.3.1.1. Major Technological Developments

Important developments in the 2000s stimulated digital technology usage. First, the WWW moved from Web 1.0 – where digital technology users consumed information, to Web 2.0\(^7\) – where users became consumers, producers and distributors of information (Brooks-Young, 2010; Solomon & Schrum, 2010).

Second, the speed of Internet connectivity improved with increasing numbers of Internet users transitioning from dial-up\(^8\) to broadband\(^9\) Internet connections. This global trend is reflected in the United States where 41% of adults had dial-up Internet connection in 2002, compared to 6% who adopted broadband connection. In contrast, by 2015, 67% of adults had broadband connection and 3% a dial-up connection (Pew Research Center, 2015, Figure 2.3). Importantly, as Internet connectivity improved and digital technology users increasingly adopted broadband links, Internet usage changed. “[People] spent more time online, performed more activities, watched more video, and themselves became content creators” (Pew Research Center, 2014).

Figure 2.3 Broadband vs. Dial-up Internet Connection

![Graph showing broadband vs. dial-up internet connection from 2002 to 2014](source)

(Source: Data obtained from “Internet Use over Time,” Pew Research Center, 2015)

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7 Web 2.0 refers “to the second generation of the World Wide Web with a shift away from static Web pages and a move toward content that is dynamic and can be shared” (Brooks-Young, 2010, p. 126).

8 A dial-up Internet connection “is connection through a telephone line and the bandwidth – which is the amount of data that can be transferred through a digital connection - is less than a cable connection” (Green et al, 2008, p. 131)

9 Broadband Internet connections refer to “cable or DSL (digital subscriber line) connections. These connections can access web pages that have audio, video or high quality images” (Green et al, 2008, p. 131).
Third, mobile computing made “anytime-anywhere” access to information a reality for digital technology users. In the early 2000s, mobile phones, laptops, personal data assistants (PDAs) and digital audio players became more affordable for public consumption and commercial use (LLobregat-Gomez & Sanchez-Ruiz, 2015; Ribble, 2015). This phenomenon gained momentum as broadband connection charges became less expensive and local community initiatives facilitated free wireless Internet connection from public locations such as libraries (Solomon & Schrum, 2010). Indeed, digital technology users began using multiple mobile devices more frequently. The global trend for mobile device popularity and pervasiveness is reflected in the United States (Pew Research Center, 2015, Figure 2.4).

Figure 2.4 Mobile Device Ownership

(Source: Data obtained from “Internet Use over Time”, Pew Research Center, 2015)

The fourth significant technological development in the 2000s was the rise of social media and social networking sites such as MySpace, Facebook, Twitter, YouTube, Wikipedia and LinkedIn.

---

10 Social media is “the collective of online communication channels dedicated to community-based input, interaction, content-sharing and collaboration. Websites and applications dedicated to forums, microblogging, social networking, social bookmarking, social curation, and wikis are among the different types of social media” (WhatIs.com, 2016d).

11 Social networking site (SNS) is “an online platform that allows users to create a public profile and interact with other users on the website” (Techopedia.com, 2016a).
In an amazingly short period of time, social media has become an integral part of our lives: the way we conduct business, connect with our friends, shop for household items, research complicated issues, find medical help, stay abreast of the news, and plan our vacations, to name just a few (Porterfield & Carnes, 2012, p. 6)

In 2016, there are 2.307 billion social media users globally. Figure 2.5 diagrammatically represents the 31% global penetration rate of social media – a 10% increase from 2015.

**Figure 2.5  Global Social Media Usage**

(Source: Data obtained from “Digital in 2016”, We Are Social UK, 2016, slide 7)

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12 Facebook is “a popular free social networking website that allows registered users to create profiles, upload photos and video, send messages and keep in touch with friends, family and colleagues” (WhatIs.com, 2016a).

13 Twitter is “a free microblogging service that allows registered members to broadcast short posts called tweets” (WhatIs.com, 2016e).

14 YouTube is “a popular video sharing website where registered users can upload and share videos with anyone able to access the site” (Techopedia.com, 2016b).

15 Wikipedia is “a free open content online encyclopedia created through the collaborative effort of a community of users” (WhatIs.com, 2016f).

16 LinkedIn is “a social networking site designed specifically for the business community” (WhatIs.com, 2016c).
2.3.1.2 New Social Dynamics

The continuous evolution of new technologies has changed the nature of social relations, education, work, thought processes and community (Furdyk & Walraven, 2009; Sernau, 2008; Suarez-Orozco & Qin-Hilliard, 2004). The WWW generated novel communication strategies. Indeed, complex and rapid communication became a reality: "[t]he Internet is a business, education, entertainment, and communications cent[re] capable of fitting into a single device" (Jukes et al., 2010a, p. 63). People and communities are no longer defined by geographical boundaries. Rather, in the Digital Age individuals, communities and countries are defined by their participation in both local contexts and global networks of relationships (Suarez-Orozco & Qin-Hilliard, 2004). This phenomenon generates a global citizenship inviting new possibilities and contemporary dynamics in social relations. Importantly, citizenship in the global, digital world requires new paradigms for thinking and living – where citizens adopt an interconnected view of culture, economics and politics (Sernau, 2008).

The diffusion of digital technologies globally has profoundly influenced the concept of “work”.

Information communications technology is completely reorganizing how, where, when, with whom, and even why people work. This global cultural evolution is redefining our notion of jobs; as a result, we see an emerging enterprise-centered workforce in which workers manage their own businesses and sell their services to many different customers across a globally connected market. (November, 2012, pp. 13-14)

Indeed, the “virtual global worker” with an international employer base is a reality in the Digital Age (Foundation for Young Australians, 2015). Complimentary Web 2.0 tools are accessible by those who have an Internet browser and connection (Solomon & Schrum, 2010); and they facilitate international employment from a local context. Moreover, corporations are increasingly outsourcing and home offices are increasing (November, 2012).

In this context of globalisation and technologically driven development, educational institutions are challenged to reflect and restructure if: “…schooling is to best
prepare the children and youth of the world to engage [with] globalization’s new challenges, opportunities and costs.” (Suarez-Orozco & QinHilliard, 2004, p. 3). Indeed, ubiquitous change in social and business interactions influences the skills that students require to effectively engage in the global, digital world. “As the world is changing, so must education; students need skills and knowledge that facilitate their involvement as active citizens in their worlds [of human rights, global citizenship and digital citizenship]” (Bennett, Aguayo, & Field, 2016, p. 191). Indeed, students need to be taught how to use technology responsibly (Bennett et al., 2016; Ribble, 2015). They ought to acquire global empathy skills (November, 2012), and productive collaboration, communication and technology skills (Solomon & Schrum, 2010). Moreover, in the Network Age technical reading skills and proficient use of ICT to innovate, problem solve and create are necessities (Jukes et al., 2010a; November, 2010).

2.3.1.3 Internet Jurisdiction

No individual, corporation, government or nation owns the Internet (Green et al., 2008). Instead data transmission mediums are owned and regulated by organizations. The United Nations defines Internet governance as: “the development and application by Governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures and programmes that shape the evolution and use of the Internet” (General Assembly Resolution 70/125, 2015, p.12). In addition, management of the Internet is described as “encompass[ing] both technical and public policy issues and should involve all stakeholders and relevant intergovernmental and international organizations, within their respective roles and responsibilities” (General Assembly Resolution 70/125, 2015, p. 12).

Importantly, there is no global juridical agreement concerning digital technology use. It is not surprising that in the absence of international law governing digital citizenship, people require guidance on how to engage responsibly with technology (Ribble, Bailey, & Ross, 2004). In this context, educational institutions are experiencing increasing expectations to teach students how to participate in their local, global and digital communities (Bennett, 2005; Ohler 2010).
These global circumstances have relevance in the Australian context.

### 2.3.2 The Network Age in Australia

The global trends for increasing presence and use of ICTs are reflected in Australian data. In 2000, 32% of Australian households had Internet access (Australian Bureau of Statistics, 2016). By 2010, this figure had increased to 78.9% of households (Organisation for Economic Cooperation and Development (OECD), 2016, Figure 2.6), and by 2015, 86% (7.7 million) Australian households had Internet access (Australian Bureau of Statistics, 2016).

**Figure 2.6  Household Internet Access in Australia 2000 - 2012**

![Household Internet Access in Australia 2000 - 2012](graph)

(Source: Data obtained from “Internet Access (indicator)”, Organisation for Economic Cooperation and Development, 2016)

Furthermore, in 2016 there are over 20.5 million Internet users in Australia. This number represents 85.1% of the population, and demonstrates a significant Internet penetration throughout the Australian population. In fact, Australia ranks eighth in the world for the number of Internet users relative to population (Internet Live Stats, 2016, Table 2.2).
Table 2.2  Internet Users by Country and as a Percentage of the National Population

<table>
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<tbody>
<tr>
<td>1</td>
<td>China</td>
<td>721,434,547</td>
<td>52.2 %</td>
<td>1,382,323,332</td>
</tr>
<tr>
<td>2</td>
<td>India</td>
<td>462,124,989</td>
<td>34.8 %</td>
<td>1,326,801,576</td>
</tr>
<tr>
<td>3</td>
<td>U.S.</td>
<td>286,942,362</td>
<td>88.5 %</td>
<td>324,118,787</td>
</tr>
<tr>
<td>4</td>
<td>Brazil</td>
<td>139,111,185</td>
<td>66.4 %</td>
<td>209,567,920</td>
</tr>
<tr>
<td>5</td>
<td>Japan</td>
<td>115,111,595</td>
<td>91.1 %</td>
<td>126,323,715</td>
</tr>
<tr>
<td>6</td>
<td>Russia</td>
<td>102,258,256</td>
<td>71.3 %</td>
<td>143,439,832</td>
</tr>
<tr>
<td>7</td>
<td>Nigeria</td>
<td>86,219,965</td>
<td>46.1 %</td>
<td>186,987,563</td>
</tr>
<tr>
<td>8</td>
<td>Germany</td>
<td>71,016,605</td>
<td>88 %</td>
<td>80,682,251</td>
</tr>
<tr>
<td>9</td>
<td>U.K.</td>
<td>60,273,385</td>
<td>92.6 %</td>
<td>65,111,143</td>
</tr>
<tr>
<td>10</td>
<td>Mexico</td>
<td>58,016,997</td>
<td>45.1 %</td>
<td>128,632,004</td>
</tr>
<tr>
<td>11</td>
<td>France</td>
<td>55,860,330</td>
<td>86.4 %</td>
<td>64,668,129</td>
</tr>
<tr>
<td>12</td>
<td>Indonesia</td>
<td>53,236,719</td>
<td>20.4 %</td>
<td>260,581,100</td>
</tr>
<tr>
<td>13</td>
<td>Viet Nam</td>
<td>49,063,762</td>
<td>52 %</td>
<td>94,444,200</td>
</tr>
<tr>
<td>14</td>
<td>Turkey</td>
<td>46,196,720</td>
<td>58 %</td>
<td>79,622,062</td>
</tr>
<tr>
<td>15</td>
<td>Philippines</td>
<td>44,478,808</td>
<td>43.5 %</td>
<td>102,250,133</td>
</tr>
<tr>
<td>16</td>
<td>South Korea</td>
<td>43,274,132</td>
<td>85.7 %</td>
<td>50,503,933</td>
</tr>
<tr>
<td>17</td>
<td>Italy</td>
<td>39,211,518</td>
<td>65.6 %</td>
<td>59,801,004</td>
</tr>
<tr>
<td>18</td>
<td>Iran</td>
<td>39,149,103</td>
<td>48.9 %</td>
<td>80,043,146</td>
</tr>
<tr>
<td>19</td>
<td>Spain</td>
<td>37,865,104</td>
<td>82.2 %</td>
<td>46,064,604</td>
</tr>
<tr>
<td>20</td>
<td>Pakistan</td>
<td>34,342,400</td>
<td>17.8 %</td>
<td>192,826,502</td>
</tr>
<tr>
<td>21</td>
<td>Canada</td>
<td>32,120,519</td>
<td>88.5 %</td>
<td>36,286,378</td>
</tr>
<tr>
<td>22</td>
<td>Egypt</td>
<td>30,835,256</td>
<td>33 %</td>
<td>93,383,574</td>
</tr>
<tr>
<td>23</td>
<td>Argentina</td>
<td>30,359,855</td>
<td>69.2 %</td>
<td>43,847,277</td>
</tr>
<tr>
<td>24</td>
<td>Thailand</td>
<td>29,078,158</td>
<td>42.7 %</td>
<td>68,146,609</td>
</tr>
<tr>
<td>25</td>
<td>South Africa</td>
<td>28,580,290</td>
<td>52 %</td>
<td>54,978,907</td>
</tr>
<tr>
<td>26</td>
<td>Poland</td>
<td>27,922,152</td>
<td>72.4 %</td>
<td>38,593,161</td>
</tr>
<tr>
<td>27</td>
<td>Colombia</td>
<td>27,664,747</td>
<td>56.9 %</td>
<td>48,654,392</td>
</tr>
<tr>
<td>28</td>
<td>Bangladesh</td>
<td>21,439,070</td>
<td>13.2 %</td>
<td>162,910,864</td>
</tr>
<tr>
<td>29</td>
<td>Kenya</td>
<td>21,246,977</td>
<td>45 %</td>
<td>47,251,449</td>
</tr>
<tr>
<td>30</td>
<td>Malaysia</td>
<td>21,090,777</td>
<td>68.6 %</td>
<td>30,751,602</td>
</tr>
<tr>
<td>31</td>
<td>Saudi Arabia</td>
<td>20,813,695</td>
<td>64.7 %</td>
<td>32,157,974</td>
</tr>
<tr>
<td>32</td>
<td>Australia</td>
<td>20,679,490</td>
<td>85.1 %</td>
<td>24,309,330</td>
</tr>
</tbody>
</table>

(Source: Data obtained from “Internet Users by Country”, Internet Live Stats, 2016)

2.3.2.1 The Effect of Major Technological Developments in Australia

Australian use reflects global trends concerning Internet connectivity, mobile device usage and social media. By 2015, 99.3% of Internet connections were broadband (Australian Bureau of Statistics, 2015). The average number of mobile devices used to access the Internet in an Australian household was six. This number increased to seven for households with children under 15 years of age (Australian Bureau of Statistics, 2016).
Once again, Australian usage mirrors global Internet usage, particularly with mobile devices. Ninety-four percent of connected households access the Internet through a desktop computer or laptop, 86% by mobile or smart phones, and 62% through tablets (Australian Bureau of Statistics, 2016). By 2014, 12% of Australian adults used mobile devices exclusively for voice, messaging and Internet access. In addition, 29% had no fixed line telephone line and relied solely on a mobile phone, while 21% of Australian adults were “mobile-only Internet users” with no fixed Internet connection (Australian Communications and Media Authority, 2015). This developing trend in Australia for mobile device usage is represented in Figure 2.7.

**Figure 2.7** Australians’ Use of Mobile Devices for Voice, Messaging and Internet Access

(Locate the diagram here)

Likewise, this trend is particularly evident among Australian teenagers. Similar to their global counterparts, Australian 14 – 17 year olds use mobile and smart phones together with a computer to access the Internet (Australian Communications and Media Authority & Office of the Children’s eSafety Commissioner, 2015, Table 2.3). In fact, smart phone usage by Australian teenagers increased from 23% in 2011 to almost 80% in 2015 (Australian Communications and Media Authority & Office of the Children’s eSafety Commissioner, 2015).
Table 2.3  Teenagers’ Choice of Device to Access the Internet

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Use a mobile phone to access the Internet</td>
<td>91%*</td>
<td>65%</td>
<td>65%</td>
</tr>
<tr>
<td>Use a computer to access the internet</td>
<td>88%</td>
<td>85%</td>
<td>74%</td>
</tr>
<tr>
<td>Own/have a smartphone</td>
<td>73%</td>
<td>69%</td>
<td>80%</td>
</tr>
</tbody>
</table>

(Source: Australian Communications and Media Authority & Office of the Children’s eSafety Commissioner, 2015, Table 1, p. 3)

The rise of social media in Australia reflects the worldwide popularity and use of social networking sites. There are 14 million social media users nationally, representing 58% of the total population. Importantly, 54% of the users access social media using a mobile device (We Are Social UK, 2016, Figure 2.8).

Figure 2.8  Active Social Media Use in Australia

(Source: Data obtained from “Digital in 2016”, We Are Social UK, 2016, slide 87)
Facebook is the most popular social media platform with 41% of the population using the site. Eleven percent of Australians use Google+ and LinkedIn, while 10% of residents access Twitter and Instagram (We Are Social UK, 2016, Figure 2.9).

**Figure 2.9 Popular Social Media Platforms in Australia**

![Popular Social Media Platforms in Australia](image)

(Source: Data obtained from “Digital in 2016”, We Are Social UK, 2016, slide 88)

In 2015, 54% of online Australian teenagers aged 14 to 17 years accessed social networking sites. This reflected an upward trend in teenage social media usage from 39% in 2011. In addition, Facebook was the most accessed platform among teenagers, with 73% of social media users accessing the site (Australian Communications and Media Authority & Office of the Children’s eSafety Commissioner, 2015).

**2.3.2.2 The Concept of “Work” in Network Age Australia**

The global and national trends for increasing presence and use of ICTs have offered Australians more flexibility in employment and enhanced access to international business (Foundation for Young Australians, 2015). In 2014-2015, 44% of employed people aged 15 years and over accessed the Internet for home-based work. In

Google+ is “a social networking project that seeks to replicate the way people interact offline” (WhatIs.com, 2016b).
particular, 16% of employed people completed home based work for employers on a regular basis and an additional 16% of self-employed people worked online from home (Australian Bureau of Statistics, 2015). Furthermore, a majority of Australian workers have either accessed or are receptive to using on-demand employment platforms such as Uber and Freelancer (Foundation for Young Australians, 2015, Figure 2.10).

**Figure 2.10  Willingness of Australians to Earn Income as a Service Provider on Digital Platforms**

![Willingness of Australians to Earn Income as a Service Provider on Digital Platforms](image)

(Source: Foundation for Young Australians, 2015, Figure 6, p. 18)

Indeed, digital technologies have facilitated access to global markets for Australian workers and businesses. This trend is demonstrated through increased Australian earnings from international employment. Between 1999 and 2013, earnings increased by 89% (Foundation for Young Australians, 2015, Figure 2.11).

**Figure 2.11  Australian Earnings from Foreign Employment (expressed in 2013 dollars)**

![Australian Earnings from Foreign Employment (expressed in 2013 dollars)](image)

(Source: Foundation for Young Australians, 2015, Figure 8, p. 20)
These global and national trends for increasing use of digital technologies have ramifications for educational institutions. It is therefore appropriate to review the developing influence of ICTs on international, national and local education contexts.

2.3.3 The Global Education Context

2.3.3.1 Overview

Students’ access to ICT resources became a salient consideration for educational institutions in the 1990’s. The capacity for learning environments to offer ICT access was a global political issue. Moreover, relationships were identified between ICTs and enhanced learning. Indeed, ICTs were considered catalytic for receiving and creating new knowledge (Anderson & Ainley, 2010).

During the 1990s and early 2000s, educational institutions focused on integrating ICTs in their curriculum. Professional development prioritised normalising the use of digital technologies in teachers’ pedagogies. Notwithstanding this focus, “[f]ew, if any, schools in the twentieth century succeeded in getting all their teachers to use digital technologies in their everyday teaching” (Lee & Finger, 2010, p. 5). Classroom instruction that integrated ICTs typically involved teaching students how to use applications and programs. Importantly, there was a lack of emphasis on teaching students how to responsibly use technology (Ribble & Bailey, 2007; Ribble, Bailey, & Ross, 2004). In fact, explicit teaching concerning appropriate use of digital technologies was sporadic (Ohler, 2010; Ribble, Bailey, & Ross, 2004, Wynne, 2008).

As the presence and use of ICTs in schools increased, so too did students’ misuse of technologies (Ribble, Bailey, & Ross, 2004). This trend occurred inside and outside of educational institutions. Indeed, this became reflective of a global phenomenon (Ribble & Bailey, 2004).

2.3.3.2 Global Focus on 21st Century Curriculum

In the 21st century, schools have increasingly been challenged to realign curriculum with the knowledge required for sustainable development in a global, digital world. Indeed, the United Nations’ two-phase World Summit on the Information Society (WSIS) in 2003 and 2005 established broadening educational expectations
Concerning ICTs in education. The Geneva Plan of Action (2003) particularised connecting primary and secondary schools with ICTs, and adapting schools’ curricula “to meet the challenges of the Information Society” as national targets. Moreover, “capacity building” was included as a WSIS Action Line. This involved implementing national education policies to fully integrate ICTs in education, curriculum development and teacher training (World Summit on the Information Society, 2003).

In addition, the United Nations’ 2030 Agenda for Sustainable Development includes inclusive and equitable quality education and promotion of lifelong learning opportunities as one of its 17 goals. Specifically, the Agenda states that:

All learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development. (General Assembly Resolution, 70/1, 2015, p. 17, para. 4.7)

Importantly, ICTs are identified as “significant enablers of sustainable development” (General Assembly Resolution, 70/125, 2015, p. 4, para. 13). Therefore, schools are called on to teach students how to proficiently and responsibly use digital communication technologies (Ohler, 2010; Ribble & Bailey, 2004). Indeed, “[e]ducators must consider children’s virtual home in order to positively impact their well-being” (Bennett, Aguayo, & Field, 2016, p. 191).

2.3.3.3 Global Considerations Concerning the Use of Digital Technologies

The ubiquitous influence of ICTs globally has established ICT capacity and literacies as fundamental educational objectives (World Summit on the Information Society, 2003). The established relationship between ICT applications and sustainable development has generated new educational goals for schools. Indeed, students’ formation includes 21st century skills required for effective participation in the Digital Age.
To effectively address the appropriate uses and integration of digital technologies in society, schools require guidance on acceptable standards for global, digital citizenship. While WSIS Action Lines such as the *Ethical Dimensions of the Information Society* of the Geneva Declaration of Principles and Plan of Action (International Telecommunication Union, 2003)\(^\text{18}\) exist, there are no universal standards for ICT usage.

In this context, organisations such as *The International Society for Technology in Education* (ISTE) have developed standards for the effective and appropriate use of technology in education. ISTE initially established standards for students (1998), teachers (2000) and administrators (2002). These guidelines offer performance indicators for technology use in schools (ISTE, 2002). In 2007, ISTE published “refreshed standards” to reflect widespread changes in the education and technology contexts.

What is particularly appropriate for the research agenda is that a comparison of ISTE’s original standards with the refreshed standards reflects the shift in global educational focus from technology usage to sustainable and appropriate use. The original *National Educational Technology Standards* (NETS) focus on technology operations and integration of technology into existing educational practice. Whereas, the 2007 refreshed standards understand educational practice as an evolving and rapidly changing technological environment and call for new teaching and learning paradigms (Ohler, 2010). While the original standards include a section on technology ethics for teachers, students and leaders, the refreshed standards particularize digital citizenship (DC) as one of the standards with performance indicators (Ribble, 2015).

The shifting technological and educational contexts are reflected in the ISTE NETS-T (National Educational Technology Standards for Teachers) where teachers are expected to: “Promote and Model Digital Citizenship and Responsibility. Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behaviour in their professional practices” (ISTE,

\(^{18}\) This was reaffirmed in 2005 in the Tunis Agenda for the Information Society (World Summit on the Information Society, 2005).
2007). In contrast, the 2000 NETS referred to: “Social, Ethical, Legal and Human Issues. Teachers understand the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and apply those principles in practice” (ISTE, 2002).

These global circumstances are relevant in the Australian education context.

2.3.4 The National Education Context

2.3.4.1 Australian School Students’ Use of Digital Technologies

Since 1990, Australia’s educational context has been influenced by globalization, rapid and continuing ICT change, and global mobility and integration (Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA), 2008).

In this context, Australian school students have become regular digital technology users. In 2012, 93.7% of 15 year-old students used a computer at school daily. This statistic represented an increase of nearly 4% from 2009 (OECD, 2016). Moreover, the ratio of computers per student has increased consistently since 2000 (OECD, 2011, Figure 2.12). Indeed, Australia had the fifth highest computer-per-student ratio of 72 computers per 100 15 year-old students in 2009 (refer to Figure 2.12).

Figure 2.12 Computers per Student Ratio in OECD Countries (2000 and 2009)

(Source: Organisation for Economic Co-operation and Development, 2011, Figure VI.5.8, p. 151)
In 2012, Australia's ratio became one school computer per .9 students (refer to Table 2.4). This was the most advantageous computer-per-student ratio among OECD countries (OECD, 2016).

Table 2.4 15 year-old Australian Student Use of ICT equipment at School and Home

<table>
<thead>
<tr>
<th>PISA 2012</th>
<th>ICT use at or for school</th>
<th></th>
<th>Home ICT equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of 15-year-old students per school computer</td>
<td>Students using computers at school</td>
<td>Students browsing the Internet weekly for schoolwork (at school)</td>
</tr>
<tr>
<td>Mean</td>
<td>S.E.</td>
<td>%</td>
<td>S.E.</td>
</tr>
<tr>
<td>Australia</td>
<td>0.9</td>
<td>0.0</td>
<td>93.7</td>
</tr>
</tbody>
</table>

(Source: Data obtained from “ICT equipment and use at school and at home,” in OECD Factbook 2015-2016, Organisation for Economic Co-operation and Development, 2016)

Students’ residential access to digital technologies is also robust. In 2012, 99% of 15 year-old students reported having at least one computer. In addition, Australia is one of six OECD countries that have in excess of 60% of students with three or more computers at home (OECD, 2016).

What is particularly appropriate for the research agenda is that Australian students spend more time online at school than their OECD counterparts. This usage combined with online activities outside of school during weekdays, reflects the largest time spent online by students in OECD countries. These trends are represented in Figure 2.13, where “AUS” denotes Australia.
Figure 2.13 Time Spent Online by 15 year-old Students Inside and Outside of School

(Source: Data obtained from “Time spent online inside and outside of school,” in OECD Factbook 2015-2016, Organisation for Economic Co-operation and Development, 2016)

2.3.4.2 The National Education Agenda

The Australian education agenda reflects global educational and political trends. Plans for integrating ICT in education were formalized in Australia in the late 20th century. The MCEETYA developed the national education plan Learning in an Online World (2000). The focus was on the use of ICTs, staff and student ICT competence, the development of online curriculum resources and implementing an ICT infrastructure for education (MCEETYA, 2000; MCEETYA, 2005). Indeed, the Australian Government invested substantially in establishing networked resources and information pathways such as the Education Network Australia (EdNA) and The Le@rning Federation for Australian educational institutions. School systems also invested in ICT professional learning opportunities for their staff. (Anderson & Ainley, 2010).

In 2007, the Federal Government proposed a Digital Education Revolution (DER) initiative. The DER aimed “to support change to teaching and learning in Australian schools...[and] ensure that new and continuing teachers have access to training in the use of ICT that enables them to enrich student learning” (Ainley, 2010, p. 74).
The initiative resulted in all secondary schools receiving funding under the National Secondary School Computer Fund for ICT equipment for students in Years 9 to 12. Considerable investment was committed to deploy high-speed broadband connections to schools (Australian Curriculum, Assessment and Reporting Authority, (ACARA), 2009). In addition, the Australian Government’s Building the Education Revolution Program funded $16.2 billion in new facilities for schools striving to meet the requirements of 21st century students and teachers (ACARA, 2011).

While educational policy and programs initially focused on ICT integration and competencies, there was a developing focus on global, digital citizenship (Australian Information and Communications Technology in Education Committee (AICTEC), 2008; AICTEC, 2009). The Australian government recognised the role of global citizenship in contemporary society and identified ICTs as enablers of sustainable development. Accordingly, shifts in policy direction reflecting this understanding became typical.

In particular, the Melbourne Declaration on Educational Goals for Young Australians 2008 detailed two goals for the development of young Australians (MCEETYA, 2008). The second goal includes students becoming “active and informed citizens”. Importantly, the Melbourne Declaration specifies that active and informed citizens “act with moral and ethical integrity” and “are responsible global and local citizens” (MCEETYA, 2008, p. 9). This is particularly appropriate for this research agenda because the Melbourne Declaration is the basis for the Australian Curriculum.

The Australian Curriculum (AC) is a salient policy direction implemented to contribute to the Melbourne Declaration’s goals (Moyle, 2014). The AC includes “sustainability” as one of three cross-curriculum priorities19, and involves a suite of general capabilities that represent “knowledge, skills, behaviours and dispositions…that will assist students to live and work successfully in the twenty-first century” (ACARA, 2015, General capabilities section, para. 1). Importantly, two of the capabilities are

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19 Cross curriculum priorities are three key areas identified in The Melbourne Declaration “that need to be addressed for the benefit of individuals and Australia as a whole. In the Australian Curriculum, these have become priorities that give students the tools and language to engage with and better understand their world at a range of levels. The priorities provide national, regional and global dimensions which will enrich the curriculum through development of considered and focused content that fits naturally within learning areas” (ACARA, 2016a, Cross-curriculum priorities section, para. 1).
information and communication technology, and ethical understanding (refer to 3.3.6.5 for elaboration). Accordingly the national curriculum suggests a broadening of government and educational authorities’ focus.

The national education agenda influences the local context in which schools interpret and implement government policies.

2.3.5 St Eliza’s College
2.3.5.1 Overview

The research is conducted at St Eliza’s College. The College is a Catholic, co-educational secondary school administered by Brisbane Catholic Education (BCE). It is located in the Brisbane region (Figure 2.14).

Figure 2.14 Catholic Education, Archdiocese of Brisbane, School Regions
Map

(Source: Data obtained from “Find a school (map)”, Brisbane Catholic Education, 2016)

The College has a distinctive focus on digital citizenship within the curriculum (refer to sections 2.3.5.2.2. and 2.3.5.2.3). At the time of data gathering, the College was unique in Brisbane Catholic Education for offering students a curriculum integrating
digital citizenship across Faculties in Years 8 and 9. Accordingly, the College was determined an appropriate site for the study.

St Eliza’s College is one of 137 schools in the Archdiocese of Brisbane. The College has an enrolment of 1031 students with 150 administrative, teaching and support staff. Teaching staff members range in experience from beginning teachers to educators with greater than twenty years practice. Teachers have diverse qualifications from certificate courses through to Masters level of attainment (St Eliza’s College Annual School Report, 2015). The data are displayed in Table 2.5.

**Table 2.5 Teacher Qualifications Information 2015**

<table>
<thead>
<tr>
<th>Qualifications of all teachers</th>
<th>Number of Teaching Staff (teaching staff includes school leaders)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctorate</td>
<td>0</td>
</tr>
<tr>
<td>Masters</td>
<td>22</td>
</tr>
<tr>
<td>Post Graduate Diploma/Certificate</td>
<td>23</td>
</tr>
<tr>
<td>Bachelors Degree</td>
<td>44</td>
</tr>
<tr>
<td>Diploma/Certificate</td>
<td>3</td>
</tr>
</tbody>
</table>

(Source: Data obtained from “St Eliza’s College Annual School Report”, St Eliza’s College, 2015)

Students have diverse socio-economic backgrounds with 19% located in the bottom quartile, 62% in the middle quartile and 19% in the top quartile. 4% of total College enrolments are indigenous students and 6% of students have a language background other than English (My School, ACARA, 2016b). The data are displayed in Table 2.6.
Table 2.6  Student Background Information 2016

<table>
<thead>
<tr>
<th>Student background 2016</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Index of Community Socio-Educational Advantage (ICSEA)</strong></td>
<td></td>
</tr>
<tr>
<td>School ICSEA value</td>
<td>1027</td>
</tr>
<tr>
<td>Average ICSEA value</td>
<td>1000</td>
</tr>
<tr>
<td>Data source</td>
<td>Parent information</td>
</tr>
<tr>
<td><strong>Distribution of students</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bottom quarter</td>
</tr>
<tr>
<td>School Distribution</td>
<td>19%</td>
</tr>
<tr>
<td>Australian Distribution</td>
<td>25%</td>
</tr>
<tr>
<td>Percentages are rounded and may not add to 100</td>
<td></td>
</tr>
</tbody>
</table>

| Students 2015                                                  |       |
|                                                               | 1031  |
| Total enrolments                                              |       |
| Girls                                                         | 520   |
| Boys                                                          | 511   |
| Full-time equivalent enrolments                               | 1030  |
| Indigenous students                                           | 4%    |
| Language background other than English                        | 6%    |
| Student attendance rate                                       | -     |

(Source: Data obtained from “MySchool”, Australian Curriculum, Assessment and Reporting Authority, 2016b)

2.3.5.2  St Eliza’s College ICT Setting

Embedding digital technologies into teaching and learning is a College responsibility. In 2009, the College implemented a school wide 1:1 laptop program. The College aims to ensure that all students have opportunities to become “competent, discriminating and creative users of a range of technologies” (St Eliza’s College Website, 2016, Teaching and Learning section). College leadership considers technology integration an opportunity to engage in new learning possibilities and to extend students’ interaction with local and global communities (St Eliza’s Website, 2016, Teaching and Learning section).

The College’s ICT context reflects global and national educational trends concerning digital technologies.

2.3.5.2.1  2009 – 2010

At the inception of the 1:1 laptop program, there was a determined focus on developing staff and student ICT competencies, and integrating ICTs in curriculum (St Eliza’s College Strategic Renewal Plan, 2007-2011, Figure 2.15).
Figure 2.15  Priority 7 Goals – Information and Communication Technologies in the Learning Process

To integrate information and communication technologies into College learning processes.
- Provide professional development for all staff to increase their level of competency in the use of technology and assist staff in providing improved student learning outcomes.
- Provide opportunities for staff to integrate technology into the curriculum.
- Technology plan addressing issues of hardware, software – increase use to industry standard.
- Increase student access to technology facilities through implementation of 1:1 laptop program.
- Use of LinCS technology infrastructure.
- Investigate a more viable infrastructure to provide essential technology for the College.

(Source: Data obtained from “Strategic Renewal Plan (2007-2011)”, St Eliza’s College, 2007)

This initiative generated College investment in staff members’ ICT competencies. The professional development focused on specific application and program training. Staff also participated in Faculty ICT curriculum integration experiences.

In addition, financial and staffing resources were allocated to engage with community awareness concerning safe technology use. Initiatives included guest speakers, dramatic performances, police information sessions, and an annual Healthy Relationships Week with cyber safety activities.

Cyber safety was addressed as part of the College laptop program. Each family received a suite of ICT AUPs, Agreements and Handbooks prior to the students receiving laptops. The College developed a Cyber Safety Policy and cyber smart resources for families. In addition, student cyber safety sessions were facilitated at the start of each year with mid-year updates. Parent education sessions were also offered.

In 2010, the College conducted a Peer Relationships Survey as part of the Healthy Relationships Week agenda. The survey included a focus on the online context and reported that 257 students (38.2%) indicated they had witnessed or experienced a form of cyber bullying while 64 students (9.5%) indicated they often experienced

20 Cyber bullying involves “the use of information and communication technologies to support deliberate, repeated, and hostile behaviour by an individual or group, which is intended to harm others” (Commonwealth of Australia, 2011, p. 30).
bullying through the cyber medium. This combined total of 321 students represented 48% of all students surveyed and 52% of student respondents (Figure 2.16).

**Figure 2.16**  
Students’ Experience of Cyber Bullying at School, 2010  
(672 St Eliza’s College students surveyed)

![Pie chart showing percentages of students' experience of cyber bullying](image)

(Source: Data obtained from “Peer Relationships Survey”, St Eliza’s College, 2010, p. 18)

The *Peer Relationships Survey* also identified that the social networking sites Facebook, MySpace and Formspring were the main forums for cyber bullying. The highest recordings of cyber bullying were reported to occur outside of school. These trends are represented in Table 2.7.
Table 2.7  Classification of Students’ Experiences of Cyber Bullying

![Table 2.7 Classification of Students’ Experiences of Cyber Bullying](image)

C = during class; B = during break times; OS = outside of school

(Source: Data obtained from “Peer Relationships Survey”, St Eliza’s College, 2010, p. 19)

As technology use in the College progressed, the incidence of improper use intensified. The College ICT Department increasingly managed student machine breakage, lost or stolen laptops and password security breaches. Additionally, staff worked with students, parents and outside agencies such as the Queensland Police, concerning ICT issues. Incidents included cyber bullying, sexting\(^{21}\), plagiarism and downloading inappropriate or illegal content. Therefore, something that had previously been a relatively minor issue became a focus of concern. Indeed, the College’s experience reflected research from international and national education settings (Bennett, 2005; Ribble & Bailey, 2007).

\(^{21}\) Sexting refers to “an act of sending sexually explicit materials through mobile phones” (Ribble, 2011, p. 148).
2.3.5.2.2 2011

In 2011, the College ICT focus expanded to developing members’ DC capacity. The shift in focus was generated by a burgeoning need to develop global, digital citizens. Accordingly, the College adopted the Digital Citizenship – Making the Connections (DCMC) project. The aim of the project was to integrate DC teaching and learning in the College curriculum. To achieve this, staff developed and implemented a curriculum integrating DC. The curriculum offered explicit DC teaching and learning opportunities within subject areas on an ongoing basis. While there are a number of definitions for digital citizenship, the College adopted Ribble & Bailey's (2007) Nine Elements Framework (refer to section 2.36 for elaboration). Indeed, the College recognised that in the Information Age students require education concerning responsible and effective technology use.

The DCMC project commenced with the support of the College Principal and a Digital Citizenship Taskforce involving College curriculum leaders. The College invested fiscal and human resources in the project together with funding secured from the Australian Government Quality Teacher Program (AGQTP).

The project involved five stages that are presented in Table 2.8.
<table>
<thead>
<tr>
<th>STAGE</th>
<th>OVERVIEW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Investigation and exploration of the concept of DC</strong>&lt;br&gt;The DC Taskforce spent six months participating in professional learning activities including workshops to raise their digital awareness. These included:&lt;br&gt;• reading <em>Digital Citizenship in Schools</em> (Ribble &amp; Bailey, 2007)&lt;br&gt;• exploring the <em>Melbourne Declaration on Educational Goals</em>&lt;br&gt;• situating the DC elements within the Australian Curriculum general capabilities; and&lt;br&gt;• examining relevant teaching standards and performance indicators such as the <em>Australian Institute for Teaching and School Leadership’s</em> National Professional Standards for Teachers and the <em>International Society for Technology in Education</em> (ISTE)’s standards for students, teachers and administrators.</td>
</tr>
<tr>
<td>2</td>
<td><strong>Two-stage Years 8 and 9 curriculum audit process</strong>&lt;br&gt;An audit tool and process was developed to identify where subjects were currently covering DC, and ascertain where untapped natural connections to DC elements existed. The audit was conducted across the Middle Phase curriculum (Years 8 and 9), with each audit team comprising the relevant Faculty Co-ordinator and another curriculum leader or teacher. (Refer to Appendix B for the audit tool)</td>
</tr>
<tr>
<td>3</td>
<td><strong>Inter-faculty synopsis and analysis process</strong>&lt;br&gt;The DC Taskforce provided overview feedback from their Faculty audits and a summary of reflections on the audit process. Faculty Co-ordinators then reviewed each other’s audits and contributed to a DC scope and sequence for all curriculum areas involved.</td>
</tr>
<tr>
<td>4</td>
<td><strong>CIDC planning</strong>&lt;br&gt;Faculties engaged in planning sessions to redevelop Year 8 and 9 units of work for semester 1 2012. In many instances the planning occurred with complementary Australian Curriculum planning. A DC Index of Codes was created to ensure uniformity across Faculty planning (see Appendix C). Faculty meetings were convened where Taskforce members modelled sample units of work incorporating DC teaching and learning opportunities.</td>
</tr>
<tr>
<td>5</td>
<td><strong>College community awareness initiatives</strong>&lt;br&gt;The CIDC initiative was promoted to community stakeholders – students, staff and parents. The DC Taskforce presented the DC Framework and planning vision to staff at Faculty and Staff Meetings. There was communication with families to introduce the Framework via the College website, newsletter and information sessions. In addition, the College conducted a survey of Year 8 and 9 students to use as baseline data for the rollout of the CIDC the following year.</td>
</tr>
<tr>
<td>6</td>
<td><strong>A professional online learning community.</strong>&lt;br&gt;An online professional learning group was developed. Staff used the DC wiki to circulate professional reading and stimulus material and promote online discussion.</td>
</tr>
</tbody>
</table>
2.3.5.2.3  2012 – 2015

St Eliza’s College Strategic Renewal Plan (2012 – 2016) reflects national and international education trends concerning digital technologies. Indeed, the Plan involves an expanded strategic focus concerning sustainable technology practices (Figure 2.17).

Figure 2.17  The Strategic Intent and Key Strategies for Learning and Teaching (Priority 2) and Strategic Resourcing (Priority 4)

Learning and Teaching (Priority 2):
Strategic Intent
1. Implementation of the Australian Curriculum within the context of the BCE Learning Framework as a means of realizing equity and access for all students

Key Strategies
4. Developing a rich learning environment which incorporates creativity, problem solving, sustainable practices
5. Embedding local, national and global contexts aligning with the developing indigenous, sustainability and Asian perspectives

Strategic Resourcing (Priority 4):
Strategic Intent
1. Model sound practices around stewardship in a local and global context
4. Align future building infrastructure, programs and resources with 21st Century curriculum objectives

Key Strategies
2. A commitment to supporting the laptop program and integrated technology practices across the curriculum for all students

(Source: Data obtained from "Strategic Renewal Plan (2012-2016)", St Eliza’s College, 2012)

Two College initiatives particularly demonstrate the expanded ICT focus. First, the Liberation in the Digital Age Conference attended by all staff. This was the College’s leading professional development session in 2012. Keynote speakers, Dr Mike Ribble and Brother Damien Price cfc, collaborated with staff to analyse DC and situate it within a Catholic school community in the Edmund Rice tradition.

Second, the College implemented its inaugural curriculum integrating digital citizenship (CIDC) in 2012 throughout Years 8 and 9. The fusion and interdisciplinary approaches to integrating DC teaching and learning opportunities across the Faculties’ curricula were adopted. These initiatives involved staff members developing students’ awareness of “digital citizenship” and the DC themes by fusing the Nine Elements Framework into each subject’s program across the Years 8 and 9 curricula. In addition, teachers generated more explicit connections to
DC across subjects using an interdisciplinary model of integration. For instance, in Year 9 English students studied the relationships that exist between digital communication, digital etiquette and digital law in their *Dare to be Different* Unit focused on cyber bullying and online addictions.

Implementing the CIDC in all year levels became an ongoing priority for the College. The inter-Faculty approach to learning about DC elements is diagrammatically represented in Figure 2.18.

**Figure 2.18** Diagrammatic Representation of St Eliza’s College Curriculum Integrating Digital Citizenship (CIDC)

The CIDC generated lessons that involved explicit and contextualised teaching of DC elements. For instance, the Year 9 Business Studies program was redesigned to include a specific focus on e-banking and the accompanying social and fiscal considerations (refer to Figures 2.19 and 2.20). In addition, students explored the role of social media in marketing (refer to Figure 2.21).
Figure 2.19  Extract from Year 9 Business Studies Term Planner

<table>
<thead>
<tr>
<th>From This...</th>
<th>To...</th>
</tr>
</thead>
</table>
| **4**  
14-18 Feb  
Banking and investment: types of accounts, interest rates | **5**  
21-25 Feb  
Income tax, borrowing money: credit |

(Source: St Eliza’s College, Year 9 Semester 1 Business Studies Term Planner, 2011)

Figure 2.20  CIDC (Year 9 Business Studies)

| 4  
Banking and investment: types of accounts, interest rates  
E-Banking (A, S, RR, CS)  
- Investigate how e-banking works, necessary steps to take to ensure privacy and security, benefits of online banking  
Does this mean access for all? Elderly? Poor? Those with disabilities? The digital divide also.  
(A)  
Securing account number/credit cards; identity theft, phishing, virus protection (S)  
Privacy issues (L) p26 – 28 Ribble, web resources p28, p126 ‘related questions’ – could do actual activity  
5  
Income tax, borrowing money: credit  
Credit – precautions with credit details (S) p33-35 Ribble – see website resources to use, guided lesson p120 ‘tips on how to secure yourself and your computer’, p122  
Ebay purchasing –  
www.ftc.gov/bcp/conline/cubs/online/auctions.htm  
www.visa.com.au - how to make a secure payment using a credit card  
Online addiction/buying – overextending credit – added stress (H) p123-125 Ribble – ‘how do you spend your free time’ may be able to use some of this, p32 discusses Internet addiction, using scenarios, p33 web resource (CS) |

(Note: the yellow shaded letters indicate the DC Index of Codes (see Appendix C))  
(Source: St Eliza’s College, Year 9 Semester 1 Business Studies Term Planner, 2012)
Furthermore, in English students explored their membership of local, regional and global communities. This involved students considering appropriate language models for global, digital communities (Figure 2.22).
Appreciating how digital citizenship has been implemented at St Eliza’s College invites a sophisticated understanding of the concept.

2.3.6 Digital Citizenship

2.3.6.1 Overview

Throughout history, large-scale transformational events have motivated society to redefine itself and citizenship. The emergence of the global digital world has generated a new social order concerning rights, responsibilities and participation (Ohler, 2010). Indeed, citizenship in the digital world involves unprecedented opportunity and few universal social guidelines (Ohler, 2010; Ribble, 2011).
The concept of DC is not new in the field of digital technologies (Ribble, 2011). However, DC has “just come on the radar”, for education sectors and society generally (Hollandsworth, et al., 2011, p. 38). As ICTs permeate schools, DC has become a relevant consideration for education sectors (Ribble, 2015). What is particularly appropriate for the research agenda is that while the concept of DC may be included in school policy, it is often overlooked in practice.

As educators, we teach our students how to be good citizens of our country and what their rights and responsibilities are as members of that society…the same issues need to be addressed with regard to the emerging digital society, so that students can learn how to be responsible and productive members of that society. (Ribble, 2011, p. 81)

2.3.6.2 Definition
Digital citizenship may be defined in a variety of ways (Ribble & Bailey, 2007; Ohler, 2010). However, common to the definitions is the concept of a defined set of skills enabling participation, and therefore citizenship, in the Network Age. Pragmatically defined, DC is citizenship in the Digital Age. DC is behaving appropriately and responsibly within the social context of the virtual world (Ohler, 2010). It is a set of skills that invites authentic teaching and practice (Jensen, 2008). It is a citizenry of engagement and membership, accompanied by ethical, moral and legal obligations (Gibbs, 2010).

Digital citizenship is formally defined in educational literature as “…the norms of appropriate, responsible behavior with regard to technology use” (Ribble & Bailey, 2007). This definition of DC identifies nine elements: digital access, digital commerce, digital communication, digital literacy, digital etiquette, digital law, digital rights and responsibilities, digital health and wellness, and digital security (Ribble & Bailey, 2007). An accompanying goal of DC is to offer resources to a citizenry to evaluate digital technology situations and have the skills to generate defensible conclusions (Ribble, 2011). Consequently, this is the definition of DC adopted for the research.
2.3.6.3 A Model of Digital Citizenship – Nine Elements

In this research DC is explained using Ribble & Bailey’s (2007) model (updated by Ribble (2011)). This model uses a Nine Elements Framework as a mechanism for digital technology users to understand the issues related to DC (Rible, 2011). The framework is illustrated in Table 2.9.

Table 2.9 The Nine Elements of Digital Citizenship Defined

<table>
<thead>
<tr>
<th>DIGITAL CITIZENSHIP ELEMENT</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIGITAL ACCESS</td>
<td>Full electronic participation in society.</td>
</tr>
<tr>
<td>DIGITAL COMMERCE</td>
<td>Electronic buying &amp; selling of goods.</td>
</tr>
<tr>
<td>DIGITAL COMMUNICATION</td>
<td>Electronic exchange of information.</td>
</tr>
<tr>
<td>DIGITAL LITERACY</td>
<td>Process of teaching &amp; learning about technology and the use of technology.</td>
</tr>
<tr>
<td>DIGITAL ETIQUETTE</td>
<td>Electronic standards of conduct or procedure.</td>
</tr>
<tr>
<td>DIGITAL LAW</td>
<td>Electronic responsibility for actions and deeds.</td>
</tr>
<tr>
<td>DIGITAL RIGHTS &amp; RESPONSIBILITIES</td>
<td>Those requirements and freedoms extended to everyone in a digital world.</td>
</tr>
<tr>
<td>DIGITAL HEALTH &amp; WELLNESS</td>
<td>Physical &amp; psychological well being in a digital technology world.</td>
</tr>
<tr>
<td>DIGITAL SECURITY (SELF-PROTECTION)</td>
<td>Electronic precautions to guarantee safety.</td>
</tr>
</tbody>
</table>

(Ribble, 2011, p.11)

2.4 The Research Problem Defined

The emergence of the global digital world has transformed how individuals and societies function (Ohler, 2010). This phenomenon has in turn created new modes of communication that have changed how society interacts with its constituents (Notley, 2008). Within the concept of citizenship is digital citizenship, which concerns the norms of appropriate and responsible behaviour regarding technology use (Ribble, 2011). This assertion becomes the rationale to include DC in school policy and offering.
The rapid change of technology has generated a need for new ways to develop responsible citizens. Schools are being challenged to address an increasing range of broader societal issues that influence responsible citizenship, such as cyber bullying, sexting and identity theft. It is therefore appropriate to understand how learning communities cultivate responsible contemporary citizens. This is the research problem this thesis addresses.

This problem may be addressed by school leaders implementing digital citizenship teaching and learning opportunities in the curriculum.

2.5 The Research Purpose
The research purpose is to explore how members of a secondary school community experience a curriculum that integrates digital citizenship.

2.6 Major Research Question
The major research question that focuses the conduct of this study is:

How do members of the St Eliza’s College community experience a curriculum that integrates digital citizenship?
CHAPTER 3: LITERATURE REVIEW

3.1 Introduction
The purpose of this research is to explore how members of a secondary school community experience a curriculum that integrates digital citizenship (CIDC).

This chapter reviews the literature that identifies and illuminates the issues underpinning the research purpose.

3.2 Conceptual Framework
An analysis of the literature generates three interrelated themes that illuminate and contextualise the issues underpinning a school community’s experience of a CIDC. It is from these themes that the research questions emerge. They are:

1. Digital Citizenship (DC)
2. Society in the Network Age; and
3. Schools as Network Age Learning Communities.

The conceptualization of the literature explains the relationship between the emergence of digital technologies and DC in society. Figure 3.1 illustrates the interrelation of each of the themes in illuminating the research purpose. Gradations in blue shading represent the expanding presence and influence of digital technologies in society between the 1970’s and 2010’s. The spectrum of orange shading represents the emergence of ethical and social issues surrounding technology use, and the developing relevance of DC in society during the same period. The wavy lines indicate complex rather than linear linkages between the emergence of digital technologies, and changes to the nature of communities and citizenship. They also depict the interrelated nature of the first and second themes. The pie graphs in the centre of Figure 3.1 represent citizens’ concurrent membership of local, global and digital communities in today’s society. This membership constitutes contemporary citizenship and has changed how citizens interact. Schools exist within society, and as society evolves, learning communities also experience transition. The blue and orange shading of the Network Age learning community represents how digital technologies, and DC influence contemporary schooling. The bi-directional arrows between the pie graphs and the Network Age learning
community indicate the simultaneous influence that society and learning communities have upon each other.

**Figure 3.1 Conceptualisation of the Literature**

![Conceptualisation of the Literature](image)

### 3.2.1 Sequence of the Literature Review

Figure 3.1 is a complex conceptualisation of the literature underpinning the research. This complexity has been further refined with the major concepts of the literature review identified and sequenced in Figure 3.2.
### 3.3 Digital Citizenship

3.3.1 A Model of Digital Citizenship – Nine Elements Defined
3.3.2 The Home of Digital Citizenship: Emergence to Relevance
3.3.3 Rationale for Teaching Digital Citizenship
3.3.4 Approaches to Teaching Digital Citizenship
3.3.5 Digital Citizenship Curriculum
3.3.6 Challenges to Imbedding Digital Citizenship into the Curriculum
3.3.7 Existing Digital Citizenship Programs

### 3.4 Conclusion and Research Question 1

### 3.5 Society in the Network Age

3.5.1 The Environment
3.5.2 The Life Experience Gap
  3.5.2.1 The Digital Generation
  3.5.2.2 Teachers and Parents
3.5.3 The Educational Disconnect

### 3.6 Conclusion and Research Question 2

### 3.7 Schools as Network Age Learning Communities

3.7.1 Digital Technology in Schools
3.7.2 Managing Digital Technology in Schools
  3.7.2.1 Acceptable Use Policies
  3.7.2.2 Filter Schemes
  3.7.2.3 Australian Online Safety Education Programs and Resources
3.7.3 Contemporary Learning Communities

### 3.8 Conclusion and Research Question 3

### 3.3 Digital Citizenship

The pervasiveness of digital communication technologies impact society. As this influence increases, so do the ethical challenges related to the use of technology (Luppicini, 2008). It is in this context that citizenship in the Network Age is explored in the literature.
3.3.1 A Model of Digital Citizenship – Nine Elements Defined

While DC may be defined in a variety of ways (refer to section 2.3.6.2 for elaboration), in this research DC is explained using Ribble & Bailey’s (2007) model.

Ribble & Bailey’s model (2007, updated by Ribble (2011)) uses a framework of nine interrelated elements as a way for digital technology users to better understand the issues concerning DC (Ribble, 2009). The definition identifies nine elements of DC: digital access, digital commerce, digital communication, digital literacy, digital etiquette, digital law, digital rights and responsibilities, digital health and wellness, and digital security (Ribble & Bailey, 2007) (Table 2.10). The model emphasizes three key themes within the elements – respect yourself and others, educate yourself and others, and protect yourself and others (Ribble, 2011). Figure 3.3 diagrammatically represents the interconnectedness of the elements, and each element’s predominant theme.

Figure 3.3 The Nine Elements of Digital Citizenship

It is relevant to the research to present issues regularly associated with each of the elements.
**Digital Access**

Digital Access is defined as “full electronic participation in society” (Ribble, 2011, p.11). The element focuses on whether users can participate in digital society at acceptable levels. This involves exploring the digital divide between those sections of community that have access to and use of digital technologies, and those who do not. For example, members of society may have limited or no access to electronic participation due to socioeconomic status, disability or physical location (Ribble & Bailey, 2007). This element includes awareness of global digital access issues. For instance, in 2015 almost 4 billion people in developing countries remain offline (G.Res. 70/125, 2015).

A number of Australian Government initiatives promote digital access and demonstrate a developing awareness of its role in DC. The National Broadband Network (NBN) was established to provide access to fibre services to 3.5 million homes and businesses in its first three-year rollout. In addition, the Digital Education Revolution (DER) equipped Australian secondary schools with new ICT equipment and high-speed broadband connections (Ainley, 2010). The Broadband for Seniors Program established broadband kiosks to improve older Australians’ access to high-speed Internet services and placed a focus on reducing the technology challenges experienced by older generations (Commonwealth of Australia, 2011).

**Digital Commerce**

Digital commerce is defined as “electronic buying and selling of goods” (Ribble, 2011, p. 11). The element focuses on technology users establishing intelligent online consumer practices. This includes learning how to protect online identity and understanding the consequences of virtual commercial transactions (Ribble, 2011). Internet scams and identify theft are common consequences of unprofessional digital commerce practices. Digital commerce is a growing concern in Australia with reported online scam losses totalling in excess of $81 million in 2014 (Australian Competition & Consumer Commission, 2014). Furthermore, digital commerce is increasingly relevant in Australia’s economy with nearly $143 billion of Internet orders received by Australian businesses in 2009-10. This represented an increase of 15% on 2008-2009 (Commonwealth of Australia, 2011).
**Digital Communication**

Digital Communication concerns the electronic exchange of information using mobile phones, smartphones, videoconferencing, email and instant messaging (IM) (Ribble, 2011). These electronic forms of communication have “created a new social structure governing whom, how, and when people interact” (Ribble, 2009, p. 254). Digital communication reinforces the pervasiveness and ubiquity of technology. This element focuses on understanding digital communication methods and knowing when it is appropriate to use them (Ribble, 2011). The relevance of digital communication is increasingly evident, with media reports of inappropriate use such as texting at inappropriate times, using digital communication to interrupt events and sexting now commonplace (Bennett, 2005; Ribble, 2009; Ribble & Bailey, 2004; Ribble, Bailey & Ross, 2004). Related issues concerning digital communication include the digital footprint that is created by digital technology users, and awareness of the in-built archiving features that are included with most devices.

**Digital Literacy**

Digital Literacy focuses on teaching and learning about digital technologies and their appropriate uses. The dual nature of this element is often overlooked (Ribble, 2009). While digital users predominantly focus on how ‘to use’ digital technologies, their understanding concerning responsible use is often limited (Ribble, 2011; Ribble et al., 2004). Digital literacy emerged “because traditional literacy could not meet the requirements of the digital age…more complicated skills [were] needed in the name of new literacies” (Simsek, E., & Simsek, A., 2013, p. 127). The concept includes information literacy, computer literacy, media literacy, communication literacy, visual literacy and technology literacy (Simsek, E., & Simsek, A., 2013). Increasingly, digital literacy is being recognized as an element of DC. For example, the Australian Government’s Digital Communities Initiative involved establishing ‘digital hubs’ in communities for residents to receive training to develop the necessary digital literacy skills to participate effectively in digital society (Commonwealth of Australia, 2011).

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22 Instant Messaging (IM) refers to “exchanging messages in real time between two or more people. It requires that both parties be logged onto their IM service at the same time” (Ribble, 2006, p. 14).

23 Digital footprint refers to “information provided in cyberspace about someone” (Ribble, 2011, p. 23).
Digital Etiquette

Digital Etiquette is defined as “electronic standards of conduct or procedure” (Ribble, 2011, p.11). This element invites digital technology users to consider how their use affects others in the global virtual world. The focus concerns respectful and effective online use.

Digital Etiquette is particularly relevant as there is no universal agreement concerning online conduct (Commonwealth of Australia, 2011; Ribble, 2009; Ribble et al., 2004). While digital technology users assume some rules and policies, others are created in the form of acceptable use policies (AUPs) or community netiquette24 (Ribble, 2011). Examples of inappropriate digital etiquette include not placing a mobile phone on the silent setting during a presentation, flaming25, and cyber bullying (Ribble, 2011). In Australia, approximately 463,000 young people have been victims of cyber bullying. In fact, in a 12-month period 20% of young people experience cyber bullying and its prevalence “has rapidly increased since it first emerged as a behaviour” (Katz, Keeley, Spears, Taddeo, Swirski, & Bates, 2014, p. 2). In addition, Australians are increasingly accessing online social networking sites such as Facebook and Twitter (Commonwealth of Australia, 2011).

Digital Law

Digital Law is defined as “electronic responsibility for actions and deeds” (Ribble, 2011, p. 11). The element addresses digital technology users’ awareness of rules and policies regulating online use. Examples of illegal technology use include downloading copyrighted music from social networking or file-sharing sites, stealing someone’s online identity, sexting, and pirating software (Gearhart, 2008). In addition, the global reach of the Internet has provided new opportunities for criminals to commit high-tech crimes such as hacking. The overall risk of cyber crime to the Australian economy is estimated to be in excess of one billion dollars annually (Commonwealth of Australia, 2014).

24 Netiquette refers to Internet etiquette. “These are etiquette guidelines for posting messages to online services, and particularly Internet newsgroups. It covers rules to maintain civility in discussions and special guidelines unique to the electronic nature of forum messages” (Ribble, 2011, p. 147).

25 Flaming refers to “a tirade by email, beating someone up verbally with text” (Ohler, 2010, p. 63).
Current influences informing policy and jurisdiction in this area concern establishing consequences appropriate to the misuse or abuse of technology. Technology growth has resulted in a policy vacuum within contemporary society, where rapidly increasing ethical issues face policy makers and law enforcement (Gearhart, 2008; Luppicini, 2008). Indeed, Australia recorded its first social-networking conviction in 2012 against a man who posted six nude photos of his ex-girlfriend on Facebook (“Man Puts Up”, 2012). Moreover, the rapidity and continuity of technological change generates the reality of legislation trailing social practice, and changing social norms (Farmer, 2010).

**Digital Rights and Responsibilities**

Digital Rights and Responsibilities are defined as “those requirements and freedoms extended to everyone in a digital world” (Ribble, 2011, p. 11). The element focuses on individuals protecting others’ rights and responsibilities while defending their own. In particular, balancing personal wants and needs with the global good. Examples of related issues include using online material ethically, using technology to cheat with assessment, and reporting inappropriate cyber behaviour such as cyber bullying or stalking (Gearhart, 2008).

Underpinning this element is awareness that governments have limited jurisdiction to regulate offensive online behaviour, particularly internationally. In this context it is productive to develop Australians’ digital citizenship. The Australian Government proposed a digital social contract for all Australians as a model of accountable and responsible online citizenship in its 2011 Cyber White Paper (Commonwealth of Australia, 2011). While this initiative did not proceed, the 2013 *Update to the National Digital Economy Strategy* offered a continuing focus on cyber safety and security. A key action was the *Digital Citizens Guide*. The *Guide* focused on developing three capacities in all digital citizens: engaging positively online, knowing your online world, and choosing your actions consciously (Australian Communications and Media Authority (ACMA), 2013).

**Digital Health and Wellness**

Digital Health and Wellness concerns “physical and psychological well being in a digital technology world” (Ribble, 2011, p. 11). Related issues include eye strain,
poor posture, carpal tunnel syndrome and ergonomic considerations concerning the position of furniture while using digital devices. This element also addresses psychological threats such as Internet and gaming addictions (Ribble, 2009).

**Digital Security (Self-Protection)**

Digital Security focuses on digital technology users protecting their own and others’ data. Security issues include network and hardware security, identity theft, phishing, online stalking, hacking and viruses (Ribble, 2011). This element concerns developing online users’ capacities to erect firewalls, backup data, use virus protection software and ensure appropriate privacy settings on social networking sites. When these strategies become regular practices, digital security is enhanced.

This element also addresses the unpredictable set of security challenges generated by society’s increased reliance on digital technologies (Commonwealth of Australia, 2011). The *Update to the National Digital Economy Strategy* described the economic cost of cyber crime in Australia as “significant” (Commonwealth of Australia, 2013, p. 10). It is in this context that digital security is an element of DC.

Having defined DC, it is relevant to the research problem to explore when and why the new form of citizenship developed.

**3.3.2 The Home of Digital Citizenship: Emergence to Relevance**

Increased use of the Internet and ICTs in contemporary society is “bringing rapid and radical change into [people’s] lives from the wonderfully beneficial to the terrifyingly difficult” (Boyle, 2010, p. 3). Digital technology is creating many changes in society. The ubiquity and pervasiveness of ICTs within society has forever changed how people “work, play and learn” (Ribble, 2006, p. 250). Since the 1970s, society has transitioned from communities using small numbers of computers, to technology

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26 Phishing is “a type of scam, generally sent by email that will direct you to a website that looks like the real website of a retailer or financial institution. The website is designed to encourage you to reveal financial details, ‘phishing’ for information such as credit card numbers, account names, passwords, and other personal information” (Commonwealth of Australia, 2011, p. 31).

27 Firewall is “a device or application that protects a computer network from unauthorized access – it may be hardware, software or a combination” (Commonwealth of Australia, 2011, p. 31).
dependent populations (Ribble, 2006). As digital technology has become increasingly prevalent so have the issues concerning inappropriate technology use.

Since the late 1960s, there has been an increasing focus globally on the power of ICTs to generate information societies. The socioeconomic concept of the ‘information society’ developed in Japan and the United States in the late 1960s and 1970s (Notley, 2008). During this time, the understanding that ICTs could “transform economies that harnessed their power into information societies” was conceived (Notley, 2008, p. 33). While computer-mediated communication was used in the 1970s and 1980s by many research institutions, and was present in education, business, industry and military sectors, its use was not widespread (Notley, 2008). Computer use during this time was largely restricted to word processing. It was the invention of the World Wide Web (WWW) in 1989 that forever changed the digital technology scene (Notley, 2008; Ribble, 2006).

In the 1990s, there were many changes in the field of technology within education, business, industry and military (Ribble, 2006). The Internet grew at an accelerated rate. The momentum of the Internet increased with the invention of the graphical user interface which added thousands of colours, iconography and images to computer screens (Thomas, 2004), together with the release of graphical web browsers such as Netscape in 1994 and Internet Explorer in 1995 (Notley, 2008). The economic potential of the Internet became evident with telecommunication industries opening up gateways to provide users with alternate communication modes (Ribble, 2006). The expansion of the Internet led to the proliferation of online technologies such as email, instant messaging (IM) and chat rooms. A new phenomenon during this period was the widespread creation of web pages. Digital technology users created web pages at their own discretion with no governing body to filter the online information. It therefore became difficult to determine website authenticity (Ribble, 2006). Moreover, the volume of online data continued to grow rapidly, with Internet access replacing technology acquisition as the new societal divide (Ribble, 2006). Large discrepancies existed between who had access to the

28 Chat room refers to “an interactive discussion (by keyboard) about a specific topic that is hosted on the Internet or on a BBS. Chat rooms are set up to handle group discussions, and everyone sees what everyone else types in, although two people can decide to break off and have their own keyboard chat” (Ribble, 2006, p. 10).
Internet (Mark, 2003; Notley, 2008), and this digital divide became a focus globally for government policy and programs.

The 1990s witnessed the global evolution of the information society, knowledge economy and digital divide policies (Norris, 2001; Notley, 2008). It was during this period that national information society policies became fundamental to many governments’ goals for successful economic globalization. Consequently, information society policy was free from traditional nation-state boundaries (Castells, 2000; Notley, 2008). By the late 1990s, developed countries such as Australia and the United States had evolved from an industrial economy paradigm, to that of a knowledge economy for growth model. This was reflected with organisations such as the OECD devising indicators to assess and compare the value of countries’ knowledge-based economy sectors (Notley, 2008).

The divide between those citizens with computer and Internet access and those without, known as the digital divide, became increasingly prominent throughout the 1990s in both global and national contexts (Notley, 2008). Governments responded by bridging the divide through focusing policies and programs on the supply side access issues. For example, the United States introduced the E-Rate Program that provided widespread network infrastructure (Oppenehimer, 2003). They also commissioned reports such as *Falling Through the Net*, with policy goals such as *Agenda for Action* in 1993 that articulated a vision for a national information infrastructure (Notley, 2008). In Australia, the *Networking the Nation* policy was announced in 1996. The policy aimed to enhance telecommunications infrastructure and services, increase access to and promote the use of telecommunication network services, and reduce the inconsistency in access to services and facilities (Notley, 2008).

Debate on the digital divide, together with monitoring, calculating and reporting on digital access became international and national agenda. For example, the G8 Heads of State created the Digital Opportunity Task Force and focused on issues such as national e-strategies (Notley, 2008). In Australia, the Australian Bureau of Statistics began monitoring technology access and use in 1996 through their *Household Use of Information Technology* report (Notley, 2008). While developed
countries’ governmental policies in the 1990s reflected a global trend of focusing on digital access and use issues, they omitted to consider issues concerning responsible engagement for members of a digital society.

The emergent ICTs of the 1990s created new modes of communication that changed and mediated social interactions. This shift in the ecology of communication resulted in new social structures (Notley, 2008). The Internet offered people novel ways to communicate (Boyle, 2010). However, these new communication methods also provided unprecedented opportunities for the misuse and abuse of technology (Ribble, 2006). Concurrently, there was no governing body and no established rules for Internet use (Ribble, 2011). This lacuna resulted in users creating their own rules, in the form of netiquette (Ribble, 2006). Frequently the support that digital technology users required was not available or came too late (Ribble, 2006). Often users were punished for violations of email usage without understanding what they had done was inappropriate. Moreover, during this period there was a growing body of evidence regarding technological misuse and abuse by adults (Gearhart, 2008). In this context of continuous and rapid ICT evolution few people engaged in personal or professional reflection concerning their digital technology use (Ribble, 2006).

The first decade of the twenty-first century was characterized by widespread Internet adoption in developed countries, and a ubiquitous increase in mobile computing devices. The lower costs of technology in the early 2000s made mobile computing affordable and appealing for general use (LLobregat-Gomez & Sanchez-Ruiz, 2015). As mobile digital technologies became more cost effective, increasing numbers of people purchased mobile telephones and other technologies without understanding the social implications of owning and using these devices (Ribble, 2006). Public online platforms also emerged in the early 2000s. These included social software – web based networks and services that supported users to create and share their own content via social content and network sharing sites, blogs, wikis and forums (Notley, 2008). The WWW moved from Web 1.0 – where digital technology users consumed information, to Web 2.0 – where users became consumers, producers and distributers of information (Brooks-Young, 2010). Burgeoning ICTs generated demand for enhanced ways to access, store and engage with data. Consequently, between 2007 and 2010 access to Wi-Fi networks became faster, cloud computing
evolved, and open learning environments developed (LLobregat-Gomez & Sanchez-Ruiz, 2015).

During this decade concerns for inappropriate technology use became more apparent (Miller, 2005), and the cyber bullying phenomenon emerged (Ribble, 2006). Society was ill equipped to address the consequences of technology misuse and abuse. Many parents were unable to remain abreast of technological change and therefore with their children’s Internet use (Notley, 2008). For example, 44% of Australian parents with teenagers surveyed in 2007 were worried about the safety of their children online (ACMA, 2007). This trend was reflected globally with parents in the United Kingdom reporting that they did not believe they were competent to help their children develop online skills (Livingstone, 2006; Notley, 2008). Furthermore, the generational divide between the digital natives and the digital immigrants was identified as one of the greatest issues in dealing with young people and online risks (Department for Children, Schools and Families, and the Department for Culture, Media and Sport, 2008). Parents did not understand online risks and therefore experienced fear and helplessness when they attempted to manage their children’s online behaviour (Notley, 2008).

Globally, twenty-first century government ICT policy in developed countries has focused on the supply issues of access and infrastructure to telecommunications. This focus has been at the expense of the demand issues such as technological skill and support (Notley, 2008) and DC (Ribble, 2006). However, a paradigm shift recognising the complexities of an information society was evident on the international scene by 2005. Indeed, a World Summit on the Information Society (WSIS) was convened involving 19,000 participants from 174 countries: “...the level and diversity of participation at WSIS emphasized that the information society was now being understood as an issue that required more than government action and included issues more diverse than economic growth” (Notley, 2008, p. 38).

Digital natives are defined “as those young people who have grown up around digital technologies and seem to instinctively understand the technology” (Ribble, 2009, p. 253).

Digital immigrants “(the majority of users) may be fascinated by and may have adopted many aspects of the new technologies, but by not growing up with these digital tools, [they] don't use them as instinctively as the natives” (Ribble, 2009, p. 253).
Moreover, one of the goals from the WSIS was “developing appropriate school curriculum to meet the challenges of the information society” by 2015 (Notley, 2008, p. 37). In the United States, the Department of Education acknowledged that students were not “adequately prepared to meet the needs of a global economy and [participate] in a digitally driven age” (Boyle, 2010, p. 12). The Department’s Education Technology Plan led to the development of EnGauge’s 21st Century Skills. A number of essential skill sets were enunciated including social and civic responsibility that emphasized the importance of responsible and ethical use of modern technologies (Boyle, 2010; Brooks-Young, 2010). In the United Kingdom, the 2008 Byron Review recommended that “the government should take the lead in ensuring that Internet safety and learning are sustained over time” (Notley, 2008, p. 149).

A broadening of the Australian Government’s understanding of issues concerning education in the information society was reflected in initiatives such as the Digital Education Revolution and the Cyber-Safety Plan (Commonwealth of Australia, 2009). The Digital Education Revolution (DER) involved a national partnership between the Commonwealth and States concerning all secondary schools achieving a 1:1 computer to student ratio for Years 9 to 12 students by 31 December 2011 (Commonwealth of Australia, 2009). In addition, The Melbourne Declaration on Educational Goals for Young Australians 2008-2009 cited students becoming “active and informed citizens” as a goal for the development of all young Australians. Importantly, the Declaration included being “a responsible global and local citizen” as part of being an active and informed citizen (MCEETYA, 2008). The Australian Curriculum (AC), described as a “curriculum designed to support 21st century learning” (ACARA, 2011), was a further example of the government’s broadening focus.

Notwithstanding Australian government education policies and programs supporting the development of online skills, students’ digital literacies and knowledge concerning responsible participation remained lacking (Notley, 2008). Globally, during this period, “...how individuals behave[d] as members of a digital society (inside and outside of school) [became] a critical issue for technology leaders, and the lightening rod for digital citizenship” (Ribble, 2006, p. 1).
In this context of international policy development concerning digital technology and its use, consideration for accompanying moral and ethical aspects evolved. Research involving the moral and ethical aspects of technology use as a specific field first emerged in the 1970s (Luppicini & Adell, 2008). This field, known as Technoethics, “...focused on social and ethical issues arising from technological transformations of work and life” (Luppicini & Adell, 2008, p. 4). As ICTs became more pervasive in daily life, ethical issues relating to technology use increased, “as the social impact of technological revolution grows, ethical problems increase...technology is an intricate part of societal development which fosters change and new ethical considerations to address” (Luppicini, 2008, pp. 1-2).

However, it was the mid 1990s before the first efforts to address and characterize DC began. Digizen.org, a British non-profit organisation loosely defined digital citizenship as: “building safe spaces and communities, understanding how to manage personal information, and about being internet savvy – using your online presence to grow and shape your world in a safe, creative way, and inspiring others to do the same” (Boyle, 2010, p. 7). It was in this period that technology users recognized the need for a framework to consider what was appropriate and inappropriate technology use (Ribble, 2006). In this context, Computer Ethics as a sub-area of applied ethics to Technoethics, grew rapidly in the 1990s (Ribble, 2006). Computer Ethics was defined as: “the analysis of the nature and social impact of computer technology and the corresponding formulation and justification of policies for the ethical use of such technology” (Ribble, 2006, p. 26).

Digital citizenship was formally defined in educational literature in 2007 as “...the norms of appropriate, responsible behaviour with regard to technology use” (Ribble & Bailey, 2007, p. 10). Its accompanying goal was to create a citizenry with the tools to evaluate digital technology situations and have the skills to reach informed conclusions (Ribble, 2009).

3.3.3 Rationale for Teaching Digital Citizenship
The pervasiveness of digital technology has generated cultural change. As digital technology has become more prevalent so have the issues concerning inappropriate technology use. Importantly, there is no agreement regulating digital technology use,
and the Internet has no governing body with established rules (Ribble, 2011; Ribble, Bailey & Ross, 2004). It is therefore productive for individuals to develop their capacities as digital citizens. While DC is acknowledged as a way of addressing social, ethical and legal issues concerning online activities, society globally is negotiating how to incorporate the new citizenship into traditional societal structures. “As the Internet and digital technologies continue to change the meaning of citizenship so, too, are they changing the tools of citizenship and the nature of citizenship education” (Drake & Drake, 2013, p. 2). Indeed, despite increasing global awareness that it is effective to teach and practice a set of skills for responsible online participation, there is no consensus as to where this education should take place.

There is no sector of society formally responsible for the education of citizens concerning responsible online activities (Hollandsworth, et al., 2011). Indeed inculcating DC into contemporary society is a shared responsibility: “no single entity can tackle the challenge alone” (Hollandsworth et al., p. 46). Families, government, businesses and educational institutions acknowledge that a lack of DC may lead to problematic and dangerous conduct (Hollandsworth et al., 2011) and result in individuals being unable to participate in the Digital Age (Jensen, 2008). Moreover, they share a distributed responsibility for developing digital citizenry (Gibbs, 2010; Hollandsworth et al., 2011).

In Australia, while government policy acknowledges the centrality of DC in society with programs and initiatives aimed at educating youth, the elderly, the impaired, and small business communities (Commonwealth of Australia, 2011; Commonwealth of Australia, 2013), the discussion of where DC education is best located continues. The 2011 Cyber White Paper posed questions concerning how Australian society can promote DC, reach agreement on acceptable online behaviour, and encourage users to assume greater responsibility for their behaviours (Commonwealth of Australia, 2011). Importantly, the Australian Curriculum (refer to section 3.3.6.5) demonstrates the Federal Government’s developing DC educative focus.

The global reality for many families is that parents are digital immigrants attempting to negotiate the rapid pace and changing nature of the Network Age (A. Churches,
Therefore, home guidance is often missing as adults lack the capacities to monitor their children's technology use, and positively model DC (A. Churches, 2012a). In these circumstances, families rely on schools to guide students' DC development.

Educational institutions are appropriate agencies to teach DC (Brooks-Young, 2010; Gearhart, 2008; Hollandsworth et al., 2011; Toteda, 2012), and model responsible DC (Miani, 2015). As schools contribute to the education of future generations, it is appropriate to include DC in students' educational programs (Cunha, 2012; Ribble et al., 2004). Indeed, students mature in a globally connected world where digital literacy and active participation are the currency of society. It is therefore relevant for school curricula to include guidance concerning online behaviours (Bennett, 2005; Ribble, 2011). Increasingly educators manage the effects of students' digital technology activities and are therefore judiciously positioned to explore DC. It is suggested that in the absence of teachers' promoting and modeling DC, students “self-filter” to determine appropriate technology use (Miani, 2015). This may result in a digital culture establishing its own direction (Hollandsworth et al., 2011).

For the inculturation of DC in schools, it is responsible for DC to be included in the Kindergarten to Year 12 curriculum (Hollandsworth et al., 2011; Kolb, 2009). Learning about DC throughout the curriculum offers students regular opportunities to participate in responsible technology use (Bennett, 2005; Brooks-Young, 2010). During this process students are sensitized to what is appropriate online conduct (Toteda, 2012). This is an important goal because while students may demonstrate abilities to use technology, they often lack understanding concerning DC (Ribble, 2009). Therefore, a school environment offers a safe and monitored setting for students to practice their DC (Brooks-Young, 2010; Hollandsworth et al., 2011; Winn, 2012). Consequently, the literature offers a justification for DC’s inclusion in the curriculum.

### 3.3.4 Approaches to Teaching Digital Citizenship

There are a number of approaches for introducing and teaching DC in schools and it is relevant to the research problem to explore a sample. The approaches share a focus on themes of respect, protection, and being informed. First, the De-Tech-Tives
Process suggests students apply the standard of investigating the personal, social and environmental impacts of all technology they use in schools (Ohler, 2010, p. 108). In doing so students engage with a three-stage process of investigating, analysing, evaluating and recommending how to address the standard. Focus questions for this approach include how does the technology connect and disconnect community; together with what are a technology’s short and long-term effects.

A second approach to teaching DC involves three steps: teaching students to respect themselves, respect others and respect outside limits in all of their digital technology use (Brooks-Young, 2010). The first stage concentrates on the issue of online privacy. It advocates opportunities for students to have supervised use of social networks before using publicly available sites. The second stage focuses on cyber bullying, tagging, and issues surrounding online communication such as the lack of social cues that inform interpersonal relations in the offline context. The third stage involves regularly revisiting school AUPs and codes of conduct to define context and meaning. This three-step approach is identified as an ongoing process.

Another approach to teaching DC involves six tenets of citizenship (A. Churches, 2012b). These are respect yourself, protect yourself, respect others, protect others, do not steal, and honour intellectual property. This approach is closely linked to the Brooks-Young (2010) model, and is used as the model to approach DC issues in the De-Tech-Tives process (Ohler, 2010).

A further approach to teaching DC that is closely aligned to Churches’ model involves six principles. They are respect yourself, respect others, protect yourself, protect others, respect intellectual property and protect intellectual property (Churches et al., 2010). In this model, schools cultivate the five fluencies of an “ideal global, digital citizen” – the creativity fluency, the collaboration fluency, the media fluency, the information fluency and the solution fluency (Crockett, Jukes, & Churches, 2012).

A fifth approach to teaching DC is Ribble & Bailey’s Nine Elements of Digital Citizenship that provides a framework for understanding technology issues (2007;

31 Tagging refers to labeling a photo posted online with details about people and/or events in the photos (Brooks-Young, 2010, p. 105)
updated in Ribble (2011)). To assist educators teaching DC, the authors developed a reflection model for students to consider their technology use. The model involves four stages – awareness, guided practice, modelling and demonstration, and feedback and analysis (Ribble & Bailey, 2007; Ribble, 2011). A progression of this approach is Ribble’s further classification of DC elements. The author refers to an individual’s digital health and physical health, and the need to ‘work out’ both forms regularly. This approach places elements in three categories: respect yourself and others (digital etiquette, digital access, digital law); educate yourself and others (digital communication, digital literacy, digital commerce); and protect yourself and others (digital rights and responsibilities, digital security, digital health and wellness) (Ribble, 2011; Ribble, 2015). This classification of elements shares similarities with Churches and Brooks-Young’s frameworks, and illustrates the ongoing evolution of approaches to teaching DC.

3.3.5 Digital Citizenship Curriculum

Digital citizenship curriculum involves a number of defining characteristics. The first is balance. This is illustrated in Standard Five of The National Educational Technology Standards for Students (NETS-S) (see Appendix D), where balance is the central theme of DC curriculum for students in Preparatory to Year 12 (Ohler, 2010). Digital citizenship curriculum focuses on balance between opportunity and responsibility; empowerment and consideration; personal fulfilment and global well being; global perspective and local action; and hope for oneself and the world (Ohler, 2010, p. 107). Digital citizenship is an ongoing process in a proactive rather than reactive context (Hollandsworth et al., 2011). Central to the curriculum is the balance between students being educated and held accountable for ethical and legal technology use (Hollandsworth et al., 2011; Toteda, 2012), while offering them opportunities to make mistakes and learn in a safe environment (Brooks-Young, 2010; Winn, 2012).

Digital citizenship curriculum is participatory. The teaching and learning process offers opportunities for students to practice and become role models of DC (Hollandsworth et al., 2011). Parent and care provider involvement is key to DC curriculum. It is productive for families to develop online awareness, educate
themselves and be involved in preparing children for digital society (Hollandsworth et al., 2011).

Digital citizenship curriculum reflects the new citizenship of individuals in the Information Age (Ribble, 2009). It integrates students’ physical and virtual lives into a meaningful approach to living in the Digital Age (Ohler, 2010). The curriculum acknowledges students’ increasing focus on digital technologies and positions DC as a productive mechanism for all citizens (Toteda, 2012). Cognizant of the defining characteristics of DC curriculum, it is relevant to the research problem to explore challenges that exist for a school seeking to imbed the curriculum.

3.3.6 Challenges to Imbedding Digital Citizenship in the Curriculum

3.3.6.1 Curriculum Integration

Implementing change in school curriculum is often a complex process (Brady & Kennedy, 2010). Indeed, determining a productive approach for curriculum integration may be problematic for schools. In seeking to imbed DC teaching and learning opportunities in a school curriculum, “[e]ducators can conceive of curriculum integration in a wide variety of ways, and its implementation can be unique in every setting” (Drake, 2012, p. 6).

Pragmatically defined, curriculum integration concerns making connections around a concept, theme, topic or issue (Drake, 2012). There are a number of approaches to integration and it is relevant to the research problem to explore four established models.

First, “fusion” involves skills, knowledge or attitudes being “fused to the already existing curriculum” (Drake, 2012, p. 14). This model may involve positive work habits, technology, environmental awareness, literacy, and character education being taught across disciplines throughout the year levels (Drake, 2012; Drake & Burns, 2003).

A second integration model is the “multidisciplinary” approach that involves distinct disciplines making deliberate connections to a common theme or topic. For instance, secondary school students may simultaneously study the American Civil War in
English, History, Art and Drama classes using different mediums. Similarly, primary school students may engage in an integrated final project that is completed in different subjects (Drake, 2012).

The “interdisciplinary” curriculum is another approach to integration. In this model, teachers imbed interdisciplinary skills and concepts in the subjects. For instance, teachers may integrate literacy, common core standards or 21st century skills in different subjects to emphasise these competencies while teaching subject content (Drake, 2012, p. 18). Figure 3.4 offers a diagrammatic summary of this approach to integration.

**Figure 3.4 The Interdisciplinary Approach to Curriculum Integration**

![Diagram showing interdisciplinary approach]

(Source: Data obtained from Drake & Burns, 2003, p. 12)

A fourth model of curriculum integration is the “transdisciplinary” approach. This involves a high level of “intensity of integration effort” (Drake & Burns, 2003, p.8; Drake, 2012). This approach begins with a real-life context rather than subjects or common themes. Curriculum is developed from the students’ interests and establishes the students as researchers. Typically, the curriculum is based on the students’ research questions concerning personal growth or social issues (Beane cited in Drake, 2012, p. 20). This approach involves negotiated curriculum or project based learning concerning a local issue (Drake & Burns, 2003).
Importantly, adopting an approach to curriculum integration is merely one of the challenges schools face in implementing a curriculum that imbeds DC. The process of changing a curriculum to integrate DC involves stakeholders with variant understanding, uptake and interest in DC. While stakeholders, like society globally, are in transition with the notion of citizenship, contemporary citizenship is assuming growing importance in education curricula. Due to the heightened political profile of citizenship, there is a suite of specific initiatives aimed at inculcating particular types of citizenship, such as DC, in schools (Brooks & Holford, 2009). However, in terms of developing a CIDC, there are challenges. In presenting these, it is relevant to the research problem to explore challenges experienced by stakeholders implementing development education\(^\text{32}\), global citizenship education and civic education programs (McCormack & O’Flaherty, 2010; Zhao, 2010).

### 3.3.6.2 Teacher Role

Teachers play a central role imbedding DC in the curriculum (Brooks & Holford, 2009). Their knowledge and confidence in teaching DC are guiding influences in implementing an integrated curriculum (Brooks & Holford, 2009). This reality generates complexities when teachers consider themselves ill equipped for the role:

- Most of them [educators] are digital immigrants, and have not experienced a technology-rich academic setting themselves. Many educators use technology on a personal basis, such as communication, but have not had formal training in technology-integrated instructional design. Therefore, many do not feel comfortable in using such educational technology in the classroom or online. (Famer, 2010, p. 389)

Indeed, limited DC knowledge is a concern for teachers. They believe their DC understanding is minimal and lack confidence implementing the elements of DC within a topic or subject area (Hollandsworth et al., 2011). A further complication is developing teacher competency to generate consistent learning outcomes across settings (Brooks & Holford, 2009; Fonseca & Bujanda, 2011). Interestingly, teachers

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\(^{32}\) Development Education is “education that aims to develop knowledge, skills and attitudes in order to enable people to participate actively in their own development and in the development of local and global communities” (McCormack & O’Flaherty, 2010, p. 1332).
report that integrating DC into all subjects is problematic. Mathematics and Technical subjects are examples where teachers experience difficulties integrating additional skills in the subject curriculum (McCormack & O’Flaherty, 2010). Creating discipline specific instructional strategies to integrate DC into different subjects’ programs is a unique challenge of cyber citizenship (Bennett, 2005). However, a school-wide DC scope and sequence across curricular areas is a useful tool for linking DC competencies to subject programs throughout year levels (Farmer, 2010).

The intricacies of the Digital Age have generated changes in teachers’ roles: “…no longer can teachers and schools be passive observers. We are in the middle of a paradigm shift in the way we live, learn and work in a digital world” (M. Pluss, 2014, Digital footprint section, para. 7). A new function for teachers is the ethical coach, where they assist students to place technology in the broader social context (Ohler, 2010). Increasingly, teachers share the responsibility for teaching DC (Al-Zahrani, 2015; Bennett, 2005; Cunha, 2012) as it “pervades every aspect of education” (A. Churches, 2012a, p. 1). The teacher’s role involves modelling and monitoring this citizenship. Moreover, “…teachers of all fields should be fully prepared to address the issues of digital citizenship at the curriculum preparation, needs analysis, implementation and assessment levels” (Bozdogan, 2013, p. 178). This changing role requires a shift in perspective, and is one of the challenges that exist when imbedding DC in a school curriculum.

3.3.6.3 Belief - Practice Disconnect

A belief–practice dissonance exists for teachers and leaders concerning DC education (Suppo, 2013). While there is widespread agreement regarding the importance of practising DC, there is a need for collaboration to effectively and consistently do so (Hollandsworth et al., 2011; Ribble, 2009). This is appropriately illustrated in survey results focused on educators’ awareness of DC. These demonstrate that while 58% of teachers and 75% of administrators were aware of DC issues there were educators requiring education, and varying degrees of implementation in practice (Hollandsworth et al., 2011).

A similar dissonance is illustrated in a survey of pre-service teachers implementing development education into lessons. Eighty-eight percent agree that development
education should be included in education, 42% agree that it was valued in their practice school, however only 4% agree that their supervising teachers’ practice included development education (McCormack & O’Flaherty, 2010).

Further, a National Council for Digital Citizenship survey concluded that while experienced educators are concerned about DC and it is a topic of increased interest, 64.6% of respondents do not believe that there is a consistently used, shared definition of DC (“Who Cares About”, 2012). Indeed, while DC is perceived as important, educators’ limited knowledge and experience engaging with DC in curricula influences the process.

3.3.6.4 School-based Challenges
There are school-based obstacles to implementing a DC integrated curriculum. Teacher training, time, curriculum constraints, and disconnect between educators and technology staff are examples. While training for educators has focused on technology use, there has been limited education concerning DC (Cunha, 2012; Ribble, 2009). The integration of ethical, legal and social issues regarding technology use is a challenge for teachers (Bennett, 2005). This identifies issues concerning schools’ capacities to address ethical issues associated with a DC curriculum (Gearhart, 2008). This reality also establishes the need to initiate pre-service teacher education programs (Cunha, 2012; McCormack & O’Flaherty, 2010; Suwannatthachote, 2012). Indeed, the emerging importance of DC in contemporary society invites ongoing teacher education on social, legal and ethical issues surrounding technology (Bennett, 2005; Cunha, 2012; Ribble & Bailey, 2004).

Lack of time to teach existing curriculum is a barrier for teachers attempting to include an additional set of skills such as DC (Brooks-Young, 2010; Carr-Gregg, 2007). The challenge involves teaching differently, rather than more (Farmer, 2010; McCormack & O’Flaherty, 2010). Suggested strategies to address time and curriculum constraints include identifying potential connections between the new skills and existing curriculum, and establishing links that support the development of relevant resources to teach those subjects (McCormack & O’Flaherty, 2010).
Blocking sites and extreme filter systems in schools can prove problematic when implementing a DC curriculum (Hollandsworth et al., 2011; Notley, 2008). A disconnect is identified between the goals of educators and technology staff (Hollandsworth et al., 2011). Stringent filtering systems established by technology staff often impede meaningful Web 2.0 learning. A frequent concern is that network administrators configure hardware so that it restricts teachers installing relevant software (Brooks-Young, 2010; Notley, 2008) (refer to section 3.7.2.2 for elaboration). These, and other school-based challenges influence the practice of DC within a school community.

3.3.6.5 Mandated Curriculum and Assessment
A further challenge to imbedding DC in the curriculum is the increasing attention that is placed on mandated education programs and standardized testing. Standardized testing constrains what may be taught and influences schools to prioritise mandated curriculum and assessment (Zhao, 2010). In this environment, assessment remains the “tail that wags the curriculum dog” (McCormack & O’Flaherty, 2010, p. 1338).

In the Australian context, DC is a developing educative focus. Accordingly, Australian curriculum, assessment and frameworks concerning DC are evolving. Key educational policy directions such as The Melbourne Declaration of Educational Goals for Young Australians 2008 (The Declaration) (MCEETYA, 2008) reflect the expanding priority. As the basis for the Australian Curriculum, The Declaration includes the goal for all students to become: “successful learners, confident and creative individuals, and active and informed citizens” (MCEETYA, 2008). Elaborations on this goal include appreciating Australia’s social, cultural, linguistic and religious diversity; an ability to relate and communicate across cultures; and to be responsible global and local citizens (MCEETYA, 2008).

Digital citizenship learning opportunities are evolving in the Australian Curriculum. Increasingly, connections to DC are located in the Foundation to Year 10 curriculum. Version 8 of the curriculum, demonstrates a developing DC emphasis in the Humanities and Social Sciences Key Learning Area (KLA) incorporating Civics and Citizenship for Years 7 to 10; the Technologies KLA comprising Digital Technologies for Foundation to Year 10; The Arts KLA with Media Arts, and in Health and Physical
Education (Commonwealth of Australia, 2016). While DC is not specifically mentioned in the curriculum documents, connections with the concept are evident:

In Years 7-10 [Geography] the focus is on the environmental characteristics of weather and water, biotic life, landscapes and resources environmental sustainability and the human characteristics of people, settlement, livelihood and lifestyles and human well being – all lend themselves, in different degrees, to an important understanding of digital citizenship. (Pluss, 2013, p.18)

The national curriculum also includes general capabilities that define knowledge, skills, behaviours and dispositions to develop across the curriculum in accordance with The Declaration goals (ACARA, 2011). Connections with DC principles are evident in a number of the general capabilities including: Ethical Behaviour, ICT Competence, Personal and Social Capability, and Intercultural Understanding (Pluss, 2013). However, clear content descriptions and connections with the general capabilities including the term DC, within the curriculum documents would be productive:

Disappointingly, the integration of the ICT general capability into the Shape of the Australian Curriculum: Civics and Citizenship paper is rudimentary at best. The ‘ICT Capability’ has been reduced to two short paragraphs outlining in generalized ways, how students could demonstrate ‘ICT competence’ through identifying, sifting and sorting information…the ‘ICT Capability’ provides teachers no guidance about how technologies can be meaningfully incorporated into the learning area of Civics and Citizenship, nor how to make connections between the content of Civics and Citizenship and the ICT capability. The introduction of the concept of ‘digital citizenship’ is one obvious and straightforward way such a connection could be made, but there is no mention of ‘digital citizenship’ in either a limited or an expanded way. This is a missed opportunity, and dates the Australian Curriculum to the 20th rather than 21st Century. (Moyle, 2014, p. 43)

While connections with DC exist in the Senior Secondary Curriculum (Pluss, 2013), opportunities for similar consideration of digital technologies, ICT competence,
ethical understandings or contemporary citizenship are less apparent. Importantly to
the research agenda, proposed changes to Queensland senior secondary school
curriculum from 2018 include an increased emphasis on developing skills required “to
succeed in a competitive, technology-driven economy and society” (Martyn-Jones,
2016, p. 15). Proposed senior subject syllabuses including Digital Technologies,
Design and Business suggest an enhanced DC emphasis (ACARA, 2016c).

Therefore, the literature suggests a developing DC focus in the Australian
Curriculum. Government policy and funding determine national curriculum and
assessment policies, and these influences invite consideration.

3.3.6.6 Government Policy
The role of education in developing responsible citizens is established, and globally
many governments have chosen to develop policies and school-based programs for
citizenship education (Brooks & Holford, 2009). In many countries, this has been in
response to perceived contemporary social problems (Brooks & Holford, 2009).
Increasingly, the Australian Government - like many of its global counterparts - is
placing a focus on DC: “Australian schools, families and communities all have a
responsibility to provide safe online environments and teach children how to use
technology in positive and productive ways” (Commonwealth of Australia, 2011, p. 9).

The Australian Government’s expanding focus on responsible digital engagement is
reflected in initiatives including the Digital Education Revolution, the National Digital
Economy Strategy, the Cybersafety Plan, and the Update to the National Digital
Economy Strategy (Ainley, 2010; ACMA, 2013; MCEETYA, 2005). Strategies such
as an updated social contract proposed in 2011 reflect, “...the growing part of our
civic experience that occurs online” (Vasek, 2011, p. 1). While the contract was not
established, it offers insight concerning the Government’s developing awareness of
the demand for a common understanding of accountable and responsible DC. The
initiative was part of a public discussion paper, Connecting with Confidence:
Optimising Australia’s Digital Future, and included focus questions concerning what
constitutes a good digital citizen, and the norms of behaviour of digital citizens. The
public discussion paper also considered the roles that government, private sector,
communities and individuals have in promoting digital citizenship (Commonwealth of Australia, 2011).

Australian Federal and State Government policies in the 2010s reflect a shifting focus from controlling technological misuse, to educating people concerning responsible digital engagement. For instance, from 2006 the Queensland Department of Education blocked all web-based email, popular social networking sites, blogging and content sharing sites (Notley, 2008). Nationally, the Australian Government launched the NetAlert policy package focusing on the misuse and abuse of technology in 2007. Moreover, Internet filtering options were offered to Australian households and libraries without charge (Notley, 2008). In contrast, by 2014 the Queensland Government education policy developed to include an endorsed Daniel Morcombe Child Safety Curriculum for Preparatory to Year 9 students. While the curriculum remains discretionary, it addresses aspects of online safety and has been recommended for inclusion in the Australian Curriculum within the Health and Physical Education KLA (Daniel Morcombe Foundation, 2015; The State of Queensland, 2014). Similarly, the Advancing Australia as a Digital Economy: An Update to the National Digital Economy Strategy ratified the completion of the Technologies KLA in the national curriculum as a component of the Federal Government’s “lifecycle approach to ICT skills” (Australian Policy Online, 2013, p. 1).

In addition, Federal Government policies have generated an enhanced focus on online safety as a key component of students’ wellbeing. The updated National Safe Schools Framework confirms that providing safe and supportive learning communities now extends to: “new and emerging challenges for school communities such as cybersafety [and] cyberbullying” (Ministerial Council for Education, Early Childhood Development and Youth Affairs, 2011, p. 2). Indeed, teaching skills to promote cybersafety is specified in the Framework’s Engagement, Skill Development and Safe School Curriculum element. Further, the Enhancing Online Safety for Children Act (Commonwealth) 2015, established Australia’s first e-Safety Commissioner to work with young people, families and schools to: “be responsible for advocacy, co-ordination of Commonwealth Government efforts in online safety, education, research, [and] also administering the complaints system that will apply to cyber bullying” (Commonwealth of Australia, 2015, p. 1).
The Federal Government implemented the *Australian Professional Standards for Principals* and the *Australian Professional Standards for Teachers* in pursuit of *The Declaration*’s goals. The standards were implemented to complement the national curriculum by providing a framework for Principals’ professional learning and teachers’ performance-based accountability. Importantly then, while the standards explicitly require teachers to include digital technologies in their practice and their performance may be evaluated accordingly: “there is no mention in either set of professional standards for teachers or school principals of developing ‘digital citizenship’ in either a limited or an expanded way” (Moyle, 2014, p. 44).

Therefore, the literature demonstrates an expanding focus on digital technologies, online safety and contemporary citizenship in Australian Government policies. However, “to determine what is truly valued in government policies, it is illuminating to check the alignment between the funding provided and the stated policy priorities” (Moyle, 2014, p. 44). It is relevant to the research problem to explore the influence of funding on integrating DC in school curricula.

### 3.3.6.7 Funding
Implementing a curriculum initiative requires human and fiscal resources. Funding is an issue that is influential in securing a curriculum integrating DC. Activities such as curriculum audits, lesson planning and staff training involve additional operating expenses for schools. As DC is inter-disciplinary and in addition to existing subject courses, it is often outside defined Faculty budgets: “…in so many instances in K-12, initiatives are defined less by what they do than where funding originates” (Hollandsworth et al., 2011, p. 38).

Schools often rely on securing funding to facilitate a DC imbedded curriculum. In a number of countries, adoption of government policy is linked to eligibility for funding for curriculum initiatives (Zhao, 2010). This is appropriately illustrated in the United States where the E-Rate Funding Program became law in 2008. To accept e-rate funding schools are required to teach DC, and this has generated the implementation of DC curriculum (Hollandsworth et al., 2011). Further, the United States’ Education
Department has mandated that to be eligible for Race to the Top Funds\textsuperscript{33}, states must agree to adopt internationally benchmarked common standards regarding globally competitive education systems (Zhao, 2010). Another example is in Costa Rica, where schools are required to engage in a National Program of Educational Informatics before having the CADE Project\textsuperscript{34} implemented (Fonseca & Bujanda, 2011).

However, in countries where government education funding is not linked to DC initiatives, schools rely on grants to introduce contemporary citizenship skills. For example, the Democracy Builders Initiative in Costa Rica is a project to build capacities for active citizenship and personal fulfilment using the CADE methodology in high school civic education curriculum. The United Nations Democracy Fund supports this initiative (Fonseca & Bujanda, 2011).

In Australia, while government policy direction has generated changes in national and state curricula, and understandings concerning student welfare and online regulation, there is an apparent lack of funding for schools to embrace the paradigm shift.

While both the National Education Agreement and the Smarter Schools National Partnership for Improving Teacher Quality indicate that the funding allocated in these Agreements is to implement the Melbourne Declaration on Educational Goals for Young Australians, neither statement places any emphasis on…digital citizenship. The Agreements do nominate specific outcomes and the Smarter Schools National Partnership for Improving Teacher Quality provided ‘reward payments’ for the achievement of explicit measures and targets. These measures however, do not equate ‘quality teaching and school leadership’ with…digital citizenship. (Moyle, 2014, p. 44)

\textsuperscript{33} Race to the Top Funds is “the largest education grant programme ($4.3 billion) in the United States of America history” (Zhao, 2010, p. 424).

\textsuperscript{34} The Deliberative Capabilities in School Age Children Project (CADE Project) is “a set of citizenship education programmes for young people based in Costa Rica” (Fonseca & Bujanda, 2011, p. 258).
A similar lack of funding is evident with the updated *National Safe Schools Framework*:

While [it] promotes some worthy goals…the truth is that there is no monitoring system and funding is not linked to implementation. This means that in some schools the document is still in its cellophane wrapper or, worse relegated to the recycling bin. (Carr-Gregg, 2014, pp. 46-47)

Therefore, in Australia schools are often reliant on initiatives such as the Australian Government Quality Teacher Program 2011–2013 (AGQTP) to support the imbedding of information communication learning technologies (ICLTs) in non-government education authorities. To be eligible for an AGQTP grant, a school’s application concerned digital citizenship, emerging technologies, or the innovative application of ICLTs in contemporary learning (Department of Education, Employment and Workplace Relations, 2012).

In summary, the literature confirms there are challenges in imbedding DC in a school curriculum. The interweaving of these situational influences and a CIDC are relevant to understanding a community’s experience of the research phenomenon.

### 3.3.7 Existing Digital Citizenship Programs

While there is an increasing focus on contemporary citizenship in the digital era, the literature suggests a lack of comprehensive programs or curricula that share this focus (Brooks & Holford, 2009). Educational authorities and the private sector have tended to concentrate on aspects of DC rather than offering a comprehensive programme (Ribble, 2009). For example, Drake University developed a program focusing on service learning and the digital divide as aspects of DC (Ribble, 2009). Typically, university courses have considered appropriate use of online resources and safety rather than focusing on holistic DC. Consequently, university programs such as British Columbia’s first year Department of Computer Science Digital Citizenship Course, are uncommon (Hui, 2013). In the private sector companies such as Google, Microsoft, Vodafone and Facebook have developed training guides and programs to assist teachers to include aspects of DC in their curriculum. Government and their agencies, such as the ACMA and the Office of Children’s
eSafety Commissioner, have developed cybersafety websites and online programmes. Examples of these are the *Budd:e Cybersecurity Package*, *Tagged* and the New South Wales Government Digital Citizenship website (Commonwealth of Australia, 2015).

School based DC programs vary in their format and delivery - from after school citizenship programs (Fonseca & Bujanda, 2011), to school projects using a school hosted social networking site to teach elements of DC (Jensen, 2008; Winn, 2012). Some schools use their technology program as a vehicle to include DC lessons (Boyle, 2010), while others adopt online critical thinking skills projects (Government of Alberta Education, 2012). Short-term, discrete DC programs involving weekly lessons in particular year levels have also been piloted (Cunha, 2012). In addition, schools collaborate with university students on social media projects (Curran, 2012), and partner with law firms to implement DC courses (Assumpcao & Sleiman, 2011). However, the approach and delivery of an integrated DC curriculum for students across subject areas is uncommon (Toteda, 2012). It is therefore relevant to the research purpose to explore school-based DC programs.

**The Deliberative Capabilities in School Age Children Project (CADE)**
The CADE project is based in Costa Rica. The project is a set of citizenship education programs for young people that focus on developing self-efficacy and deliberative capabilities using digital technologies. It is an after school program facilitated by computer laboratory teachers. Since 2004, the programs have been implemented in twenty-four primary schools and two high schools. Its implementation is linked to schools that participate in the National Program of Educational Informatics, a program that concerns the use of digital technologies to promote citizenship skills (Fonseca & Bujanda, 2011). One of the founding principles of the CADE project is that digital technologies are required in twenty-first century citizenship education programs (Fonseca & Bujanda, 2011).

The experiences of the program’s Directors suggest that defining a set of contemporary citizenship skills and devising a curriculum to teach these, is the first of many challenges in conducting the program. “The more complex part [is] developing frameworks for and competencies of teachers or facilitators that will enable them to
generate those learning outcomes in a reliable way in many settings, in dissimilar circumstances, and with little supervision" (Fonseca & Bujanda, 2011, p. 259). With the success of the program largely dependent on teachers “as orchestrators of effective learning processes”, CADE Project Directors identify that for a school based citizenship education program to be successful it is productive to invest in teacher training and development strategies (p. 259). Recommended focus areas include regular self-reflection and coaching; access to knowledge concerning best practice, and motivators for teachers to adopt the change (Fonseca & Bujanda, 2011). Members’ experiences of the programs have developed awareness of the need to “lay the adequate structural conditions that can lead to more effective learning outcomes” (p. 259).

**The Government of Alberta Online Critical Thinking Skills Project**

With this project Alberta Education signed a licensing agreement with Media Smarts to use their *Passport to the Internet* (Years 4 to 8) and *MyWorld* (Years 9 to 12) online student resources (Media Smarts, n.d.a, n.d.b). The project aimed to help students develop critical thinking skills for their online behaviour. The *Passport* includes online safety, authenticating online information, recognizing online marketing ploys, protecting privacy, managing online relationships and dealing with cyberbullying. The licensing agreement concluded in 2014 and the community’s experience of the project is yet to be reported. However, schools may continue to fund their own license agreement for the resources. (Government of Alberta Education, 2012).

**Hands on a Camera Project (HOC)**

HOC is an ongoing collaborative project between the Brigham Young University and three local districts in Utah. The project seeks to engage young people in learning media literacy principles and documentary filmmaking skills (Jensen, 2008). HOC is based on the notion of “new citizenship” for the Information Age. This is an interactive citizenship that provides a method for interpreting and negotiating global concerns, locally. Students are taught a set of skills they require for citizenship through interactive participation and engagement. This form of citizenship identifies mediatized spaces such as classrooms, homes and communities, as participatory spaces in the teaching process (Jensen, 2008).
HOC is based on a participatory action research model involving Brigham Young University students, public school teachers and K-12 students over a 12 to 14 week period. East Shore High School is one of the schools running HOC and their experiences reflect increased student engagement and empowerment of students. As a result of the HOC, they identify students moving from the position of denizen - a spectator or consumer of virtual community - to participatory digital citizens (Jensen, 2008).

Southwest Christian School
Southwest Christian School is a Preparatory to Year 12 School in Texas that uses a school based social network to teach appropriate online etiquette. The program was piloted with middle school students and staff, and is designed for school-wide implementation. Teachers integrate social networking into their curricula and use the site as a vehicle for illustrating DC issues through a private social network. The site is managed by a teacher and maintained by a Technical Applications class. The school believes that DC education must be intentional, and have created a middle school technology class with an emphasis on promoting DC (Winn, 2012). In terms of the school community’s experience of their DC model and program, “...promoting digital citizenship via private social network has provided an extraordinary opportunity for our school, parents, and students” (Winn, 2012, p. 13). The school reports that their model allows them to exceed ISTE’s NETS for Students on DC in a safe, practical and integrated way (Winn, 2012).

Northeast Urban School
An urban school located in the Northeast adapted and implemented a DC curriculum in its Technology program for Year 9 students. The school based its program on Ribble and Bailey’s 2007 Digital Citizenship in Schools Guide. Seventy-five Year Nine students were selected from the Academy of Arts to act as the control group, and the same number were chosen from the Academy of Information Technology to be the experimental group and engage with the DC curriculum. The experimental group of students received four lessons over a period of two weeks. The lessons explored four topics: DC, appropriate or inappropriate use, ethics and etiquette, and online safety. Students were also required to deliver three oral presentations in the year concerning DC issues.
In terms of research that investigates the influence a DC program has on normative student technology use behaviours, the Northeast school experience is novel (Boyle, 2010). The study involved two technology teachers and 150 students. The students were tested pre and post program using Ribble and Bailey’s Digital Driver’s License Exam. This exam provided nine multiple-choice questions covering each of the DC elements. Results from the testing provided data indicating a “significant difference in students’ normative behaviour of technology use when exposed to the Digital Citizenship curriculum” (Boyle, 2010, p. 53). The study concluded a relationship existed between the time and focus spent addressing DC issues, and students’ awareness and knowledge of the issues (Boyle, 2010). A recommendation from the study for the Academy of Arts to implement a DC program confirmed Ribble and Bailey’s belief that: “as students become more aware of their actions, the principles embedded within this [Ribble & Bailey’s] model will become mental habits that will inform the way students see digital technologies now and in the future” (Boyle, 2010, p. 59).

**The Lester B. Pearson School Board**
The Lester B. Pearson School Board is the first school board in Quebec to adopt a DC program. The program began in 2011 and operates throughout elementary and high schools. The curriculum is “a developmental framework designed to help teachers understand the skills and knowledge students need to learn to become digital citizens” (Lester B. Pearson School Board, 2014, para 1). The program is organized by year level cycles and across four categories: communication, safety and health, awareness and information literacy. The school community reports a shift in focus with the program from curriculum centric to content creation (Lester B. Pearson School Board, 2014, para. 1). While there is a lack of data reflecting the school community’s experience, the program is relevant to the research as it implements DC lessons across year levels (“All Lester B. Pearson”, 2011, para. 1). The program recognizes that it is productive for parents and teachers to be educated in DC if they are to be models for the students. The Lester B. Pearson School Board suggests that the DC program addresses the realities of growing up in a media-saturated society (Toteda, 2012).
iCitizen Project

The iCitizen Project is a collaboration between college freshmen in West Hartford, Connecticut and high school juniors in Birmingham, Alabama. The project aimed to offer high school and college students opportunities to connect using social media concerning DC and cyberbullying issues. It offered a holistic approach to iCitizenship in the 21st century. An iCitizen is defined as someone who is “...aware, empathetic, and socially responsible; they believe in social justice and model social responsibility both face-to-face and virtually” (Curran, 2012, p. 8). The high school students continued to engage with the project beyond the College semester, and implications from the study indicate that:

[E]ngaging K-12 students in iCitizenship is essential for 21st century learners...learning is social. Social media must be a part of K-12 curriculum and instruction...student focused project-based learning is important for K-12 classrooms...teachers and students need to model being both learners and teachers in the classroom. (Curran, 2012, p. 14)

Ethics and Digital Citizenship (EDC) at Colegio Bandeirantes

EDC is a school-wide course created by Colegio Bandeirantes, a Brazilian Middle and High School, in partnership with a law firm. The ongoing course, implemented in 2008, consists of three face-to-face lessons annually concerning Internet safety practices. The lessons are facilitated by lawyers and teachers, and are incremental throughout the year levels. They involve a pre-survey of the students' online interests and behaviours, engaging with a Learning Management System (LMS) and ongoing communication with lawyers using a blog and email. Students evaluate the EDC course using a survey and responses reflect: “trends on student uses of the internet, and that some students are rethinking their practices and abandoning behaviours that would put them at a higher risk” (Assumpcao & Sleiman, 2011, p. 314).

3.4 Conclusion and Research Question 1

An analysis of the literature confirms a lacuna in research concerning how a secondary school community experiences continuing curriculum that integrates DC. While there is growing consensus globally that DC education is necessary (Winn,
the literature focuses on defining DC, potential models and frameworks, and the effectiveness of discrete DC programs. What is yet to be explored is how a school community experiences a CIDC. Consequently, the first specific research question is:

**How do members of a secondary school community experience a curriculum that integrates digital citizenship?**

### 3.5 Society In The Network Age

The purpose of this section is to illuminate the broader social context in which a school functions. It is this wider context that offers explanation for the experience of a CIDC within a school. A review of the literature generates three aspects of contemporary society that illuminate the context in which a school implements a CIDC. These are the Environment, the Life Experience Gap and the Educational Disconnect.

#### 3.5.1 The Environment

Digital technology pervades society In the Network Age. As a result, society exists in a media-saturated environment where the nature of ICT is all encompassing (Ohler, 2010; Toteda, 2012). In fact, 46% of the global population has access to the Internet (Internet Live Stats, 2016). Indeed, the Internet has permeated 73.3% of the Australia/Oceania geographic region (Internet World Stats, 2016, Figure 3.5). Similarly, the North American and European regions have high penetration rates with 89% and 73.9% respectively. In contrast, Africa has the lowest penetration rate at 28.6% (Internet World Stats, 2016). Moreover, more than seven billion people used mobile phones worldwide in 2015 (International Telecommunication Union, 2015). It is this environment of media access that is the status quo for the digital generation.

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35 Digital Generation refers to “students and young people today who have been born into the new digital landscape. For this generation there has never been a time when [sic] powerful technologies and resources have not existed. As a result, they have become Digital Natives, who have internalized the new digital landscape and have come to take it for granted” (Jukes, McCain & Crockett, 2010a, p. 40). The Digital Generation has “emerged since the mid 1990s” (Jukes, McCain & Crockett, 2010b, p. 12). The Digital Generation is a generation defined in and through its experience of digital computer technology (Buckingham, 2007; Notley, 2008).
Indeed, contemporary society is a “society of the spectacle” where imagery is central to the creation of identity and the gathering and distribution of knowledge (Thomas, 2004). The reliance on the visual in the virtual context has resulted in increased opportunities for online identity experimentation. “When online one’s gender, culture, lifestyle, clothing, voice, body size, age and identity are no longer bound by the confines of the embodied reality” (Thomas, 2004, p. 50). The perceived anonymity of online users combined with a reduced sense of inhibition, results in a “digital Dutch courage” for risk-taking online behaviours (Thomas, 2004). The risks involve people becoming aggressive via flaming, overtly critical or even cruel to online users. This behaviour reflects a shift in psychological perspective that is typical of society in the Digital Age. Increasingly, individuals exhibit disinhibited, dissociated and abstracted activity with their online behaviour (Ohler, 2010).

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36 Disinhibited activity is – “the change in character that occurs when we communicate in the absence of the social cues that we typically rely on to guide our interactions” (Ohler, 2010, p. 170).

Disassociated activity – a person’s sense of place contributes to their behaviour, and in cyberspace place is often dissociated (Ohler, 2010, p. 170).
Social relationships and networks in the Digital Age are created, negotiated and maintained in new ways. Digital communication technologies render distance, geographic and economic barriers increasingly irrelevant in contemporary society (Jukes, McCain, & Crockett, 2010b; Notley, 2008; Zhao, 2010). “The confluence of time and space online constructs another way of thinking about communication as instant, crossing boundaries…the speed with which relationships are formed online is caused by regular and constant contact with many others” (Thomas, 2004, p. 277).

The social capital of society is linked increasingly to a person’s ability to communicate online (Notley, 2008). This is exemplified by Australians’ increasing use of mobile phones, Internet telephony services such as Skype, and social media platforms (ACMA, 2013). In 2012, 48% of Australians identified mobile phones as their dominant communication device (ACMA, 2013). Figure 3.6 diagrammatically represents this trend, together with Australians’ decreasing use of fixed-line telephone service numbers (ACMA, 2013).

Abstracted activity – this refers to when a person "know[s] something has concrete elements, [but] elect[s] to see it completely in abstract terms...a perspective that includes just enough distance to see the benefits and blur the potential injuries” (Ohler, 2010, pp. 170-171).
Indeed, in Australia 70% of child Internet users access social media or game sites. Social networking sites such as Facebook and YouTube are used by more than 50% of Australian teenagers (Raco, 2014) (refer to section 2.3.2.1 for elaboration). Moreover, in April 2015, 69% of all website visits by child Internet users were to social media sites (Commonwealth of Australia, 2015). This phenomenon is reflected globally, where young people are considered prolific users and members of social software and online networks (OECD, 2007). Youth are using online networks to participate in society in social, educational, cultural, economic, political and civic activities (Notley, 2008). The changes brought about by the “networked information environment” (Benkler, 2006) are both deep and structural. Such change has transformed how the digital generation experiences its identity formation, social and intellectual development. Indeed, in contrast to previous generations, Network Age youth have always been members of the global digital village.

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37 Child Internet user - is defined as Australian youth aged 2 to 17 years, for the purpose of the Social Media and Kids Infographic (Commonwealth of Australia, 2015).
Multiple, concurrent communities and online networks infuse contemporary society. Network Age society is one where people are members of numerous, contemporaneous communities. Indeed, citizens are members of local, global and digital communities, while living in natural, human and digital ecosystems (Ohler, 2010). These communities are expanding in power due to their structure, and the proliferation of ICTs (Castells, 2004). Social, political and economic relationships in the Network Age are increasingly organized through network structures (Barney, 2004; Castells, 2000; Notley, 2008). Moreover, “as our digital connections and interactions grow, the lines between our education and personal lives, our career and private activities, become blurred” (ISTE, 2015). It is within this context that a school community exists and seeks to engage the digital generation, and antecedent generations, in teaching and learning processes.

Therefore an analysis of the literature illuminates Network Age society as one that is increasingly influenced by digital communication technologies. It is in this environment that a school community functions and experiences a CIDC.

3.5.2 The Life Experience Gap

In order to consider the research problem, it is appropriate to explore how stakeholders, as members of different generations, experience aspects of Network Age life. While students are from the digital generation, teachers and leaders are from antecedent generations that grew up in a non-digital world (Prensky, 2006). The different life experiences of school community members may influence how they experience a CIDC.

3.5.2.1 The Digital Generation

What constitutes the digital generation invites an understanding of community. Community in the Network Age is an established environment for young people. They are accustomed to communicating through digital technology without relying on body language, and are comfortable with their own constructs of place and time online (Ohler, 2010). Digital community with its freedoms, pervasiveness and invisibility is the participatory space of youth culture (Jensen, 2008; Ohler, 2010). Youth of the Network Age embrace the World Wide Web (WWW) and its principles of participation, openness and communication. Indeed, Web 2.0 enables young people
to be both producers and consumers (Pescetta, 2011). Students use the Internet to create and upload data, become informed, research, and be entertained (Thomas, 2008). In the participatory space of digital community, there are distinct characteristics of the digital generation that influence how they experience life.

First, members of the digital generation are increasingly identified and defined in terms of their access to, and relationship with, technology (Jensen, 2008; Notley, 2008). Internet use is central to citizenship in the Network Age (Hollandsworth et al., 2011). Indeed, citizenship is constituted by skilled, critical and productive engagement with technology. “As children become older, going online becomes a central activity for social interaction, education, knowledge gathering and exposure to new experiences. It becomes an integral part of their lives” (ACMA, 2014, p. 3). For youth in the digital era, interactive, participatory engagement constitutes social currency and equates with citizenship (Jensen, 2008). They therefore “embrace new technology interfaces as forums to explore their own personal constructs of place, identity and participation” (Jensen, 2008, p. 98).

Second, members of the digital generation prefer to learn through participation. This is appropriately illustrated by the success of online communities such as Facebook and Instagram (ACMA, 2014). Moreover, young people demonstrate particular interest with content creation activities and prefer websites such as YouTube and Tumblr that upload user-generated content (ACMA, 2014, p. 4). Connectivity with others and a sense of belonging are central to online communities (Thomas, 2008). Youth choose the communities they are members of, and express their commitment to a community by their participation (Jensen, 2008). Indeed, they are naturally drawn to opportunities for participation and empowerment, and feel at ease working with media. Importantly, youth view media messages as authoritative (Jensen, 2008). Members of the digital generation use online networks as a vehicle for social, civil and political comment and change. Vibewire and Reach Out! are examples within Australia, of youth creating and distributing in online public spaces (Notley, 2008).

Third, the digital generation lives “wired” lives in an environment where ICT is increasingly ubiquitous and pervasive (A. Churches, 2012b; Rosen, 2010; Thomas,
Youth spend an average of six and a half hours per day with multiple media forms (Jukes et al., 2010b; Parker, 2010). For most of the digital generation, there has never been a time when they haven’t been surrounded by computers, digital video, cell phones, video games, the Internet, online tools, and all the other digital wonders that increasingly define their (and our) world. (Jukes et al., 2010b, p. 1)

While the digital generation is at ease when using technology, the focus for most of their activity is recreation, not education. Indeed, in December 2013 90% of Australian teenagers used the Internet for entertainment (ACMA, 2014) (Figure 3.7). While a variety of factors such as ICT literacies, knowledge, family environment and school access influence young people’s experiences concerning digital technologies, by the age of 21 they will have conservatively: “played more than 10,000 hours of video games, sent and received 250,000 emails and text/instant messages, spend 10,000 hours talking on phones, and watched more than 20,000 hours of television and 500,000 commercials” (Prensky, 2006 p. 28).

Figure 3.7  Types of Online Activities Undertaken by Australian Teenagers

(Source: Data obtained from Australian Communications and Media Authority, 2014, “Types of activities undertaken by Internet users by age during December 2013”, Figure 4, Capability section)
What is particularly appropriate for the research agenda is the suggestion that effective and responsible virtual communication skills are often overlooked in students’ education (Jukes et al., 2010b). This may result in members of the digital generation experiencing the consequences of ill-considered online activities. In other circumstances where students learn about responsible online behaviour, a demonstrated lack of DC may be “a reflection of brain development, an existence or absence of an ethical compass and perhaps a lack of understanding about how one’s digital presence develops” (Pluss, 2013, p. 23). Therefore, an analysis of the literature demonstrates that members of the digital generation spend part of their daily lives in digital community, and this may influence how students experience a CIDC.

The fourth distinct characteristic of the digital generation concerns their learning preferences. Members are predisposed to learning through, and interacting with digital media: “constant exposure to digital media has changed the way the digital generation processes, interacts, and uses information” (Jukes et al., 2010b, p. 1). As a result, “they think and communicate in fundamentally different ways than any previous generation” (p. 1). Indeed, the digital generation prefers to receive information quickly and from multiple multimedia sources (Jukes et al., 2010b; Parker, 2010; Rosen, 2011). Their status quo involves multitasking and switching between working at a computer or tablet, listening to their iPod, chatting on IM screens and interacting on social networking sites. The speed and frequency of the digital generation’s multitasking is distinct from previous generations (Jukes et al., 2010b, Notley, 2008). They have an expectation that they have access to the digital world, which for them is “...an everyday and internalized part of students’ lives outside of school” (Jukes et al., 2010b, p. 36). Moreover, members of the digital generation have heightened levels of visual literacy. Consequently, their established experiences begin with image, sound, colour and video. Text provides additional, rather than primary detail (Crockett et al., 2012; Tapscott, 2009).

Members of the digital generation prefer a non-linear learning style. They favour peer based learning and collaboration with others, where members make connections and explore based on their intuition (Jukes et al., 2010b; Parker, 2010). The participatory space of digital community promotes involvement: “they [the digital
generation] expect, want, and need interactive information, interactive resources, interactive communications, and relevant, real-life experiences” (Jukes et al., 2010b, p. 14). Indeed, the digital generation want their learning to be relevant to their life experience, where feedback is proximate to their learning (Crockett et al., 2012; Johnson, 2005; Jukes et al., 2010b).

While family and school have traditionally fulfilled the function of preparing young people for life, society in the Network Age faces an unprecedented phenomenon. The digital generation “is the first generation that has ever mastered the tools essential to society before the older generations” (Jukes et al., 2010b, p. 15). Indeed, members of the digital generation are: “for the most part, growing up in this digital world without any explicit or universally adopted rules about how to behave, and there is little guidance available to adults” (ISTE, 2015). In fact, teachers and parents attempting to develop students’ DC are often without their own online experience and education. This life experience deficit influences how different generations in a school community experience DC within curriculum, and is therefore relevant to the proposed research.

3.5.2.2 Teachers and Parents
Teachers and parents are often not from the digital generation. They are from antecedent generations that grew up in a non-digital world (Prensky, 2006). “[They] speak digital as a second language and with varying degrees of skill” (Jukes et al., 2010b, p. 15). Typically, teachers and parents were raised in communities determined by geography and educated in an Industrial Age schooling model (Crockett et al., 2012). In contrast, the digital generation is born into a global, digital world as citizens of physical and virtual communities (Dillinger, 2015; Ribble, 2011). The life experience gap between the digital generation and antecedent generations often results in families and educators viewing young people’s online practices

38 Antecedent generations include the Silent Generation, the Baby Boomers, Generation X and Generation Y. The Silent Generation refers to people born between 1925 and 1942 (approximately). They were raised to be seen and not heard. The Baby Boomers refers to people born between 1942 and 1960 and were raised on postwar optimism. Generation X refers to people born between 1961 and 1981. They grew up in an era of failing schools, failing marriages, working mothers, and devil-child movies. Generation Y refers to those people born between 1981 and 2002. These people (some are still at school) grew up in an era of the ‘wanted child’ (Porterfield & Carnes, 2012, pp. 14-15).
through a “moral panic” lens (Notley, 2008). Indeed, adults often associate students’ digital participation with concern for their safety and social development.

It is a difficult age to be, to teach and to parent. Teaching and learning are no longer just happening inside the four walls of a classroom or school. The onset of digital and social media has changed how we communicate, learn, and interact with others. (Curran, 2012, p. 4)

Many parents are unable to maintain pace with technological changes and their children’s Internet use (Assumpcao & Sleiman, 2011; Notley, 2008). They are uncertain how to teach their children to use digital technology devices (Kolb, 2009). Indeed, the shifts in Digital Age learning modes are foreign to many parents. Their educational experiences involved textbooks, where text provided the primary information and images were complementary (Richardson, 2011).

Many teachers work with students who are more skilled with technology than they are (Hartnell-Young & Morriss, 2007; Pescetta, 2011). The life experience deficit often results in dissonance. While teachers view technology as a tool to integrate in teaching or as a teaching aid (Parker, 2010; Rosen, 2011), students consider digital communication technologies as: “sociocultural forms and connected to larger cultural contexts” (Buckingham, 2007, p. 145). Moreover, the learning strategies and educational experiences of many educators are the antithesis of the digital generation (Jukes et al, 2010b). In contrast to the digital generation’s learning preferences, many teachers choose to present information linearly following a logical sequence and single thought path, where students work independently and then in groups (Jukes et al., 2010b). Teachers also frequently favour the slow and controlled release of information from limited sources (Jukes et al., 2010b). Not surprisingly, the learning modes and school curricula often lack relevance for members of the digital generation (Jukes et al., 2010b; Rosen, 2010). Indeed, while young people have internalized new media, digital communication technologies are still largely perceived as an external option by other generations. This deficit in life experience may influence how teachers and leaders experience a CIDC.
3.5.3 The Educational Disconnect

Education in the Network Age faces the challenge of preparing students for global, digital society. Pre-globalization and the digital era, education was a local, social institution (Zhao, 2010). In contrast, a contemporary understanding of education is identified with global competition evaluated by international testing and educational standards. Global competence and citizenship are features of 21st century education. It involves a local education with a global perspective (Zhao, 2010).

Education policy increasingly focuses on developing 21st century skills such as fostering cultural tolerance, and the ability to tackle issues that do not respect disciplinary boundaries (Brooks-Young, 2010; LLobregat-Gomez & Sanchez-Ruiz, 2015). However, curriculum developers, teachers and schools continue to prepare students for a pre-globalization and industrial world (Jukes et al., 2010b; Rosen, 2010). Indeed, left-brain thinking that specializes in “linear, logical, left to right, top to bottom, beginning to end” thinking is a predominant curriculum focus (Jukes et al., 2010b, p. 23). This is at variance with the digital generation’s established non-linear, media saturated environment where creativity and “just in-time” learning are their status quo. Therefore, it is proposed that developing the right-brain creative and problem-solving thinking is productive for 21st century citizenship (Pink, 2005).

Approaches to teaching are also often incongruous with young people’s learning preferences (Brooks & Holford, 2009). This results in boredom, frustration and disempowerment for young people who view digital community as a natural participative space (Thomas, 2008). There is disconnect between what students are “learning inside the school and what they learn outside” (LLobregat-Gomez & Sanchez-Ruiz, 2015, p. 1). The “digital disconnect” concerns “how students use technology for their everyday communication and how they use technology in the classroom” (Kolb, 2009, p. 1). Often students are limited to using educational hardware and software in the classroom, in contrast to using their everyday digital devices for educational purposes. In other circumstances the disconnect concerns

39 Just in-time learning refers to “an understanding of the things [the digital generation] need to know in order to acquire the necessary skills and knowledge to do something they don’t know how to do….Just in-time learning is about having the skills, knowledge, and habits of mind that will allow them [the digital generation] to continuously learn and adapt just in time, when that next window of opportunity or area of interest briefly opens to them” (Jukes et al., 2010b, p. 39).
young people’s “technology poor” lives at school, and their media saturated lives outside of school (Ohler, 2010). Importantly, the disconnect is complicated by the increasing influence on schools of students’ outside school ICT use (Hollandsworth et al., 2011; Thomas, 2008).

The key [for educators] is in understanding how their students are very different in the ways they value and approach media and technology. It is not only that they are using more up-to-date technologies, but also that they approach technology differently than their teachers and even their older college-age brothers and sisters. If educators can better understand how their students process multimedia technology then they can more creatively imagine how to teach them and how to select or develop curricula that will engage these tech-savvy learners. (Rosen, 2010, p. 24)

The rapidity and ubiquity of digital technologies in society generates the need for new information literacies in the Network Age.

Today’s generation of students should anticipate having multiple careers in industries that don’t yet exist, using technologies that haven’t been invented to solve problems we haven’t even begun to think about yet. Preparing them for the world that awaits them after school requires a fundamentally different set of skills and knowledge than the skills and knowledge students traditionally leave school with today. (Friedman cited in Jukes et al., 2010b, p. 39)

Together with traditional literacies such as reading, writing, numeracy and interpersonal communication, students require opportunities to discover competencies unique to the 21st century. These skills include DC, 21st century collaboration, and competence with social networking and online communications (Crockett et al., 2012; Pescetta, 2011). Indeed, literacies with the interface between technology and literacy develop as new technologies and online practices emerge (Lankshear and Knobel, 2003). These technoliteracies or multiliteracies40 require

40 Technoliteracy or technological literacy or silicon literacy or cyberliteracies refer “to the range of multiliteracies required of young people to participate effectively in computer mediated communication in virtual worlds” (Thomas, 2004, p. 40).
students to use 21st century skills to cross cultural, community and national boundaries in both online and offline communities (Crockett et al., 2012; Thomas, 2004).

Moreover, the ability to effectively access online material is productive, however the capacity to produce content is increasingly valued in Network Age society (Castells, 2007; Jenkins, 2007; Notley, 2008). User created content is central to online commerce and therefore understanding the structure of e-business models is a relevant skill for students (Notley, 2008, p. 96). Indeed, it is suggested that in society’s multimedia environment, the standards and skills that determine students’ literacy levels have broadened to include visual literacy. A person who is “literate by the standards of the 20th century may be illiterate in the culture of the 21st century” (Crockett et al., 2012, p. 57).

The challenge for educational authorities is to respond to the evolving needs of students in the Network Age, by supporting them to develop the technoliteracies and 21st century skills they require for effective contemporary citizenship (Thomas, 2004). This goal involves teacher training in the new literacies, policy level change for curriculum, and pre-service teacher preparation (Crockett et al., 2012; Jukes et al., 2010b; Pescetta, 2011; Thomas, 2004). “The need to make digital citizenship an integral part of any teacher education program is paramount” (Curran, 2012, p. 4).

Notwithstanding the development of policy level curriculum change (refer to section 3.3.6.4), many skills enhanced by the digital generation’s life experience are omitted from curriculum and assessment. These skills include random access, graphics awareness and parallel processing (Jukes et al., 2010b). Furthermore, while the digital generation prefers to learn through participation, many educators continue to rely on the teacher-instructor model where students are passive receivers of information (Crockett et al., 2012). “This is a generation that learns differently, and unless we [educators] recognize and accept those differences, we will turn them off to education” (Rosen, 2010, p. 49).

An approach that offers students opportunities to implement and refine technoliteracies and 21st century skills, is to empower them to use digital
technologies effectively in their education (Crockett et al., 2012; Jukes et al., 2010b). This pedagogical shift from teacher instructor to teacher facilitator moves responsibility for learning from the teacher to the student. It reinforces the relationship between the students' learning and their world outside of school (A. Churches, 2012b; Crockett et al., 2012; LLobregat-Gomez & Sanchez-Ruiz, 2015).

Therefore an analysis of the literature illuminates disconnect between what is understood as productive educational practice in the Network Age, and contemporary teaching practice. This may be relevant in understanding how a community experiences a CIDC.

3.6 Conclusion and Research Question 2
To support the evolving needs of students in the Network Age, it is productive to develop the technoliteracies and 21st century skills they require for effective contemporary citizenship (Rosen, 2010; Ohler, 2010). Therefore, research that explores how students, teachers and leaders engage with a CIDC may be worthy of study. Consequently, the second specific research question is:

*How do members of a secondary school community engage with a curriculum that integrates digital citizenship?*

3.7 Schools As Network Age Learning Communities
The educational context in which school communities engage with, and manage, digital technology use is relevant to the research purpose.

Students around the world are becoming increasingly connected and dependent on technology for communication, information and learning. [The] surge of mobile devices in K-12 environments means students are increasingly going online for learning, collaborating and connecting…in the digital age, myriad day-to-day activities have an online component. (ISTE, 2015)

It is in this context, together with the broader social context, that the experience of a school curriculum integrating DC is understood.
3.7.1 Digital Technology in Schools

While schools have used computers and other digital communication technologies since the 1970s, it is the frequency, and type, of use that has changed (Ribble, 2006). In the 1970s, schools focused on computer languages, rather than pedagogy and technology infused learning (Oppenheimer, 2003). In the 1980s, the focus was on teaching students how to use the computers and the software, rather than integrating technology cross-curricula, or preparing students for its social impact (Ribble, 2006). School leadership grappled with visioning technology across curricula, and typically it was focused in the Business Department and not provided to other staff. Consequently, the focus concerning appropriate technology use was limited to Business Department classes (Milken Family Foundation, 2003).

With the invention of the WWW in 1989, existing ethical and safety issues concerning technology use intensified (Notley, 2008). While technology remained an adjunct to curriculum and separate from the teaching process, issues such as plagiarism became increasingly prevalent during the early 1990s (Berdik, 2005). Concurrently, teachers and leaders were ill equipped to deal with emerging issues and teach Internet safety (Ribble, 2006). Critical literacy regarding websites became a burgeoning issue because many teachers were unable to identify, and therefore teach students about authentic websites (Ribble, 2006). This deficit in teacher knowledge generated limited technology use for typing and “surfing the Internet” in many schools (Pescetta, 2011).

Not surprisingly, without opportunities to learn about ICTs at school many students began educating themselves to use the technology, and teachers relied on school or system installed Internet filters to block inappropriate sites (Notley, 2008). While Internet filters were effective in blocking websites, they created other issues for teachers by restricting students’ access to sites that were of educational benefit (Callister & Burbules, 2004). Moreover, while Internet filters offered protection at school, students were: “unprepared for identifying and acting when they accessed an inappropriate site outside of school” (Ribble, 2006, p. 26). Indeed, at the end of the 20th century schools operated within a predominantly reactive technology use and management model.
The situation compounded at the start of the 21st century, when schools lacked the systems and procedures to handle increasing numbers of students attending school with mobile digital devices (Ribble, 2006). Schools were unprepared for the effect of the digital technologies on students and their educational experiences (McHugh 2005). Indeed, students had internalized the digital world (Jukes et al., 2010b) and learned technology skills from observing others (Irvine, 2004). They developed detrimental uses for wireless technology including class time conversations with peers and cheating in examinations (Ribble, 2006). Typically, schools considered banning digital communication technologies such as mobile phones and iPods (Boyle, 2010; Kolb, 2009). However, increasing parent and external pressure generated the need for schools to reevaluate how they managed ICTs (Ribble, 2006). Safety issues concerning parental communication rights became linked to mobile phones (Selingo, 2004).

During the first decade of the 21st century, schools were increasingly expected to engage with, and manage digital technologies. Moreover, 1:1 student laptop programs and later, Bring Your Own Device41 (BYOD) digital learning platforms, emerged during this period. Concurrently, cyber bullying intensified (Kearsley, 2005), and traditional home – school boundaries for managing students' behaviour were challenged (Ribble, 2006). Schools often remained cautious about equipping students with digital technologies. Many educators had limited ICT competence and lacked training concerning technology integration (Cunha, 2012). Accordingly, teachers “…[did] not feel comfortable in using such educational technology in the classroom or online” (Farmer, 2010, p. 293).

An analysis of the literature suggests an increasing presence of digital communication technologies in schools. This is the educational context in which a CIDC is experienced.

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41 Bring your own device (BYOD) refers to “technology models where students bring a personally owned device to school for the purpose of learning. A personally owned device is any technology device brought into the school and owned by a student (or the student’s family), staff or guests” (Alberta Education, 2012 cited in NSW Department of Education and Communities, 2013, p. 6).
3.7.2 Managing Digital Technology in Schools

A school’s legal obligation to provide a safe learning environment for students has broadened. A school’s duty of care extends to “...doing everything possible to prevent students accessing offensive or inappropriate material, or using their online access in a harmful way” (Carr-Gregg, 2007, p. 139). Schools have a responsibility to “ensure that the technology is being used responsibly and teachers are making constructive use of these tools in the classroom” (Pescetta, 2011, p. 29). Indeed, when students are required to use ICTs to participate in the school curriculum “...it becomes the responsibility of the teachers and administrators to provide guidance in the correct ways to use technology” (Pescetta, 2011, p. 32). Therefore, the literature offers justification for DC’s inclusion in a school curriculum.

To fulfil this duty of care schools have adopted appropriate strategies. Approaches include developing acceptable use policies (AUPs), implementing school-wide filter schemes and adopting elements of education programs (Boyle, 2010; Dooley, Cross, Hearn & Treyvaud, 2009).

3.7.2.1 Acceptable Use Policies

AUPs detail stakeholders’ online rights and responsibilities and have been implemented by schools for most of the 21st century. The policy documents emphasize potential issues, and consequences of students’ ICT usage and “tend to assume that digital access is not a fundamental learning tool” (Government of Alberta Education, 2012, p. 15).

There are issues to consider concerning AUPs. First, when policies are poorly written they are difficult to defend legally (Fitzer & Peterson, 2005). Second, there is a lack of comprehensiveness with policy implementation (Carr-Gregg, 2007). Third, schools experience difficulties maintaining effective policies that reflect the changing educational role of digital technologies (Boyle, 2010; Kinnaman 1995). This is the reality even when schools implement Responsible Use Policies, in an attempt to shift

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42 An acceptable use policy (AUP) is a “policy set up by the network administrator or other school leaders in conjunction with their technology needs and safety concerns. This policy restricts the manner in which a network may be used and provides guidelines for teachers using technology in the classroom” (Ribble, 2011, p. 143).
the focus from controlling student behaviour to the rights and responsibilities of digital citizenry (Government of Alberta Education, 2012).

Consequently, while AUPs develop awareness in school communities concerning digital technology users’ rights and responsibilities, “evidence has been discovered that these policies are, in fact, not working in critical areas” (Ribble, 2011, p. 12; Government of Alberta Education, 2012). Indeed, AUPs have had limited success in reducing inappropriate technology use, as many students do not understand the policies they sign and require direction on what constitutes appropriate verse inappropriate behaviour (Government of Alberta Education, 2012; Ribble & Bailey, 2007). Therefore, AUPs do not replace the need for teaching students how to be responsible digital citizens (Pescetta, 2011).

### 3.7.2.2 Filter Schemes
Filter schemes assist schools to provide a safe learning environment for their communities (Dooley et al., 2009). Filtering software is designed to control the online material permitted on digital communication technology devices by blocking access to websites. The aim is to restrict people from viewing inappropriate material (Carr-Gregg, 2007). Indeed, filter software has a range of capabilities including applying filters to web browsing and email, customising restrictions to pornographic material, blanking out offensive words in email and IM, and limiting access (Carr-Gregg, 2007; Dooley et al., 2009).

However, there are limitations with filtering technology. First, it “can be easily circumvented or disabled by computer-savvy users, completely eliminating their effectiveness” (Dooley et al., 2009, p. 175). This was appropriately illustrated in 2007 when the Victorian Government announced a ban on accessing YouTube in its 1600 state schools. The ban proved unenforceable because of circumvention software students used to avoid the restriction. This situation is reflected globally where “…within months of schools around the world instituting such bans and installing blocking software, there is inevitably a proliferation of sites offering free downloads of circumvention software” (Carr-Gregg, 2007, p. 83). The second limitation concerns filters under or over-blocking material (Kranich, 2004). For instance, English
language-based filters fail to block inappropriate material written in other languages (Dooley et al., 2009).

Notwithstanding filtering scheme limitations, Queensland schools operate the software as a component of their digital management strategies. In 2003, all Queensland state schools began using EdNet, a mandatory state government filtering system (Notley, 2008). The Blue Coat web filtering system is now used on department-owned computers used at school, and externally. It aims to protect staff and students from inappropriate webpages, spyware, insecure IM, peer-to-peer sessions and scams or identity theft (The State of Queensland, 2015). Similarly, Brisbane Catholic Education operates a system wide approach with the Websense TRITON system where categories of websites or single URLs may be blocked (Brisbane Catholic Education, 2015).

While filtering systems are one strategy for providing a safe learning environment, they also represent a barrier for schools embracing 21st century learning (Willard, 2010). Indeed, they fail to equip students with the skills to navigate issues occurring outside of school (Carr-Gregg, 2007). What is appropriate for the research agenda is that it is the combination of education, supervision and effective AUPs that generate safe online experiences (Carr-Gregg, 2007). Therefore, filter schemes do not replace the need for teaching students DC (Pescetta, 2011). Instead, when schools develop effective peer leadership and establish digital social norms, they offer students opportunities to practice their digital engagement (Pescetta, 2011).

3.7.2.3 Australian Online Safety Education Programs and Resources

National online safety education programs are available for schools that seek to address cyber safety or DC. While there are a variety of online safety resources, “...few have been developed according to a specific theoretical framework with even fewer being empirically validated” (Dooley et al., 2009, p. 187). Indeed, there is “considerable diversity in content, style and method” of the programs (The Liberal Party, 2012, p. 10). Importantly, implementation of the resources remains a decision for individual schools.
However, the Australian Curriculum has contributed to an identified need for: “more formal and continuing education to address knowledge gaps about appropriate and available technical and behavioural measures to mitigate online risks” (Commonwealth of Australia, 2009, p.20). The national curriculum offers a mechanism for online programs and resources to be incorporated in the Digital Technologies (Foundation to Year 10), Civics and Citizenship (Years 7 to 10) and other courses (refer to section 3.3.6.5 for elaboration). Four examples of Australian online resources include Office of the Children’s eSafety Commissioner’s Education Resources, Bullying. No Way!, ThinkUKnow, and the New South Wales Department of Education and Communities’ DC website. It is therefore relevant to the research purpose to explore these programs.

**Office of the Children’s e-Safety Commissioner’s Education Resources (the Office)**

The Office’s educational resources (formerly Cybersmart teacher resources managed by the ACMA) are part of the Australian Government’s online safety and cyber bullying initiative. The resources are available for primary and secondary schools and are developed for particular age groups. For example #GameOn, Tagged, Budd:e Cybersecurity Education Package and Digital Citizenship are teaching resources for secondary schools. Each of the programs focus on aspects of online safety such as the misuse of technology, cyber bullying, and posting personal information online. The resources aim to develop digital citizens by educating children about online safety and risks. They also address skills for positive engagement in digital community. The Office also offers professional education for teachers and pre-service teachers through its Outreach professional development programs and workshops (Commonwealth of Australia, 2015).

**Bullying. No Way!**

*Bullying. No Way!* is a website developed by the Safe and Supportive School Communities (SSSC) Project. The Project includes representatives from Australian education jurisdictions together with national Catholic and independent schooling representatives. The aim of the Project is to: “create learning environments where every student and school community member is safe, supported, respected, valued – and free from bullying” (Department of Education, Training and Employment, 2012).
The website is a repository of nationwide resources for teachers, parents and students. It provides links to Australian programs or websites such as the Office of the Children’s eSafety Commissioner, and the Australian Government’s Stay Smart Online website.

**ThinkUKnow**

*ThinkUKnow* is an Internet safety program that delivers interactive training to parents, carers and teachers through schools and organisations across Australia. The program was created by the UK Child Exploitation and Online Protection (CEOP) Centre, and *ThinkUKnow* Australia was developed by the Australian Federal Police (AFP) and Microsoft Australia (*ThinkUKnow* Australia, 2012). It offers newsletters, videos, web seminars, interactive learning tools and fact sheets for teachers. Similar to the Office’s Outreach Program, *ThinkUKnow* also offers free presentations to schools and parents.

**New South Wales Department of Education and Communities’ DC website**

The Departments’ DC website is a suite of resources to support responsible online behaviour. It includes eight online lessons, an online mystery game called *Digital Dilemma*, a professional learning course for teachers, and resources for families. The program may be customised for each school and adopted as a discrete course; part of one subject curriculum or integrated across year level teaching and learning programs (New South Wales Department of Education and Communities, 2012).

In summary, while AUPs and filter schemes assist to provide a safer learning environment, an analysis of the literature suggests it is productive to teach students how to be digital citizens. Online safety education programs contribute to this goal. The research concerns one school’s attempt to provide a curriculum that integrates DC teaching and learning opportunities.

### 3.7.3 Contemporary Learning Communities

Schools operate in a multimedia, global, digital world. With the rapid development of wireless and mobile technologies, students use ICTs to learn anytime and anywhere (Pescetta, 2011). Indeed, “students and teachers have new roles with new abilities,
capabilities and demands, and manage new variables like haptic feedback\textsuperscript{43}, digital competence and discovery-driven learning” (Llobregat-Gomez & Sanchez-Ruiz, 2015, p. 4). The proliferation of ICTs in society has generated new approaches to teaching and learning methodologies including blended learning, flipped classrooms and collaborative learning (Ferdig, Rasinski & Pytash, 2014; Llobregat-Gomez & Sanchez-Ruiz, 2015). It is in this context that Network Age schools have expanded beyond the physical environment to include online learning experiences.

The changing nature of educational outcomes, delivery and opportunities in the Network Age is reflected in contemporary Australian educational strategies and policies (refer to section 3.3.6.6). Indeed, national curriculum and educational goals provide direction for school systems concerning relevant learning environments for their communities. Importantly, Principals are a critical influence in the implementation of school education policies:

In Australia, school leaders are seen as central to ensuring students leave school having achieved the outcomes expected of them...include[ing] the ability to use technologies as part of their personal learning styles. Principals are the conduit between the creators of government policies, and policy implementation in school communities. Principals have to synthesise the respective government policies and make sense of them, so they are implemented in meaningful, cohesive and complementary ways at the local level. (Moyle, 2014, p. 37)

Considering the contemporary social context and national education policies, it is not surprising that education systems including Queensland Department of Education and Brisbane Catholic Education (BCE), have implemented strategies to support online learning communities in schools. The strategies reflect students’ increasing participation in digital communities outside of school (Ribble, 2015), are relevant for the digital generation (Jukes et al., 2010b), and offer opportunities for enriched learning (Thomas, 2004).

\textsuperscript{43} Haptic feedback is “feedback gained by the sense of touch through manipulating icons on objects such as a tablet or smartphone” (Llobregat-Gomez & Sanchez-Ruiz, 2015, p. 2).
The Queensland Government has implemented *Smart Classrooms* as its digital education strategy for state schools. The strategy offers direction for schools concerning the learning and business potential of ICT. It is student focused and recognizes the need for “seamless movement between learning at school, home, work and play” (The State of Queensland, 2012). The strategy’s aim is to make ICT integral to learning. *Smart Classrooms* involves a series of projects created to imbed ICT in learning. For example, the Digital Classroom Project aims to support schools to understand, plan and develop digitally rich environments and experiences for student learning. To achieve this goal, the Queensland Government provides schools with focused information, resources and professional development opportunities (The State of Queensland, 2012). Another *Smart Classrooms* project is The Learning Place, a secure online learning environment for staff and students. In addition, the Queensland Government has fast-tracked the Digital Technologies curriculum implementation with a particular focus on coding and robotics (The State of Queensland, 2015).

In accordance with its Digital Strategy, Brisbane Catholic Education (BCE) has introduced a number of initiatives to support online school community engagement (BCE, 2015). The Knowledge Web (KWeb), is designed to meet the information, communication and collaboration needs of BCE educators. It provides a framework for online service delivery, online workspaces for BCE staff and future portals. The Teaching and Learning Framework on KWeb provides information, resources and professional development opportunities for staff. Brisbane Catholic Education also promotes digital community learning tools such as Scootle and Atomic Learning. Links to these teaching and learning resources are accessible on KWeb. Connected Classrooms is another initiative that facilitates video conferencing between schools or with the wider community (BCE, 2012). In 2012, BCE piloted and later implemented LIFE, an online learning management system for staff and students.

3.8 Conclusion and Research Question 3

An analysis of the literature indicates the evolving role of digital communication technologies in schools. It also illuminates increasingly proactive school-based ICT management. However, there is a lacuna in research examining the influence of school based curriculum initiatives such as a CIDC on a school’s use and
management, of digital technologies. Consequently, the third specific research question is:

*How does a curriculum that integrates digital citizenship influence members of the school community?*

### 3.9 Specific Research Questions

The literature review generated the following three specific research questions that focused the conduct of the research design. They are:

1. How do members of a secondary school community experience a curriculum that integrates digital citizenship?
2. How do members of a secondary school community engage with a curriculum that integrates digital citizenship?
3. How does a curriculum that integrates digital citizenship influence members of the school community?
CHAPTER 4 DESIGN OF THE RESEARCH

4.1 Introduction

The purpose of this research is to explore how members of a secondary school community experience a curriculum that integrates digital citizenship (CIDC). This chapter explains and justifies the adopted research design (Figure 4.1).

The specific research questions that focus the design for this study are:

1. How do members of a secondary school community experience a CIDC?
2. How do members of a secondary school community engage with a CIDC?
3. How does a CIDC influence members of the school community?

4.2 Theoretical Framework

A theoretical framework provides a defensible philosophical foundation to structure the research process (Neuman, 2006). Given the purpose of this research is to explore how members of a school community experience a CIDC the epistemological framework of Constructionism is adopted (Feast & Melles, 2010). In order to engage with the participants’ experiences of the study phenomenon, Interpretivism as an application of Constructionism, is adopted as the theoretical perspective (O’Donoghue, 2007). Symbolic Interactionism (SI) is the particular lens chosen to offer a distinct interpretation of how Interpretivism may be conceptualised (Davetian, 2010). Case study is the methodology adopted for the research. The data gathering strategies are focus group interviews, semi-structured individual interviews, online questionnaires, and participant observation (Knox, 2004).
4.2.1 Epistemology

Epistemology offers a philosophical rationale for explaining how knowledge is generated and how it is determined to be ‘valid’ (Crotty, 1998; O'Donoghue, 2007). Epistemology offers theoretical assumptions that explain the relationship between the researcher and knowledge (Gough, 2002). Since this research concerns how participants experience a CIDC, Constructionism is the adopted epistemology.

Constructionism assumes that human knowledge is constructed, and that the basis for knowledge is social interaction (O'Donoghue, 2007). By interacting with others, humans engage with the world in negotiating meaning (Crotty, 1998). Consequently, Constructionism enables the understanding that “(m)eaning is not discovered but constructed” (Crotty, 1998, p. 9), and that humans interpret phenomena from different perspectives (Candy, 1989; Crotty, 1998).

In this study, the researcher seeks to explore how students, teachers and leaders experience a secondary school CIDC. The Constructionist paradigm acknowledges
the role of social interaction and participants’ perspectives. Constructionism is therefore adopted as the appropriate epistemology for the research design.

4.2.2 Theoretical Perspective
A theoretical perspective is an approach to representing and explaining human society (Crotty, 1998). It is informed by an epistemology and provides the philosophical stance for the chosen methodology (Crotty, 1998; Feast & Melles, 2010). Interpretivism is adopted as the theoretical perspective for this research (Davetian, 2010; O’Donoghue, 2007).

An Interpretivist perspective considers the individual and society as ‘mutually interdependent’. A complete understanding of one is not possible without the other (O’Donoghue, 2007). It focuses on how people interrelate. Interpretivism seeks to understand people’s socially constructed experiences, what people think, and how they form their ideas about the world (Neuman, 2006; Thomas, 2009). Indeed, this perspective is justified by four assumptions:

1. Everyday activity is the building block of society
2. Everyday activity is never totally imposed – there is always some autonomy and freedom
3. Everyday activity nearly always involves a person interacting with other people rather than acting in isolation; and
4. Everyday activity involves a process of negotiation of meaning (O’Donoghue, 2007, pp.16-17).

Accordingly, Interpretivism acknowledges that everyday activity typically occurs through social interaction that involves a process of mutual interpretation of one’s own, and others’ behaviours. This research concerns the meanings and interpretations members negotiate in their experiences of a CIDC. The process is continuous and occurs in a context of multiple realities, where individuals’ understandings change and shared assumptions develop (Neuman, 2006; O’Donoghue, 2007).

Symbolic Interactionism (SI) is a theoretical approach within the Interpretivist perspective.
4.2.2.1 Symbolic Interactionism

SI is a theoretical explanation of how interpretations may assist in research. It postulates that understanding meaning making is through human interaction (Charon, 2010). SI focuses on the symbols, language and actions that humans use to construct culture. The perspective involves three fundamental principles (Blumer cited in Dimmock & O'Donoghue, 1997; O'Donoghue, 2007):

1. Humans act towards people, events and objects “on the basis of the meanings that these things have for them” (Blumer, 1969, p. 2)

2. Social interaction influences these meanings. Indeed, “meaning...is acquired from one’s experience of the world and because one is in constant engagement with the world that meaning may constantly be modified, if not completely changed” (Dimmock & O'Donoghue, 1997, p. 54); and

3. Meanings are negotiated and modified, through an interpretive process that individuals use when relating to people, events and objects. The interpretive process involves two stages. First, when individuals identify what has meaning for them and engage with that meaning. Second, when “one selects, checks, suspends, regroups and transforms the meaning in the light of the situation in which one is placed and the direction of one’s actions” (O'Donoghue, 2007, p. 19).

Indeed, the research involves exploring the meanings assigned by the participants in response to a CIDC. Furthermore, the research purpose is situated within the changing nature of digital technologies. SI conceptualizes the research to acknowledge the interconnectedness of global, digital society and education.

4.3 Methodology

A methodology is a rationale that justifies the choice and use of data gathering strategies in a research design (Crotty, 1998; O'Donoghue, 2007). Case study is adopted as an appropriate methodology for this research. Given the purpose of this research is to explore how a community experiences a curriculum initiative, it is an evaluative case study. An illuminative model of program or curriculum evaluation is adopted for this research (Parlett & Hamilton 1972; 1987).
4.3.1 Case Study

Case study is described as a unit of human interaction - the phenomenon - embedded in the natural world (Scholz & Tietje, 2002). The phenomenon is studied within its context in a given timeframe (Gillham, 2004). The merging of contextual conditions and the phenomenon indicates that precise boundaries are difficult to determine (Gillham, 2004). Case study enables the researcher to appreciate how participants experience a phenomenon as it "investigates a contemporary phenomenon within real-life context" (Yin, 1994, p. 13; Thomas, 2009). In the research, the phenomenon is a CIDC, and the context is a secondary school that has implemented the curriculum in Years Eight and Nine. Indeed, the ‘caseness’ of this case study is the students’, teachers’ and leaders’ experiences of a curriculum integrating digital citizenship.

Case study aims to generate a thick description of participants’ thoughts, feelings, and experiences. This design acknowledges that “contexts are unique and dynamic, hence case studies investigate and report the real-life, complex dynamic and unfolding interactions of events, human relationships and other factors in a unique instance” (Cohen, Manion, & Morrison, 2011, p. 289).

Evaluative case study involves “description, explanation, and judgment” (Merriam, 1998, p. 39). This type of case study is appropriate for researching curriculum innovations, evaluating programs and informing policy (Merriam, 1998). By exploring how members of a secondary school community experience a CIDC, this research offers understandings into an educational innovation.

Case study methodology has a number of strengths and limitations relevant to this research. Identified strengths include:

1. Design flexibility suited to exploring a complex phenomenon involving human interaction (Timmons & Cairns, 2010; Shuttleworth, 2008)
2. Observation of the study phenomenon in its context (Cohen et al., 2011; Thomas, 2009; Yin, 1994);
3. Encourages a wide range of data gathering strategies (Creswell, 2012; Aaltio & Heilmann, 2010);
4. Apposite for educational research as it offers contributions to teaching practice standards through the development and implementation of policy (Aaltio & Heilmann, 2010); and

5. Conclusions are readily understood and accessible to the public (Cohen et al., 2011; Shuttleworth, 2008).

Potential issues relevant to this research include:

1. Case study findings cannot be generalized to a whole population (Aaltio & Heilmann, 2010). However, the methodology adopts an analytic rather than statistical generalization, where a theory is developed that may assist researchers to understand other similar situations (Cohen et al., 2011; Merriam and Associates, 2002). In addressing this limitation, it is suggested that understanding a phenomenon in its context may produce greater insight (Aaltio & Heilmann, 2010).

2. A criticism of case study is that it is confined to a relatively small population. However, targeted selection enables the findings to remain transferable to other interpretive research, if the reader is so inclined (Timmons & Cairns, 2010).

3. Case study is also criticized for issues regarding the anonymity of participants. With smaller numbers of participants in case study, anonymity may be problematic when variables that contribute to the phenomenon also identify participants. This issue is addressed when effective procedures are implemented to establish the balance between sufficient detail and minimal risk of identification (Timmons & Cairns, 2010).

4. A perceived lack of objectivity and neutrality is another criticism of case study. However, this issue is addressed when researchers reflexively consider their position in the case study (Cohen et al., 2011). This occurs when researchers recognize their values and question their actions, motives and assumptions about the research (Neuman, 2006). It is useful for researchers to document how their views and experiences influence the research, how they interact with the participants, and how they interpret the data (Shuttleworth, 2008). Indeed, a researcher’s reflective log that includes observations and
insights is a useful tool (Gillham, 2004). Moreover, it is important that researchers are mindful of experimenter reactivity\textsuperscript{44}, and

5. Case study in educational research is criticized for failing to regard the larger context of educational reform, and its impact on the classroom (Timmons & Cairns, 2010). This concern is addressed when the researcher implements an effective design that locates the case within its social, political and economic context (Creswell, 2012).

### 4.3.2 Illuminative Evaluation

Illuminative evaluation concentrates on providing a “comprehensive understanding of the complex reality (or realities) surrounding [a] program: in short to illuminate” (Parlett & Hamilton, 1972, p. 32). Illuminative evaluation is informed by SI, and focuses the Interpretive research on understanding how participants construct meaning.

Parlett and Hamilton’s (1972) evaluation involves three stages – observation, enquiry and explanation. The first stage involves the observation and tracking of ongoing events, transactions, informal remarks and background information. The second stage involves focused and sustained inquiry through data gathering. Strategies include questionnaires, observation, focus group and individual interviews. The final stage is identifying underlying principles and patterns, critiquing alternative interpretations of the data, and positioning individual conclusions in a broader context.

The model identifies that understanding participants’ experiences of the research phenomenon involves the ‘interweaving’ of the instructional system, and the learning milieu (Brady & Kennedy, 2010, p. 211). In this research, the instructional system is the CIDC, and the learning milieu is the matrix of contextual variables that constitutes St Eliza’s College.

\textsuperscript{44} Experimenter reactivity refers to “unwanted influence on participants’ behaviour” (Graziano & Raulin, 2013, p. 9).
The model is apposite for this research for the following reasons:

1. It is concerned with interpretation and description, and is therefore less restrictive than evaluative approaches that involve measurement and prediction.

2. It explores the situational influences on an educational initiative, the opinions of participants, and learning outcomes; and

3. The three stages in illuminative evaluation – observation, enquiry and explanation – overlap and interrelate. This complements the iterative and simultaneous nature of the data collection and analysis in the research design (Brady & Kennedy, 2010).

Figure 4.2 is a diagrammatic summary of the suitability of Parlett and Hamilton’s (1972) model for the research.

**Figure 4.2  Suitability of an Illuminative Evaluation Model for the Research**

(Source: An adaptation from Parlett & Hamilton’s (1972) illuminative model of curriculum evaluation)
4.4 Participants

4.4.1 Participant Selection

There are three groups of participants in the research – students, teachers and leaders of the school community. All participants are volunteers and they are purposely selected for their knowledge concerning the research phenomenon (Creswell, 2012). Purposive selection seeks to “acquire in-depth information from those who are in a position to give it” (Cohen et al., 2011, p. 157). Indeed, it “is based on the assumption that the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned” (Merriam, 1998, p. 61).

There are inclusion criteria for school community members (refer to Figure 4.3). They are:

**Student**

a) At the time of data collection, is enrolled at the school in Year 8 or Year 9; and

b) Has been a student for a minimum of one term.

**Teacher**

a) At the time of data collection is an employee with the school; and

b) Has worked with a CIDC for a minimum of one semester.

**Leader**

a) At the time of data collection is an employee with the school; and

b) At the time of data collection, is a curriculum leader or member of the Senior Leadership Team (SLT).

Minimum timeframes for involvement with the CIDC were established to ensure that data gathered are from stakeholders who have ongoing exposure to the curriculum. This provides the researcher with greater opportunity for “information rich” knowledge into the research phenomenon (Merriam, 1998).
All students, teachers and leaders meeting the inclusion criteria were invited to participate in the research. Staff and students, who indicated a willingness to be involved in the research, nominated their preferred data gathering strategies and were invited to attend relevant sessions (refer to section 4.4.2 for elaboration). Initially, focus group interviews were conducted to gather information concerning the stakeholders’ experiences of a CIDC. Individual interviews were then convened with those participants who indicated a preference to be involved in a one to one setting; and those individuals whose focus group responses indicated value in exploring issues further. The researcher then used the information from the focus group and individual interviews to inform the construction of the online questionnaires. In addition, the researcher observed four classes in each year level to gain empirical data concerning the research phenomenon (Gillham, 2004). A summary of participants is displayed in Table 4.1.

Table 4.1 Research Participants

<table>
<thead>
<tr>
<th>Participant Category</th>
<th>Focus Groups</th>
<th>Individual Interviews</th>
<th>Online Questionnaire</th>
<th>Lesson Observation</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>5 (28 students)</td>
<td>7</td>
<td>60</td>
<td>8 (145 students)</td>
<td>240</td>
</tr>
<tr>
<td>Teachers</td>
<td>2 (13 teachers)</td>
<td>7</td>
<td>40 (for the purposes of the questionnaire, leaders are included in the teacher participant category)</td>
<td>4</td>
<td>64</td>
</tr>
<tr>
<td>Leaders</td>
<td>1 (7 leaders)</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>12</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>8</td>
<td>19</td>
<td>100</td>
<td>8</td>
<td>316</td>
</tr>
</tbody>
</table>
A total of 300 Year 8 and 9 students, teachers and leaders participated in the period 10 March to 4 December 2014. This figure accounts for those who participated in more than one data gathering strategy.

4.4.2 Informed Participation
Volunteers were sought for each of the participant categories (O’Donoghue, 2007). Two information sessions were convened – one for staff during a staff meeting and another for students at a Middle Phase Assembly. The researcher facilitated each session and provided an overview of the major research question, eligibility to participate, data gathering strategies, and the significance of the research. In addition, the researcher explained that the research had been granted ethical approval by ACU and BCE. Students and staff were assured of the confidentiality of their responses, the anonymity of participants, and that participation was voluntary. The researcher emphasised that consent could be withdrawn at any stage during the research (Thomas, 2009).

At the conclusion of the staff information session, all staff received an email inviting them to participate in the research (refer to Appendix E). Eligible staff members who wished to participate in the research were invited to respond to the email. The researcher then placed an Information Letter and Consent Form in those staff members’ pigeonholes (refer to Appendix F).

Prior to the student information session, a message was placed in the College Newsletter for Years 8 & 9 students and their families (refer to Appendix G). The message advised families of the research project and opportunity to participate. At the conclusion of the information session, all students received an Information Letter and Consent Form for themselves and their parents (refer to Appendix H). Those students who wished to participate were then directed to return the necessary documents to their Pastoral Care Teacher.

4.4.3 Participation Conditions
There were a number of conditions for participation in the research. First, the researcher confirmed participant anonymity and confidentiality of responses. To achieve this, the researcher implemented a coding system to identify the data
sources in the research (Cohen et al., 2011). A data index was secured and maintained by the researcher. This detailed participants’ names, assigned pseudonyms (category specific) and their involvement in a data gathering strategy. An example of the data index format is illustrated in Table 4.2.

Table 4.2  Data Index Format

<table>
<thead>
<tr>
<th>Participant</th>
<th>Pseudonym</th>
<th>Data Gathering Strategy</th>
<th>Code Used in Thesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark Smith Teacher</td>
<td>T1</td>
<td>FG1 (focus group number 1)</td>
<td>(T1 FG1 8/5/14)</td>
</tr>
<tr>
<td>Sue Jones Curriculum leader</td>
<td>L1</td>
<td>I6 (individual interview number 6)</td>
<td>(L1 I 11/6/14)</td>
</tr>
<tr>
<td>Sam Green Student</td>
<td>S1</td>
<td>Q (questionnaire)</td>
<td>(S1 Q)</td>
</tr>
<tr>
<td>Ben Williams SLT</td>
<td>L1</td>
<td>O3 (lesson observation number 3)</td>
<td>(L1 O 21/6/14)</td>
</tr>
</tbody>
</table>

Second, participants were guaranteed privacy (Creswell, 2012). To fulfil this condition, all individual interviews and focus groups were convened in a confidential meeting room or office at the College (Cohen et al., 2011). Focus group participants were reminded in an information letter and during the discussion, of the confidentiality expectations concerning the session.

Third, wherever possible, focus groups and individual interviews were scheduled outside of class times. Data gathering that occurred during classes, including lesson observations, were convened at mutually convenient times. The questionnaires were administered online through SurveyMonkey. Given the College’s 1:1 laptop environment, participant access was ensured.

Finally, all participation was voluntary and obtained in writing. Participants could withdraw their consent at any stage during the research process (Thomas, 2009). Written parental consent was also obtained for student participants. Moreover, students were offered an opportunity to reaffirm their initial written consent at the beginning of each data gathering strategy (Harcourt & Conroy, 2011).

45 Mark Smith, Sue Jones, Sam Green and Ben Williams are pseudonyms to preserve the privacy of participants.
4.5 Data Gathering Strategies

The case study approach “does not claim any particular methods for data collection or data analysis” (Merriam, 1998, p.28). In this research, the data gathering strategies are focus group interviews, semi-structured individual interviews, online questionnaires and participant observation. The adopted strategies are those that “yield the best information with which to answer the question” (Merriam & Associates, 2002, p.12). The strategies are consistent with the Interpretivist research design. The data gathering strategies are represented in Figure 4.4.

Figure 4.4 Data Gathering Strategies

4.5.1 Focus Group Interviews

Focus group interviews are adopted as appropriate for the research as a way to “get at the understandings, beliefs and values”, of the participants within their homogenous categories (Thomas, 2009, p. 170). Focus group interviews rely on the interaction of participants within a group to discuss a topic and produce a collective view (Cohen et al., 2011). The optimum number in a focus group is six to eight (Cohen et al., 2011). This number of participants reduces the possible effect of intragroup dynamics, and is manageable. The researcher adopts the role of facilitator in the interview, with the intent of gathering data from a different perspective, as the participants interact with each other instead of the researcher (Thomas, 2009).
A set of open-ended questions was generated to guide the focus group process for each participant category (refer to Appendix I). The questions offered participants opportunities to reflect upon and share their experiences of engaging with a CIDC.

There are limitations of focus group interviews that are relevant to this research (Creswell, 2013). They include:

- Outspoken individuals may dominate the group. It is important for the facilitator to monitor dominant participants and encourage all members to speak (Cohen et al., 2011).
- Equipment issues can be problematic. The facilitator needs to ensure that recording and transcribing instruments are adequate for the process (Cohen et al., 2011); and
- The influence of the researcher on the direction and nature of the discussion can lead to bias and manipulation of outcomes (Cohen et al., 2011; Merriam, 1998). The researcher accounts for these factors by saying little during the discussion, and intervening only to redirect discussion or ask new questions.

Nevertheless, the strengths of the focus group approach in this research exceed the limitations. Focus group interviews are “economical on time, producing a large amount of data in a short period of time” and are therefore suitable for the study (Cohen et al., 2011, p. 436). In addition, the nature of a focus group interview may generate information that may not be forthcoming in individual interviews (Cohen et al., 2011). Importantly, it is productive to provide participants with an agenda prior to the focus group, and to conduct interviews in a safe and confidential environment (Cohen et al., 2011).

4.5.2 Semi-Structured Individual Interviews

The semi-structured interview approach is adopted for the research as a less structured format that accounts for participants “defin[ing] the world in unique ways” (Merriam, 1998). In this type of interview the questions are more flexibly worded, or a mix of more and less structured questions is used (Merriam & Associates, 2002). This approach allows the researcher to respond to the participant’s viewpoints, and to new ideas that emerge concerning a CIDC (Merriam, 1998).
Question guides were generated for student, teacher and leader individual interviews (refer to Appendix J). Suggested prompt questions were also created to ensure that key topics were addressed during the interviews (Gillham, 2004).

While the semi-structured interview has strengths, its nature requires the researcher’s use of judgment in assigning importance to particular data or redirecting discussion. Therefore, there are issues for the researcher to consider in this process. For example, the effect of differing articulation levels of the interviewees on the data collected (Creswell, 2013); the complexities and subjective nature of the interview that can influence the data collected (Cohen et al., 2011; Fontana & Frey, 1994); and the potential effect that the presence of the researcher has on data collected at the interview (Cohen et al., 2011). Member checking provides an opportunity for participants to read and verify the interpreted meaning of their comments shared in interviews (Creswell, 2013). This approach is adopted for the research.

Notwithstanding potential limitations of the semi-structured individual interview, it is adopted as an appropriate data gathering strategy given the purpose of the research. This approach allows the researcher to develop an open and relaxed setting to listen to participants’ perceptions of their experience of a CIDC. The strategy recognizes the unique nature of a participant’s experience, and provides the flexibility for an interviewee to articulate the context for their responses. Furthermore, the semi-structured individual interview allows the researcher to use verbal and non-verbal probes to ensure increased understanding and clarity on particular issues (Thomas, 2009).

4.5.3 Student Focus Group & Individual Interviews
In the student focus group and individual interviews, the researcher is mindful of understanding the experiences of children through “their own eyes rather than the lens of the adult” (Cohen et al., 2011, p. 433). In facilitating the interviews, the researcher considers the influence of different levels of concentration spans, life experience, and cognitive and linguistic development on the interview process (Cohen et al., 2011). The researcher also uses open-ended questions to avoid a
single word response, and to allow for greater detail in the students’ answers (Wright & Powell, 2006).

Year Eight and Year Nine student focus groups are particularly apposite for the research as they provide an opportunity for the students to challenge and extend each other’s ideas in a familiar setting (Cohen et al., 2011). The group setting encourages interaction between the participants rather than simply a response to the researcher’s questions. It also offers insights that may not have been anticipated (Cohen et al., 2011).

Whereas, the individual interviews offer an opportunity for the researcher to ask the participants to develop themes that emerge in the focus groups and lesson observations. The individual interviews also provide a forum for those students who prefer a one-to-one conversation.

4.5.4 Online Questionnaires

The questionnaire is used as a data gathering strategy. An open-ended questionnaire is used to address contextual differences between participants, and to “capture the specificity of a particular situation” (Cohen et al., 2011, p. 382).

In the research, participants meeting the inclusion criteria are invited to participate in an online questionnaire. One questionnaire was developed for students and another for staff (refer to Appendix K). The questionnaires were posted on SurveyMonkey and conducted on school laptops using compatible software versions. Participant access was ensured with the College’s 1:1 laptop environment. The questionnaires were administered after the focus group interviews and the majority of individual interviews. This timing allowed the group and individual interview data to inform the questionnaires.

There are advantages and limitations in using an online questionnaire that are relevant to this research. The advantages include reduced time, cost and human error in administering and processing the data; flexibility in completing the questionnaire; and fewer missing responses due to software prompts (Cohen et al., 2011, p. 280; Creswell, 2013).
While there are limitations associated with using online questionnaires, the ‘everyday’ environment of the research site and the circumstances in which the questionnaires are administered address these concerns (Cohen et al., 2011). Suggested technical issues with hardware and software are avoided by the questionnaires being completed on school laptops using compatible software versions. Participant dropout issues such as recurring error messages and slow network connections are managed by the College ICT Department. Furthermore, participants are comfortable using online environments and regularly complete web-based surveys. The researcher also ensures the clarity of construction of questionnaires by including concise, logical instructions and information (Creswell, 2013).

4.5.5 Participant Observation

The participant observation approach is adopted for the research as it represents a “firsthand encounter with the phenomenon of interest” (Merriam & Associates, 2002, p. 13). This approach allows the researcher to observe participants’ interactions and conversations, view activities and discern the physical setting as they relate to the research. Indeed, observation is used to triangulate findings that emerge from other data collection such as interviews or questionnaires (Merriam, 1998), and provides a fresh perspective that may not be apparent with other data gathering processes (Cohen et al., 2011).

The researcher purposely selects and observes four Year Eight classes and four Year Nine classes engaging with a C IDC. Observation occurs during a two-month period following focus groups, individual interviews and the questionnaires. The data gathering involves the researcher taking field notes and recording data without direct involvement in the lessons or with the students and teachers (Creswell, 2013). At the commencement of each observation, the researcher identifies herself to the class and explains the purpose of the visit (Gillham, 2004). The researcher uses an unstructured, direct, and overt observation approach (Cooper & Schindler, 2001; Flick, 2004). The unstructured observation approach permits the researcher to “operate within the agenda of the participants” (Cohen et al., 2011, p. 458), and therefore respond to each situation as it unfolds. In doing so the researcher gains insight into how participants experience a C IDC.
The researcher uses an observation sheet to record observations (refer to Appendix L). Each observation begins with a description of the setting, people involved and learning activities. The observation then focuses on a detailed description of elements particularly related to the CIDC, including personal impressions and details requiring attention (Gillham, 2004).

There are potential issues to consider in selecting participant observation as a data gathering strategy. Those relevant to the research include the time-consuming nature (Cohen et al., 2011), and the ‘mechanics’ of observation (Creswell, 2013). Effective data gathering relies on the accuracy of the researcher’s field notes. An issue identified with observation is that it is subjective, and prone to bias (Cohen et al., 2011; Merriam, 1998). As a researcher, I am mindful that all research may be subject to this issue. Observation is selective and depends on variables such as the researcher’s attention, opportunities to observe, the collection techniques, and ‘what, why, when, who, where and how’ the researcher determines to observe. Therefore, it is productive for the researcher to proceed with “great caution and reflexivity [for] this form of data collection” (Cohen et al., 2011, p. 459).

As a part-time staff member of St Eliza’s College, the researcher is mindful of potential advantages and disadvantages of teacher-researcher engagement with a study. Benefits of this type of research are well documented and include contributing to teachers’ and students’ understanding and professional development (Alexakos, 2015; Ryan, Taylor, Barone, Della Pesca, Durgana, Ostrowski, Piccirillo & Pikaard, 2016), reinvigorating teaching practices (Alexakos, 2015; Pappas & Tucker-Raymond, 2011), professional empowerment (Ryan et al., 2016), enhancing evidence-based knowledge concerning student learning and teaching practices (Kesson, 2010; Ryan et al., 2016), and contributing to educational theory and policy (Kesson, 2010; Pappas & Tucker-Raymond, 2011).

However, the literature suggests potential limitations concerning teacher-researcher engagement. For instance, the issue of a teacher-researcher being ‘too subjective’ and personally invested in the research (Alexakos, 2015; Kesson, 2010), the risk of the research conclusions being unexpected or unfavourable (Alexakos, 2015), and the issue of time to undertake the research (Alexakos, 2015; Kesson, 2010).
Participant observation is adopted as an appropriate data gathering strategy given the nature and purpose of the research. Consistent with the principles of Interpretivism, participant observation is sensitive to the context of the case study, is open-ended and inductive, and allows the researcher to move beyond perception-based data collected in the questionnaires and interviews (Cohen et al., 2011; Thomas, 2009).

4.6 Analysis Of Data
Data analysis is the process of making meaning from the data (Merriam, 1998). In Interpretive research, data analysis is simultaneous and iterative with data collection. It is a complex and inductive procedure that is guided by the research design (Merriam & Associates, 2002). Analysis of interpretative data focuses on “conveying an understanding of the case” (Merriam, 1998, p. 193). The data collection and data analysis merge in “…an iterative, back and forth process” (Cohen et al., 2011, p. 537). There are a number of approaches available to researchers for the analysis, reduction and interpretation of data. For the purpose of this research, Constant Comparative Analysis (CCA) is applied (Glaser & Strauss cited in Merriam, 1998, p. 159).

4.6.1 Strategy for Data Analysis – Constant Comparative Analysis (CCA)
CCA is a continuous process where the strategy is to constantly compare a particular incident in a data set, with another incident in the same or another set of data. The comparisons result in tentative categories that are then compared to each other and other instances. Indeed, “comparisons are constantly made within and between levels of conceptualization until a theory can be formulated” (Merriam, 1998, p. 159). From the constant comparison of data, the researcher generates themes that “capture or summarise the contents of [the] data” (Thomas, 2009, p.198).

In this research, data is gathered for analysis from the focus group and individual interviews, questionnaires and lesson observations. All group and individual interviews were taped using a Sony IC recorder and then transcribed into text files by the researcher. The questionnaire responses were collected, organized and tabulated using SurveyMonkey software. In addition, the researcher completed lesson observations sheets for each class observed.
As each data set was gathered, the information was organized, labelled and displayed. The researcher then read each data set and noted phrases, concepts or ideas that presented. Following this, the data were described, classified and interpreted using codes, categories of codes, and themes. The data were coded and clustered around emerging themes. During the analysis process, data were compared within groups and across groups.

A three-part method of coding analysis was used to alternate between analysis styles (O’Donoghue, 2007). This allowed the researcher to synthesize and recombine data to illuminate the research purpose and questions, while identifying emerging themes. The researcher interpreted the data by making sense of the information, and identifying the “lessons learned” (Lincoln & Guba cited in Creswell, 2013, p. 187). This stage involved abstracting beyond the codes and themes to the larger meaning of the data by linking the researcher’s interpretation to the existing body of literature concerning the study phenomenon. The final stage involved representing the data, explaining new understandings, and presenting conclusions (Creswell, 2013). The process is represented in Figure 4.5.
4.6.2 Coding

Coding is a component of Interpretive data analysis (Strauss & Corbin cited in Cohen et al., 2011). A code is a name or a label that the researcher gives to a piece of text that contains an idea or a piece of information (Cohen et al., 2011). Coding enables the researcher to identify similar information, to search and retrieve data, and to detect patterns. As the analysis process progresses, codes that are initially assigned to data may change to either implement more discriminating labels, or to conflate specific codes (Cohen et al., 2011). Moreover, coding occurs at two levels “identifying information about the data and interpretive constructs related to analysis” (Merriam, 1998, p. 164). A three-part process of data analysis involving open, axial and selective coding, is adopted for the research (O’Donoghue, 2007).
Open coding is the initial coding used in the interpretative data analysis process. An open code is “a new label that the researcher attaches to a piece of text to describe and categorize that piece of text” (Strauss & Corbin cited in Cohen et al., 2011, p. 561). This type of coding develops concepts in terms of their properties and dimensions (Merriam & Associates, 2002). The codes are then grouped into categories and the category is assigned a name.

Figure 4.6 represents a summary of the initial open codes applied to data gathered from staff in individual interviews concerning research question two. Axial codes were later applied to the data to group open codes regarding the same concept (Cohen et al., 2011).

Figure 4.6  A Representation of 14 Initial Open Codes Applied to Individual Interview Data Gathered from Staff for Research Question 2 (Part A)

Axial coding is the second stage of the three-part analysis process. An axial code is a category label given to a group of open codes that concern the same concept (Cohen et al., 2011). It is a category or axis around which several codes revolve. The process organizes the data in new ways by making connections between a category and its subcategories to develop several main categories (Merriam &
Associates, 2002). Indeed, axial coding connects related codes and subcategories into a larger axial category of common meaning (Cohen et al., 2011). During this stage of analysis, proposed categories and relationships are verified with incoming data.

The application of open and axial coding is followed by selective coding (O’Donoghue, 2007). Selective coding is the process of integrating categories with reference to a core category (O’Donoghue, 2007). In creating a selective code, the researcher seeks to ensure ‘conceptual density’ of the category based on the data (Cohen et al., 2011, p. 562). A selective code is identified as similar to an axial code, “except that it is a greater level of abstraction” (Cohen et al., 2011, p. 562). The purpose of selective coding is to allow for a deeper level of analysis (Creswell, 2013).

Table 4.3 illustrates the three-part process of analysis applied to data gathered from students in the online questionnaire concerning research question one. This process was undertaken for each data gathering strategy used with each participant category.
Table 4.3  Open, Axial and Selective Codes Applied to Student Questionnaire Data for Research Question 1

**Open, Axial and Selective Coding: Key Themes from Data Analysis**

Research Question 1: How do members of a secondary school community experience a curriculum that integrates digital citizenship?

<table>
<thead>
<tr>
<th>STUDENT DATA – QUESTIONNAIRE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Open Codes</strong></td>
</tr>
<tr>
<td><strong>(1) Outline what digital citizenship means for you.</strong></td>
</tr>
<tr>
<td>Concept to help adults</td>
</tr>
<tr>
<td>Use of technology</td>
</tr>
<tr>
<td>Ability to access the internet and social media on electronic devices</td>
</tr>
<tr>
<td>Being a part of something digitally</td>
</tr>
<tr>
<td>Connection globally</td>
</tr>
<tr>
<td>Online identity</td>
</tr>
<tr>
<td>Citizen of digital community</td>
</tr>
<tr>
<td>Online community conduct</td>
</tr>
<tr>
<td>Organisation</td>
</tr>
<tr>
<td>Being responsible online</td>
</tr>
<tr>
<td>Responsibility to understand self and others’ rights and responsibilities online</td>
</tr>
<tr>
<td>Balanced lifestyle</td>
</tr>
<tr>
<td>Online safety</td>
</tr>
<tr>
<td>Being appropriate online</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

| **(2) What do you learn about digital citizenship in your subjects at school?** | | |
| Respect | Act Appropriately | Online Appropriateness |
| Appropriate online behaviour | Security | Online Responsibilities |
| Safety online | Digital Literacy | | |
| Computer use | Digital Record | Online Citizenry |
| Correct internet use | Responsibilities | |
| Online identity | Citizenship | | |
Participant responses for each research question, across data gathering strategies were then synthesized. This generated key themes and concepts that were organized under the specific research question and according to the participant categories. Table 4.4 exemplifies this process concerning students’ responses to research question one.

Table 4.4  Synthesis of Responses – Research Question 1 (Students)

<table>
<thead>
<tr>
<th>Research Question One: How do members of a secondary school community experience a curriculum that integrates digital citizenship (CIDC)?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part A: What does digital citizenship mean to you?</strong></td>
</tr>
<tr>
<td><strong>Codes</strong></td>
</tr>
<tr>
<td>Safety online, knowing the dangers, knowing what is appropriate, not everything on the internet is real, use technology properly and wisely, learn not to cyber bully, learn the consequences of inappropriate use, right thing at right time, being responsible, being careful, job consequences, common sense, balance</td>
</tr>
<tr>
<td>Online communication, social media connection, how you act online, being productive online, use of technology, ability to access internet and social media, global connection, online identity, citizen of digital community, being a part of something digitally, Concept to help adults, way to organise ideas</td>
</tr>
<tr>
<td><strong>Part B: Is digital citizenship something that should be covered in the school curriculum? Why?/why not?</strong></td>
</tr>
<tr>
<td><strong>Codes</strong></td>
</tr>
<tr>
<td>Learn about digital citizenship (DC), know what is right and wrong, learn about cyber bullying, learn to think before we act, learn to be better in society, use technology responsibly, future generations</td>
</tr>
<tr>
<td>Not placing in danger, actions can hurt, consequences for self and others, checklist, 1:1 laptop school, impact on our generation</td>
</tr>
<tr>
<td>Common sense for parents, digital literacy struggle, parental knowledge growth, different type of bullying, parent perception, parental involvement, partnership with home</td>
</tr>
<tr>
<td>In classes, when relevant, repeatedly, not overwhelming, not separate subject, gradual, ongoing, to the point, discussion, touch-ups, relate to students, explanations, visual learners</td>
</tr>
<tr>
<td><strong>Part C: What has been your experience of learning about digital citizenship in your subjects?</strong></td>
</tr>
<tr>
<td><strong>Codes</strong></td>
</tr>
<tr>
<td>Discussion, teacher teaching, activities, hands on, visually, reading, multimedia, making mistakes, other students, guest speakers, consequences, using devices</td>
</tr>
<tr>
<td>How to be safe, effects on others, digital literacy, online appropriateness, online responsibilities, online citizenry</td>
</tr>
<tr>
<td>Teachers do DC differently, teacher style, teacher knowledge, learning style, teacher age,</td>
</tr>
<tr>
<td>Laptop school, new things, gain knowledge, student perception of DC</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

(Note: Section 5.1.2 presents a synthesis of responses for each research question).
4.7 Verification
As the research is an Interpretivist study in the SI tradition, it is appropriate to validate the analysed data in terms of its trustworthiness (O'Donoghue, 2007). To establish the trustworthiness of research, Lincoln & Guba's four criteria of credibility, transferability, dependability and confirmability are adopted (cited in Creswell, 2013, p. 244). It is therefore relevant to address each of these criteria in relation to this research.

4.7.1 Credibility
Credibility refers to the truthfulness of the data relied upon in the research (O'Donoghue, 2007). The adequacy of the research process, and the empirical grounding of the research findings determine a study's credibility (Strauss & Corbin cited in Merriam & Associates, 2002). Credibility is enhanced when the research processes used make it more probable that “credible findings and interpretations will be produced” (Lincoln & Guba cited in O'Donoghue, 2007, p. 99). These processes include focus group interviews, semi-structured individual interviews, online questionnaires and participant observation. Credibility in this research is enhanced by the extended period of data gathering and engagement with the participants of approximately nine months; the use of multiple data gathering methods, and the triangulation of data sources and methods (Creswell, 2013; Merriam & Associates, 2002). The research process is guided by detailed procedures such as participant selection, the identification of codes, and the creation of conceptually dense categories. The adequacy of the empirical grounding of the research outcomes addresses factors such as concepts, linkages, variation and process (Merriam & Associates, 2002).

In this research, concepts are generated through the use of the constant comparative method of data analysis and systematically related using axial and selective coding processes. As interpretations evolved, the researcher presented these to the participants for their opinions. When the feedback was defensible it was incorporated. However there were no major dissonances between participants’ understandings of the research problem and the researcher’s interpretations of a variety of participants’ perspectives. The process of presenting participants with evolving understandings occurred during the period May to November 2014 and
involved 12 staff and student participants. Finally, the research outcomes are presented as a series of conclusions, recommendations, and contributions to the existing body of research literature.

4.7.2 Transferability
A lingering criticism of Interpretive research is its lack of transferability or generalizability of findings to other settings (Aaltio & Heilmann, 2010). While Lincoln and Guba (cited in O'Donoghue, 2007, p. 100) assert that transferability, in its strictest sense, is not compatible with Interpretive research, it is possible to generate theories, accompanied by rich descriptions that may be applied to other settings. This trustworthiness criterion refers to the researcher’s obligation to provide sufficient detailed description “of the study’s context to enable readers to compare the ‘fit’ with their situations” (Merriam, 1998, p. 211). The thick description of the participants and setting of case study allows readers to determine the transferability of the findings (Creswell, 2013).

Strategies are used to enable readers to determine whether the findings of research are transferable due to “shared characteristics” (Erlandson, Harris, Skipper, & Allen cited in Creswell, 2013, p. 252). This approach is adopted in the research by ensuring that strategies include detailed analysis of interview transcripts, questionnaire responses and observation notes; the use of purposeful selection, and the presentation of understandings accompanied by examples from the data.

4.7.3 Dependability
Dependability refers to the rigour of the consistency in the research findings (Guba cited in O'Donoghue, 2007, p. 100). This criterion involves the stability and trackability of data generated in the research. An audit trail is an authentic strategy for demonstrating this criterion (Merriam, 1998). An audit trail permits the researcher to “walk readers through the[ir] work” so that readers may understand the research undertaken and the trustworthiness of the outcomes (O'Donoghue, 2007, p.100). Dependability is enhanced by the researcher explaining her relationship to the participants. In addition, providing a detailed description of the participant selection process, the participants, and the social context in which data are collected augments dependability (Merriam, 1998). Member checking is also used as a
validation strategy for this criterion (Creswell, 2013). Participants are presented with preliminary analyses of themes and conceptual categories and the researcher seeks feedback regarding the analysis.

**4.7.4 Confirmability**

Confirmability refers to the grounding of the data and understandings in events, rather than in the researcher’s constructions (Lincoln & Guba cited in O’Donoghue, 2007, p. 100). The confirmability of the research is enhanced by the development of a transparent audit trail detailing how data are collected, analysed and interpreted. All data are maintained in three secure databases from the commencement of data collection. In addition, interview recordings are stored on CD-ROMs. Furthermore, the researcher is guided by O’Donoghue’s (2007, p. 100) audit trail evaluation questions as a model for checking the confirmability of the findings:

1. Are the findings grounded in data?
2. Are the inferences that are based on the data logical?
3. Does the category structure have explanatory power and does it have fit to the data?

Figure 4.7 is a diagrammatic summary of Lincoln and Guba’s four criteria of trustworthiness applied to the research.

**Figure 4.7 Lincoln and Guba’s Four Criteria Applied to the Research**

![Diagram](source: Adapted from Lincoln and Guba’s Four Criteria of Trustworthiness, 1986, pp. 76-77)
4.8 Ethical Considerations

A common concern in all forms of research is that the research is conducted in an ethical manner (Merriam, 1998). With Interpretive research, the validity and reliability of a study depends on the ethics of the researcher (Merriam & Associates, 2002). A researcher is bound to proceed in “as ethically a manner as possible” (Merriam & Associates, 2002, p. 29). Researcher requirements extend to considering potential ethical issues of the research, and strategies to address issues should they arise (Creswell, 2013). With Interpretive research, ethical dilemmas are expected to emerge during data gathering, in the dissemination of understandings, and in the researcher-participant relationship (Merriam & Associates, 2002).

4.8.1 Role of the Researcher

In the research, Weis and Fine’s ‘catalogue of possibilities’ (cited in Creswell, 2013, p. 56) is adopted as a strategy to examine possible ethical issues. The researcher is mindful of ethical considerations concerning:

- The researcher’s role as an insider to the participants. The researcher is cognizant of her ‘insider status’ with participants, given her one-day per week employment at the College. It may be suggested that the researcher’s role as a part-time middle leader of the College could lead to a perceived power imbalance in the interview process. However, it is more useful to see this connection as advantageous in obtaining participants’ cooperation and rapport during the data gathering process and to “expedite understanding [the] respondents” (Hesse-Biber & Leavy, 2011, p.116). Refer to section 7.3 for elaboration on the researcher’s role as a part-time employee of the College.

- The researcher’s role in the study. The researcher is a human research instrument with prejudices and pre-judgments (Gillham, 2004). Therefore, the researcher uses the process of reflexivity to reflect on how her social background and assumptions may influence the research (Hesse-Biber & Leavy, 2011). By reflexively reading the data the researcher explores her role and perspective in the generation and interpretation of data (Creswell, 2013). In so doing, the researcher “strive[s] for a level of detached honesty which acknowledges [her] place in the scheme of things” (Gillham, 2004, p. 27).
• Establishing supportive, reflective relationships without stereotyping and using labels that participants do not embrace; and

• Acknowledging which voices will be represented in the thesis document.

4.8.2 Student Participants

At each stage of the research, the researcher is mindful of the sensitivities surrounding imbalanced power relations, vulnerable populations and placing participants at risk (Hatch, 2002). In working with Year Eight and Year Nine students, the researcher is cognizant of the ethical responsibility to “invite children into research conversations with a great deal of authentic consideration” (Harcourt & Conroy, 2011, p. 49). This involves working with the potential student participants to ensure they are “informed and empowered to make a decision about their participation” (Harcourt & Conroy, 2011, p. 39). The researcher is conscious of explaining her role and the purpose of the research to potential student participants. Moreover, the researcher establishes a shared understanding of how student participants are involved in each of the data gathering strategies. While all staff and students attend an information session addressing these aspects of the research project, the researcher is particularly mindful that student participants are under 18 years of age.

As student participants engage with a CIDC, there is a common language concerning the research phenomenon (Harcourt & Conroy, 2011). This is an important ethical consideration because using a common language is productive for establishing trusting relationships. Indeed, in these circumstances student participants may share an authentic account of their experience of a CIDC and not attempt to provide a ‘right answer’ (Grover in Harcourt & Conroy, 2011). In establishing trusting relationships with student participants, it is beneficial to offer students an opportunity to reaffirm their initial consent to participate at the beginning of each data gathering session (Harcourt & Conroy, 2011). The researcher adopts this approach and is careful to use a Library interview room (a familiar school setting) for data gathering.
4.8.3 Authorisation to Conduct Research

Prior to commencing the research, ethics clearance was obtained from the Australian Catholic University’s (ACU) Research Project Ethics Committee, and the research design and conduct is in accordance with the Brisbane Catholic Education’s (BCE) guidelines for research. Informed permission to undertake the research was received in writing from ACU, BCE and St Eliza’s College (refer to Appendix A).

In receiving the College’s permission to conduct research on-site, the researcher assured the Principal of minimal disruption to regular school routines (Creswell, 2012). In addition, permission was sought from participants to tape the interviews, and to observe negotiated lessons. Information sessions were convened for staff and students before research commenced (refer to section 4.4.2 for elaboration). The ethical considerations presented in Thomas (2009) were observed, therefore staff and student volunteers received information letters and consent forms indicating that participation in the research was voluntary, and each participant was free to withdraw from the research at any time. Copies of the information letters and consent forms for staff, students and parents are provided in Appendices F and H.

4.8.4 Data Storage

Gathered data are maintained securely in three databases. As the researcher is a part-time staff member of the College, data are used only for the purpose for which it is collected (Merriam, 1998). Throughout the research, participant privacy is protected using a coding system that assigns a pseudonym to each informant (Creswell, 2013) (refer to section 4.4.3 for elaboration).

Figure 4.8 is a diagrammatic summary of the ethical considerations for this research.
4.9 Overview Of The Research Design

The research is designed to illuminate students’, teachers’ and leaders’ experiences of a CIDC. The research problem invites an Interpretive approach to explore participants’ experiences of the study phenomenon using a range of data gathering strategies. The case study methodology enables the researcher to generate an in depth understanding of how participants construct events and experiences concerning the CIDC.

Table 4.5 presents a summary of the research design. It displays the relationship between the research questions and the data, details the participants involved in each of the data gathering strategies, and provides a timeline for the stages of the research process.
### Table 4.5 Summary of the Research Design

Research Purpose: To explore how members of a secondary school community experience a curriculum that integrates digital citizenship (CIDC).

<table>
<thead>
<tr>
<th>Stage of Research</th>
<th>Timeline</th>
<th>Steps in Research Process</th>
<th>Data Gathering Strategy</th>
<th>Research Question</th>
<th>Participants</th>
<th>Data Analysis Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Observation Stage</strong></td>
<td>Term 4 2013 to End of Term 1 2014</td>
<td>1. Seek and receive ACU &amp; BCE Ethics clearance (November/December 2013) 2. Seek and receive Principal's approval (February 2014) 3. Staff &amp; students' information sessions (February 2014) 4. Preparation for focus group &amp; individual interviews</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td><strong>Observation Stage</strong></td>
<td>End of Term 1 2014 to End of Term 4 2014</td>
<td>5. Conduct focus group interviews (April/May 2014) 6. Conduct individual interviews (May/June 2014) 7. Apply constant comparative analysis and open &amp; axial coding to data from FGs &amp; Is (April - June 2014) 8. Develop online questionnaire for staff informed by gathered data (May 2014) 9. Administer SurveyMonkey questionnaire for staff to complete (June – August 2014) 10. Analyse questionnaire data using constant comparative analysis and 3 stage coding (July-September 2014) 11. Conduct student individual interviews &amp; clarifying staff individual interviews</td>
<td>Focus groups (FG) Semi-structured individual interviews (I) Online questionnaire (Q)</td>
<td>Research Questions 1 - 3 Research Questions 1 – 3</td>
<td>Teachers, Leaders Students Teachers, Leaders</td>
<td>Collation, analysis &amp; coding of data Pattern matching Confirmation of themes Triangulation &amp; verification Synthesising patterns and themes Constant comparative analysis</td>
</tr>
<tr>
<td><strong>Enquiry Stage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER 5: PRESENTATION OF THE NEW UNDERSTANDINGS

5.1 Introduction

The purpose of this chapter is to present new understandings generated from research exploring how students, teachers and leaders experience digital citizenship (DC) in a secondary school curriculum. The research conducted for this thesis is interpretative. The process of data analysis adopted is Constant Comparative Analysis (Fram, 2013) (see section 4.6). This chapter presents understandings of the participants’ varied understandings of the research purpose. The dynamics incorporated in this understanding of interpretative data analysis is termed the double hermeneutic (Norreklit, 2006). It involves exploring the meanings assigned by multiple participants in response to a curriculum that integrates digital citizenship (CIDC). Rather than being “found”, the research product in this thesis is “generated” by the researcher critically engaging with the participants’ varied understandings of the research phenomenon. Therefore “New Understandings” is preferred as the appropriate title for this chapter, rather than the traditional nomenclature “Research Findings”.

Data were collected using focus groups (FG), semi-structured individual interviews (I), online questionnaires (Q) and lesson observations (O).

5.1.1 The Participants, pseudonyms and codes

The number of participants engaged in data gathering strategies in this study is as follows.

<table>
<thead>
<tr>
<th>Participant Category</th>
<th>Focus Groups</th>
<th>Individual Interviews</th>
<th>Online Questionnaire</th>
<th>Lesson Observation</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>5 (26 students)</td>
<td>7</td>
<td>60</td>
<td>8 (145 students)</td>
<td>240</td>
</tr>
<tr>
<td>Teachers</td>
<td>2 (13 teachers)</td>
<td>7</td>
<td>40</td>
<td>4</td>
<td>64</td>
</tr>
<tr>
<td>Leaders</td>
<td>1 (7 leaders)</td>
<td>5</td>
<td>(for the purposes of the questionnaire, leaders are included in the teacher participant category)</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>8</strong></td>
<td><strong>19</strong></td>
<td><strong>100</strong></td>
<td><strong>8</strong></td>
<td><strong>316</strong></td>
</tr>
</tbody>
</table>
To ensure participant confidentiality and anonymity, a coding system is adopted to identify data sources in the research. The coding system is category specific, and details the data gathering strategy and corresponding date. Examples of the coding system are illustrated in Table 5.2.

**Table 5.2  Coding System**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Pseudonym</th>
<th>Data Gathering Strategy</th>
<th>Example of Coding System</th>
</tr>
</thead>
</table>
| Student     | S1 (Student no. 1)  
S3 (Student no. 3) | Focus Group (FG) | S1 FG 15/5/14 (Student no. 1 – participated in a focus group on 15/5/14) |
| Teacher     | T1 (Teacher no. 1)  
T4 (Teacher no. 4) | Individual Interview (I)  
Lesson Observation (O) | T1 I 6/6/14 (Teacher no. 1 – participated in an individual interview on 6/6/14)  
T4 O 17/8/14 (Teacher no. 4 – participated in a lesson observation on 17/8/14) |
| Leader      | L1 (Leader no. 1)  
L2 (Leader no. 2) | Online Questionnaire (Q) | L1 Q (Leader no.1 – participated in the online questionnaire) |

5.1.2 Research Analysis: Codes to Concepts
For the purpose of data analysis, Constant Comparative Analysis is applied (Fram, 2013). This method of data analysis involves a continuous process where the strategy is to constantly compare a particular incident in a data set, with another incident in the same or another set of data. The comparisons generate tentative categories that are then compared to each other and other instances. From the constant comparison of data, the researcher generates themes that “capture or summarise the contents of [the] data” (Thomas, 2009, p. 198). The data are described, classified and interpreted using codes, categories of codes and themes. Tables 5.3, 5.4, 5.5, 5.6, 5.7 and 5.8 illustrate the key themes and concepts generated from the data. The themes and concepts are organised under the specific research questions and according to the participant categories of students and staff. The data analysis process is elaborated in section 4.6.
Three specific research questions structure the research design:

- How do members of a secondary school community experience a CIDC?
- How do members of a secondary school community engage with a CIDC?
- How does a CIDC influence members of the school community?

Table 5.3 Synthesis of Responses: Research Question 1 (Staff)

<table>
<thead>
<tr>
<th>Codes</th>
<th>Themes</th>
<th>Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building capacity, process for decision making, guide, awareness of the digital world, world they are living in, aware of implications, skills &amp; understandings, broadening awareness, access to technology, digital etiquette, engagement in communities, preparing students for online world</td>
<td>Develop capacity (knowledge and understanding)</td>
<td>Prepare people</td>
</tr>
<tr>
<td>Responsible use of technology, building understanding, responsibilities as digital users, safe way to behave online, new way of right and wrong, informed, aware</td>
<td>Provide a process</td>
<td>Rights and responsibilities in digital community</td>
</tr>
<tr>
<td>Adult construct, term</td>
<td>Equip with skills to participate in global, digital communities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Responsible Use Rights and responsibilities as digital users</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adult construct</td>
<td>Concept</td>
</tr>
</tbody>
</table>

Part B: Should digital citizenship be covered in the school curriculum? Why?/why not?

<table>
<thead>
<tr>
<th>Codes</th>
<th>Themes</th>
<th>Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>How to use technology appropriately and safely, new capabilities, preparing for world they live in, don't understand dangers, framework for decision making, raise awareness, street smart, rights &amp; responsibilities, provides students with choice</td>
<td>Protection Knowledge of capabilities Guide for decision making Street smart Holistic formation</td>
<td>Developing student capacity</td>
</tr>
<tr>
<td>Changing perspectives to match environment, education environment has changed, schools best placed, filling gaps, influences community, school expectations and environment, associated responsibility with technology use, currency, world today</td>
<td>Contemporary education Schools best placed Duty of care</td>
<td>Education environment</td>
</tr>
<tr>
<td>Staff focus, more proactive, forefront of minds, part of what we do, explicitly stated in curriculum, embedded in curriculum, to ensure not a sideline issue, student development, DC becomes the norm, expectation</td>
<td>Staff and student focus Embedded in curriculum</td>
<td></td>
</tr>
<tr>
<td>Parent-school partnership, modelling, parent capacity, uneducated parents, family morals and values, parental fear of technology</td>
<td>Parent/carer knowledge and experience Partnership with school</td>
<td>Parent/carer capacity</td>
</tr>
</tbody>
</table>
Table 5.4  Synthesis of Responses: Research Question 1 (Students)

Research Question 1: How do members of a secondary school community experience a curriculum that integrates digital citizenship (CIDC)?

### Part A: What does digital citizenship mean to you?

<table>
<thead>
<tr>
<th>Codes</th>
<th>Themes</th>
<th>Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety online, knowing the dangers, knowing what is appropriate, not</td>
<td>Knowledge, Protection, Responsible Behaviour, Participation</td>
<td></td>
</tr>
<tr>
<td>everything on the internet is real, use technology properly and wisely,</td>
<td></td>
<td>Online Rights and Responsibilities</td>
</tr>
<tr>
<td>learn not to cyber bully, learn the consequences of inappropriate use,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>right thing at right time, being responsible, being careful, job</td>
<td></td>
<td></td>
</tr>
<tr>
<td>consequences, common sense, balance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online communication, social media connection, how you act online,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>being productive online, use of technology, ability to access internet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and social media, global connection, online identity, citizen of digital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>community, being a part of something digitally,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concept to help adults, way to organise ideas</td>
<td>Adult term</td>
<td>Term</td>
</tr>
</tbody>
</table>

### Part B: Is digital citizenship something that should be covered in the school curriculum? Why/why not?

<table>
<thead>
<tr>
<th>Codes</th>
<th>Themes</th>
<th>Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn about DC, know what is right and wrong, learn about cyber</td>
<td>Increase Knowledge,</td>
<td>Knowledge Develops Understanding</td>
</tr>
<tr>
<td>bullying, learn to think before we act, learn to be better in society,</td>
<td>Assist Understanding</td>
<td></td>
</tr>
<tr>
<td>use technology responsibly, future generations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not placing in danger, actions can hurt, consequences for self and</td>
<td></td>
<td>Context</td>
</tr>
<tr>
<td>others, checklist, 1:1 laptop school, impact on our generation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common sense for parents, digital literacy struggle, parental</td>
<td></td>
<td>Parent Role</td>
</tr>
<tr>
<td>knowledge growth, different type of bullying, parent perception,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>parental involvement, partnership with home</td>
<td></td>
<td>Coverage</td>
</tr>
<tr>
<td>In classes, when relevant, repeatedly, not overwhelming, not separate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>subject, gradual, ongoing, to the point, discussion, touch-ups, relate</td>
<td>Across Subjects</td>
<td></td>
</tr>
<tr>
<td>to students, explanations, visual learners</td>
<td>Effective Teaching</td>
<td></td>
</tr>
</tbody>
</table>

### Part C: Would you like to continue learning about digital citizenship in your subjects? Why/why not?

<table>
<thead>
<tr>
<th>Codes</th>
<th>Themes</th>
<th>Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need to keep learning, constant change, currency, reinforce to</td>
<td>Necessary</td>
<td>Contemporary Curriculum</td>
</tr>
<tr>
<td>remember, develop understanding</td>
<td>Relevant</td>
<td></td>
</tr>
<tr>
<td>Relevant to our world, learning new things, fun, learning by doing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 5.5  Synthesis of Responses: Research Question 2 (Staff)

**Research Question 2:** How do members of a secondary school community engage with a curriculum integrating digital citizenship (CIDC)?

#### Part A: What has been your experience of working with a curriculum integrating digital citizenship (CIDC)?

<table>
<thead>
<tr>
<th>Codes</th>
<th>Themes</th>
<th>Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC process, technology barriers, varied focus on elements, DC code, prompts, connection, subject &amp; topic dependent, overarching framework, guidelines, easy connections, more deliberate with DC, more aware of practice, part of education, uncertainty around process, not completely understood</td>
<td>CIDC process Framework Subject and topic Barriers</td>
<td>Procedural dimension</td>
</tr>
<tr>
<td>Varied staff uptake, teacher knowledge &amp; understanding, staff turnover, rapid pace of technology, font to facilitator, curriculum knowledge, not recognising DC, staff willingness, change is difficult, curriculum pressures, disconnect, dinosaur, thinking differently about technology, more possibilities, supports working with difference, student reaction, student ignorance</td>
<td>Staff uptake Teacher knowledge and understanding Broadens teaching and learning opportunities Student reaction Disconnect Pace of ICT changes</td>
<td>Human dimension</td>
</tr>
<tr>
<td>Senior leadership directions, momentum, personality based rather than process driven, maintenance pressure, department attitudes and expectations, accountability, senior leadership strategic vision link</td>
<td>Senior Leadership strategic vision Focus Department expectations Accountability</td>
<td>Leadership dimension</td>
</tr>
<tr>
<td>Many priorities, classroom teaching pressures, snowed under, curriculum pressures, time factor, teaching loads, support for priority, frustration, lack of time, limited opportunity for professional sharing, results focus, core curriculum pressures, limited face to face teaching time, nature of teaching, can be done, basics v meaningful</td>
<td>Competing pressures How much is enough? Professional learning, sharing and reflection Planning and preparation Lesson time Workload intensification</td>
<td>Priorities Time</td>
</tr>
</tbody>
</table>

#### Part B: What is the greatest need to develop in staff in continuing to implement a curriculum that integrates digital citizenship (CIDC)?

<table>
<thead>
<tr>
<th>Codes</th>
<th>Themes</th>
<th>Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>More understanding of DC, understanding the breadth of learning parameters, openness to new things, staff self DC capacity</td>
<td>Understanding of DC As Digital Citizens Risk Taking</td>
<td>Staff Capacity</td>
</tr>
<tr>
<td>Collegial sharing, planning time, proactivity, visual professional development, time, lesson time pressures</td>
<td>Professional Learning Engage with CIDC</td>
<td>Time</td>
</tr>
<tr>
<td>Keep relevance, regular refreshers, reinforcement, continuity, momentum, focus, remind of priority, on radar, keep it alive</td>
<td>Reinforcement of DC Priority</td>
<td>Momentum</td>
</tr>
</tbody>
</table>

#### Part C: What is the greatest challenge to meeting the identified need/s?

<table>
<thead>
<tr>
<th>Codes</th>
<th>Themes</th>
<th>Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple priorities, time, getting people together, accountability, individual professionalism, meshing priorities, leadership, driving the priority, on radar, staff willingness, desire to engage, curriculum leaders’ knowledge, inspiration for staff, ensure it’s happening, measuring progress, feedback, goal setting, school environment, clear senior leadership vision and focus, inculturation, priorities, PD focus, results focus, release time, limited lesson time, extra work, many demands on teachers, staff turnover, expectations, curriculum requirements, student attitude Currency, pace of technology, lack of mandated curriculum</td>
<td>Leadership Multiple Priorities Consistency Time Promotion &amp; Accountability Staff Engagement Student Attitudes</td>
<td>School-based Challenges</td>
</tr>
<tr>
<td></td>
<td>Technological Change Mandated Curriculum</td>
<td>External Challenges</td>
</tr>
</tbody>
</table>
Table 5.6 Synthesis of Responses: Research Question 2 (Students)

Research Question 2: How do members of a secondary school community engage with a curriculum integrating digital citizenship?

What has been your experience of learning about digital citizenship in your subjects?

<table>
<thead>
<tr>
<th>Codes</th>
<th>Themes</th>
<th>Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion, teacher teaching, activities, hands on, visually, reading, multimedia, making mistakes, other students, guest speakers, consequences, using devices</td>
<td>How we learn</td>
<td>Varied</td>
</tr>
<tr>
<td>How to be safe, effects on others, digital literacy, online appropriateness, online responsibilities, online citizenry</td>
<td>What we learn</td>
<td></td>
</tr>
<tr>
<td>Teachers do DC differently, teacher style, teacher knowledge, learning style, teacher age,</td>
<td>Teacher Effect</td>
<td></td>
</tr>
<tr>
<td>Laptop school, new things, gain knowledge, student perception of DC</td>
<td>Relevant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interesting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student Perception</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5.7 Synthesis of Responses: Research Question 3 (Staff)

Research Question 3 – How does a curriculum that integrates digital citizenship (CIDC) influence members of the school community?

Part A: What is your sense of the influence a curriculum that integrates digital citizenship (CIDC) has had on the staff?

<table>
<thead>
<tr>
<th>Codes</th>
<th>Themes</th>
<th>Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural shift, progress, change in understanding, shared practice, changed expectations, part of what we do, common language, interactions with students and parents, leverage, staff focus, common starting point, long term consequences push, school wide process, legitimacy, inbuilt, integrated, not a bolt on, bigger picture, changed attitude, different stages, in the process</td>
<td>Change in understandings</td>
<td>Cultural Shift</td>
</tr>
<tr>
<td>Increased staff knowledge, increased awareness of issues, more informed decisions, aware online, responsibility on staff, expanded teaching parameters, meaningful discussions, thought provoking</td>
<td>Expectations</td>
<td></td>
</tr>
<tr>
<td>Mechanism for measuring, how do you measure influence?, unknown, data</td>
<td>Shared practice</td>
<td>Staff Competency</td>
</tr>
<tr>
<td></td>
<td>Common language</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Staff interactions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Awareness and knowledge</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Informed decision making</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Breadth of teaching</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mechanism for measuring</td>
<td>Measuring Influence</td>
</tr>
</tbody>
</table>

Part B: What is your sense of the influence a curriculum that integrates digital citizenship (CIDC) has had on the students?

<table>
<thead>
<tr>
<th>Codes</th>
<th>Themes</th>
<th>Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some influenced more than others, decrease in misuse, mixed influence, actions change, manners, attitude, transfer of knowledge, grasp of DC, code of ethics in action, 9 elements competency</td>
<td>Student uptake</td>
<td>Heterogeneous</td>
</tr>
<tr>
<td>Student understandings, increased awareness of appropriate use, increased acceptance of appropriate use, common language, deeper discussions</td>
<td>Influence on actions</td>
<td>Effect</td>
</tr>
<tr>
<td></td>
<td>Understandings</td>
<td>Culture</td>
</tr>
<tr>
<td></td>
<td>Common language</td>
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</tbody>
</table>
Table 5.8 Synthesis of Responses: Research Question 3 (Students)

Research Question 3: How does a curriculum that integrates digital citizenship (CIDC) influence members of the school community?

What is your sense of the influence that learning about digital citizenship has had on students?

<table>
<thead>
<tr>
<th>Codes</th>
<th>Themes</th>
<th>Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online age limits, email etiquette, safety, how to think about online actions, awareness of how to act online, awareness of consequences, fear factor, effects of the internet, harsh reality, bad people on social media, tracking, permanent record, easy access to information, internet can be dangerous, predators, online threats, trust factor, cyber bullying awareness, stay out of trouble, Digital Dutch Courage, right time right place, alert to what is on my laptop, global context, already knew, never had a problem</td>
<td>Increased Awareness &amp; Understanding</td>
<td>Understanding Changes Behaviour</td>
</tr>
<tr>
<td>Online usage times, balance, the need for rules, digital photo etiquette, copying and pasting, referencing, copyright, less trusting, considered, ‘friending’ differently, respectful of others, more cautious, say and do, stopped pirating, changed downloading, security, different websites, power of delete, log off, report, laptop skills, easier to use technology, know how to learn using the internet, more confident, more aware, no change</td>
<td></td>
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</tr>
</tbody>
</table>

Table 5.9 illustrates the key themes and concepts that were generated from the constant comparative analysis of data. The themes and concepts are organised under each research question from which they emerged, and are numbered to correspond with a section within this chapter.
Table 5.9  Key Themes and Concepts from Data Analysis

| Research Question 1: How do members of a secondary school community experience a curriculum that integrates digital citizenship (CIDC)? |
| Research Question 2: How do members of a secondary school community engage with a curriculum that integrates digital citizenship (CIDC)? |
| 5.2.1 Prepare People for Participation in Digital Community |
| 5.2.1.1 Develops capacity to understand digital society |
| 5.2.1.2 Provides a framework for participation and decision-making in digital community |
| 5.2.1.3 Develops skills to participate in digital society |
| 5.2.2 Digital Citizenship Teaching and Learning Opportunities Belong in the Curriculum |
| 5.2.2.1 Contemporary education environment |
| 5.2.2.2 School context |
| 5.2.2.3 Integrated curriculum |
| 5.2.2.3.1 School focus – Staff perspective |
| 5.2.2.3.2 Connection – Student perspective |
| 5.2.2.4 Shared responsibility for developing digital citizens |
| 5.3 Engaging with a CIDC |
| 5.3.1 Procedural dimension of engaging with CIDC |
| 5.3.1.1 CIDC audit and planning process |
| 5.3.1.2 Inhibitors of the CIDC process |
| 5.3.1.2.1 Time Pressures and Multiple Curriculum Priorities |
| 5.3.1.2.2 ICT Challenges |
| 5.3.2 Human dimension |
| 5.3.2.1 Staff |
| 5.3.2.1.1 Staff Knowledge of ICTs, DC and the Australian Curriculum |
| 5.3.2.1.2 Staff Willingness to Participate |
| 5.3.2.1.3 Students’ Reaction to CIDC |
| 5.3.2.2 Students |
| 5.3.2.2.1 Supportive Influences for Student Engagement |
| 5.3.2.2.2 The Influence of Teacher Age on Student Engagement |
| 5.3.3 Leadership dimension |
| 5.3.3.1 Vision |
| 5.3.3.2 Accountability |

| Research Question 3: How does a curriculum that integrates digital citizenship (CIDC) influence members of the school community? |
| 5.4 CIDC generates cultural change in the school community |
| 5.4.1.1 Common language |
| 5.4.1.2 Expectations |
| 5.4.1.3 Community interactions |
| 5.4.1.4 Digital citizenship awareness |
| 5.4.1.5 Practice |
| 5.4.1.6 Determining influence |
| 5.5 Conclusion |
5.2 Research Question 1

The first research question is: *How do members of a secondary school community experience a curriculum that integrates digital citizenship?*

Understandings about specific research question one relate to two key concepts:

1. A CIDC prepares people for participation in digital community; and
2. Digital citizenship teaching and learning opportunities belong in the curriculum

Each of these understandings is presented.

5.2.1 A CIDC Prepares People for Participation in Digital Community

Three themes have been generated that illustrate how students, teachers and leaders perceive a CIDC prepares people for digital participation:

1. Develops capacity to understand digital society
2. Provides a framework for participation and decision making in digital community
3. Develops skills to participate in digital society.

5.2.1.1 Develops Capacity to Understand Digital Society

A CIDC offers opportunities for the school community to develop members’ capacity to understand digital society. This goal involves enhancing members’ awareness of their online rights, as well as preparing members for the responsible use of digital technology. Developing capacity is important because when members’ understanding of digital society is extended, they are able to make informed decisions concerning digital participation.

The first way a CIDC contributes to this goal is by broadening members’ awareness of the digital reality. An integrated curriculum creates opportunities for staff and students to consider possible scenarios in digital community and contemplate the implications of actions. This is beneficial because members have occasion to become mindful of the digital context. Often when people participate in digital community they experience shifts in psychological perspective and engage in disinhibited, disassociated and abstracted activity (Ohler, 2010). “I think it’s…about creating people that *(sic)* have an awareness of what the digital world is going to look
like for them and what it means for them now” (L3 FG 8/5/14). In considering the digital reality, members become familiar with opportunities and potential consequences of online participation. This is beneficial for a school community because teacher and leader participants identify a common lack of awareness among students regarding the context and consequences of their online behaviour.

Kids do things that they wouldn’t normally do and then before [in the physical world] if they did it they’d be hiding it. But now [in the digital world] they do it and they’re advertising it. And it’s hard, [students] don’t realize that it actually is public and number one they did the wrong thing, and number two they’re advertising they did the wrong thing. So they need to be educated. (L4 FG 8/5/14)

Second, a CIDC develops members’ capacity to understand digital society by demonstrating the interconnectedness of virtual and physical communities. An integrated curriculum offers opportunities for students and staff to explore how online activity may influence members’ offline reputations and lives. This affords staff and students a more authentic understanding of the connection between the online world and everyday life.

It’s [a curriculum integrating digital citizenship] making them [students] aware of the implications for the world they are living in, and it’s a digital world that’s so different to maybe what their parents or family have lived in or been exposed to. So it’s really just making them aware of what could happen should they not make wise choices. (L6 FG 8/5/14)

Demonstrating interconnectedness of virtual and physical communities is important because there is a perceived disconnect in student thinking between online activity and potential implications for relationships in physical society. Therefore, it is beneficial for a school community to have opportunities to engage with digital platforms and consider implications for local, digital and global communities. L1 explains:

I think often the students see a disconnect between the physical world and the online world – that they’re somehow different. And I think that digital citizenship is a mirror part or second part of their physical world
identity. And I don’t think they understand that very well and that’s part of our role as educators.

(I 29/5/14)

Part of the educator’s role involves expanding student thinking concerning the realities associated with physical and virtual citizenship. “A unique characteristic of teenagers is that they’re not good at predicting consequences of actions, so we [as adults] have to help them” (M. Carr-Gregg, personal communication, July 20, 2010). Staff participants believe a C IDC assists students to role-play online situations and practise forecasting outcomes. The adoption of such experiences in an integrated curriculum develops student capacity to understand digital society.

I think we have a role and obligation to broaden their horizons and minds, and not to take the wool from their eyes, but to make them realize that there’s more involved [with using the Internet] than just having fun. And I don’t mean just the learning part, I mean the consequences and repercussions, and that’s with everything that teenagers do – it [digital citizenship] just fits into broadening their awareness and lessening their naivety. (L7 FG 8/5/14)

Importantly, students become sensitised to the relationship between learning about DC, and their understanding the dynamics between virtual and physical communities. S4 offers this understanding:

I’m actually happy because I used to never know that it was illegal to take photos of someone and put it on the Internet. So now, even if they’re in a photo with me I’ll ask them if I can put it up [on the Internet].

(I 29/10/14)

Similarly S20 amplifies this perspective:

We were dissecting a heart in science and all the girls wanted to take photos of them with their friends. And even though the digital technology we were using wasn’t the school’s it was on school property and still going to affect the school. Our teacher explained that taking photos of somebody…they might not necessarily want you to do that, and even though you may have their permission, their parents may not
want you to do that, and if you’re in school uniform and you put it on Facebook that can affect things if somebody finds it and can locate where you live. (FG 19/5/14)

The third way CIDC develops students’ capacities to better appreciate digital society is sensitising them to appropriate norms of online behaviour. This is beneficial for a school community because while staff and students may be comfortable using digital communication technology, they may be incapable of using it appropriately. “Some students have considerable experience with blogging, podcasting, instant messaging, and picture messaging…while most students have never been taught the appropriate use of technology, and even fewer understand the potential implications of using that technology” (Ribble, 2011, p. 89).

A CIDC educates school members about standards of behaviour in online society in at least two ways. While in some cases the CIDC extends members’ existing knowledge of online standards of behaviour, in other situations, it introduces the concept of online behaviour standards and offers opportunities to debunk the myth that ‘anything goes’ in digital society. Moreover, some students mistakenly believe that they can operate online in a manner unacceptable in their offline lives. “Some people don’t actually think before they write something [online] and they think they’re safe behind a screen…but they are really hurting people” (S4 FG 7/5/14).

This false sense of protection or bravado experienced online is referred to as “a sort of digital Dutch courage that the kids have because they can’t see the person’s face. They will say and do things which they’d never do in real life” (M. Carr-Gregg, personal communication, July 20, 2010). The CIDC addresses this challenge by offering opportunities for members to become more informed about online behaviour standards, and to reframe their understanding of “responsible online use”. “People realise that they’re not doing the right thing [online] and then [after learning about digital citizenship] they realise the right thing to do” (S7 FG 7/5/14). An integrated curriculum facilitates a paradigm shift in members’ thinking concerning responsible online use, and may develop capacity to better understand digital society. T1 explains:
…it [a curriculum integrating digital citizenship] comes down to the bottom line of me being responsible for what I’m doing using a digital item, and then making sure that if I’m going to be using that then my students must know how to use that [item] with the same amount of responsibility (I 8/5/14).

Learning about online behaviour standards develops members’ capacities to more sophisticatedly understand their environment. In contemporary society, a student’s holistic development involves preparation for participation in virtual and physical communities. Ninety-five percent of respondents in the staff online questionnaire agree that teaching and learning about DC contributes to the holistic formation of students (see Table 5.10).

**Table 5.10  Holistic Formation of Students – Question 8 Section C in the Staff Questionnaire (39 respondents)**

| Q8 Please indicate your level of agreement with the following statements. Indicate your opinion by selecting the appropriate descriptor. |
|---|---|---|---|---|---|
| | Strongly Agree | Agree | Unsure | Disagree | Strongly Disagree |
| A. Digital citizenship education has little to do with contemporary curriculum. | 0% | 0% | 3% | 46% | 51% |
| B. Teaching about what it means to be a citizen of the digital community is an optional extra for schools. | 3% | 3% | 3% | 46% | 46% |
| C. Teaching and learning about digital citizenship is part of the holistic formation of students in schools in 2014. | 54% | 41% | 0% | 0% | 5% |

Indeed, teaching students about acceptable standards of behaviour for digital society prepares them to act responsibly. T3, a father and experienced teacher offers this understanding:

I don’t always have control over what comes towards [through the Internet] my children and students and they don’t also. So it’s also teaching them how to deal with that … and live in a world in a way
that’s going to be uplifting for themselves and other people. (FG 24/4/14)

Furthermore, without an integrated curriculum, students believe their capacity to respond appropriately is limited:

...back then [at my previous school] you didn’t know and I was on the Internet and I knew nothing. Like the Internet wasn’t new, but all the things I was doing were new to me and like I’d add someone and think ‘oh, they’re just a really nice person’ but it’d turn out they weren’t. And just stuff like that happens. (S20 FG 19/5/14)

A CIDC provides students with opportunities to consider how they use their laptop, iPad and mobile phone with reference to online behaviour standards. This is important for a school community, because members are presented with responsible options for their online participation. S11 explains:

If I hadn’t learnt about digital citizenship I would probably let anybody follow me [online] so I could get more followers or likes on Instagram or Facebook or more friends on Snapchat...or have the prettiest selfies uploaded because it’s all like a competition now. Not everyone thinks it’s a competition but a lot do.
(I 29/10/14)

In summary, participants’ experiences of a CIDC educate them to participate responsibly in digital society. The CIDC builds members’ capacity to understand through a more nuanced lens, the virtual world. Participants believe that a CIDC demonstrates the interconnectedness of virtual and physical communities, and sensitises members to standards of online behaviour.

5.2.1.2 Provides a Framework for Participation and Decision-Making in Digital Community

A CIDC offers opportunities for the school community to learn about, and engage with, a framework for participating and decision-making in online communities. This objective involves introducing members to the framework and facilitating guided practice in the school environment.
Students need guided practice for learning digital citizenship skills...Without guided practice, inappropriate use of technology can occur without students being aware of it. Students need to have an opportunity to learn the skills in a safe environment. (Ribble, 2011, p. 85)

The DC framework integrated at St Eliza’s College is Ribble and Bailey’s *Nine Elements of Digital Citizenship* (2007). The Nine Elements are explained in sections 2.3.6.2 and 3.3.1. Members learn about each of the elements that constitute DC. This process involves opportunities to consider issues concerning aspects of DC; explore examples of responsible and irresponsible use of technology within each aspect; as well as identifying potential consequences of online activities. Learning the guiding principles of each element offers members signposts concerning access, commerce, communication, literacy, etiquette, law, rights and responsibilities, health and wellness, and security in virtual communities.

…we’ve come into the Digital Age and it’s like any new advance or innovation there needs to be a framework so that students can learn how to steer their vehicle if you like in terms of that, and provide the framework that allows them to make decisions on an ethical basis and to be informed and skilled to operate within that area. (L3 I 26/11/14)

Engaging with the *Nine Elements Framework* in a CIDC scaffolds members’ learning about responsible online decision-making and practices. First, it contributes to this objective by offering an approach for conceptualising the complexities associated with being a digital citizen. In addition, the framework assists members to visualise and define the rights and responsibilities associated with online activity. T17 offers this understanding:

Before we put a name on it and said these are the elements of digital citizenship and this is what we call it, it was in a bit of the too hard basket and even though I was quite savvy with computers and technology, I didn’t know how to teach it. Like I hadn’t gone through that thought process and it was very loosely around teachable moments. But now even the name digital citizenship, it allows me to
think of it in “let’s just be good people online”, the morality of it and being a good citizen online, and it’s more thinking about the approach.

(FG 24/4/15)

Moreover, by learning the guiding principles of responsible digital citizenry members have opportunities to make an abstract dynamic, quantifiable (L3 I 26/11/14; T1 FG 7/5/14; S20 FG 19/5/14). Indeed, by exploring the nine elements of DC, staff and students practise relating digital behaviour standards to those already understood in physical community.

...they [the nine elements of DC] give you a set of tools to be able to handle how you talk about each aspect and define it, so if you’re talking about digital citizenship in the area of ethics or consumer areas – it just gives you a way of looking at it that links it back to the citizenship [physical world] that everyone knows – what is right and what is wrong.

(L3 I 26/11/14)

The Nine Elements Framework and companion textbook Digital Citizenship in Schools (2nd ed.) (Ribble, 2011) are useful resources for teachers engaging with a CIDC and important as a professional heuristic: “especially the way it’s [digital citizenship] set out in Ribble and Bailey’s book with the breakdown of the elements and examples can be quite good to look at and makes it so much more accessible as a teacher” (T7 I 12/6/14). Indeed, the Nine Elements Framework offers structure for professional dialogue, classroom discussions and learning activities (T1 I 7/5/14). Furthermore, the Nine Elements Framework offers a foundation for teachers’ planning and pedagogy. T17 offers this understanding:

I think with most things if you scaffold them it makes them easier to do. So I think putting digital citizenship into the boxes [elements] is scaffolding it for us [teachers]...Like digital health and wellness could be really difficult to cover in Music but easy in HPE. And digital rights and responsibilities is something that I think most subjects would be able to cover in one shape or form. I think just breaking it [digital citizenship] right down makes it so much more accessible for us [teachers]...It makes it doable I guess. (I 12/6/15)
Interestingly, while all staff participants experience the *Nine Elements Framework* and DC terminology as valuable conceptual strategies, some staff members believe that the framework and terminology may be more meaningful for adults than students. Students were born into the digital generation, consequently they have always been citizens of virtual and physical communities. Their established experience is the globally connected and digital world. This is in contrast with the experiences of many staff members who “grew up” in a pre-Internet world. Indeed, while the distinct terminology and framework concerning DC may assist adults to navigate digital society, it may be unnecessary for the digital generation. T7 offers an explanation for entertaining such a dialectical tension:

I don’t think they (the students) need the same language. They know what digital etiquette is, but I think if you said “now we’re ticking off the box of digital etiquette” they wouldn’t care – instead they’re like how do I get an A? (I 12/6/14)

Moreover, L10 believes that students may not relate to the term ‘digital citizenship’.

…I think this is their [young people’s] real world and they don’t know any different. Whereas, we in our generation do know how it [the world] was without the digital world. And in some sense we are probably the people who have created or designed or come up with digital citizenship. That digital citizenship has come from that [our] perspective. I don’t think they [the students] would probably use the same terminology as us. If we asked them to define things around a computer or device they would come up with something different…I think the word ‘citizenship’ doesn’t speak their language at that age…Digital, no worries – they know that, but citizenship means nothing to them. And so if you’re saying digital citizenship to them [students] you’re only then saying in the online world and not worrying about how that affects the non-online world. (19/11/14)

This understanding is supported by three of the sixty students who participated in the online questionnaire. While the student perception of DC concerns online rights, responsibilities and citizenship (refer to Table 5.4, Part A, p. 144, for elaboration), 5% of responses in the student questionnaire explain DC “...as a concept that helps
teachers, technology leaders and parents to understand what students, children and technology users should know to use technology appropriately” (Student Q).

Second, the Nine Elements Framework offers staff and students a decision-making process for online activity. At St Eliza’s College, the process involves three fundamental questions:

1. Is the action responsible?
2. Does the action respect my own and others’ digital rights and responsibilities? and
3. What are the potential consequences of the action?

The first question invites members to consider their online actions, “…to think things through – like when you’re about to post something you can think will this get me into trouble or attract the wrong type of people?” (S26 FG3 19/5/14). The second question involves a “…little checklist that goes through your head every time you post something” (S28 FG3 19/5/14). The third question focuses members’ attention on potentially long-term personal and professional consequences of online activity. S3 explains, “…what you write now can be seen when you go for your first job. So you have to be really careful about that” (FG 7/5/14). S7 offers a further elaboration “…with the AFL clubs even if you’re the best, if you have a really bad social media search they won’t take you” (FG 7/5/14). Indeed, the decision-making process assists members generate a relationship between their online decisions and physical community outcomes.

People need to be aware that what they might say [online] is a joke may not be interpreted that way. So they need to think, that if they say ‘why don’t you go and kill yourself’ – people might take it that they really don’t like them and they don’t want them in their world and go and self harm. (S4 FG 7/5/14)

It is important for schools to educate students about responsible online decision-making because there is a societal deficiency in preparing them for participation in digital community. While young people have access to the online world early in their development, this experience occurs often without education regarding responsible and effective use (L4 FG 8/5/14; T16 FG 24/4/14). In the absence of a national DC
curriculum or a legally mandated Internet licence for minors, preparing students for online participation may be ad hoc or neglected. Engaging with the *Nine Elements Framework* in a CIDC is one approach for a school that may address this societal deficiency. Members agree that a CIDC offers opportunities to educate students to make decisions that support responsible online use.

...[a CIDC] give[s] the scaffolding to come back in and also the depth of approach with lots of examples that if you’re a good digital citizen what does that mean? And it’s [digital community] an area that young people have got involved in very quickly and they’re very good at it in terms of being able to use it [the Internet], but they need some guidance in terms of what is right and wrong, what is dangerous, what is safe, what should I do here? All of those ways of guiding them along the road – they need those signposts that digital citizenship, by defining it, gives a way ahead. (L3 I 26/11/14)

Lastly, learning about the *Nine Elements Framework* offers opportunities for students to have guided practice implementing the decision-making process. Students are challenged by the third stage of the decision-making process: considering potential consequences of their online activity. These are important skills to develop because there are multiple ethical and legal repercussions emanating from poor decisions. Students’ lack of maturity and limited ability to consider consequences is exploitable in a media-saturated online environment. This reality is appropriately illustrated by T9:

> I don’t think kids have changed have they? No one thinks about the future that much at 17 do they? We just didn’t have the technology 20 years ago to take a nude selfie…or post it on Twitter or Facebook. (FG 29/4/14).

Consequently, it is important for students to discuss virtual community scenarios, apply the decision-making process, and practise navigating situations responsibly. By learning about, and engaging with, a decision-making framework for digital society, members of a school community prepare for responsible online participation. Year 9 business students respond to the values they learnt from one of their teachers:
...We were discussing what information you put on the Web. What information do you trust...and the kids brought up that they play games online. And I said ‘who do you play with?’ And they said, ‘kids we know’. I asked ‘have you ever met these kids?’ And they said ‘no’. I then asked ‘well how do you know they’re kids?’. And the students said ‘well, we do because they have the same interests as us’. So we then went on to have a class discussion about how you don’t know who a person is online unless you’ve actually met them [physically]. (T12 FG 24/4/14)

In summary, participants’ experiences of a CIDC are likely to prepare them for participation in the digital world by offering them skills and opportunities to learn about, and engage with, a framework for online participation and decision-making. Guided practice develops members’ capacities to consider their online activities in a balanced and respectful manner.

5.2.1.3 Develops Skills to Participate in Digital Society

A CIDC offers opportunities for the school community to develop members’ skills to effectively participate in digital society. This goal involves members learning and practising skills that support responsible online habits. This is an important goal for a school community because when members’ digital competencies improve, they may participate more productively.

Students then know how to use it [digital technology] properly and at the same time it makes it easy for students to use it appropriately and be responsible. It [digital citizenship] raises everyone’s awareness and skills and then the kids have a choice. (T15 I 12/6/14)

A CIDC demonstrates responsible online practices. In learning about the elements of DC members are introduced to new skills appropriate for virtual community. T1 offers this understanding:

…and now not just could [a person] have stranger danger on the road, but now at home in your bedroom when you’re on the computer with webcams and chat sites and such. But I think also its [digital citizenship] how to interact and deal appropriately. And I think it’s kids
who think it’s ok to use somebody else’s words and think it’s ok to plagiarise, and that’s out there for me to use, and I can just copy and paste...So a new way of educating kids as to what’s right and wrong and what’s the appropriate thing to do in a situation. (T1 FG 24/4/14)

There are many skills to acquire for professional participation in digital society. St Eliza’s College CIDC focuses on skill sets concerning media literacy, digital literacy, intellectual property ownership, e-commerce, personal safety and security, digital reputation, and digital communication (Student Q). In learning new skills, members are educated about the potential for appropriate use and misuse: “…it’s really important that we know the rules and what to do and what not to do” (S18 FG 19/5/14). Importantly, members also have opportunities to develop skills that support a sense of online astuteness. “[Digital citizenship] teaches people how to be safe and how not to walk into traps set by people who don’t have very good intentions” (S28 FG 19/5/14). Similarly T6 and T7 identify the value in developing a sense of ‘virtual streetsmart’: “…recognising that what’s out there is not necessarily factual anyway” (T6), and “that people lie” (T7), “…so to educate kids to go in there [on the internet] with some degree of circumspect and be able to look for authentic signs” (T6 FG 24/4/14).

A CIDC offers opportunities for members of a school community to practise skills required in digital society. “It [CIDC] gives students the chance to practise using technology in a way that doesn’t harm anyone and using it in a way that will help, and not short cut [their] learning” (T9 FG 29/4/14). Indeed, a CIDC provides occasion for members to make mistakes and learn from the experiences. “[T]eachers should lead students in guided activities and help them recognise and practise appropriate use. Give students an opportunity to learn these principles in an atmosphere where exploration and risk taking are promoted” (Ribble, 2011, p. 85).

Importantly, some skillsets only develop with experience. Indeed, the ability to determine responsible online actions and reactions requires practise. By engaging with a CIDC, members learn the guiding principles of DC and have opportunities to apply their skills and knowledge in guided activities using digital communication
technologies. S4 explains, ‘...we learn about what’s appropriate to put out there [online] and what’s not and what to look up” (FG 7/5/14). S6 highlights the benefit of practising “…doing the right thing at the right time. Like doing your school work at school and then playing games after school, instead of playing games during class” (FG 7/5/14).

In summary, the first understanding generated from specific research question one is that participants’ experiences of a CIDC prepare them for participation in the online world by developing their digital capacity and online skills, and by providing them with a framework for decision-making and participating in digital communities. Further understandings about research question one relate to DC belonging in a secondary school curriculum and these are presented in section 5.2.2.

5.2.2 Digital Citizenship Teaching and Learning Opportunities Belong in the Curriculum

The second understanding generated from research question one is that DC teaching and learning opportunities belong in school curricula. Four themes are created to illustrate how students, teachers and leaders perceive DC in the curriculum:

1. Contemporary education environment;
2. School context;
3. Integrated curriculum; and
4. Shared responsibility for developing digital citizens.

5.2.2.1 Contemporary Education Environment

Members agree that a CIDC is one approach to implementing such curriculum. When I look at teaching digital citizenship I look at teaching students to be responsible in the world as it is today. Obviously we’ve got the physical world, but the digital world is such an integral part of their lives now...teaching it is important because we need to show them how to be responsible in the digital world and for the repercussions in the physical world. (T7 FG 24/4/14)
CIDC offers teaching and learning opportunities that are necessary and appropriate for members of a school community in the contemporary education environment. Education is situated in a world of rapid and constant technological change. Indeed, members of a school community interact within physical, digital and global communities. It is therefore important to offer a developed curriculum relevant to the society in which a school community operates.

In the Digital Age, schools have experienced a changing educational environment with a shifting focus on technology use. Globally, the major educational and political trends in the 1990s and early 2000s focused on educational institutions “using” technology to develop ICT competence. However, in the latter 2000s this transitioned to a dual focus incorporating the appropriate use of technology. At a national level, the shift in focus precipitated a heterogeneous response in Australian schools. In the absence of a national DC curriculum, schools independently addressed the changing needs of their learning communities. Indeed, a CIDC is one school’s response to the changing ICT focus and education environment. Members agree that a CIDC offers opportunities for students and staff to focus on responsible technology use. L9 offers this understanding:

…Education has changed, because I can remember when education [focused] on you’ve got to get technology in there – get it in there, get it in there, get it in there! And we armed our students with laptops and tablets…and technology changed and you couldn’t keep up with it and technology was…it’s got to be there, it’s got to be there! But we didn’t look at the other side of how do you use that properly and all of these issues popped up around it. And I remember reading an article where it described the Internet is like the wild, wild west and that’s where we’re at the moment in terms of law and who runs what. And until such time as we get to the stage where it’s a lot more policed and the etiquette and everything else gets around it I think if we’re going to arm our kids with those kind of tools then you’re going to have to give lessons that show them how to use it properly in a way that protects them as well as educates them. (FG 8/5/14)
The shift in school curricula focus from technology use to appropriate technology use, is the education environment’s response to the particular requirements of the Digital Age. Indeed, teachers and leaders’ experiences of a CIDC identify the shift in focus as a natural evolution of school curriculum and reflective of societal change.

And it’s just true of life that as things evolve we put in place education to teach about it. Technology we teach, stuff today that 20 years ago wouldn’t have existed, and that’s always going to happen. So I see digital citizenship as going hand in hand with that, with the Information Age. (T6 l 11/6/14)

The ubiquity of digital communication technologies in society has generated a need for remodelled school curricula sensitive to the developing requirements of school students, tertiary education and the workplace. Contemporary education invites a developed curriculum that reflects the knowledge and skills for effective participation in society. It is therefore not surprising that school curricula require a focus on digital character and competencies. Consequently, a CIDC focused on developing students’ digital citizenry is relevant and necessary in the Digital Age. L5 explains: “students were thrown into this technological world and never provided the education of how to handle that technology in an appropriate manner. So therefore digital citizenship is needed and has its’ place within the curriculum” (FG 8/5/14).

The contemporary education environment and developing curricula are likely to influence teachers’ classroom practice. In fact, the changing focus on digital communication technologies in school curricula generates a need for teachers to remodel their pedagogies.

As ICT is embedded and integrated into our Australian Curriculum, and technology enhances the learning and teaching in our classrooms, it is of the utmost importance to guide and teach our students how to use ICT appropriately, responsibly and effectively. (Staff Q)

Thirty-eight of 39 staff respondents support this understanding in the online questionnaire where they identify DC is relevant to contemporary school curriculum. Moreover, 36 staff members believe that teaching DC is no longer an “optional extra” for schools (see Table 5.11).
This is particularly relevant in schools operating laptop programs and *bring your own device* (BYOD) learning environments. The changing milieu has generated alternative professional approaches congruent with a CIDC. T13 offers this understanding:

The laptop program really asked us [staff] to think about it [technology] in terms of the school context and the classroom and the impact on students; and I think that’s a different mindset for teachers to take on board. Before that [the laptop program] students may have had phones, but we didn’t really connect that to the classroom so we didn’t really need to go there [digital citizenship teaching and learning]. (FG 29/4/14)

Importantly then, CIDC assists teachers to adapt their practice for 21st century education requirements. L8 offers this understanding:

I’ve had to think of my role as a digital citizen – as just a person, and then as a teacher as a well and then think of the way I work and how my teaching is influenced by ICT, and then just in the same way that I might tell them [students] how to treat a textbook or a book of literature I then have to teach them the responsibility and the care and the purpose and the audience of whatever technology we are
using…Changing my perspective – from ten years ago when it was all about global citizenship to now digital citizenship. (FG 8/5/14)

In summary, participants’ experiences of a CIDC educate them to appropriately use technology. Teachers and leaders believe DC teaching and learning opportunities are relevant and necessary for a school curriculum in the contemporary education environment.

5.2.2.2 School context

In a world of rapid and constant technological change, society requires established influences to guide the development of citizens’ digital character and competencies. Schools are perceived as “well placed” in society to provide consistent and informed messages concerning appropriate technology use. Indeed, staff participants discern that a CIDC is one school’s approach to offering DC teaching and learning opportunities in the curriculum.

...At this stage schools are better placed to try and nut out what procedures or guidelines are going to be more effective, and because they are continually evolving it needs to be a process that is constantly being monitored as to the use of technology and how it impacts on schools. But I’m also fairly positive that a lot of parents seem to struggle with even just an awareness of those issues and what may be possible. So I don’t think that it can be left to parent control or influence to try and implement an effective policy. I think it needs to happen within the school and certainly across staff rather than individuals, and then that message is communicated between school and home. (T13 I 11/6/14)

There are five influences determining schools are “well placed” in society to guide the development of students’ DC. First, staff members undertake continuing professional education concerning digital communication technologies and believe this affords them knowledge and skills that are lacking in the wider community. T12 explains: “you know the parents don’t get the statistics, on a professional development day we get the statistics – they [children] shouldn’t have more than 10 hours a week screen time. They [the parents] don’t have that, but we get that” (FG 29/4/14).
Second, schools’ outreach to families offers them opportunities to partner with, and guide parents in developing DC. Staff participants identify deficits in parental capacity and experience in the digital world. Indeed, staff members believe this deficit justifies schools adopting a leading role in DC education. L3 offers this understanding:

I think in this new area [digital citizenship] it [the Nine Elements Framework] gives the parents the language. Now they’ll know something is not right or wrong but they won’t have the framework of being able to talk about digital citizenship, so the more the language is used in schools and at home, the more it becomes part of the culture and people can talk about it and have a discussion about how I negotiate my way through it. (I 26/11/14)

In circumstances where schools adopt leading roles in developing students’ DC, staff members believe opportunities are enhanced for students to experience consistent messages concerning appropriate technology use. Teachers and leaders identify the importance of a common language and shared expectations between home and school in developing students’ DC. L1 explains: “I say to the parent groups they [students] should not have their phones in their bedrooms past a certain time. They need to rest, their brains need to rest” (I 29/5/14). Importantly, staff members believe that initiatives such as a CIDC, offer schools opportunities to work with students and their families to develop shared understandings concerning technology use.

…it has to be like a village raising this idea [of digital citizenship] and following it through. We can do a lot from school and we can talk about real life situations, but when it comes to giving the kids a real life situation it’s really the parents that need to follow that through. (T17 I 12/6/14)

The understanding that schools and families work together to develop students’ DC is elaborated in section 5.2.2.4.

Third, DC education is contextualised in contemporary school learning environments. Whether schools operate one to one laptop programs, implement BYOD policies, or use class iPad and laptop loan resources, they facilitate networked environments
where students use digital communication devices for their learning. It is therefore relevant for school curricula to educate students concerning how to use the technology effectively and responsibly. S11 explains, St Eliza’s College “being a school that uses laptops and all digital devices we should know how to use it properly and how to be safe” (FG 7/5/14). Similarly, L1 amplifies the view that a DC focus belongs in school curriculum:

I think digital citizenship absolutely should be covered in the curriculum and I think there’s a whole host of reasons for that…and while there is a fine line between what is the parent’s responsibility and what is the school’s, I do think with digital citizenship the implications are so significant and because the students are using the technology on school grounds, and with our blessing and with our expectation,…it [digital citizenship] should be in covered in the curriculum” (I 29/5/15)

Fourth, schools have a duty of care to provide a safe learning environment for students. This duty of care has been restricted to physical community: the school grounds and off-site “school sanctioned” activities such as camps and excursions. However, contemporary education learning environments include digital community. Therefore, members agree that in a networked learning environment schools have an expanded duty of care to educate students concerning appropriate technology use. Consequently, a CIDC supports this objective and is productive. L1 offers this understanding:

At this school every student has a laptop and there’s an associated responsibility to use that responsibly and to use it effectively and well and safely. I think because we’re teaching young people and we have all of these young people in our care, we have a responsibility to help them to try and put things into place and make good decisions. That’s our duty of care…Students can really put themselves in danger and they don’t understand that. So when they’ve got a laptop with them for every lesson of the day I think that it’s very important that digital citizenship is integrated across the curriculum. (I 29/5/14)
This understanding is supported in the online questionnaire where 37 of 39 staff members agree that teaching and learning about DC is closely associated with education in a one to one laptop environment (see Table 5.12).

Table 5.12  DC Education in a 1:1 Laptop Environment – Question 8 Section D in the Staff Questionnaire (39 respondents)

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Unsure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Digital citizenship education has little to do with contemporary curriculum.</td>
<td>0%</td>
<td>0%</td>
<td>3%</td>
<td>46%</td>
<td>51%</td>
</tr>
<tr>
<td>B. Teaching about what it means to be a citizen of the digital community is an optional extra for schools.</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>46%</td>
<td>46%</td>
</tr>
<tr>
<td>C. Teaching and learning about digital citizenship is part of the holistic formation of students in schools in 2014.</td>
<td>54%</td>
<td>41%</td>
<td>0%</td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>D. Teaching and learning about digital citizenship is closely associated with education in a 1:1 laptop environment.</td>
<td>79%</td>
<td>15%</td>
<td>0%</td>
<td>0%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Lastly, schools are uniquely positioned in society to contribute to the holistic development of future generations. Consequently, it is productive for school curricula to prepare students for appropriate participation in physical and virtual communities. Indeed, when schools integrate DC teaching and learning opportunities in the curriculum, they invite a basic standard of understanding among members. Staff participants identify CIDC as a mechanism for guiding the development of students’ DC.

I think digital citizenship should always be included in the curriculum…the current parents didn’t learn about it at school but the students we’re teaching now are going to be parents and how much of a help is it going to be to have parents that have been taught these things and then their children will be taught. (T18 I 12/6/14)
In summary, participants perceive schools as “well placed” to guide the development of students’ DC. Participants experience CIDC as one justifiable approach to achieving this goal.

5.2.2.3 Integrated Curriculum
Digital citizenship teaching and learning opportunities are relevant dynamics to include in school curriculum. Importantly, staff and student participants agree that a particularly productive approach to learning about DC is when the themes are integrated across subjects, throughout year levels. Interestingly, participant groups entertain different rationales for the integration and these are presented.

5.2.2.3.1 School Focus – Staff Perspective
CIDC offers opportunities for staff and students to develop DC as a school focus (L1 I 29/5/14; T14 I 8/5/14). This is an important goal for a school community in the contemporary education environment (Ribble, 2011). While there are varied approaches to DC education, staff members offer four justifications for an integrated curriculum. First, DC has school wide relevance. Members agree that developing students’ capacities to appropriately use digital technologies is most productive when teaching and learning opportunities are offered contextually and consistently. “Digital citizenship should definitely be covered in the school curriculum, not as a subject on its own, but embedded in normal everyday teaching that we do. It is something that affects all students across all subject areas” (T16 I 20/6/14). Indeed, members consider that “stand-alone” isolated DC programs, and educative approaches involving one Faculty offering DC lessons, disregard the reality that digital communication technologies influence all aspects of students’ learning.

Second, embedding DC in school curricula reinforces its’ unique contribution to the learning process.

The beauty of having it [digital citizenship] in the curriculum is that it constantly makes teachers think about it [digital citizenship] in that background of our mind all the time for what we’re doing. Much the same as we may be thinking about OHS all the time, but we may not be thinking about the exact word but we’re always aware if a student’s going to hurt themselves. The beauty of having it there as part of it [the
curriculum] is it's there all the time in our thinking and our planning – at the forefront of our mind – it becomes integral to what we do. (L7 FG 8/5/14)

Indeed, a relationship exists between integrating DC in the curriculum, and its’ prominence in the learning community (L1 I 29/5/14).

I think the impact of having those lessons in digital citizenship pass on, has to be built in and accepted by both staff and students, and if it's [digital citizenship] not built in and included as part of the curriculum I think it becomes a sideline issue and something you get to if you’ve got through the rest of your content. Therefore teachers may or may not choose to pick it up and include the message. (T13 I 11/6/14)

In fact, positioning DC in school curricula affords it status in the learning community. “If it’s [digital citizenship] school wide and if it’s a word and a process and ideas that are already there, it’s got legitimacy among staff” (L7 FG 8/5/14). Importantly, staff members agree the more intrinsic DC is to school curricula, the more likely it develops as a school focus. Consequently, it is productive for a school to integrate DC across subjects and throughout year levels.

The more you teach it [digital citizenship], the more you go over it, the more it becomes the norm than not. So what you want is digital citizenship to be the norm so eventually it becomes just the way we do things. So it is an expectation here – this is one of the things that make us who we are. (T18 I 12/6/14)

Third, learning environments that implement an integrated curriculum generate staff proactivity concerning DC (L5 FG 8/5/14; L7 FG 8/5/14). With an integrated curriculum staff members share ownership and accountability for the school goal. “Every teacher is a teacher of digital citizenship – it’s our responsibility” (T17 I 12/6/14). In this learning environment, staff members are less likely to ignore DC teaching and learning opportunities or assume they are covered elsewhere in the curriculum. In fact, members recognise enhanced pedagogies and attribute this reality to relying less on “teachable moments” and reactive situations to address DC (L4 FG 8/5/14; L10 FG 8/5/14).
Finally, when DC teaching and learning occurs across subjects throughout year levels, staff members believe opportunities for meaningful engagement are maximised. Importantly, a CIDC establishes school-wide curricula expectations and avoids reliance on individual staff to champion the DC message. T13 offers this understanding:

One of the real benefits of having digital citizenship integrated in the curriculum is you need it [digital citizenship] to be taken on board as an across staff focus which means bringing staff generally up to speed which is going to mean that it is far more likely to be an effective policy and message [for staff and students]. (I 11/6/14)

Indeed, when students are offered ongoing opportunities across their subjects to learn about DC, they may develop more sophisticated understandings of the norms of appropriate behaviour concerning technology use (T10 FG 29/4/14; T11 FG 29/4/14). Teachers agree that the progressive structure of an integrated curriculum enhances student development. T13 explains:

I think students obviously mature at different stages through any year group, and providing a one off exposure to the message [digital citizenship] would not be as effective as incorporating that message into basic unit planning and continuing in regular lessons throughout a term or a semester. I think it’s highly likely it would become an ineffective message and may be not as broadly publicized as it should be. (I 11/6/14)

In summary, staff participants experience a CIDC as a productive approach for educating school members about standards of behaviour for digital society. Teachers and leaders believe it is important for schools to focus on DC in the contemporary education environment, and a CIDC promotes this goal.

5.2.2.3.2 Connection – Student Perspective

Digital citizenship belongs in St Eliza’s College curricula because it is relevant to the school’s one to one laptop learning environment, and the digital society in which students learn, play and work. CIDC offers opportunities for students to develop their digital citizenry in a connected learning environment. Importantly, students believe a
particularly productive approach to learning about DC involves relevant, gradual and continuous school curricula that operate in partnership with parental guidance.

Learning about DC is productive when it occurs contextually. School curricula that integrate DC across subjects, offer students opportunities to learn about the nine elements when natural connections occur within topics they are studying. Indeed, students appreciate the relevance of DC when a discernible relationship exists. “It’s good to have digital citizenship in the subjects…don’t have it as a subject but talk about digital citizenship when it relates to your subject like when we’re doing a big assignment for our research” (S1 FG 7/5/14). Importantly, students recognise the relationship between learning about standards of behaviour for digital activity and their subjects: “…just go over digital citizenship when it’s relevant to what you’re doing in your core subjects” (S7 FG 7/5/14). Similarly, S2 amplifies this perspective: “…like in Business classes you would touch over digital citizenship every couple of lessons to make sure you know what’s safe and what’s not [when using the Internet]” (FG 7/5/14).

A progressive learning process is effective for developing students’ DC. Rather than participating in “one-off” information sessions or “stand-alone” courses, students believe that a productive educative approach offers regular and ongoing opportunities to explore appropriate technology use: “…I think it [digital citizenship] should be in our classes so that the message is repeated enough but so that it’s not overwhelming” (S10 FG 7/5/14). Likewise, S26 explains “…do it [teach digital citizenship] gradually, so people will be more able to remember it…if you give it all to them [students] in one big session they’re going to just tune out” (FG 19/5/14). Nevertheless, students perceive that it is important to begin engaging with an integrated curriculum early in their development (S25 I 29/10/14). This is appropriately illustrated by S23:

It [digital citizenship education] needs to start younger. Like in primary school the teachers need to say ‘when you’re in high school you’ll probably get Facebook and there are things that can happen’ and not scare the kids but tell them about what can happen because that will save them…Like when we’re in primary school we were taught to put our hand up so that’s just something that stays with us all throughout
our schooling...And I think starting it [digital citizenship education] earlier...people would be more excited about it and know what it is. (I 14/10/14)

In summary, students experience DC teaching and learning opportunities as relevant to their educational program. Contextualising DC learning in subjects offers students a connected approach to developing digital citizenry throughout their schooling.

5.2.2.4 Shared Responsibility for Developing Digital Citizens

Members agree that educating young people to be digital citizens involves families and schools (T13 I 11/6/14; T6 I 11/6/14; S20 FG 19/5/14).

I absolutely think digital citizenship should be taught in schools but I also err on the side of a lot of this should be taught at home as well because...a big part of this is your family morals and values. And I think when we say digital citizenship is taught in schools, that’s not enough a lot of the time...it’s got to be home too. Then that becomes about educating parents because they don’t know a lot of the time. (T17 FG 24/4/14).

Indeed, participants believe teachers and parents share responsibility for developing students’ DC. Consequently, it is productive for school curricula to include DC.

There are five influences in determining DC teaching and learning opportunities belong in school curricula. First, parents lack education in appropriate technology use: “there’s no education for my generation, for their [students’] parent’s generation. They [parents] have no idea” (L6 FG 8/5/14). Similarly, T13 explains “…parents have the task of educating children but because the parents have not had the opportunity to be educated in that [digital citizenship], they are behind the eight ball” (FG 24/4/14). In fact, the lack of education produces deficiencies in DC knowledge that generate lacunas in parenting.

There’s definitely a gap...I think parents themselves need some education in technology and their children…and education in terms of parenting and what I would consider parenting in terms of access to technology. I think that many parents (not all) are ill-informed or
uninformed...some of the issues I see coming through my door are the cyber bullying that happens at 2am when they’re online or on Skype. My value system says that at that time that student should be as asleep in bed and certainly not accessing technology. (L1 I 29/5/14)

“Gaps” in parent knowledge are compounded by the second influence: a lack of experience in digital communities. Staff and students recognise parents have diverse involvement with digital communication technologies. Many families are perceived as ill-equipped for, and unworldly with DC (L1 I 29/5/14; T13 I 11/6/14). “Generally speaking parents and families are grappling with digital citizenship and learning themselves” (L3 I 26/11/14). Moreover, some parents are challenged to develop their children’s DC knowledge and skills because of their inexperience using digital technologies (S15 FG 19/5/14; S19 FG 19/5/14).

Parents’ lack of experiences using digital technologies, are likely to affect their capacities to nurture responsible digital citizens. There are four reasons for this phenomenon. First, parents’ fear of cyberspace limits their virtual engagement and ability to manage their children’s online activities.

I actually said the other day as a parent, I’m glad I’m a teacher. Because I can cope with being a parent of a teenager with all of those things [social media] because I have experience of them. Those that don’t must have a really hard and anxious time. (T12 FG 24/4/14)

In addition, parents’ lack of interest in digital communication technologies influences their participation in virtual society and the skills they develop to engage safely online. This is appropriately illustrated by T13, a 50 year-old father of three teenagers:

I have no interest in Facebook. That’s my age group. It’s a valid form of communication and a lot of people use it – I think that’s great. But I don’t have the time to do that at the moment and if I did have the time there’s something else I’d rather do. (FG 24/4/14)

Further, parents’ lack of time to become educated digital citizens restricts their abilities to guide their children’s technology use. Staff members agree that parents’
limited time to attend information sessions or participate in professional education activities generates a “need to know” or “emergency” only attitude to accessing DC education. T14 offers this understanding:

I also think with parents that unless they’re experiencing a problem, you don’t sort of think about it [digital citizenship] either. Like you might think I should know something more about this, but until it’s relevant for you – like it becomes an issue for you – you’re probably not going to make it a priority. Apart from people being really time poor too, I think there’s an element that people are so busy that unless something is impacting on them, like if they have a child experiencing cyber bullying or whether it’s a child that won’t get off their screen…they probably wouldn’t seek that [digital citizenship] information because it’s not an issue at that time. (FG 24/4/14)

Lastly, access to digital communication technologies may inhibit parents’ virtual experiences. “Not even every family has a computer, so it’s very difficult for some families to even know what it’s [digital citizenship] all about” (T11 FG 29/4/14). In this context socio-economic factors or parenting beliefs concerning digital technology use, may affect families’ abilities to nurture digitally aware and responsible citizens (T12 FG 29/4/14).

Considering parents’ lack of experience in digital communities, teachers agree it is important for students to be offered a consistent message concerning digital responsibilities and believe an integrated curriculum contributes to this goal.

The third influence in determining DC teaching and learning opportunities belong in school curricula concerns the absence of parent role-modelling for students. While parents’ lack of digital experience is an explanation for some families, other parents maintain an unhealthy preoccupation with digital communication technologies. Indeed, when parents’ lives are dominated by technology use, this influence conflicts with responsible DC. This is appropriately illustrated by L1:

…what I have found is that we [the school] have to be conscious that there is a generation of parents who for being attached to their technology is very important as well. In speaking with a student this
week about being on Facebook, we’d asked her to stay off social media which she did on her laptop but she got onto her mum’s phone and used it on her mum’s phone…and she said that mum is obsessed with Facebook and mum can’t sit through a meal without checking her phone. (I 29/5/14)

In some families, students established experiences involve parents using digital devices throughout meal times, or creating social media accounts for their children’s underage use. In these circumstances, staff members believe misunderstandings concerning digital responsibilities are likely to develop.

I really think the parents also need to set a good example. We [teachers] can talk about pirating music but if mum and dad are pirating videos at home then it’s not going to mean much from us at school. If they’re using technology irresponsibly then it’s not going to help us…but then often I think parents also don’t know they’re doing it [being irresponsible] a lot of the time. I know my brother sits there and texts while he’s looking after his kids and I don’t think he realises that he’s doing it – it’s become too much a part of some people’s lives. (T17 I 12/6/14)

Fourth, “life experience” differences exist between students and their parents. While students were born into the Digital Age, many parents “grew up” in a pre-Internet world and perceive digital society differently. Importantly, even when parents maintain currency with digital platforms, students identify inadequacies in parents’ understandings of the digital generation. S18 explains:

My parents do have laptops and phones and as technology sort of grew so did Mum and Dad so they sort of kept up with it. But like the stuff that goes on with our generation with technology it’s not like theirs [generation]. Like they don’t see it as a big thing – like it’s just a phone, or it’s just Facebook that you post a photo on every now and then. But we see it like a whole different thing – to bully people, to talk to people and it’s a lot worse with our generation. (FG 19/5/14)
Similarly, S16 amplifies this view “…while parents would know about bullying and all that, they might not know about the type of bullying that’s happening right now [online]” (FG 19/5/14). Consequently, schools can support families in developing digital citizens, and it is productive to have the nine elements included in curricula.

The final influence is that students’ DC is most productively developed when parents and teachers cooperatively guide the process. S20 explains:

It [digital citizenship] shouldn’t really just be covered by the school or just at home because unfortunately our laptops are supposed to be used for school work and they are in school, bit I’m pretty sure when most kids go home they use it for Skype or Facebook or games, and so you really need to have a solid foundation between family and school joining together and spreading that knowledge between the kids…and I think if we have knowledge across both areas of family and school it will make it a stronger foundation for kids to understand digital citizenship. (FG 19/5/14)

Data from the online questionnaire support this understanding. Student participants confirm they learn most about DC at school and home. Thirty-six students nominate school as the main influence, while 22 students agree they learn equally in both environments (see Figure 5.1).

**Figure 5.1 Learning about Digital Citizenship – Question 5 in the Student Questionnaire (60 respondents)**

<table>
<thead>
<tr>
<th>Q5 Where do you learn most about digital citizenship?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answered: 60  Skipped: 0</td>
</tr>
</tbody>
</table>

- At home: 60%
- At school: 37%
- At both home and school: 2%
- Other (please specify): 2%
Further, when DC is developed at home and school, the process offers opportunities for family values, and school ethics, to inform the guiding principles of students’ digital conduct. This is appropriately illustrated by S29:

…because school might tell you what they think is right, but that’s the school’s morals not your family’s morals. Like the school might say, this is what you should do and give you this boundary, but especially in my house school would say like you need to do this, but my family would be like – no, you need to do more than that, you need to be really, really careful. I guess it’s up to each family to decide what their standard is. Like when I was little, Mum was really careful with me and my sisters on the Internet. We had a folder and a rule that each time we went on a website we had to bookmark it into that folder, so that’s how Mum checked it. But I know some families wouldn’t do that, but some would…And like I don’t think school would go into that depth…And if it’s not there at home then school needs to make up for it in those homes too. (I 14/10/14)

In summary, members agree that families and schools share responsibility for developing students’ DC. Participants experience a CIDC as a productive approach for schools contributing to students’ DC formation.

The second understanding generated from specific research question one is that participants believe DC teaching and learning opportunities belong in school curricula. Participants experience a CIDC as a connected educative approach to developing students’ understandings of appropriate technology use. Importantly, members perceive DC as a relevant and necessary focus for contemporary education and believe schools, in partnership with families, are “well placed” to promote this goal.

5.3 Research Question 2
The second research question is: How do members of a secondary school community engage with a curriculum that integrates digital citizenship?
Understandings about specific research question two relate to three key concepts:

1. Procedural dimension of engaging with a CIDC
2. Human dimension of engaging with a CIDC
3. Leadership dimension of engaging with a CIDC

Each of these understandings is presented.

5.3.1 Procedural Dimension of Engaging with CIDC

Two themes are generated to illustrate how teachers and leaders perceive engaging with the CIDC process:

1. CIDC audit and planning process; and
2. Inhibitors of the CIDC process.

5.3.1.1 CIDC Audit and Planning Process

The CIDC process implemented at St Eliza’s College is a three-stage process involving two fundamental questions:

1. Where are DC elements currently being addressed in the curriculum? and
2. Where in the curriculum do the natural connections to DC elements occur?

During the first stage staff members work collaboratively using the audit tool (see Appendix B) to identify where DC elements are included in the curriculum. The second phase involves staff identifying additional opportunities for integrating DC teaching in the curriculum. This is achieved by discerning appropriate connections between units of work and the nine elements. The final phase of the process involves staff using the audit tool to plan and include integrated learning activities in subject term planners, and year level work programs.

Teachers and leaders agree the CIDC audit and planning process is productive.

It was wonderful having the audit time because I then went through the units and thought ‘oh, I can put it [digital citizenship] in here as well and that’s easy to fit into that section’...it was the time and sitting down with the program with that [digital citizenship] in mind as opposed to
everything else you’ve got to teach – but it was time that I really sat down and went ‘Oh’ we actually already cover a lot of this’, and putting it in there. (T17 FG 24/4/14)

Before the inaugural CIDC implementation, Faculties participated in planning sessions to generate semester one units of work as exemplars for further curriculum design. The College’s CIDC was implemented across Years 8 and 9 in 2012. In subsequent years, CIDC was developed in Years 10 to 12 (from 2013), and Year 7 (2015). During this four-year period the audit and planning process developed. Staff members describe a transition from their initial reliance on the audit tool, to a more organic process where DC elements are integrated into units of work as a part of curriculum design.

…we’re always rewriting our units and we’re always rewriting our lesson plans, and we’re always getting new syllabuses. I think it’s [digital citizenship] just something we need to include. I don’t think it’s possible to go back through every unit you’ve got going at the moment and get it [digital citizenship elements] on paper to everything there. But I think the next time you have to write a unit it needs to go in. So it’s like it [CIDC] should evolve. (T17 I 12/6/14)

The CIDC audit and planning process is “user-friendly” and generates DC teaching and learning opportunities in school curriculum. Staff members offer a number of explanations for these opinions. First, teachers rapidly integrate the Australian Curriculum with DC elements during the planning process: “…it’s nice that it [digital citizenship] does go quite easily into our curriculum, and it’s not a huge effort to do it” (T17 FG 24/4/14). In fact, teachers and leaders agree the Australian Curriculum’s seven General Capabilities and their organising elements offer particular scope for integrating DC elements. This is appropriately illustrated by L8:

It is quite easy to make the connections with DC. We redesigned the Year 8 program and gave it a framework and so with my knowledge of the Australian Curriculum it was just really easy to map out a really good program for year 8s. And it gives them so much digital citizenship, and it’s more embedded in our assessment, and learning experiences and learning intentions. But I think we probably had to
redesign first for us to be really aware of what we already had [in the units of work] but also of the opportunities we could now create to make sure that DC was there and assessable. (FG 8/514)

Second, the CIDC audit and planning process supports changes in curriculum. Staff members explain that because DC elements are often linked to skills rather than content, revisions to national curriculum or work programs are manageable.

In the last few years we’re changing the content with Australian Curriculum and [designing] different units…so I looked at my audits and thought “oh, no”. But then I thought actually it doesn’t really matter what the content is, those DC elements linked up to the skills that I’d also mapped in the audit. So I could ditch the whole content for the Middle School work program I’m creating, and the linkage between the skills in the Australian curriculum and the digital citizenship elements was still there. So it was just a matter of linking the skills up to the new content areas we do them in. (L7 FG 8/5/14)

Further, the flexible structure of the CIDC audit and planning process is productive for school curriculum. This is important because teachers regularly engage with curriculum change such as adapting work programs, implementing amendments to mandated curricula, and revising units of work for particular students’ or class needs. Consequently, teaching aids such as the Digital Citizenship Index of Codes (see Appendix C) assist teachers to identify the DC focus in unit plans and are an important professional heuristic. T13 offers this understanding:

The reality of implementing it [digital citizenship] and finding where it is incorporated into unit plans and connections have been made, it is…a very flexible or fluid thing that is continually changing, but even just to have the symbols for the elements that we created scattered through the units, make it at least a prompt for the teachers when they picked it up to say ‘oh yeah, well I could bring it in here and talk to it quite easily within a unit at a particular time’. (FG 29/4/14)

Notwithstanding the flexibility of the CIDC process, staff members experience regularly revising units of work to include integrated DC learning activities as
challenging. Teachers and leaders believe this process influences the momentum of CIDC. L1 explains:

> From a planning perspective I can see the value of that [DC elements prescribed in units of work] but I also think sometimes you write things in your plan but you may not actually do that in your lesson. So trying to keep your lessons or your planning fresh or reflective of the group you have. I think that's always a challenge...when we were looking at planning [in the audit process] I'd be thinking 'yeah, I might have done that now or I might be going to do that next. But next time I do it I might do it in a different way so does that make this redundant?' (I 29/5/14)

Lastly, the CIDC audit and planning process generates developed staff pedagogies observant of DC teaching and learning opportunities across subjects, throughout year levels. Consequently, after engaging with the CIDC audit and planning process staff members are less likely to embrace ad hoc approaches to integrating DC. T12’s experience with the CIDC process for Middle School Business Studies confirms this value:

> Because it's “Business” we were already on computers and we had certain things we discussed with kids all the time [before CIDC]. But [the audit and planning process] also made you aware that you’re actually covering digital citizenship. But then there were also bits to the process that made you realise you could bring in more digital citizenship...so we looked further into it [the curriculum] to see where we could use digital citizenship elements that we weren’t already using. (FG 24/4/14)

Moreover, the CIDC audit and planning process enhances staff members’ capacities to identify the breadth of opportunities for integrating DC in curriculum.

> When we’re using digital technology, no matter what you’re doing there’s always an opportunity [to integrate digital citizenship]. I found [after doing the audit and planning] I’m not having to make it [extra content] up to meet the elements of digital citizenship education. If you’re using digital technology then you’re going to use it following the rules of good digital citizenship...but you do it in a deliberate way.
When a teacher came up with the idea of designing a website for the Year 9 task there was a great opportunity there to think “oh, they’re [the year 9 students] going to publish something and therefore you’d better follow the rules of being polite and citing and referencing and copyright”. (L4 FG 8/5/14)

Data from the online questionnaire support this understanding. Out of 39 staff who responded, 35 agree there are opportunities for integrating DC within their subjects (see Table 5.13).

Table 5.13  Digital Citizenship Integration Opportunities in Subjects – Question 8 Section F in the Staff Questionnaire (39 respondents)

<table>
<thead>
<tr>
<th>Question 8 Section F</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Unsure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Digital citizenship education has little to do with contemporary curriculum.</td>
<td>0%</td>
<td>0%</td>
<td>3%</td>
<td>46%</td>
<td>51%</td>
</tr>
<tr>
<td>B. Teaching about what it means to be a citizen of the digital community is an optional extra for schools.</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>46%</td>
<td>46%</td>
</tr>
<tr>
<td>C. Teaching and learning about digital citizenship is part of the holistic formation of students in schools in 2014.</td>
<td>54%</td>
<td>41%</td>
<td>0%</td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>D. Teaching and learning about digital citizenship is closely associated with education in a 1:1 laptop environment.</td>
<td>79%</td>
<td>15%</td>
<td>0%</td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>E. Students find digital citizenship difficult to understand.</td>
<td>0%</td>
<td>13%</td>
<td>21%</td>
<td>59%</td>
<td>8%</td>
</tr>
<tr>
<td>F. There are opportunities for integrating digital citizenship within my subject areas.</td>
<td>44%</td>
<td>46%</td>
<td>8%</td>
<td>0%</td>
<td>3%</td>
</tr>
</tbody>
</table>

While staff members agree the CIDC audit and planning process is productive for school curriculum, they identify three influences on teachers’ experiences. The first influence on teachers’ engagement with the process concerns the subject and topic involved. Teachers explain that some topics generate connections with DC more easily than others. “You look for those opportunities where there is a natural integration, and they come more readily in some subject areas than others...with
some units it’s easier than others as you do see that natural connection” (L1 I 29/5/14). T1 amplifies this perspective:

I think depending on what the topic is and what the subject you’re doing makes it feasible as to what quantity and quality of digital citizenship integration you can do...With Year 12 Fitness that I’ve got at the moment, they’ve got modules to hand in and it’s just answering questions for the outside providers and then they’ve got the gym – so it doesn’t lend itself as well to do it [integrate digital citizenship]...But when you’re doing Year 9 Core PE and you’re looking at body image – you really link that to digital security and what images you put out there about yourself – so sexting and that. (I 7/5/14)

Further, in subjects such as Mathematics, where teachers’ established experiences involve limited digital technology integration, the CIDC audit and planning process may be less productive. Teachers offer two explanations for this occurrence. First, where a subject involves limited ICT integration, there are reduced opportunities for discussing its’ appropriate use. Second, teachers are less likely to perceive the relevance of CIDC in subjects where digital communication technologies are rarely used. Consequently, staff members’ teaching areas influence their experiences of the CIDC process.

I think as time goes by we [the Maths Faculty] are using it [technology] more and I know personally at the moment I am doing a flipped classroom course and it’s going to be very much on a technology platform, so I could see even in my own personal use that there will be more opportunities for using the technology, and also for implementing digital citizenship strategies into the lessons. (T18 I 12/6/14)

The second influence on teachers’ engagement with the CIDC process concerns the year level involved. The process is particularly productive for the Middle School educational program because there are more opportunities for integrating DC in Years 7 to 10 curricula. “It’s a little easier to squish things in and go off topic, not off topic but go and do extra things in digital citizenship [more than the work program], but definitely in Senior [Years 11 and 12] it’s really difficult” (T17 I 12/6/14). Indeed, teachers attribute this reality to increased work program constraints in Senior School
curricula, together with a lack of focus on DC in Years 11 and 12 syllabi. T17’s experience with the Senior Music Work Program confirms this value:

Having just rewritten the Senior Music Work Program for the new syllabus there’s lots about equity, there’s lots about language and literacy but there is no mention at all about digital literacy or digital citizenship in the syllabus document…and that’s a fairly new document – that’s 2013 for 2014 implementation…So we [the College] didn’t put anything [digital citizenship] into it [work program] because if we did it would probably be rejected from panel I’m guessing because they don’t like too much information in your work program. (I 12/6/14)

The third influence on teachers’ engagement with the CIDC process concerns its structure. In some cases, staff members experience a tension between the audit and planning process being too structured for their pedagogies, and their assumption that “what is not planned for in the curriculum, does not happen”.

And so my struggle always as a teacher when integrating any different or new approach – is I hate to be boxed in to think that I have to do digital etiquette today. You know you go into your lesson thinking you’re going to do X and Y but you actually do Z because a student asked a question and you think “I’ve got this really great idea”. And as an experienced teacher you can run with that and so I’ve always felt a little bit hesitant about a plan that locks me into that I must do these DC elements for example in this unit…But I think even taking into account people like me, who are a bit more fluid, I think it [digital citizenship] needs to be in the planning and written down. “(L1 I 29/5/14)

In contrast, other staff members believe a more prescriptive structure may enhance the CIDC process. Interestingly, these teachers experience frustration and uncertainty with the flexibility of the CIDC process. T1 offers this understanding:

Sometimes part of the query [for me] is what push does need to go for this [CIDC], and how much time should be involved in it? And at the moment it’s just been put them [digital citizenship elements] in when you can and when you see that they fit. So I guess more intensive guidelines about what needs to be done with these [elements] for
implementation…I’m a very structured person and I would like if there was an expectation that in the 12 months you will get them [the elements] all in. (I 7/5/14)

In summary, participants’ experiences of the CIDC audit and planning process prepare them to identify and facilitate DC teaching and learning opportunities in school curricula. There are a number of school-based, and external, influences determining members’ capacity to contribute to this goal and these are presented in section 5.3.1.2.

5.3.1.2 Inhibitors of the CIDC Process
While teachers and leaders agree CIDC is productive, the process of integrating DC teaching and learning opportunities is another requirement of a crowded curriculum. Indeed, staff participants agree time pressures, multiple curriculum priorities, and ICT challenges influence their experiences of CIDC.

5.3.1.2.1 Time Pressures and Multiple Curriculum Priorities
The CIDC process generates a need for additional curriculum design and this places strain on staff members’ preparation time. While St Eliza’s College funded staff preparation release time before the inaugural Middle and Senior Phase CIDCs, integrating DC has become a requirement of Faculty and teacher planning. Consequently, teachers experience a congested educational program with expanded curriculum requirements and unchanged planning times: “there has been a continuous growth of expectations within the teaching profession of many and varied [curriculum] areas that take up considerable time…Indeed more classes and less time release seems to be the order of the day” (T21 Q). Not surprisingly, teachers identify work intensification as a constraint on the CIDC process: “I think there’s time pressures, particularly on staff who are teaching full loads and are having to keep up to date or try and make sure that they’re covering the elements of digital citizenship” (T13 I 11/6/14).

Indeed, there is a dissonance between curriculum expectations and CIDC planning and teaching realities.
In being able to give enough respect and time to all [curriculum related] things teachers are being asked to do now...we all know about work intensification and how we’re all doing so much more. So sometimes I can think of some of my staff and me, who would be frustrated because we can't give enough of our time to this [CIDC] or other stuff we’re supposed to be doing. (FC7 FG 8/5/14)

While staff members believe CIDC is necessary and important for their school community, they experience frustration with the interweaving of the instructional system and the matrix of contextual variables that constitute St Eliza’s College (Brady & Kennedy, 2010). Faculty leaders explain ongoing pressures from multiple curriculum priorities inhibit the CIDC process.

One of the biggest factors forever in trying to implement something is the pressures that come down from leadership above. And often you might be trying within your Faculty to do a focus on digital citizenship and really try and get that right. But then you’ve got the pressure to, ‘oh, we need you to focus on higher order thinking and QCS’. So I find for me one of the biggest challenges is there are so many pressures to apply different things to our curriculum. And sometimes you don’t do things as well as you could. (L5 FG 8/5/14)

T13 confirms this reality:

One of the greatest issues is the limited time that teachers have to get their heads around how these digital citizenship topics relate to their units. It’s been a very manual process of getting the recognition and using the [digital citizenship] symbols and identifying where in the curriculum it [DC] fits. But really I think [teachers] moving to six lines we’ve reached a point where every little extra that is tacked on is becoming more and more of a burden in a sense rather than something that ‘yes, it has all of these positive impacts, but it’s just another one on top’. And I think from an Administration point of view it really needs to be looked at, if we want to do this [CIDC] well, if we have to do this well, then we need to create the time and space for it...Because more and more we’re seeing classroom teachers being asked to update units and
create curriculum anyway, tying it in with ACARA. There really needs to be a review of the time factor...the planning and delivery needs some support from a time factor. (FG 29/4/14)

Data from the online questionnaire support the sense of frustration experienced by staff regarding CIDC planning time. Fifteen of 39 staff respondents agree there is insufficient time to prepare for including DC in their subjects. In contrast, 20 staff members believe there is sufficient time, and 4 members are unsure (see Table 5.14).

Table 5.14  Curriculum Integrating Digital Citizenship Planning Time – Question 8 Section H in the Staff Questionnaire (39 respondents)

<table>
<thead>
<tr>
<th>Q8 Please indicate your level of agreement with the following statements. Indicate your opinion by selecting the appropriate descriptor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answered: 39  Skipped: 1</td>
</tr>
<tr>
<td>Strongly Agree</td>
</tr>
<tr>
<td>A. Digital citizenship education has little to do with contemporary curriculum.</td>
</tr>
<tr>
<td>B. Teaching about what it means to be a citizen of the digital community is an optional extra for schools.</td>
</tr>
<tr>
<td>C. Teaching and learning about digital citizenship is part of the holistic formation of students in schools in 2014.</td>
</tr>
<tr>
<td>D. Teaching and learning about digital citizenship is closely associated with education in a 1:1 laptop environment.</td>
</tr>
<tr>
<td>E. Students find digital citizenship difficult to understand.</td>
</tr>
<tr>
<td>F. There are opportunities for integrating digital citizenship within my subject areas.</td>
</tr>
<tr>
<td>G. I feel capable of teaching about digital citizenship in my subject areas.</td>
</tr>
<tr>
<td>H. There is insufficient time to prepare for the inclusion of digital citizenship in my subject areas.</td>
</tr>
</tbody>
</table>

Importantly, staff members experience an enhanced CIDC planning process when circumstances facilitate release from classes for individual or Faculty preparation. Teacher and leader participants agree that the ideal CIDC planning model involves College and Faculty funded planning sessions that generate the “time and space” for
staff members to develop CIDC. T17’s experiences of CIDC planning sessions confirm this value: “…that [College funded planning session] was probably the first time I actually sat down and thought about it [CIDC] and made it that formal and written down in the program. (FG 24/4/14)

In addition to CIDC planning phase pressures, staff members explain enhanced curriculum expectations impede the quality of classroom teaching: “…I think the main challenge is time. Dedicating lessons to DC can sometimes be challenging, particularly when students are working on assessment” (T16 I 20/6/15). Staff members explain lesson time constraints may result in DC integration being an “afterthought” or “add on”: “…oh, we’ll whack it [digital citizenship] in here and there, rather than it being central” (T8 FG 29/4/14). T9 amplifies this perspective:

Sometimes you get to the end of term and think ‘oh, weren’t there some digital citizenship bits I should have covered’. And you get caught up doing everything else and so the only way you have taught things [digital citizenship elements] is incidentally as things have come up. That can be a challenge sometimes…especially when you’re focusing on assignment work or what’s going to be assessed. (FG 29/4/14)

Further, time pressures experienced in Middle School classroom teaching are compounded in the Senior School. The rigour of Senior School curricula, overloaded work programs, and vocational education and training requirements, are influences likely to interfere with teachers’ capacities to offer well-defined DC learning activities in Years 11 and 12.

Whilst planning and preparation time is provided to embed digital citizenship into my subject area, time spent with students (especially in Year 11 & 12) face to face is sometimes limited – just enough to teach the content and so curriculum content (such as assessment) take priority. Therefore other priorities, like digital citizenship take a break and are only addressed some of the time. (T10 Q)

Moreover, classroom teaching time constraints in the Senior School generate a “curriculum hierarchy”, where assessable content areas are prioritised.
I feel in my subjects at present we are rushed to get through the core curriculum content…and we are also very focused on reporting on results in criteria areas that do not incorporate digital citizenship, which means that does not get the same level of priority. (T17 Q)

Notwithstanding the increased curriculum design and facilitation requirements of CIDC, a majority of staff members consider this goal is achievable. T8 explains: “there is enough time you just have to make it [digital citizenship integration] a priority, which can be difficult given the complexity of teaching. Otherwise it can get lost in the pressure of assessment and other curriculum expectations” (Q). Likewise T2 confirms this value: “…there is always insufficient time to prepare and plan [for everything]. We [teachers] can always do more and better. On the other hand the inclusion of digital citizenship should be integral to planning” (Q).

Time pressures and multiple curriculum priorities also impact staff members’ capacities to maintain CIDC. This is an important reality for two reasons. First, when work programs and unit plans are not current their relevance is limited. Accurate and consistent CIDC documentation scaffolds the effectiveness of the instructional system. Consequently, it is productive for teachers and leaders to maintain units of work, because in circumstances where this is not achieved, CIDC regresses.

I think there’s pressure on Curriculum Co-ordinators to make so many changes to their documentation, particularly with ACARA and the curriculum updates and rewrites, and all that’s taken place in the last year or two, that it’s just not possible to maintain everything up to perhaps the standard we would appreciate or like. I think the time factor again and the fact that loads have increased for teaching staff with timetable change in allocations over the last 18 months has meant that yet again there’s pressure on the Curriculum Co-ordinators to be able to maintain documentation and update and not necessarily have the focus on digital citizenship that would have been there prior. (T13 I 11/6/14)
Second, educators’ professional sharing and reflection is productive for maintaining CIDC momentum (T13 FG 24/4/14). Therefore, time pressures at St Eliza’s College influence members’ capacity to achieve this goal.

I think the pressure on classroom teachers has increased dramatically and there’s not much down time – not much time for interaction between staff – even with their regular subject discussions. For the ‘I’m doing this, you’re doing that, what are your resources etc.? ’ - let alone taking that next step and going on to digital citizenship and how we can incorporate that [in our planning]. (T13 I 11/6/14)

Not surprisingly, limited time for professional dialogue combined with infrequent Faculty meetings constrain staff members’ capacities to engage with curriculum changes: “I’d say time is one of the biggest challenges. Just the challenge with getting your people [Faculty] together, being able to have conversations about it [CIDC], being able to share what you’ve done” (L7 FG 8/5/14). Indeed, staff members agree continuing professional sharing opportunities generate staff members’ interest and engagement with an instructional system. L8’s experiences with her Faculty confirm this value, “I did a planning session the other day and at the end someone was showing Edmodo and everyone was like ‘wow, I can use that for my teaching – for digital literacy’ ” (FG 8/5/14). T17 amplifies this perspective:

It’s having that ‘ah ha time’ to sit down and [plan]...So I think even when it comes to in-servicing each other and having space with each other, we don’t necessarily need an expert...it wouldn’t even have to be just teachers of the one subject, it could be a Music teacher and a Drama teacher. (I 12/6/14)

5.3.1.2.2 ICT Challenges

The pace of ICT changes impedes staff members’ experiences of the CIDC process. The rapid and continuous change with digital communication technologies overwhelms a majority of staff participants: “…I sometimes feel that I just get my head around some software, and then it’s been upgraded, or there’s a better one out there or there’s something else. And then I’ve got to relearn a whole new program” (L9 FG 8/5/14). Indeed, the pace of ICT changes challenge staff members’ abilities to maintain professional currency, and therefore inhibit the CIDC process.
I think in terms of keeping up to date with current professional development of ICT can be challenging and having time to continually review the curriculum and effective pedagogical practices to ensure we are delivering a high quality curriculum program is difficult. (T5 Q)

Moreover, the expanding role of ICTs in the school environment generates a transformed teacher role. This change involves teachers transitioning from being the “fonts of all knowledge” to facilitators of students’ learning: “I’m going into the unknown with technology…whereas you know, I know where I am with a text” (L8 FG 8/5/14). While a majority of staff members believe the revised pedagogies are productive, they are nevertheless challenging for teachers and this affects the CIDC process.

And it turns over so fast. I mean you think you know what they’re doing and then suddenly it’s something else and I don’t even know what it is. And that’s probably different, because in the past we’ve had the knowledge about what we teach. (T7 FG 8/5/14)

Technical issues with classroom digital technologies also impact staff members’ experiences of the CIDC process. CIDC involves practising students’ DC in a safe learning environment. To achieve this goal teachers use a learning management system (LMS) as their digital platform. In circumstances where staff and students regularly experience technical issues with the LMS, participants identify this negatively influences the CIDC process. Indeed, staff members explain that when the LMS crashes during lessons or prevents students’ accessing the platform, this impedes CIDC (T14 I 8/5/14; T18 I 12/6/14).

In summary, staff participants’ identify time pressures, multiple curriculum priorities and ICT challenges as inhibitors of the CIDC process.

5.3.2 Human Dimension of Engaging with CIDC

5.3.2.1 Staff

CIDC offers opportunities for teachers and leaders to develop their own, and their students’ understandings of DC. There are three phenomena that influence staff members’ engagement with the curriculum initiative.
5.3.2.1.1 Staff Knowledge of ICTs, DC and the Australian Curriculum

First, staff members’ knowledge of digital communication technologies, DC elements and the Australian Curriculum, affect their involvement with CIDC. Teachers experience difficulties facilitating CIDC when they lack confidence and experience using ICTs effectively.

My inexperience with setting things up, and knowing how things work, certainly does inhibit my [CIDC] lessons. Because when something doesn’t go exactly to plan, it’s like ‘ok let’s go back to plan b’ – and that doesn’t involve any digital stuff – it’s all chalk and talk. (T8 FG 29/4/15)

Indeed, staff members identify that their competency with digital technologies is a fundamental prerequisite to enhance CIDC. Although teachers consider they are capable of integrating DC in their subjects\(^{46}\) - they discern a challenge facilitating the learning in an area where students’ technical knowledge exceeds their own. Further, students’ technological abilities transcend their maturity concerning responsible online and offline activities. T22 offers this understanding:

I think it is always a challenge to discuss issues of technology with students because their knowledge is often much better than their teacher’s. Also, we are competing with the technologies they use to frame all of their social interactions and communications – and obviously teenagers are risk-takers, very socially minded, and may not appreciate “older people” telling them how to best use their technologies. I think the home environment and expectations has a lot to do with how students are taught to use and engage with technology. I also think that teenagers need to see really strong consequences for poor use behaviours. At the moment the law is not even clear in many cases and policy-makers, schools, governments etc. are grappling to keep up with the speed in which technological advancements are accelerating. Providing up to date information about these issues to students is always going to be challenging. (Q)

\(^{46}\) This understanding is shared by 34 of 39 staff who responded to Question 8 Section G in the online questionnaire.
Importantly, teachers explain their lack of digital communications technologies knowledge and personal DC, results in a sense of frustration when engaging with CIDC.

I sometimes feel, particularly when I’m trying to teach the kids how to do something, because they’re so far ahead, I feel like a dinosaur. The only program I don’t feel like that with is Excel! I remember trying to bring in the iMovie multimedia aspect – digital literacy – for Year 9 and trying to learn it and yet the kids go click, click, click and it’s done. So that frustrates me feeling ancient in front of the kids, that really frustrates me. (L9 FG 8/5/14)

The sense of frustration is intensified when technically “savvy” students demonstrate limited understanding of engaging responsibly in digital community. Further, students’ lack of awareness of this deficiency and their unresponsive attitudes may generate barriers for staff facilitating CIDC.

I find that students at times think they are wiser and more informed than they really are, and are reluctant to listen to advice and cautions from mature staff – who maybe don’t use digital devices as often or as widely as they do. (T9 Q)

This value is confirmed by T7:

Many students are unwilling to take responsibility online and quite a few refuse to accept that there are even issues related to digital citizenship. Students often believe that they are more tech savvy than adults and our attempts to educate or inform them are sometimes met with derision. (Q)

In addition, staff members explain that diverse levels of Australian Curriculum knowledge also influence their capacities to engage with CIDC. While the ICT, Personal and Social, and Ethical Understanding General Capabilities included in the Australian Curriculum (AC) offer opportunities to engage with DC, teachers’ developing knowledge of the AC may limit the occasions when this occurs.

With the Australian curriculum it’s really easy to see where digital citizenship is – like it’s just there. So I think a little bit more curriculum
knowledge would actually make all of the links [with digital citizenship for teachers]. Because I think they’re there. It’s just thinking ‘that if I use that bit of technology I’m actually doing this, this and this. (L8 FG 8/5/14)

Staff transfers at St Eliza’s College affect teachers’ knowledge and engagement with CIDC. While participants recognise the itinerant nature of staff in education sectors (L10 FG 8/5/14), they identify that “…staff turnover [at the College] has been pretty substantial since the start of CIDC” (L6 FG 8/5/14). This fact generates two influences on staff knowledge. First, departing teachers and leaders create lacunae in CIDC knowledge and leadership. Second, incoming teachers and leaders engage with CIDC at varying levels of competency depending on their prior knowledge of DC, their abilities to “be brought up to speed” through professional development, and their aptitude with digital communication technologies. Consequently, staff members joining the College after the initial CIDC implementation “may not understand how to do CIDC well” (L6 FG 8/5/14). Indeed, staff movement inhibits quality engagement with the curriculum initiative.

I think it’s been a very positive experience [CIDC] but obviously like any other journey there’s people that are at different stages down the spectrum in terms of the journey, and also in schools when we have changes in staff it means where one’s picked up and done a lot the next [staff member] may not have done as much so you have to keep doing the education and orientation to make sure it keeps on going. (L3 I 26/11/14).

Therefore, the reality of staff movement presents challenges for staff engagement, and pedagogical consistency, with CIDC. In circumstances where high numbers of staff transfers are ongoing, members perceive difficulties in achieving consistent CIDC throughout Faculties and the College. Despite staff goodwill and support for the curriculum initiative, teachers’ experiences demonstrate that varying levels of competency, experience and interest complicate CIDC’s facilitation: “consistency across time and the ability to renew the digital citizenship message is a challenge. Staff changes, curriculum changes and technology changes. The one constant element is change” (T25 Q). Indeed, staff members’ CIDC knowledge is inconsistent
and ranges from rudimentary teacher understandings to CIDC proficiency (T14 I 8/5/14; T8 & T19 Q).

5.3.2.1.2 Staff Willingness to Participate
The second phenomenon that influences staff engagement with CIDC is their willingness to participate. The curriculum initiative involves a commitment to ongoing learning and risk taking, together with creating time for preparation and facilitation of CIDC. This is challenging for many teachers. While they may understand and support CIDC, their dilemma is making a commitment when it is one of a number of initiatives. L7 offers this understanding:

From a curriculum point of view, any change is difficult to bring your teachers along with you. And there’s lots of reasons for that – some of them don’t know how, some of them don’t want to, some just resist for the sake of resisting because they don’t like anything new. Other ones would dearly love to be able to do it but they are just snowed under with what they are doing in their subjects or with other initiatives. (FG 8/5/14)

Not surprisingly, staff members offer conflicting interpretations concerning their CIDC engagement. This ranges from members feeling isolated in their attempts to engage with CIDC: “…staff don’t really know what others are doing. I sometimes feel that I might be the only one doing it to a cohort of kids” (L10 FG 8/5/14); to a sense of frustration with a perceived lack of professional initiative:

You can only put information out there…you can lead a horse to water but you can’t make it drink…It’s [digital citizenship] realized but I don’t think it’s wholeheartedly understood [by staff]. Which is intriguing because there’s every opportunity to find out that information, not just at the College – we all work around with a global identity with our laptops in our hands, we can Google so much information” (T14 I 8/5/14).

Further, leaders’ perceptions of staff members’ willingness to engage with CIDC vary. While some leaders identify strong engagement among staff: “I think with this school in general there’s a greater understanding that we do need to be doing this
[CIDC]…and it’s been taken up very well by the staff” (L1 I 29/5/15), others offer a different understanding:

I have this tension between what I think is happening and what is actually happening. I think we’ve got pockets of really good levels of DC learning with some teachers that have taken it on board. I think there are others that give it the lip service and say ‘yeah, yeah I’m doing that’ but you’d actually question whether there’s evidence of that…That’s the tension for me. (L2 I 29/5/15)

Importantly, there is a relationship between staff willingness, and accountability. This is elaborated in the Leadership Dimension of engaging with CIDC in section 5.3.3.

5.3.2.1.3 Students’ Reaction to CIDC
The final phenomenon influencing staff members’ engagement with CIDC is the students’ responses to the curriculum. A majority of teachers and leaders experience students’ limited understanding of DC. Therefore, the challenge for staff is to engage students with the realities of digital participation. This is difficult for many staff members who discern a generational divide in approaches to digital technologies: “in terms of the way that they [students] think about technology, it’s different to the way I [as an adult] think about it” (L6 FG 8/5/14). As members of the digital generation, students’ online activities often reflect a sense of entitlement and lack of responsibility.

And with a lot of kids they have hundreds of illegally downloaded movies and when you chat to them about it, and say ‘this isn’t right – some people are missing out here’, the kids look at you like – come on, you’ve probably got some on yours [laptop] too. It’s [digital rights and responsibilities and digital law] not a serious issue for them and I don’t know how we get that across to them. (T9 FG 29/4/14)

In striving to develop students’ DC capacities, staff members recognise the complexities involved with educating teenagers about long-term consequences of abstract online activities. Attempts by teachers to discuss the risks involved with particular online actions are often unsuccessful.
A lot of the kids don’t understand that what they do [online] is lifelong. Like Snapchat - once your image is out there you have no control...Trying to get to the kids that what you see is not always what you get. And once you put your stuff out there it's there forever. And when you go for a job and they do a Google search to see your reputation - it's lifelong repercussions. (T1 | 7/5/14)

T4 amplifies this perspective:
While students learn about the risks and long lasting effects their digital actions can have, they still undertake teenage risk taking behaviour or they have the idea that it won’t happen to them. I guess it’s the same issue with explaining drug and alcohol abuse and they believe they are invincible to that as well. (Q)

While there are students who engage meaningfully with CIDC (T18 Q), there are others whose actions reflect a lack of understanding or interest in learning about digital responsibilities (T16 | 20/6/14). In addition, while Year 8 and 9 students are particularly open to engaging with CIDC, older students appear more interested in using ICTs than doing so appropriately (T15 | 12/6/14).

In summary, staff participants’ experiences facilitating CIDC are influenced by their knowledge of ICTs, DC and the Australian Curriculum; their willingness to commit energy and time to developing the curriculum initiative; and students’ responses to the teaching and learning opportunities.

5.3.2.2 Students
While students identify varied experiences engaging with CIDC, they distinguish teachers as the fundamental influence on their participation and learning. Teachers’ pedagogies determine how meaningfully students engage with CIDC.

5.3.2.2.1 Supportive Influences for Student Engagement
Students identify two supportive influences for their engagement with CIDC. First, approachable, respectful teaching behaviours that demonstrate ICT knowledge are productive for CIDC. These behaviours generate student confidence in teachers’
understandings of their online lives (S25 I 29/10/14). Indeed, students discern informed teachers by their capacities to clarify concepts, and provide explanations for online community standards. S23 offers this understanding:

Teachers can be like ‘I hate Facebook, no one should have Facebook’. Like people are just going to get angry – as teenagers we enjoy having Facebook – we enjoy having that communication within the digital world. But some teachers just shut it down and say ‘no, no, no’. Then we’re not going to do what they say within Facebook. But if teachers are like ‘yes, we understand that there are good parts within Facebook but there are bad parts about it too’. Then we are going to understand that they [teachers] have been educated on it and understand where we’re coming from, but also what they have to teach. (I 14/10/14)

Similarly, S21 affirms this perspective:

…if the teachers explain to us why you can’t do something like be on iMessage because they need you to be doing work or because it’s dangerous and they can’t watch you because they don’t have full access [then we listen]…So if they explain it to us and don’t just say ‘no, you can’t’, because then you’re going to do it anyway. (FG 19/5/14).

Further, respectful teaching behaviours generate student receptiveness to the DC message. When teachers relate to students as online participants they enhance student engagement. In contrast, when teachers deliver instructions regarding appropriate online behaviours, students are reluctant to engage (S21 & S24 FG 19/5/14). While teacher approachability influences engagement across curricula, students explain it is particularly relevant with CIDC. They perceive DC as a “real life” issue, similar to other topics including sexual behaviours and substance abuse. Consequently, students believe their opinions and experiences are relevant to the CIDC learning process, and distinguish this from traditional curriculum such as Mathematics and Science (S22 & S25 FG 19/5/14). Not surprisingly, when teachers demonstrate an authoritarian approach towards social media use and ICTs, students are less receptive to CIDC. S23 offers this understanding:
Like in Maths, if they’re [teachers] telling us something and we’re like ‘that doesn’t even make sense’, like we’re still going to take it in because we know we’re going to have a test on it. But if we’re doing sex education [or digital citizenship] and we’re like ‘well that doesn’t really make sense’, and the teacher’s like ‘well that’s just how it is’, then we’re not going to listen anyway…Like if they’re [teachers] just saying ‘no, you can’t do this and this’, like if we don’t get a say – we have opinions and some teachers don’t understand that. Like with Maths I understand we don’t need an opinion on everything, but with things like digital citizenship that can affect our lives, I think we should have an opinion. (I 14/10/14)

The second supportive influence for CIDC engagement is teaching that incorporates discussions and uses examples (S26 FG 19/5/14). Lessons involving a balance of direct teacher instruction, group work, and class discussion offer opportunities for students to authentically engage with the Nine Elements Framework:

...[we need] some teaching, but not a lot - but lots of discussion. Because everyone has a chance to put in their own opinion if you have a class discussion. But you need teaching first to know what’s right and wrong, and then you can talk about it in class. (S25 I 29/10/14)

In addition, this approach facilitates teacher-student, and peer learning (S16 & S26 FG 19/5/14).

We don’t really think about the consequences until you have a discussion and you really talk about what can happen - not just when the teacher is just telling us but when we have to think about it and we’re discussing it...because then you just openly talk about it [digital citizenship issue]. Because it [discussion] does make you think about what can go wrong and what is bad. (S23 FG 19/5/14).

These pedagogic approaches also accommodate sensitivities regarding students’ experiences in digital community. Depending on the issue previously identified, students may engage more readily in a small group in contrast to large classes (S26 FG 19/5/14). Offering class and smaller group discussions provides students with
opportunities to consider a variety of viewpoints concerning DC (S25 I 29/10/14; O 29/10/14). Indeed, these approaches appeal to those students who may experience anxiety or embarrassment speaking in larger groups, or to those students who are uncomfortable revealing their online activities to their teachers or distrusted peers.

Further, the concept of DC becomes tangible for students when teachers use examples from “real life” to illustrate online standards of behaviour. This is an important goal for CIDC because the digital context is abstract for students (Ohler, 2010), and realistic examples of digital participation offer meaningful learning opportunities (S21 FG 19/5/14). Moreover, students respond to teachers using examples from their own online participation throughout the lessons (O 4/11/14). S10 explains: “like Ms C, she doesn’t always just go ‘well I think this or that’, she also uses information like websites to backup what she’s saying – so it doesn’t just sound like random stuff…so real examples” (I 30/10/14).

When teachers focus on realistic examples of positive and negative aspects of digital communication technology use, students experience a balanced approach to the Digital Age (S22 FG 19/5/14; O 12/11/14). In this context, students develop receptiveness to the DC message.

I think if we hear stories about it [digital citizenship] – like not all bad ones - it’s better. Like if they [teachers] said to us ‘yes, people send nudes and there’s a percentage that get caught and that could be you – you could be the one who ends up having a police record for making child pornography’. I think that would be better than them saying ‘well people go to jail for this – everyone’s going to go to jail for doing this’. (S22 FG 19/5/14)

Indeed, when CIDC teaching involves authentic examples of appropriate and inappropriate online actions that students relate to, participants are more likely to apply the standards of behaviour in their own lives. This is an important goal because when students can visualise realistic outcomes of their online activities, it builds their capacity to consider effects for their own and others’ lives. S11 explains: “if there could be more real life stories – that makes people change their thinking” (I 29/10/14). Similarly, S23 confirms this value:
If kids send nudes they don’t really think about what could happen – it’s just like I’ll do it because everyone else does. But I think that people need to be aware that if you send them on Snapchat there’s snap save – a screen shot function and they are going to get caught. They [the photos] are going to go around and it’s going to be very embarrassing for you, and everyone’s going to bully you about it, and then the school will find out, your parents will find out and then you’re going to be in trouble with the school and with your parents and then with the police. I think we need to be aware that it’s not only going to be your friends embarrassed about it and finding out, it’s not only the police – because if you go to the Police Station with nudes – everyone knows at school and is talking about it. And no one wants that. No one wants to be in the spotlight of the school, because it’s embarrassing. So I think people need to know when they’re learning about digital citizenship that if you do something, the consequences can go further than you actually think. I think people need to understand that the traditional rebellions [drinking, smoking] stay within physical boundaries, but online means it’s global and it can go anywhere. (I 14/10/14)

5.3.2.2.2 The Influence of Teacher Age on Student Engagement
Students perceive a relationship between teacher age and CIDC knowledge. Younger teachers are identified as more approachable, understanding of the students’ digital experiences, and knowledgeable with ICTs. In contrast, older teachers are typically recognised as digital immigrants with limited knowledge of the online context. While students discern exceptions to this stereotype, it influences their engagement with CIDC.

Younger teachers’ locus of experience is perceived by students as more aligned with the digital generation. This is appropriately illustrated by S21: “it’s easier with the young ones [teachers] because they understand our point of view and technology. They know where we’re coming from” (FG 19/5/14). Likewise S25 confirms this value: “because they [younger teachers] grew up in a place where technology was relevant – they grew up with it. So they know how to use it and they know our point and where we’re coming from” (FG 19/5/14). Indeed, younger teachers’ perceived
digital experiences create a rapport with students’ digital lives. This dynamic generates student responsiveness to CIDC.

When we speak to teachers it’s easier with the younger teachers I think than older teachers, because they were obviously in high school and university closer to now than older teachers. They make us feel like we have an opinion and they care what we have to say. When older teachers just enforce it to us we don’t feel like we have an opinion so we think why should we listen if we don’t get to have a say. (S21 FG 19/5/14)

When younger teachers facilitate CIDC, they present as knowledgeable about DC and connect with students’ learning styles (S22 FG 19/5/14). Students explain that younger teachers’ classes involve more discussions, clarification of concepts and integration of ICTs (S27 & S28 FG 19/5/14). In addition to these characteristics, students believe younger teachers use fewer “talking at” and more “talking with” strategies during CIDC (S25 I 29/10/14). Importantly, students describe a preference for these approaches to teaching and learning (S23 I 14/10/14; S11 I 29/10/14).

In contrast, students identify mature aged teachers as less educated and experienced in the digital reality. This perception is grounded in the students’ experiences of these teachers’ reduced abilities and willingness, to discuss DC issues. Importantly, this discernment influences students’ initial impressions concerning older teachers’ abilities to engage them in CIDC.

If they’re [one of the senior teachers] trying to teach us about digital citizenship I don’t always listen because they don’t know what Facebook is and how to use it like we do. We have privacy settings and we know how to use those. But they [the teachers] just assume that we don’t and that we talk to heaps of strangers, but we most likely do know them from someone else. (S23 FG 19/5/14)

In addition, mature aged teachers have less favourable perspectives concerning technology. Instead of acknowledging positive and negative outcomes of digital technology use, older teachers tend to focus on potential repercussions associated
with online participation and this influences students’ CIDC engagement. This understanding is illustrated by S29:

An older teacher is not going to understand Facebook as much as a younger teacher, because they haven’t been raised with it. Generally, older people – while they are more knowledgeable – they are also more close-minded rather than being open to new things…most older people don’t necessarily think technology this fast and this quick is such a good thing. (I 14/10/14)

Consequently, while students acknowledge the age-based stereotype does not apply to all teachers, they believe it reflects a reality of generational differences concerning teachers’ online knowledge, approaches and experiences:

Not all young teachers understand [about digital citizenship issues] and not all older teachers don’t. Some older teachers do understand what you’re talking about and some younger teachers don’t. It just depends on the teacher. But generally they [older teachers] have an old fashioned way of learning – they don’t understand what we’re talking about. (S23 FG 19/5/14)

In summary, student participants experience enhanced engagement with CIDC when teachers acknowledge their online experiences, demonstrate willingness to discuss the virtual reality in a respectful and balanced manner, and use authentic examples to illustrate online standards. Students experience a generational difference in teachers’ online knowledge, approaches and experiences.

5.3.3 Leadership Dimension of Engaging with CIDC

A fundamental influence on the productiveness of a curriculum initiative at St Eliza’s College is the Senior Leadership Team (SLT) and Faculty Leaders’ dynamic and consistent stewardship of the priority. Two themes are generated to illustrate how staff members experience the leadership and management of the CIDC initiative:

1. Vision; and
2. Accountability
5.3.3.1 Vision

Staff members agree that it is an important objective to include curriculum initiatives in the College’s strategic vision plan, and communicate this to the community.

With any curriculum initiative it must be hooked back into SLT and their vision. To answer ‘why on Earth am I doing this?’ – ‘because here is the strategic plan for what we are doing – with clear dates’...It comes from the top. It must be sold and with detail from the top. (T14 8/5/14)

Indeed, it is effective for College planning, processes, and activities to embrace CIDC. This is appropriately illustrated by L2:

A long-term strategic plan removes the peaks and troughs of how we address things...an overarching plan for our staff meetings, our professional development, our Twilights...so it actually becomes standard operating procedure for when we [staff] talk about this – you must include digital citizenship. (I 29/5/14)

When this focus occurs, staff experience clarity concerning school priorities. This is an important goal because in the learning milieu that constitutes St Eliza’s College, multiple curriculum priorities present challenges for promoting CIDC among staff. Clearly articulated College priorities assist leaders to validate CIDC as central to student learning.

It’s got a lot to do with politically strategic directions. There are certain things that have to happen, and others that if they happen it’s good, but they may not happen. It’s one of the features of the [teaching] profession. It needs simply to be made as a focus, and then it will probably happen. Someone must [as we’ve had] drive it. (L4 FG 8/5/14)

Moreover, a clear vision for student learning is productive for the enculturation of a curriculum initiative. This is an important goal for a school undertaking a new initiative because clarity concerning the CIDC’s contribution to the vision, promotes staff and students’ adoption of DC principles as “standard operating procedure” at St Eliza’s College. The vision offers opportunities for leaders and teachers to
experience a shared understanding of the value of DC for their community. While multiple strategies may achieve this goal, leaders suggest three enablers for transforming school culture.

I think that if it’s to be part of the culture it needs to be in every classroom, charts in every classroom so it’s visually there...in the unit planning so they’re [staff] checking it off. It also should come into the performance development review – that it could be a clear question saying ‘how have you incorporated digital citizenship into your planning and preparation?’ (L3 I 26/11/14)

Furthermore, when a curriculum initiative is grounded in the school vision it generates opportunities for leadership. Importantly, staff experience increased confidence in engaging with CIDC in circumstances where there is sustained focus on DC through professional development, staff collaboration at meetings, and professional discourse (L2 I 29/5/14). Indeed, teachers and leaders agree that the CIDC initiative requires overarching leadership - specifically a leader dedicated to driving the curriculum and maintaining the DC emphasis (L4 & L6 FG 8/5/14; T14 I 8/5/14).

I think like any successful program or implementation it needs someone driving it...someone’s knowledge and passion in doing that is keeping everyone on that track. I think that’s the important part of implementing any program – is having the right leaders in terms of making it happen. (L3 I 26/11/14).

In summary, staff participants experience Senior Leadership Team and Faculty Leaders’ visioning of CIDC as a fundamental influence on the initiative’s effectiveness in the College. When teachers and leaders’ experiences include sustained focus on DC, CIDC gains momentum in the community.

5.3.3.2 Accountability
Accountability for CIDC is a complex process. There are a number of explanations for this phenomenon. First, there is a lack of externally mandated school-wide curriculum and reporting requirements concerning DC. While DC principles are reflected in the Melbourne Declaration on Educational Goals for Young Australians
and the Australian Curriculum’s (AC) General Capabilities, and connections are generated between DC and the AC’s Year Level Descriptors, it has a developing rather than preeminent educative focus. Consequently, CIDC lacks the automatic validation with staff afforded to assessment and reporting foci mandated by Queensland Curriculum and Assessment Authority (QCAA) and Australian Curriculum, Reporting and Assessment Authority (ACARA).

Indeed, DC elements and their assessment are mostly omitted in senior QCAA subject syllabuses. This is in contrast to many College curriculum priorities that are mandated in Queensland senior curriculum. The QCAA Common Curriculum Elements (CCEs) is an illustration of a College Years 8 to 12 priority that is legitimised in Queensland senior curricula and assessed in the Queensland Core Skills (QCS) Test. Not surprisingly, staff members are likely to prioritise College curriculum initiatives endorsed by senior school educational programs. Consequently, if a curriculum initiative has limited assessment or reporting requirements regulated by external authorities, it is predominantly reliant on school-based accountabilities. In these circumstances, it is productive to include the initiative in College reflection and feedback processes because this demonstrates the importance of CIDC at the College:

…it’s the same with the unit planner [another College priority] and with these other things [curriculum initiatives - CIDC] we’re told we have to do, but then there’s not a lot of support or accountability then. Like you know until I’m asked three or four times and reminded ‘hey, you haven’t sent something’ [it doesn’t happen]…and that’s probably because it’s there but it’s not there at certain times…to me…The biggest challenge is how legitimate is it [CIDC]? And, is it something that we are valuing, that we are really meant to be putting energy into? (T18 FG 24/4/14).

The second reason for poor accountability concerns the lack of consistency with Faculty CIDC expectations. While there are complexities balancing responsibilities for a school-based curriculum initiative, distinct accountability processes validate CIDC among staff and students.

There are so many things that we are expected to embed in the curriculum, and often it is those things where you don’t have a set
guideline to meet or someone tapping you on the shoulder – it’s those things that you do then let go. (L5 & L6 FG 8/5/14)

Not surprisingly, inconsistent CiDC standards and accountabilities between College Faculties generate challenges for staff. Instead of a sustained CiDC focus throughout the curriculum, staff members’ experiences include varied expectations concerning the presence of DC elements in subject unit planners, and inconsistent Faculty emphasis on integrated DC learning opportunities (T14 I 8/5/14; T6 I 11/6/14). This is appropriately illustrated by T18:

I don’t think in our Department digital citizenship is a priority for us in planning our units. But then we address it in the assessment...so maybe at the moment that's what we’re doing. But I still think there is a question of ‘are we going to be audited to see are we doing this [CiDC] correctly?’ (I 12/6/14)

Similarly, T13 confirms the influence of Faculty expectations on staff engagement:

Certainly, Department attitudes toward it [influence CiDC]. Whether or not the symbols or links [DC index] may still be in place, but if they’re not referred to or if there’s no expectation that people are actually going to implement them [DC elements] it would soon become irrelevant. (I 11/6/14)

Third, there is a lack of College generated staff accountability and reporting processes concerning CiDC. Unambiguous and monitored accountabilities are particularly productive for CiDC. Indeed, an effective curriculum initiative develops professional learning, program planning, assessment, and reporting. In circumstances where College leadership addresses these aspects, staff members experience an enhanced willingness for engagement: “so if you want to enculturate it [an initiative], it needs to be put out there in a number of mediums so that you’ve got the promotion but also the accountability so that those two go together” (L3 I 26/11/14). Similarly, L2 confirms this perspective: “what gets measured gets done, and what gets fed back gets done better (I 29/5/14). Consequently, it is appropriate to include DC elements as standard components of Faculty assessment rubrics.
It [digital citizenship] should actually be built into their [students’] assessment where you can tick it off and say ‘I’ve seen these elements, we’ve tested that skill, they’ve applied that knowledge’. I think that needs to be in the assessment task itself in order to ensure that we are building on top of what is happening in the classroom, and not just letting it happen by osmosis. (L2 I 29/5/14)

Further, in the absence of externally mandated school-wide curriculum and reporting requirements, members discern an enhanced role for school-based CIDC staff feedback and reflection opportunities. Quarterly or six-monthly questionnaires that assist staff to determine how they are experiencing CIDC may be productive (T18 I 12/6/14): “...you don’t want it [feedback tool] too complicated, and you’re not trying to put people in a corner, you just want simple things but in those simple things come some learning outcomes (T6 I 11/6/14). In addition, displaying feedback using diagrams and graphs may be effective visual stimulus to support staff CIDC engagement. T6 offers this understanding:

I think like anything if you’re going to the trouble of planning resources, and you’re wanting an outcome, then you really want to measure or track the effectiveness of that. And you might be talking about the effectiveness of something over several years. If you agree on that and then you say well ‘what are we tracking and trying to measure here?’...it could be fairly intangible things like people’s attitudes to some very concrete things about what people actually do...I just look at it in a goal setting sense which says if you’re at a current spot and you want to get to somewhere else you need to have a path or trajectory to which you’re going to go along, and the only way you’ll know whether you’re on that path is to track it somehow, and if you’re getting off the path to give you feedback and steer you back. (I 11/6/14)

Moreover, College leadership structures and Strategic Renewal Framework (SRF) planning may offer opportunities to support the leadership of CIDC processes (T14 I 8/5/14).

An Assistant Principal who has technology, data, elearning and digital citizenship as their role, needs to sit alongside the Middle Phase and
Senior Phase Assistant Principals…It [that role] needs to be someone in the SLT because then the school is making it a priority. Because annual goals come directly out of the SRF and inform the SRF as well, so if [a person’s] professional goals are digital citizenship, elearning and technology, then it’s given emphasis, priority and money. (L2 I 29/5/14)

Likewise again, L3 identifies the influence of the College’s SRF on accountability processes:

Absolutely because it’s only when you get some accountability, like the other thing that we [the school] have obviously is our SRF, so it [DC] would be part of your SRF over say a four year period and it would then be an action plan of what you’re doing each year [regarding digital citizenship]. (I 26/11/14)

The final reason for poor accountability concerns the “results focused” educative culture in which CIDC is facilitated. Staff participants’ experiences of secondary schooling confirm curriculum that is not assessable is marginalised (T9 FG 29/4/14; T17 I 12/6/14). While staff members acknowledge that individual professionalism should influence this reality (L6 FG 8/5/14), their established experiences confirm the phenomenon. Indeed, teachers and leaders encounter the dilemma of foregoing curriculum responsibilities, in an attempt to fulfil syllabus and program assessment requirements.

From a principal’s point of view I’m sure that [digital citizenship] would not be as high a priority as making sure kids are getting the best levels in what is assessed…I think it would make it [CIDC] more likely to happen and happen sooner if that was part of the assessment criteria now across the board, then it would have to presumably happen and I think that would be a good thing. But I think knowing what we’re really trying to do is educate children for success in life we should be doing it [CIDC] anyway, and we should be taking the trouble to help each individual to learn all their subjects to the best of their ability without the focus that we have on just what’s the result. (T6 I 11/6/14).
Importantly, Principals’ accountabilities to national and state education authorities and governments are a fundamental influence on a school’s curriculum focus. At St Eliza’s College, engaging with CIDC informs staff members’ understandings that “at the moment the onus is on us as a school just to have it [digital citizenship] in our work lesson plans and activities” (T17 I 11/9/14). Indeed, there is a perceived dissonance in DC focus among *The Melbourne Declaration on Educational Goals for Young People*, the Australian Curriculum and Senior Subject Syllabuses.

It needs to come from above that there needs to be this section [on digital citizenship] in your work program. To be honest if we’re not instructed by QSA and panel to do something, it doesn’t happen because we don’t have the time in the day to do the “extra” things we’d like to do because we need to get what is supposed to be there, done well. So unless it’s in there [the work program] it’s not going to happen at a classroom level especially at Senior. (T17 I 11/9/14)

Similarly, T14 confirms this understanding:

It ties in with Principals being held accountable for digital citizenship in schools, like in the United States with eRate funding…Until it’s [digital citizenship] there [more explicit in Australian Curriculum and detailed in senior work programs] it will never be definitive – never critically respected and forged in a school. It’ll be something that runs alongside [mandated curriculum] but…there’ll always be something else and therefore it becomes a bandaid. (I 8/5/14)

In summary, the understandings generated from specific research question two are that staff participants’ experiences of the CIDC audit and planning process prepare them to identify and facilitate DC teaching and learning opportunities in school curricula. Participants believe time pressures, multiple curriculum priorities and ICT challenges inhibit the process. Staff members’ experiences facilitating CIDC are influenced by their understandings of ICTs, DC and the Australian Curriculum; their willingness to commit energy and time to developing the curriculum initiative; and students’ responses to the learning opportunities. Student participants perceive teachers as the fundamental influence on their CIDC participation and learning. Staff participants experience Senior Leadership Team and Faculty Leaders’ visioning of
CIDC as a pivotal influence on the initiative’s effectiveness in the College community. When teachers and leaders’ experiences include sustained focus on, and accountability for DC, CIDC gains momentum in the community.

5.4 Research Question 3
The third research question is: How does a curriculum that integrates digital citizenship influence members of the school community?

Understandings about specific research question three relate to one concept:

1. CIDC generates cultural change in the school community

Six themes are created to illustrate how teachers, leaders and students perceive CIDC influences members of St Eliza’s College:

1. Common language
2. Expectations
3. Community interactions
4. DC awareness
5. Practice
6. Determining influence

5.4.1 CIDC Generates Cultural Change in the School Community
Staff members agree the CIDC has influenced St Eliza’s College community: “there’s been a change in culture and a change in understanding of the need for something like digital citizenship” (L1 I 29/5/14). CIDC has affected members’ understandings concerning College values, priorities, acceptable behaviours, and educational “core business”. Importantly, CIDC is a developing influence on members of the College community.

We are part way through a shift in culture and a shift in understanding. So I would say if you’d said to the staff before 2011 ‘what is digital citizenship?’ or ‘is it [digital citizenship] important?’ or ‘should we be doing something?’ you might have had a sector that said we probably should but we are too busy – I mean you may have had support. But I think in the main if you spoke to staff now, I’d be very surprised if there wasn’t very strong support across the board that we need to be doing
something or we are doing something in this area [digital citizenship]. I’m trying to think of a similar cultural shift – like the no smoking movement or the understanding of the discrimination movement. You have a legislative change which takes a while to filter through to people, whereas now you can’t imagine someone smoking in the workplace – whereas probably it was 10-15 years ago when they were all doing it. When I began teaching they [teachers] used to smoke in the staffroom, and now it’s unthinkable. So for me it’s that kind of cultural shift. So as a leadership team when we’re talking about professional development or what needs to happen [in the school] or the direction of the school – digital citizenship is part of that conversation, in the same way that Edmund Rice values might be. (L1 29/5/14)

The implementation of CIDC in 2012 generated a focus on the responsible and effective use of digital communication technologies. Before CIDC, the College’s one to one laptop program offered students a networked digital platform for learning. However, guidance concerning appropriate technology use was limited to a suite of ICT policies and year level sessions focused on responsible use of digital technologies. This is appropriately illustrated by L2:

I think we were really limited in our original scope [of the laptop rollout] because we just looked at the technology and what the technology could bring to the school – how it could be used as a research tool and how could we communicate and all that sort of stuff and we really didn’t give much consideration to the elements of digital citizenship. I think it only really hit home for us with the DCIC project in 2011. That’s when we started to hear the term ‘digital citizenship’ and it started to drive home and I think we were also at that point starting to have issues with students and Facebook…there were all of these issues starting to emerge at the same time and we were starting to think ‘oh, we have to do more than just teach the content and the learning experience, we actually have to do things a lot better’. So then we started to team with outside people to come up and do a talk….we were doing it very elementary through assemblies, and we were starting to talk to staff about some stuff to do with digital citizenship. But it really didn’t start to
take hold until the project in 2011 and then the common language came in, and people started recognising that they had to do it as part of their classroom teaching. (I 29/5/14)

Indeed, the absence of a comprehensive curriculum approach to ICT integration together with increasing inappropriate online use generated the need for a further dynamic to complement the laptop program. It was in this context that the Digital Citizenship Framework was introduced and the CIDC implemented in 2012. This timing was important because it affected how staff engaged with the initiative:

I think it came at the time when we were looking for something and also looking at other things [curriculum changes] too. So that we could incorporate it [digital citizenship] with the Australian Curriculum, the Understanding By Design focus, and the curriculum planner initiative. So, it’s been part of a bigger picture, not just this one thing that we had to concentrate on and that’s a strength. (L10 FG 8/5/14)

By offering regular opportunities for students and staff to learn about and practise their DC, CIDC has transformed the College focus from technology use to responsible technology use. This has been an important shift in focus because it has generated developing awareness and acceptance of online behaviour standards among members.

I don’t think you can look easily at individuals and say…that two-thirds of the cohort have got the message and understood it. Standing back and without any data to support it, I would think that the fact that teachers were brought up to speed with one view and then went into classrooms and began to implement a lot of the messages gave everyone a focus and a starting point and immediately people began to upgrade their awareness, their ability to be able to make decisions on their use of technology, and the misuse of technology. So I think…that there are still issues of misuse of technology but I don’t think it’s anything like it was, so that general awareness and acceptance of the way technology is used has been lifted certainly. Because we took everybody from a certain starting point and gave a set of boundaries or constraints which could be linked to curriculum and daily practice. And
even if that message has fluctuated since I think it has been a powerful moment for the College and for students and staff to be able to do that.  
(T13 I 11/6/14)

Importantly, the shifting focus has offered opportunities for members to enhance their social interactions and capacities to respond effectively in situations arising from online activities. L2 identifies this influence among students:

I see it with students when students come to me now and are a little bit more proactive I suppose. So you know a student will come to me and say ‘Sir, I’m a little bit concerned about such and such a student who’s doing X, Y and Z with their phone or across the Internet so can you talk to them please?’ So before [CIDC] it was us [staff] finding out that they’d already done it and dealing with the fallout, now some students are being aware and saying ‘look we know it’s wrong and we know they need development in this area so can you come and talk to them?’ So we’re not doing the punishment stuff or having to react and then punish [as much]. We’re actually going: ‘is this the right way?’, ‘is there a better way you should have done it?’, ‘how can we resolve this?’, ‘how can we fix it or remove it?’ And I’m seeing that more in the last couple of years, and I think it’s the same with staff. (I 29/5/14)

Participants identify six dimensions of cultural change at St Eliza’s College. Each of these is presented.

5.4.1.1 Common Language

CIDC introduces staff and students to the Nine Elements Framework and offers members a vocabulary to discuss their experiences from the digital reality. Shared understandings concerning language and its meaning is an important dimension of school culture. When staff and students identify the same meaning for words and phrases they develop connections that transcend age and experience.

Well I know if I start off with students, when I’m talking to students and you bring up elements of digital citizenship – digital rights and responsibilities for example – they tend to be able to shoot back the same language. And I think that’s important because if we’re using the
same language then we’re not confusing what we’re talking about. (L2 17/11/14)

Similarly, S23 confirms the clarity generated by common language: “so if you’re trying to explain something to someone everyone knows what it is. Just like Maths we don’t have lots of different names for the one thing [and this helps us]” (I 17/11/14)

Moreover, common language is productive for community relationships. Introducing staff and students to the Nine Elements Framework accustoms them to digital standards and integrates online participation within St Eliza’s College community. Indeed, CIDC offers an approach for developing shared understandings concerning online participation for staff and students. L10 offers this insight:

We use it [digital citizenship terms] in general conversation with kids too. So it could be sitting at lunch and they could say something and I’ll say ‘ah, but does that make you a good digital citizen?’ So I use that language a lot with the kids externally from the curriculum also. (FG 8/5/14)

In addition, language generates links between thought processes and actions. Therefore, it is an important influence in a school community when DC terminology is an established component of members’ discussions and learning. L1 confirms this value:

So it’s become part of our everyday language I think…and I’m a big believer that if you can get something into the language you will ultimately end up with a change. So I think there’s been a significant influence on the community. (I 29/5/14)

Furthermore, the Nine Elements Framework has offered a mechanism for St Eliza’s staff and students to inculcate DC into their planning, teaching and learning processes.

I think it’s [CIDC] worked to support the conversation that in terms of the curriculum, people have had that language to use. And it’s been a complimentary factor if you take other approaches in terms of our
learning management system (LMS) – that it’s sat on the side but also to be linked in – so there would be some things that would be put into a program where the teachers mightn’t have used that language to describe it originally but now they have got that language to be able to talk about it [digital citizenship]. And if you take our secondary school students who tend to have six or seven subjects, and they’re going from subject to subject and the language is similar, they get to see the links and then it becomes ingrained in their thinking. (L3 I 26/11/14)

5.4.1.2 Expectations
CIDC has enhanced College expectations concerning teachers’ and leaders’ professional practice. Teachers’ experiences inform their changed understandings and acceptance of integrating DC in unit planning and lessons (T17 I 12/6/14). The change in practice extends to developing students’ understandings of acceptable behaviour standards: “I try to introduce it [digital citizenship] at the beginning of the year and then encouraging and supporting what our ICT Department does too. I try to share the focus of what the College’s expectations are” (L10 FG 8/5/14). In addition, staff members recognise a developed duty of care for their own and students’ online participation: “I think CIDC puts quite a bit of responsibility on me [the staff member]” (T14 I 8/5/14). Similarly, T9 confirms the increased emphasis concerning staff members’ online responsibilities: “we just had that talk the other day from an Administration member [SLT] about not having students or ex students on Facebook…I’m sure there’s a number of teachers who would have a lot of students as friends” (FG 29/4/14).

Further, CIDC has generated enhanced opportunities for leaders to establish a DC focus in curriculum processes. By implementing CIDC, St Eliza’s College legitimised the dynamic with staff. The decision demonstrated DC as a priority in the school curricula. L7 explains: “...so you can bring along those ones [staff] who you might have been spending all your effort trying to bring along and get up to pace” (FG 8/5/14). Likewise, L1 confirms the influence on College expectations:

In terms of the expectation that you [a curriculum leader] would say to staff ‘I know you’re doing this or what elements are you looking at here?’ So it’s just a conversation. Or when I observe lessons for new
staff we talk about that [digital citizenship] or when I look at their work moving to full registration they will show me examples and teaching digital citizenship is just part of what they do. So I think there’s been a significant change in that regard, whereas they wouldn’t be doing that if it was 5 years ago. (I 29/5/14)

5.4.1.3 Community Interactions
CIDC generates change in staff members’ approaches to managing students’ online participation. Engaging with CIDC promotes a proactive and enquiring approach to online activities. This is particularly demonstrated by leaders’ remodelled behaviour management techniques.

It’s [CIDC] certainly given me some leverage into talking with students, and talking with their parents when they come to me because of some misuse [of technology]. So when they come to me and there’s some online poor behaviour or inappropriate use of technology, it’s like that little window in that you can talk about. So, ‘tell me what you’ve done in your classes about this?’ Or ‘this can’t be new to you - this can’t be the first time someone has told you this kind of behaviour is not appropriate, so what have you been doing?’ So that common language is critical so I’m able to say to parents that students are taught about digital citizenship in a variety of ways – it is in the classroom, we have external people who talk with them also, so I’m able to use it [CIDC] as a segway into the conversation. (L1 I 29/5/14)

Likewise, L2 explains the influence CIDC has on her approach to dealing with students:

It influences my interactions with students, particularly around dealing with issues with Facebook and the like. In the early days [of the laptop rollout] I probably would have jumped straight to the punishment – you’re wrong, do this…Now I go back; I check with them [students]. I talk about proactive strategies they can use – ‘how can you have that conversation with someone else?’ or ‘who can you have that conversation with?’ So even my dealing has changed a little bit more proactively than reactively. I mean you still have to do the reactive stuff
as you find out, but I think I’ve changed as my knowledge and experience have grown, I’ve changed my interactions with students around digital citizenship. (I 29/5/14)

CIDC also develops staff and students’ online communication. This is an important influence because an increasing proportion of St Eliza’s community interactions occur on a digital platform. The virtual interchanges include emails, iMessaging and texting and CIDC offers opportunities for members to explore online communication standards. Staff members identify enhanced student and staff electronic exchanges after explicit teaching of appropriate online correspondence (T6 I 11/6/14).

I always worry about the way they [students] communicate [online] and address [emails], and their tone. And the fact that they send emails late at night and expect a reply – so the etiquette. And the submission of something, and how to word an email, and the salutations. So it’s even just the day-to-day world that they’re in and communication has changed. So I’ve had many conversations about how you address an email does influence my decision on your work, what you’re asking for – all of those sorts of things. (L8 FG 8/5/14)

Moreover, CIDC generates enhanced discussions between staff and students concerning their online experiences. Teaching and learning about DC augments members’ capacities to engage in purposeful conversations. This is a productive outcome of CIDC because when members communicate effectively, relationships are strengthened and this is conducive for student learning.

The kids often talk about their digital selves in every day language and sometimes as a teacher you listen and say, ‘well hang on, have you considered the implications if you do that?’ That’s just our role as care givers, so something that we instinctively do. And I probably put it to you that you probably wouldn’t do it if you didn’t know all of those elements of digital citizenship. You’d probably say, ‘hey guys that’s not right’. But at least you’ve got some working knowledge [and can say] ‘do you realise that’s against the law if you do that?’ (L9 FG 8/5/14)
Similarly, “you can follow up the conversation…not just tell them off” (L10 FG 8/5/14). L7 confirms this influence:

You’re putting it back on to them [the students]. And you’re making it a thought provoking question [for them] rather than just ‘ah, I didn’t realise that’ [type of question and response]…If our kids all have this basic level of digital citizenship, I find that with my senior students you are able to have much more sophisticated discussions with them…because the world is not black and white. (FG 8/5/14)

5.4.1.4 DC Awareness

CIDC enhances staff and students’ awareness of their digital rights and responsibilities and this is an important component of cultural change. Developing awareness of DC generates opportunities for change in members’ understandings of their roles in digital community. Prior to implementing CIDC, members’ appreciation of DC was limited to personal interest or incidental curriculum coverage. Placing a curriculum focus on DC generates fundamental changes in members’ appreciation of responsible online participation: “[prior to CIDC] I didn’t realise just how big digital citizenship was and how important it was to our students” (T16 I 20/6/14).

Importantly, CIDC has influenced staff members’ personal and professional endeavours (L7 FG 8/5/14). Data from the online questionnaire confirm this conclusion. Out of 35 staff who responded, 29 (83%) identify that CIDC changed their awareness of digital citizenry issues in professional practice (Figure 5.2).
Figure 5.2 Changes in Professional Practice – Question 12 in the Staff Questionnaire (35 respondents)

Q12 Which of the following best describes the area of change in your professional practice? Please indicate one or more responses.

Answered: 35 Skipped: 5

Furthermore, 34 of 39 respondents agree or strongly agree, that: “staff are more aware of their own rights and responsibilities when participating in digital community” (refer to Table 5.15).

Table 5.15 Staff Awareness of Online Rights and Responsibilities – Question 13 Section B in the Staff Questionnaire (39 respondents)

Q13 Please indicate your level of agreement with the following statements. Indicate your opinion by selecting the appropriate descriptor.

Answered: 39 Skipped: 1

<table>
<thead>
<tr>
<th>A. Students are interested in learning about how to participate in a digital community.</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Unsure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5%</td>
<td>54%</td>
<td>23%</td>
<td>15%</td>
<td>3%</td>
</tr>
<tr>
<td>B. Staff are more aware of their own rights and responsibilities when participating in digital community.</td>
<td>15%</td>
<td>72%</td>
<td>8%</td>
<td>5%</td>
<td>0%</td>
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An important influence of CIDC is students’ enhanced awareness of the digital context. When students' capacities to understand the online reality expand, they
likely experience changes in attitudes and behaviours. This is appropriately illustrated by S20:

Last year I was bullied online through Skype and Facebook and it affected me a lot and it affected my behaviours…I was quite obsessed, I would check it [online] every 10 seconds, and I found when I went and spoke to the House Co-ordinators about it and they brought up digital citizenship. And he [my Co-ordinator] explained that what they [the students] were doing is that they were being more confident to say those things over the keyboard, and just to delete those things. And I kind of realised that because I went through that experience I would never put anyone else through that. If I have anything to say to anybody I would say it to them directly because they could take what I say in any way. Because it turns out those girls were just having a joke but it wasn’t a joke for me…and because they can’t express emotion over the Internet or typing or whatever, you can’t see their faces so you take it very seriously if it’s an insecurity or something like that. (FG 19/5/14)

5.4.1.5 Practice
CIDC influences the actions of St Eliza’s College members. While CIDC affects a heterogeneous change in students’ actions, staff members’ experiences reflect sustained transformation in their professional practices.

5.4.1.5.1 Student Actions
Importantly, while CIDC sensitises students’ awareness of digital rights and responsibilities, it may not consistently influence their actions. There is a perceived tension between students’ apparent understanding of DC principles, their abilities to practise informed decision making, and their online activities.

…there is an influence on them [students], because they are aware. Every time we say ‘ok, we’re going to talk about responsible [online] use’, they go ‘yeah, yeah, we’ve heard this 100 times’. So they know the drill. They don’t necessarily follow the instructions…it’s being young and untouchable in many ways or a “this won’t really affect me in 10 years” [mindset]. (T9 FG 29/4/14)
The dissonance in students’ online awareness and actions reflects two realities. First, students experience challenges translating their knowledge into practice. In some instances students’ online actions reflect a lack of understanding of their DC. In these cases, while students are aware of the Nine Elements Framework they have difficulty applying the online standards to their digital participation. This inconsistency in students’ online awareness and actions may demonstrate their developing maturity.

Second, some students’ irresponsible online activities reflect a disregard for behaviour standards. Notwithstanding their evolving awareness of DC, students dismiss their online responsibilities and engage in non-productive practices.

I think for some students it’s [CIDC] influenced them more than others. Some are still ‘I can do whatever I want’. ...I think some of the kids do understand more of the safety issues, some not and are still snap happy. I think with digital communication – some take it on board and some don’t… I recently received a most inappropriate email from a student about another staff member. The reaction of the student was not appropriate for the situation. But I thought the student had learnt this [appropriate digital communication] in my class, but then maybe they hadn’t transferred it across the situations. So it made me question myself as to how much [CIDC] is being taken up by students? (T1 7/5/14)

However, the perceived disregard for online standards may reflect students’ developmental abilities to understand the seriousness of situations.

My honest opinion is probably that they’re [students] more aware [of their digital citizenship] but whether that awareness actually impacts on their behaviour [is hard to know]. Just recently, [a student] showed me a Facebook picture of a girl in his class that she had posted…and it was in a situation that I didn’t think was appropriate. So I’m thinking for that young girl she’s clearly not got the message…so that sense of being private. There was nothing wrong with what she was doing as such but the image wasn’t right – appropriate to be out there. (T18 12/6/15)
The online questionnaire supports this understanding of a disparate influence on students’ actions. Ten of the 39 staff agree that “students use their laptops and mobile phones more appropriately”, 23 staff are uncertain, and six staff disagree (Q).

Interestingly, students maintain learning about DC has generated changes in their digital technology use. Notable changes include enhanced respect for their own and others’ online privacy and property rights, accessing appropriate websites, and protecting their digital reputations (Q). Students recognise CIDC has improved their digital skills and abilities to use the Internet for learning: “...now I know more about technology, and get more out of it than I did before” (S20 Q).

5.4.1.5.2 Professional Practice
CIDC generates changes in staff members’ professional practice. First, CIDC influences members’ decision-making concerning ICT integration. Before CIDC, members’ ICT focus was limited to ‘how’ technology was included in their lessons. Teaching and learning about DC transferred members’ focus to initially determining ‘why’ digital technologies are embedded in the learning process and then ‘what’ is the most productive way of achieving the educative outcome. This paradigm shift is appropriately illustrated by T1:

I think one of the biggest things is just people making more informed decisions about why they integrate technology, and the reasons they’re integrating it and the effects it can have for putting information online, and what happens with it and who can access it...So whether you’re doing a blog in class - who can edit it, who can access it and view it and what kind of information is going in there and what’s it applicable for? So I think things like that have made people really think about ‘ok, we’ve got these extra options available to us but what is the best way of putting it out there and what’s the safest way for the students and people involved in being part of this?’ So I think CIDC has made you think a bit more about other options I have, and the right ways of using it [digital technology], and the laws involved, and the ethics, and how it can affect other people [rather than just including it for the sake of it].

(I 7/5/14)
The second change since implementing CIDC concerns the altered teaching approaches to include the digital context. Before 2012, the DC focus was limited to digital literacies involved in learning activities or assessment. Indeed, there was no ownership or responsibility for DC knowledge among the College Faculties. The influence is exemplified by L10:

I think for me with teaching Science, I’m now teaching a lesson on copyright and referencing that I probably wouldn’t have spent much time on in the past. I probably would have been like ‘oh well, Humanities will do that, or the librarian should do that or whatever’. So that’s had an influence on me, so basically all of those levels that we [teachers] probably would have pinpointed into certain department areas, have certainly come into every area…But yeah, it’s [CIDC] had a big influence on some things that I now teach in my class, that I probably never would [have before] from a textbook style [subject]. (FG 8/5/14)

Therefore, CIDC offered opportunities for teachers to explore broader understandings connected with, but not specific to, a subject. Considering digital community standards across the curriculum facilitates contextualised learning. Indeed, students are likely to learn equally about digital communication strategies in Science and English. Health and Physical Education classes incorporate digital literacies including critiquing legitimate websites and referencing online sources, rather than limiting coverage of these understandings to Library classes. Therefore, learning about DC where it is relevant in a subject facilitates meaningful learning. T12 confirms this influence with her Business Studies class:

Yesterday, I was doing Webpages with Year 8s, and I just put up iWeb and said ‘ok before we do anything, before I teach you, what do we need to think about?’ And the kids said copyright. And then we had a big discussion about not just copyright on webpages, but copyright for everything. You know, downloading music, downloading movies and just laying down the facts, ‘If you’re doing that, you don’t have the person’s permission, it’s illegal and you are stealing’. (FG 24/4/14)
The online questionnaire supports this understanding. Thirty-eight respondents identified changes in teaching practice (20) and lesson content (18) as the second and third largest areas of CIDC influence on their professional practice (Q).

The third influence on staff members’ practice is an expanded repertoire for facilitating student learning. Since CIDC was implemented, enhanced teaching practices have offered new options for demonstrating learning. CIDC offers members opportunities to engage with digital programs that refine their work, and facilitate learning beyond the physical environment.

I can do so much more on Final Cut Pro than it would have taken me three days to do 10 years ago…and software available for English – the templates and reproducing things. It is just phenomenal. How they [students] can publish blogs, and publish their work to a global area. And how they can talk to people [other students] overseas about their work. There are so many possibilities that are so exciting…there are lots of things you could never do carrying around encyclopaedias! (T15 FG 24/4/14)

Moreover, CIDC especially facilitates the learning of gifted students. It also enables working with students who have varied learning preferences including kinaesthetic, auditory and visual approaches. When teachers develop students’ digital literacies they augment students’ capacities to demonstrate their learning.

I’ve experienced last year that it’s [CIDC] really good to expose gifted students in the classroom, or working with any difference. But particularly those students that usually just quietly hunker down, but you can get them to show their work with iMovie…and some of it is outstanding. So…I’ve picked out kids that I thought ‘wow!’ I never realised they had that potential in them. (T15 FG 24/4/14)

5.4.1.6 Determining influence

Staff and students at St Eliza’s College appreciate that CIDC does influence their community. However, determining the influence on students’ actions is an area of complexity identified by staff.
I think there’s been a significant influence [from CIDC] on the community. If you said to me has behaviour online changed from students or by the students - I’m not sure how I would measure that, and I think personally, I would struggle to answer that. (L1 29/5/14)

There are two explanations for this phenomenon. First, the formal strategy to determine a curriculum initiative’s influence on students’ progress is assessment. Therefore, the lack of externally mandated or College based school-wide CIDC assessment (refer to section 5.3.3.2) generates complexity. While adjusted accountability requirements offer feedback concerning students’ knowledge and capacities to apply understandings in simulated situations, they may be unable to illuminate CIDC’s influence on students’ online actions. Consequently, staff members rely on informal observation and feedback. T13 offers this understanding:

I really think that it’s [CIDC] had an impact… I think there just seems to be a [change in] attitude among students. I remember a year or two ago, some of the nastier stuff that was being passed around the College from an internal level – students’ photos and filming of outside activities and comments passing back and forth – there doesn’t seem to be that [nasty behaviour] through the place at this stage which I think is interesting. (FG 29/4/14)

Moreover, while St Eliza’s College leaders identify productive changes in students’ actions since 2012, they understand the intricacy in accrediting the influence solely to CIDC. Therefore, the leaders understand the nature and quantity of formally reported online incidents pre and post CIDC offer an insight concerning the influence.

I know I’m now dealing with less issues around Facebook [with students] – the words that some students would use, the abuse that they would give each other on Facebook – it still happens but no where near to the same degree. And I think that’s got to do with the classroom teacher being much more aware of digital citizenship when they’re teaching it in the classroom. So I think that’s a positive…if I’m seeing less of that it means we’re supporting the students a lot better. (L2 29/5/14)
The second complexity in determining CIDC’s influence on students’ online activity is accounting for the effect of other influences at home and school. Students are maturing and affected by attitudes, lessons and role modelling from parents and staff members. Therefore, while there are positive changes in students’ online awareness and digital technologies use, staff members believe the difficulty lies in attributing influence to a particular component of students’ holistic development:

I don’t even know how you would go about that [gauging influence of CIDC on students]. How do you measure the impact it [CIDC] is having? Because a lot of it is behavioural and it’s developmental, and all of those sort of issues in terms of adolescence” (T18 I 12/6/14).

Similarly, T14 confirms this understanding:

I’d hope that kids are more aware of what we’re talking about, say the dangers and how to be respectful, how to treat each person with respect when they post things or communicate online with someone. I would hope that, but I don’t know that. You know we still get kids that are in trouble for doing all kinds of things that they shouldn’t…and I know that’s going to happen at anytime with anything [because that’s just kids] and not just on the Internet. (FG 24/4/14)

In summary, the understanding generated from specific research question three is that CIDC generates cultural change within a school community. Participants believe CIDC creates shared understandings concerning language and this influences their abilities to discuss online experiences. The curriculum initiative has enhanced College expectations concerning teachers’ and leaders’ professional practice, and transformed staff members’ understandings regarding DC in curriculum. Further, CIDC generates change in staff members’ approaches to managing students’ online participation. Participants consider CIDC enhances their awareness of digital rights and responsibilities. While staff members’ experiences reflect sustained transformation in their professional practice, CIDC may not consistently influence students’ actions.
5.5 Conclusion

This chapter identifies new understandings about members’ experiences of a CIDC, and its influence on students, teachers and leaders at St Eliza’s College. These are summarised conceptually in Figure 5.3.

The majority of this chapter addresses those understandings generated from specific research questions one and two. This is because of the relative newness of CIDC at St Eliza’s College at the time the research was conducted. CIDC was in its third year of implementation. Not surprisingly, a preponderance of data concerned participants’ contact with, and interpretations of, their engagement with a CIDC. Therefore the researcher acknowledges that the understanding concerning influence presented in this research is generated mid-way through a curriculum development and invites further research following the initial five-year implementation period.

Figure 5.3 Conceptualisation of Chapter 5 Understandings
The understandings generated from the specific research questions require synthesis, reconceptualization and further discussion. This is presented in Chapter 6.
CHAPTER SIX: DISCUSSION OF THE NEW UNDERSTANDINGS

6.1 Introduction

The purpose of this research is to explore how members of a secondary school community experience a curriculum that integrates digital citizenship (CIDC). The purpose of this chapter is to discuss issues that were generated by the new understandings presented in Chapter 5. A synthesis of the new understandings identified four issues. They are:

- Staff and students’ understandings when implementing digital citizenship (DC) in a school curriculum
- Appropriateness of established terminology in reflecting students’ understanding of DC
- Ability of staff members to engage confidently and professionally with DC in the curriculum
- Generational dissonances in implementing a CIDC

These issues are relatively novel and create a comparatively new contribution to scholarship, and as such invite discussion. Table 6.1 illustrates the relationship between the research questions, new understandings and issues that structure this chapter.

Table 6.1 The Relationship Between the Research Questions, New Understandings and Issues for Discussion.

<table>
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<tr>
<th>Specific Research Questions</th>
<th>New Understandings</th>
<th>Issues for Discussion</th>
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<tr>
<td>Specific research question 1: How do members of a secondary school community experience a curriculum that integrates digital citizenship (DC)?</td>
<td>Preparation for participation in digital community</td>
<td>Staff and students’ understandings when implementing DC in a school curriculum</td>
</tr>
<tr>
<td>Specific research question 2: How do members of a secondary school community engage with a curriculum integrating digital citizenship (CIDC)?</td>
<td>DC belongs in the curriculum</td>
<td>Appropriateness of established terminology in reflecting students’ understanding of DC</td>
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<tr>
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| | Staff engagement influenced by knowledge base, willingness and students’ reactions | Generational dissonances in implementing a CIDC |
| | Leadership focus and accountability processes influence engagement | |
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Table 6.2 offers a diagrammatic structure for the discussion of these new understandings.

**Table 6.2  Structure for Discussion of New Understandings**

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**6.2  Staff and Students’ Understandings When Implementing DC in a School Curriculum**

A new understanding from the research is that integrating DC in the curriculum is a prerequisite to members’ appreciation of, and engagement with the nine elements framework. Participants identify a role for schools in developing members’ DC capacities and agree that an integrated curriculum substantially contributes to this goal. They believe CIDC generates an overarching focus on DC and facilitates contextualised learning.

Undoubtedly, it [DC] should be embedded in the curriculum at every opportunity. It should have its own identity…The schools who are being dynamic have a leader or the Senior Leadership Team who have the foresight to understand that this isn’t something that’s here for the
next couple of years, it’s something that will scaffold curriculum into the ages. (T14 I 8/5/14)

This understanding explains the preferred DC learning model for students, teachers and leaders: “Digital citizenship should definitely be covered in the school curriculum, not as a subject on its own, but embedded in normal everyday teaching that we do. It is something that affects all students across all subject areas” (T16 I 20/6/14). Students share this perspective: “It’s good to have digital citizenship in the subjects…don’t have it as a subject but talk about digital citizenship when it relates to your subject like when we’re doing a big assignment for our research” (S1 FG 7/5/14). Particularly illuminating is the collective perspective that “stand-alone” DC programs, and educative approaches involving one Faculty offering DC lessons, are disconnected from the holistic learning process. Importantly, students and staff members perceive such approaches ignore that digital communication technologies influence all aspects of student learning. (See section 5.2.2.3 for elaboration of this issue).

This understanding appears novel because there is minimal research concerning school members' experiences of a CIDC. Existing literature advocates the appropriateness and relevance of DC in students' educational programs (Bennett, 2005; Ribble, 2015; Ribble & Bailey, 2007). While a number of studies (Boyle, 2010; Pescetta, 2011) examine implementing DC in schools, they fail to explore the perspectives of teachers, leaders and students engaging with an ongoing CIDC.

In contrast, the literature tends to examine any one or more of the following:

- the development and validation of a Technology Leader’s Guide for implementing DC in schools (Ribble, 2006);
- developing and testing a DC guide for teachers at a global academy (Pescetta, 2011);
- the effectiveness of a short-term DC program in a Year 9 Technology course (Boyle, 2010);
- the design of a stand-alone DC program for Years 5 and 6 students (Cunha, 2012);
the relationship between school leaders’ beliefs and the implementation of a DC curriculum in schools (Suppo, 2013); and

- the relationship between Catholic educators’ perceptions of the influence of Catholic identity and their ability to promote and model DC (Miani, 2015).

While research (Ribble, 2006) focused on the development and validation of a Technology Leader’s guide for school staff members to implement and teach DC, it did not explore the experiences of those involved with DC curriculum. Moreover, it is fair to conclude that while there are texts offering guidelines for initiating DC education (Ribble, 2011; Ribble & Bailey, 2007), they are not empirically based in that such strategies fail to incorporate the researched perspectives of staff members or students.

Likewise, although the research (Pescetta, 2011) developed a guide for teaching DC at a global academy its empirical basis was limited to the classroom observations of four teachers across five lessons together with their survey data. While the final teaching guide was revised to include recommendations from a panel of subject experts, survey findings and feedback from teachers involved in a professional development workshop about the guide, the study did not incorporate researched perspectives of students involved.

While there is limited research concerning the effects of DC education on students’ behaviour (Boyle, 2010), it does not explore the perspectives of staff and students engaging with ongoing CIDC. Instead, the study uses Ribble’s (2004) Digital Driver’s License Survey to assess if DC lessons affect the normative technology use behaviours of two groups of Year Nine students. Initially, both groups completed the survey and then the experimental group participated in four DC lessons over a two-week period in their Information Systems course. They also completed three DC oral presentations later in the year. In contrast, the control group did not participate in the activities. Both groups were tested again using Ribble’s survey two months after the DC lessons and the findings indicated “a significant difference in the students’ normative behavior of technology use when exposed to the Digital Citizenship curriculum” (Boyle, 2010, p. 55). Unfortunately the research design was restricted to quantifying students’ knowledge of appropriate technology use, and failed to
generate data demonstrating changes in students’ attitudes or behaviours. In contrast, the research reported in this thesis identifies a tension between students’ abilities to identify responsible ICT use and their digital practice (refer to section 5.4.1.5 for amplified understanding). Consequently, Boyle’s conclusions should be cautiously considered.

In summary, the current study offers a novel Interpretivist understanding of CIDC from the perspectives of students and staff. While the new understandings presented in Chapter 5 endorse international literature asserting schools are positioned to teach and model DC (Brooks-Young, 2010; Gearhart, 2008; Hollandsworth et al., 2011; Miani, 2015; Ribble, 2011; Toteda, 2012), they also extend existing research concerning staff and student engagement with DC education programs. There is minimum research exploring a school community’s experiences of an integrated DC curriculum. This research addresses this lacuna. A synthesis of the understandings presented in Chapter 5 offers empirically based research concerning student and staff members’ perspectives of CIDC, and invites discussion.

6.2.1 Different Motivations for Including DC Across the Curriculum
Students and staff members believe that integrating DC across subjects and throughout year levels is an appropriate approach for two distinct reasons.

6.2.1.1 Staff Motivation
Interestingly, the primary justification staff members offer for integrating DC across curricula concerns focus. They believe the effectiveness of the curriculum priority is related to maintaining a school-wide emphasis, and identify this goal as a challenge for school communities (L10 FG 8/10/14).

The challenge is that teachers are very busy and they have a lot of demands on them – so how do you do something in a way that it’s going to get the message across rather than it becoming sidelined – you know it’s pushed to the side and they don’t see the integral importance of it and just see it as another one of those systemic things that we have to do. (L3 I 26/11/14)
A regular concern addressed by teachers and middle leaders is the intermittent nature of the school's focus on multiple priorities. CIDC is one example of the school's curriculum priorities. Staff communicate that while initial professional development for a school focus is successful, ongoing and meaningful engagement with the priority is lacking (T16 FG 24/4/14). Participants confirm this has been their experience with the CIDC priority. While teachers and leaders recognize there are many influences contributing to this reality – particularly time scarcity and insufficient funding – it is nonetheless a regular phenomenon.

…unless you have that vision and that push from senior leadership that leads down into every level of leadership within the College all working towards one goal...then it just keeps fizzling at different points, and then you restart, reboot and rehash things that have already been done. But not getting much further than we ever did. (T14 I 8/5/14)

Moreover, changes in staffing influence the capacities of teachers and leaders to maintain a school-wide DC focus. Participants acknowledge the itinerant nature of staff as “just part of education” (L6 & L10 FG 8/5/14) and describe the challenge of maintaining DC’s relevance in the curriculum with staff turnover and Faculty Coordinator changes (L10 FG 8/5/14). “I think it’s [DC] got to be that constant and continuous in front of staff…that’s one of our challenges to make sure that we’re constantly putting it in front of the staff” (L2 I 29/5/14). In these circumstances, staff suggest an ongoing need for more “small acts of momentum”. Suggestions include story telling, regular staff surveys and staff “Digital Drivers’ License” top-up activities:

I think as far as reinforcement, you can reinforce without perhaps putting people under more pressure. Just by simply sharing stories – positive stories that have come out of the practicing of DC and just some of those stories keep it on the radar and keep it alive both at a personal level…and in the classroom. (T6 I 6/11/14)

A further recommendation involves a mechanism for regular reflection on members’ “currency” with DC knowledge: “you have to have currency – how current are you in digital citizenship?” (T14 I 8/5/14). Staff members describe “DC currency” as their knowledge of appropriate and responsible digital technologies use, their related experience, and their capacity to guide their students. “So you’ve got to get your way
of thinking so that they [students and staff] know – what is a good digital citizen? Where’s your [DC] license? Has everyone got a license around that [DC]?” (L3 I 26/11/14).

Importantly, teachers and leaders confirm that an integrated DC curriculum addresses their concerns regarding consistency and momentum. Integrating DC throughout subjects and across year levels fosters a shared ownership of the school goal among staff members: “[e]very teacher is a teacher of digital citizenship – it’s our responsibility” (T17 I 12/6/14). In these circumstances, staff members are less likely to ignore DC teaching and learning opportunities or assume they are covered elsewhere in the curriculum. These understandings contribute to scholarship advocating DC’s inclusion in school curricula by presenting empirically based data supporting CIDC (Bennett, 2005; Brooks-Young, 2010; Hollandsworth et al., 2011; Ribble, 2009; Toteda, 2012; Winn, 2012). The research reported in this thesis also advances new explanations for why educators prefer an integrated curriculum approach to DC education.

6.2.1.2 Students’ Motivation

In contrast to staff members’ motivation for an integrated curriculum approach, students suggest CIDC offers a contextualised, “just in time” method of learning: “It [DC learning] doesn’t need to take up like a whole lesson to talk about it because people just zone out” (S23 FG 19/5/14). The emergence of learning preferences particular to the digital generation has been confirmed in the literature (Jukes et al., 2010b; Rosen, 2011). Students’ preferences for learning to be participatory, visual, collaborative, linked to real life examples, and relevant resonate with scholarship (Jensen, 2008; Johnson, 2005; Parker, 2010; Tapscott, 2009). The research presented in this study offers new understandings of how a CIDC applies these learning preferences to DC education. It also attempts to illuminate why students believe this is an appropriate approach to developing their DC capacities.

Like if we’re working on our laptops we just want the teacher to say, ‘well be careful what you’re doing’. We don’t want them to sit down for half an hour and be like this is why you can’t do it. We just want them to say it so it goes off in our head – ‘oh yes, we remember we can’t do that’. (S25 FG 19/5/14)
The new understandings involve an expressed desire for learning the “hard facts” (S24 FG 19/5/14) about DC, without lengthy explanations from teachers. Students prefer to engage in discussions with teachers about DC issues as they relate to lessons or assessment (O 12/11/14). Indeed, the digital generation’s predilection is for learning to be “just in time” rather than linear.

[Just in time learning]…is about having the skills, knowledge and habits of mind that allow them [the digital generation] to continuously learn and adapt just in time, when that next window of opportunity or area of interest briefly opens to them. (Jukes et al., 2010b, p. 39)

What is particularly insightful is that while students acknowledge the benefit of guest speakers or “top up” year level DC sessions (S4 I 29/10/14; S29 I 14/10/14), they believe it is more effective to learn about digital rights and responsibilities when it relates to their educational program: “if you do it [DC] once every year it wouldn’t sink in, but if you do it multiple times it has a better chance” (S25 FG 19/5/14).

Students describe dissonance between stand-alone information sessions and their digital lives. This experience contributes to their preference for an integrated DC approach.

When we have talks on DC, to be honest, no one listens. Like no one takes any of what they’re saying into account when they’re at home. Like when the police came one time, it all scared us a bit about nudes and stuff but no one takes into account [afterwards] what they talk about. (S23 FG 19/5/14)

Further synthesis of these understandings offers the nuanced perspective that a CIDC is one approach that provides the necessary “hook” for students to engage in developing their DC capacities. The “digital disconnect” (see section 3.5.3 for elaboration) that permeates contemporary education generates a need for creative ways for teachers to “make their students receptive to new ideas in technology” (Pescetta, 2011, p. 77). Scholarship confirms that “students think they know everything about using technology” (Rosen cited in Pescetta, 2011, p. 77), and many teachers work with students who are more skilled with technology than they are (Hartnell-Young & Morriss, 2007; Pescetta, 2011).
When students’ experiences involve teachers “approaching, mastering, valuing and using technology differently” (Rosen, 2011) from the digital generation, the research confirms that they express boredom (Brooks & Holford, 2009; Thomas, 2008). Participants’ perspectives resonate with the scholarship. Students doubt teachers’ abilities to enhance their digital context knowledge, and describe their own digital context proficiencies as superior to those of teachers and adults generally: “with digital stuff we think we know more about it than the teachers” (S23 I 17/11/14). In these circumstances, the current study concludes students are likely to disengage from lessons or information sessions designated solely as “digital citizenship”: “because if we go to a group and it’s just about digital citizenship – no one listens” (S23 I 17/11/14). What is particularly insightful is that an effective “hook” to engage students in DC education is contextualising their learning within other subjects.

This understanding may explain why students’ prefer an integrated curriculum. The relevance of the natural connection between a particular subject and the DC elements becomes the “hook” for engaging students in developing their DC capacities. “I think when they [teachers] do it sneakily just putting it [DC] in there [to lessons] like we listen, because we think this is Maths and we do have to learn about it” (S23 I 17/11/14; O 12/11/14; O 17/11/14). However, this research establishes the perceived connection DC has to the subject is fundamental to the success of CIDC:

Even the other day in class everyone was like ‘why are we learning about this [data about texting while driving]? This isn’t Maths’. People just switch off when they think it’s got nothing to do with the subject we’re in. (S23 I 17/11/14)

Just recently in English we had the option to write an analytical essay…I know lots of people didn’t understand that what they had done was copyright. So after that we got pretty much a whole lesson from Mr X on what’s copyright, what’s breaching copyright and what’s ok. (S29 I 14/10/14)

Importantly the “hook” for student engagement that an integrated curriculum provides, also appears to diminish two perceptions that are reinforced by stand-alone curriculum. First, students experience teachers’ lack of expertise concerning digital
technologies and surmise a lack of DC knowledge. This perception generates challenges for staff in demonstrating their DC proficiency. The research presented in this thesis establishes that teachers’ perceived grasp of the digital context is a precondition to student engagement with DC education (S25 & S22 I 29/10/14). This phenomenon is novel in the teacher - student relationship where staff members are understood (unless demonstrated otherwise) to have mastery of traditional subjects such as Maths or Geography. In contrast, many students consider their own knowledge superior to teachers in “all things digital”: “I already knew everything [about DC]” (S9 Q).

No one needs it [DC education] at our age, kids already know what to do or not to do on the internet and thinking that you need to teach us what it is - is basically you thinking we are stupid which we are not. (S10 Q)

This belief combined with a perceived lack of teachers’ digital technologies experience, generates a student conclusion that staff members have limited DC training.

More teachers should be educated on it [DC]. Like that should be part of their uni [university] degree to learn about DC and to learn about how to respond to teenagers – like not just about what we need to learn but about how to interact…It’s important to have a teacher that’s been educated [about DC] and not a random teacher. (S22 FG 19/5/14)

Students describe that this perspective intensifies when inexperienced or unprepared teachers facilitate standalone DC lessons (S25 I 29/10/14).

I think like say we’re in Maths and we have not a good teacher you’re still going to try and learn about it because you know that’s something you’re going to need in life. But if we’re first just learning about digital citizenship [with a teacher who doesn't know what they're doing] we’re kind of like ‘oh, it doesn’t matter’. We’re not going to listen to the stuff or take it in. But if they [the teachers] were good and talked to us and discussed it [DC] and what could happen we would take it in and enjoy being there. (S23 I 14/10/14)
This research concludes that students believe teachers lack digital technologies expertise and DC training. It reports that students prefer effective DC educators and believe teachers need to be specifically trained in this area. These understandings confirm the scholarship that identifies a lacuna in teacher preparation for DC education (Curran, 2012) and a need for specialised training (Crockett et al., 2012; Jukes et al., 2010b; Pescetta, 2011).

A second perception diminished by an integrated curriculum is that DC education is unimportant. Students consider DC as non-essential compared to those subjects that “count” towards their Overall Position (OP) ranking or vocational education pursuits (S21, S22 & S24 FG 19/5/14).

You know that your parents are going to be angry with you if you get a D in Maths. But if you fail DC like it’s something that would be ‘oh, that’s alright’ because your parents wouldn’t understand that it’s something that is kind of helpful…not everyone’s aware of it [DC] and aware that it is a major priority. (S23 I 14/10/14)

This research reports that CIDC contributes to discrediting a perception among students that relative to core curriculum, DC lacks importance. It achieves this goal by establishing relationships between DC and students’ core subjects (O 12/11/14; O 17/11/14). Moreover, students consider assessable curriculum as particularly important. Therefore, when DC learning outcomes are included in an assignment or examination, students more readily identify their value to their studies.

I think that it’s a good way to actually learn about DC [having DC in a Maths assignment] and get kids to listen, because we know we have to do our assignment and know how to do it…so I think we learn best that way. (S23 I 17/11/14)

6.2.1.3 Conclusion

The research presented in this thesis identifies benefits of integrating DC teaching and learning opportunities throughout subjects and across year levels. However, it also emphasises the need for sustained focus on DC and offers suggestions for support mechanisms to contribute to this goal. In particular, this study concludes that locating DC education in the context of traditional subjects encourages teachers and
students to engage in connected learning. These conclusions are innovative and advance existing scholarship by offering insights for school leaders seeking to implement DC curriculum.

6.2.2 The “Village” Approach to DC Formation

An associated new understanding reported in this research is that it is appropriate to include DC in school curriculum because schools and families share responsibility for developing students’ DC capacities. This understanding aligns with research suggesting that “no single entity can tackle the challenge alone”, and confirms that the village approach to raising a child includes developing their digital citizenry (Hollandsworth, et al., 2011, p. 46; Gibbs, 2010). Staff and students identify the shared role in DC formation for two distinct reasons. Interestingly, the explanations illuminate a dissonance in understanding concerning parental capacity and invite discussion.

6.2.2.1 Different Understandings of Parental Capacity

6.2.2.1.1 Staff Perspective

Staff members believe parents are unable to develop students’ DC. This understanding reflects the global experience that parents struggle to negotiate the rapidly changing Digital Age. Their abilities to regulate their children’s online activities and model positive DC are limited (A. Churches, 2012b; Boyle, 2010; Ribble, 2011). Teachers and leaders describe a lack of parental knowledge and experience concerning the digital context. “I think Mum and Dad often have no idea what’s happening [online] at home so for staff to reinforce the long term consequences of [poor digital citizenship] is important” (T1 I 7/5/14). A lack of positive DC role-modelling at home impedes the sensitising of students to appropriate digital communication technology standards: “just some basic etiquette such as I would consider it rude to be on the phone at a meal, but if the parents are doing it the students see that” (L1 I 29/5/14). Consequently, staff members identify CIDC as an appropriate educative approach to holistic formation in the Digital Age. “It [DC education] moves beyond the family, because the family themselves aren’t equipped for that…the technology would be ahead of most parents or carers for a lot of the students” (T14 I 8/5/14).
Particularly illuminating is that teachers and leaders do not distinguish a CIDC as “a point in time thing or need” (T17 I 12/6/14). Staff members explain that while parents’ capacity to nurture their children’s DC may evolve over time, CIDC is relevant in the Digital Age. (Refer to sections 5.2.2.1 and 5.2.2.2 for elaboration). Therefore, teachers and leaders embrace the dual goal that “by doing it [CIDC] at school – if we’re starting with the younger generations then hopefully with them having an understanding and an awareness of it [DC]…hopefully they can influence their parents via their education” (L5 FG 8/5/14).

6.2.2.1.2 Student Perspective

In contrast, while students acknowledge parents may not be “technologically savvy” they do not agree with the “digital parenting gaps” opined by staff. Students consider digital communication technologies permeate all aspects of their lives, and believe it is appropriate for school and home to contribute to their DC education.

What becomes apparent in this research is that students believe parents are capable of developing DC. While students recognise deficits in parents’ digital knowledge, they are more concerned with how parents approach digital communication technologies. In this respect, students perceive that parents and teachers share a different appreciation for technology than themselves. Indeed, students explain that parents and teachers, as members of “older generations” have grown up in a pre-Internet world or a world where digital technologies were relatively unsophisticated (S16 FG 19/5/14).

But like the stuff that goes on with our generation with technology it’s not like theirs [parents’ generation]. Like they don’t see it as a big thing – it’s just a phone. Or it’s just Facebook that you post a photo on every now and then. But we see it like a whole different thing – to bully people, to talk to people… (S18 FG 19/5/14)

Therefore, students believe adults currently fail to adequately appreciate the technology-related challenges children regularly negotiate. One particularly relevant challenge is cyber bullying. Students explain that online bullying is different to bullying they’ve experienced offline. While their parents tell them “to delete everything they [bullies] say or just block them” (S16 FG 19/5/14), students feel
depressed, insecure and scared by what they’re read on social media or in text messages (S19 & S20 FG 19/5/14). Consequently, students believe that often “parents would know about bullying…but they might not know about the type of bullying that’s happening right now” (S16 FG 19/5/14).

In other words, students discern that antecedent generations’ approaches to digital technologies are different to their own (S16 FG 19/5/14; S18 FG 19/5/14). These perspectives confirm research (Jukes et al., 2010b; Rosen, 2011).

What is particularly insightful in this research is that students perceive the generational differences extend to social norms (S21 & S25 FG 19/5/14). One issue that illustrates this conclusion is sexting (refer to section 2.3.5.2.1 for amplified understanding). “I think sexting and things like that are kind of becoming the norm this day and age for young people” (S22 FG 19/5/14). While students are aware of social guidelines such as not electronically forwarding sexually explicit pictures, they explain that sexting, similar to underage drinking and smoking, is widely accepted among their generation. “Everyone knows you shouldn’t send nudes and it could come back to haunt you with jobs but they still do it” (S23 FG 19/5/14). A leader also identifies the generational distinction:

…the way they [students] now write in texting format and use it in their conversation. For example LOL...Even how they relate to each other – they have a funny way of courting each other, which we [teachers] would never think about...I’ve seen on the news that sexting is now considered a normal part of courting. (L4 FG 8/5/14)

Therefore while students identify parents, like teachers, approach digital technologies differently than they do, they do not believe it generates a lack of parental capacity to develop DC. Instead, students believe these different approaches generate at times incongruent understandings of responsible online participation. Notwithstanding, students consider the online context is another dimension of parenting and expect parents to “be pretty down with that” (S20 FG 19/5/14).

When we’re younger our parents teach us about stranger danger and then when you’re on the Internet it is the same thing and so then even if they [parents] don’t know about DC, they teach us about talking to
people on the road, so everyone would have the general knowledge that you shouldn’t talk to people you’re not supposed to on the Internet. (S21 FG 19/5/14)

The reality for students is that digital communication technologies influence so many aspects of their lives. “To them, the smartphone, the Internet, and everything technological are not ‘tools’ at all – they simply are. Just as we don’t think about the existence of air, they don’t question the existence of technology and media” (Rosen, 2011, p.10). Indeed, students presume parents – together with schools - will be involved in developing their DC (S25 FG 19/5/14). While students acknowledge parents “struggle” with the pace of technology, they believe parents should maintain currency with the digital context and be aware of online activities. “[P]arents should be able to see everything that we do online…they should be able to keep up with everything we’re doing so then they’re able to educate us as well” (S17 FG 19/5/14).

6.2.2.1.3 Conclusion
The research presented in this thesis concludes that parents and schools share responsibility for guiding students’ DC formation. These understandings confirm previous research (Gibbs, 2010; Hollandsworth et al., 2011), and make a special contribution to scholarship by offering empirically based perspectives on the shared responsibility. In addition, this study generates novel student insights concerning parents’ capacity for DC formation.

6.3 Appropriateness of Established Terminology in Reflecting Students’ Understanding of DC
A second issue that invites discussion focuses on the appropriateness of DC terminology for students. The term “digital citizenship” was broadly defined in the mid 1990s by Digizen.org. It was then formally defined in educational literature with Ribble & Bailey’s Nine Elements Framework (2007). The nine elements include digital access, digital etiquette, digital law, digital communication, digital literacy, digital commerce, digital rights and responsibilities, digital security, and digital health and wellness. (Refer to section 3.3.1 for elaboration). While the terminology offers a common language for discussing online rights and responsibilities, an emerging
issue from this research is how the digital generation understands and engages with the various conventional terms associated with DC.

Staff and students agree that the term “digital citizenship” and the Nine Elements (Ribble & Bailey, 2007) offer a vocabulary for discussions concerning the digital context, and citizens' online participation. They believe a common DC language offers teachers and students increased clarity in learning (L2 I 29/5/14; S23 I 17/11/14). However an issue that emerges in this research is how students relate to the terms used to describe the concept, and the Nine Elements. Staff members explain that students experience difficulties connecting the DC elements to the issues they are discussing (T17 FG 24/4/14). For example, when students learn about privacy settings they do not relate that to the element of Digital Security. In addition, when students discuss texting they do not consider it as an aspect of DC. “I think a lot of people don’t pick up that it’s digital citizenship even if they’re (teachers are) saying it’s digital citizenship. Like things are connected within it but you don’t realise you’re learning about it” (S23 I 17/11/14). In fact, teachers indicate that while students understand a DC element when it is defined, they tend to focus on the topics, such as referencing or podcasting, and avoid using the terms that describe various aspects of DC (FG 19/5/14).

One explanation for this phenomenon is that the concept of DC is an adult construct. It has been designed from the perspective of digital immigrants who lived in a world without digital technologies – where the real world was limited to the physical context (L10 FG 8/5/14). (Refer to section 5.2.1.2 for elaboration). Therefore, while the DC terminology may offer guideposts for older generations it may be redundant for the digital generation.

…I think putting digital citizenship into the boxes [elements] is scaffolding it for us [teachers]…I think just breaking it [DC] right down makes it so much more accessible for us [teachers]…but I don’t think they [students] need the same language. (T17 I 12/6/14)

Moreover, because the students’ world has always encompassed the digital and physical contexts (Dillinger, 2015), a dichotomy between digital and physical citizenship may be confusing for them. While antecedent generations categorize
online and offline behaviours (L10 FG 8/5/14), this action may perplex students (S10 Q). Indeed, the concept of DC may misrepresent for students the interrelatedness of online and offline activities.

So if there’s bullying going on on Facebook then that affects the social-emotional of the person offline – their whole citizenship. So I suppose there’s that too – they’re [students] just thinking what they’re doing online is only what it’s [DC] about. (L10 I 19/11/14)

These perspectives offer novel insights into the appropriateness of the concept of DC and the Nine Elements terminology, in reflecting student understandings concerning DC. Ribble’s (2006, p. 30) intention for the Nine Elements Framework was to contribute to “a need for resources to help teachers explain these issues [about ethical problems with technology use] to their students”. It is therefore not surprising that staff members consider the terminology effectively supports educators’ DC understanding. What is particularly insightful in this study is that while the Nine Elements offer a lens for staff to focus their understanding of DC issues, students’ experiences of the terminology may be different. Indeed, student perspectives in this study suggest that the Nine Elements and DC terminology may be unnecessary for the digital generation and understood as “stating the obvious”. In other words, students often perceive the terms as extrinsic labels. While they apply the principles contained within the nine DC themes in their daily lives, they do not necessarily associate the terms with their online activities. In this regard, the current research presents students’ experiences of applying the Nine Elements in their school life, and illuminates an implication from Ribble’s (2006) study:

…students need to be able to take the information in Digital Citizenship and apply it to all aspects of technology usage…[they] need to show that the themes of Digital Citizenship are part of their everyday life and not just topics to be left in the classroom. (p. 426)

It is with regret that the researcher notes the limited work on this issue in the present study. The new understanding was not anticipated and in fact only emerged in the analysis of data. Therefore, while the researcher did not have the time or resources in the current study to explore the issue further, it invites additional research.
6.4 Ability of Staff to Engage Confidently and Professionally with DC in the Curriculum

The third issue that invites discussion is the ability of staff to engage confidently and professionally with CIDC. There appears to be a number of school-based and external challenges that influence staff members’ capacity to engage with DC in the curriculum. Three particular challenges are identified. These include teacher DC knowledge, paucity of time, and the need for overt reference to DC in government policy and national curriculum.

6.4.1 Teacher DC Knowledge

Teachers express concern over their lack of knowledge regarding DC: “a real challenge is being au fait with the [DC] literature. Reading it, reflecting on it and thinking about it” (T13 24/4/14). Understanding the DC elements and how to effectively integrate them in the curriculum is a challenge for staff members (T13 29/4/14). They explain that a lack of confidence and experience using digital communication technologies contributes to this reality.

I think in terms of keeping up to date with current professional development of ICT can be challenging and having time to continually review the curriculum and effective pedagogical practices to ensure we are delivering a high quality curriculum program. (T5 Q)

Teachers identify the need to gain practical experience concerning CIDC:

[W]hether that’s somebody doing a lesson and recording or whether [we] sit through a mock lesson as examples of how this [a DC element] could be applied in this situation, and this is the [year] level it could be applied to…so to bring it to life and allow me to think about it [DC] in different ways. (T1 I 7/5/14)

These perspectives resonate with research that identifies a deficit in teacher knowledge and confidence in teaching DC (Farmer, 2010; Hollandsworth et al., 2011). The research presented in this study indicates that a lack of knowledge regarding the Australian Curriculum and its DC implications often compound the situation. Teachers describe a “lack of experience or knowledge of how to include it [DC] effectively” (T15 Q). Indeed, for many staff their paucity of knowledge
generates feelings of frustration (L6 & L7 FG 8/5/14). Teachers describe feeling like a “dinosaur” compared to technologically “savvy” students (L9 FG 8/5/14).

School leaders recognise this deficit and identify staff members’ DC knowledge as an area for development:

I think the greatest aspect to develop in staff would be - just understanding the breadth of the parameters in terms of learning. Being able to understand all of the different areas where you can use different mediums in terms of technology to imbed that in your curriculum. But along with that to understand what are the elements of DC that I need to be aware of?...I think it’s understanding across the board what are the important things…you know we’ve got teachers still learning what’s appropriate to put in an email and what’s not, so the more that we saturate and educate [the better]. (L3 I 26/11/14)

Similarly, staff members confirm they require ongoing professional learning to better understand how to effectively integrate DC in the curriculum (L7 FG 8/5/14; T17 I 12/6/14). Teachers express a need to regularly reinforce the nine elements (T17 FG 24/4/14); to participate in refresher activities (T12 FG 24/4/14; L6 FG 8/5/14), and be supported in professional conversations concerning DC (T14 I 8/5/14). These perspectives confirm research advocating initial and graduate teacher education on social, legal and ethical issues associated with digital technology use (Bennett, 2005; Cunha, 2012; Curran, 2012; Pescetta, 2011; Ribble & Bailey, 2004).

An issue that emerges in this study is that further funding is required to appropriately address this deficiency in teacher education. However, the reality is that the professional development budgets rarely extend to offering regular DC professional learning. Indeed, CIDC is merely one of multiple College priorities that are competing for funding (L5 & L7 FG 8/5/14). On the international scene, countries including the United States, associate curriculum initiative funding to the adoption of government policy (Hollandsworth et al., 2011; Zhao, 2010). This does not occur in Australia, where government education policy is not a necessary prerequisite to funding that targets DC in school curriculum or leadership (Moyle, 2014). (Refer to section 3.3.6.6 for elaboration).
Therefore, in order to appropriately address this issue, Government policy initiatives need to focus on funding associated with initial and graduate teacher education concerning DC.

6.4.2 Paucity of Time

Staff members identify time as a challenge to their ability to engage with CIDC. The issue is two-fold: time to prepare CIDC and time to teach an increasingly crowded curriculum.

…if we want to do this [CIDC] well, if we have to do this well, then we need to create the time and space for it…Because more and more we’re seeing classroom teachers being asked to update units and create curriculum anyway, tying it in with ACARA. There really needs to be a review of the time factor…the planning and delivery needs some support from a time factor. (T13 FG 29/4/14)

While teachers and leaders believe CIDC is important for students (L5 FG 8/5/14) they describe the reality of foregoing some curriculum responsibilities in an attempt to fulfil syllabus and program assessment requirements (T6 I 11/6/14). “There are certain things that have to happen, and others that if they happen it’s good, but they may not happen. It’s one of the features of the profession” (L4 FG 8/5/14). This research confirms that when teachers struggle to deliver mandated course content from the Australian Curriculum (AC) and Senior Work Programs, DC is one of the College priorities that “take a break and [is] only addressed some of the time” (T10 Q; T17 Q).

Indeed, teachers are frustrated by multiple curriculum priorities and the effect this has on their professional abilities to engage with CIDC. “While we can teach students the basics as on our school framework, to develop more meaningful education is challenging with all the requirements of secondary schools” (T1 Q). This perspective supports scholarship that identifies paucity of time and increasing content requirements as challenges for teachers attempting to address DC (Brooks-Young, 2010).
The sense of frustration staff experience generates different approaches to CIDC responsibilities. Some teachers explain: “you can always find time for the things that you value” (T26 Q), and consider DC integral to the curriculum (T2 Q). Teachers who embrace this approach respond: “We are all tight on time, however it is our responsibility to teach students the opportunities as well as the dangers of using technology in a modern world” (T27 Q). In contrast, other staff members discern: “...any extra work and planning takes time. It is not magic” (T29 Q). The reality for these teachers is that DC is rarely purposefully addressed. “Sometimes school curriculum is so crowded with so many expectations of what needs to be included that things get forgotten or put into the too hard basket. Digital citizenship can fall into this” (T28 Q).

Therefore, while some staff members engage with CIDC notwithstanding time constraints, others disengage. Teachers confirm that paucity of time does constrain their ability to participate in initiatives such as CIDC (L5 FG 8/5/14; T16 I 20/6/15). However, what is insightful in this research is that the challenges concerning time reflect an overarching need among staff to be provided with research-based direction concerning the importance of DC to student learning outcomes. “The biggest challenge is how legitimate is it [DC]. Is it something that we are valuing, that we are really meant to be putting energy into?” (T14 FG 24/4/14). Teachers express concern with a lack of clarity regarding the DC emphasis at school and system level.

If there’s not a clear-cut vision that’s coming down from the Area Supervisor to Principal to Deputy Principal to Faculty Leader to teacher, of what we should be doing with digital citizenship as well as our digital delivery for curriculum, then it will fade. (T14 I 8/5/14)

While more direction and clarity do not necessarily generate additional teaching or planning time, they offer signposts for staff regarding the best use of time (L2 29/5/14). Indeed, what this research concludes is that without informed leadership teachers’ ability and willingness to engage with CIDC is inconsistent.
6.4.3 The Need for Overt Reference to DC in Government Policy and National Curriculum

Staff members recognise inconsistency between College DC goals, and definitive educational policy and curriculum requirements (T14 I 8/5/14; T17 I 12/6/14). While St Eliza’s College facilitates C IDC, teachers experience lacunae in Australian Curriculum documents concerning DC.

Having just rewritten the Senior Music Work Program for the new syllabus there’s lots about equity, there’s lots about language and literacy but there is no mention at all about digital literacy or DC in the syllabus document, and that’s a fairly new document – that’s 2013 for 2014 implementation. (T17 I 12/6/14)

These perspectives align with research (Moyle, 2014) that concludes, “no mention is made of the concept of ‘digital citizenship’” in the Melbourne Declaration on Educational Goals for Young Australians or the Australian Curriculum (p. 42).

The lack of Australian Curriculum, Assessment and Reporting Authority (ACARA) and Queensland Curriculum and Assessment Authority (QCAA) curriculum and reporting requirements concerning DC generates complexity in C IDC accountabilities. Refer to section 5.3.3.2 for elaboration. Staff members explain that mandated curriculum, assessment and reporting are prioritised in a school. “Like all things, there is often not enough time for planning, and often things that are stipulated by state authority or school policy are prioritised, leaving little room for non-compulsory aspects such as Digital Citizenship” (T3 Q). These understandings resonate with international research concerning the implementation of global citizenship (Zhao, 2010), and development education in school curricula (McCormack & O’Flaherty, 2010). They also reinforce scholarship identifying that technoliteracies and 21st century skills including DC, are omitted from curriculum and assessment (Jukes et al., 2010b).

While teachers recognise a developing DC focus in the Australian Curriculum through connections in some KLAs, and in the general capabilities (Pluss, 2013), it is not overt (T17 I 12/6/14; T18 FG 24/4/14). Refer to sections 3.3.6.4 and 5.3.1.1 for amplification. Therefore while staff members identify particular scope for integrating
DC elements in curriculum, assessment and reporting processes (L8 FG 8/5/14; L7 FG 8/5/14) they believe policy prescribing DC in the content descriptions would be productive. “It would be as simple as [ACARA or QCAA] saying these elements of digital citizenship apply to your subject and we must see them in your work program” (T17 I 12/6/14).

What this research identifies is that staff members experience a tension between student learning outcomes that are prioritised and measured by ACARA and QCAA accountability processes, and CIDC responsibilities (T6 I 11/6/14). Particularly concerning is the lack of DC emphasis in Australian Curriculum guidelines, essential learnings and standards, and syllabuses.

Until it’s [DC] there [in the Australian Curriculum], it will never be definitive – never critically respected and forged in a College. It’ll be something that runs alongside but until it’s [clearly stated] in that national curriculum – there’ll always be something else and therefore a bandaid [approach]. (T14 I 8/5/14)

Teachers confirm that in an overcrowded curriculum, course work that is not assessable is marginalised. “We are very focused on reporting on results in criteria areas that do not incorporate digital citizenship, which means that does not get the same level of priority” (T17 Q). Staff members suggest a number of strategies that would appropriately address the deficiency. First, manifest references to DC in mandated curriculum (T14 I 8/5/14), and assessment (T9 FG 29/4/14; L2 I 29/5/14) would be productive for schools attempting to implement a DC focus. Second, leaders discern the effectiveness of explicit citation to DC in professional registration and performance processes.

Digital citizenship could also come into the performance development review – that it could be a clear question saying ‘how have you incorporated DC into your planning and preparation?’ It could [be included] in terms of the standards for teachers with QCT [Queensland College of Teachers] in what’s expected under those professional standards. It could be incorporated into that so to get registration as a teacher you have to be ticked off as understanding DC…[T]he other thing we [the school] have obviously is SRF [Strategic Renewal
Framework], so it [DC] would be part of your SRF over say a four year period and it would then be an action plan of what you’re doing each year [regarding digital citizenship]. (L3 1 26/11/14)

The research identifies the need for enhanced teacher education concerning DC, and its incorporation in the Australian Curriculum. There are considerable inconsistencies in Australian educational policy documents concerning DC. It recommends a need for Government, school system and school informed leadership concerning DC’s importance to student learning outcomes.

6.5 Generational Dissonances in Implementing a CIDC

The final issue that invites discussion is the phenomenon of generational dissonances in implementing a CIDC.

Distinct characteristics of the digital generation are identified (Pescetta, 2011; Thomas, 2008). These characteristics influence how students experience CIDC. Refer to section 3.5.2.1 for elaboration. Many of these characteristics are the antithesis of teachers’ educational experiences and learning strategies (Crockett et al., 2012; Jukes et al., 2010b; Prensky, 2006). Indeed, the different life experiences of students and teachers generate inconsistent approaches to how they perceive and value digital communication technologies (Jukes et al., 2010b; Rosen, 2011). The understandings presented in Chapter 5 (sections 5.3.2.1 and 5.3.2.2) endorse these conclusions.

In light of the generational dissonances, an issue emerges in this research involving how teachers may effectively engage students in learning about responsible online activities. “The million dollar question is how do we deliver ‘digital citizenship’ so that we [teachers] make a difference to our students…HOW is the dilemma. How do we deliver such education to make the difference?” (T6 Q).

This challenge for teachers is complex. Students embrace the openness of the WWW and are comfortable with the freedoms, pervasiveness and invisibility of digital community (Ohler, 2010). Technology is central to their lives because they have internalised it (Rosen, 2011). In contrast, many teachers’ experiences with
technology are very different to those experienced by their students. Teachers view technology as a tool to integrate in teaching (Parker, 2010), and often observe young people’s online activities through a ‘moral panic lens’ (Notley, 2008). Two influences compound the effect of these different generational approaches to technology. First because teachers, particularly older staff, lack digital technologies expertise and DC training (S22 FG 19/5/14; T8 FG 29/4/14) they have diminished confidence facilitating CIDC. Second, students lack awareness that they have a serious responsibility concerning the appropriate use of technology (T9 & T7 Q). Refer to sections 5.3.2.1 and 5.3.2.2 for elaboration.

Consequently, teachers’ initial attempts to focus on DC curriculum are often met with student disinterest or ignorance concerning the importance of responsible technology use (T7 Q; T9 Q; T1 I 7/5/14; T16 I 20/6/14; T15 I 12/6/14). While students are predisposed to learning through, and interacting with digital media (Jukes et al., 2010b; Parker, 2010), they are more interested in using digital technologies than learning how to do so appropriately (T15 I 12/6/14; T16 I 20/6/14). This research concludes that the process for teachers to engage reflectively students with the realities of digital participation is problematic (T1 I 17/5/14; T14 Q). Refer to section 5.3.2.1 for amplification. Importantly though, the understandings presented in Chapter 5 (section 5.2.2.3.2) confirm that once students are engaged they appreciate that the reason they want to learn about DC is because it is relevant to their daily lives (S16, S18 & S20 FG 19/5/14).

Consequently, how staff facilitate CIDC with students is important. An understanding from this study is that students identify teachers as the fundamental influence on their CIDC learning and participation (see section 5.3.2.2). It is therefore productive for student engagement if teachers deliberately generate approaches to exploring DC themes that accommodate broad ranging student perspectives. In this respect, students are enabled to relate to their teachers while meaningfully engaging with CIDC.

An effective strategy that this research identifies, is for teachers to use “real life” examples to illustrate aspects of DC. Students respond to discussing examples of appropriate and inappropriate online activities: “if there could be more real life stories
– that makes people change their thinking" (S11 I 29/10/14). When teachers use authentic examples to illustrate DC themes they provide common ground to foster communication. The real life examples are not restricted to teachers’ or students’ life experiences.

I think a good way is to talk about life lessons, like relating back to real life stories influences students a lot…actually showing us how things can happen – not just saying it. And like giving us examples of what you should say and what you shouldn’t say. If someone is bullying you and you go back to them – how you can be made the bad person [held responsible too]…and like they [the teachers] just say ‘tell a teacher’, but if you don’t really want to tell a teacher, you can just say ‘please stop it’ and then unfriend them. (S23 I 14/10/14)

With things like digital citizenship you need to be able to visualise and talk about what can actually happen, and what has happened in the past…People respond to real life issues being addressed in real life ways...Like for example...step us through the process of what happened if someone gets in trouble for [example - sexting] at school. They went to the police station and were questioned and then fined or whatever. (S22 I 14/10/14)

By way of explanation see Figure 6.1. This is a synthesised version of a Year 9 Maths assignment on Data. The multimedia assessment component integrates the DC elements of rights and responsibilities, law, communication and literacy.
**Figure 6.1  Year 9 Maths Assignment**

*Data* is what drives us to make decisions about everything we do.

But how does the data inform us or misinform us? You will now use data to inform or misinform. This task will require you to collect evidence from several sources and provide a presentation in your class.

**Stimulus:** Your teacher will show you some YouTube videos of the ABC’s Hungry Beast fact file. [https://www.youtube.com/watch?v=A16fJrX5c0g](https://www.youtube.com/watch?v=A16fJrX5c0g)

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**Task 1**

What are the dangers and implications of texting while driving? Class brainstorming activity on whiteboard. (An example of one class response is included here).

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**Task 2**

The following table shows data relating to the number of people who reported having a crash or near crash while using their mobile phone. The number of people surveyed was 6000 and aged between 18 and 65+. (Students completed a variety of activities related to the data)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Near Crash</th>
<th>Crash</th>
<th>No Crash</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-20</td>
<td>16</td>
<td>47</td>
<td>212</td>
<td>275</td>
</tr>
<tr>
<td>21-24</td>
<td>29</td>
<td>37</td>
<td>324</td>
<td>390</td>
</tr>
<tr>
<td>25-34</td>
<td>100</td>
<td>70</td>
<td>979</td>
<td>1195</td>
</tr>
<tr>
<td>35-44</td>
<td>63</td>
<td>58</td>
<td>760</td>
<td>880</td>
</tr>
<tr>
<td>45-64</td>
<td>201</td>
<td>144</td>
<td>2205</td>
<td>2550</td>
</tr>
<tr>
<td>65+</td>
<td>30</td>
<td>29</td>
<td>691</td>
<td>750</td>
</tr>
</tbody>
</table>

**Totals**: 6000

---

**Task 3**

When considering the *validity of data*, the way it was collected needs to be carefully analysed. Refer to the full document ‘Young Drivers Record the Highest Level of Phone Involvement in Crash or Near-Crash Incidences’ found at [http://www.distraction.gov/download/811611.pdf](http://www.distraction.gov/download/811611.pdf)  (Students completed activities focusing on the strengths, limitations and assumptions of the data)

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**Task 4**

Make a multimedia presentation showing relevant facts about the dangers of texting while driving. Your intended audience is the Year 11 students who are about to get their licence next year. This presentation could be done in the style of the Hungry Beast video we watched or you could make an iMovie, Keynote, PowerPoint, Prezzie or a short film. You could even make a Lego movie!
These perspectives assist with a more insightful appreciation of the digital generation’s learning preference for “relevant, real-life experiences” (Jukes et al., 2010b, p.14; Crockett et al., 2012; Johnson, 2005; Rosen, 2011). In addition, the researched perspectives contribute to scholarship suggesting the use of examples as a productive approach for DC education (Pescetta, 2011).

The research presented in this study offers an empirically based perspective concerning the effects of generational dissonances on implementing a CIDC. It recommends a strategy to reduce the influence of generational differences concerning technology on a CIDC.
CHAPTER SEVEN: CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction
The purpose of this chapter is to present the conclusions and recommendations from this research concerning how staff and students experience a curriculum that integrates digital citizenship (CIDC). This chapter also demonstrates contributions to scholarship through new knowledge, practice and policy.

7.2 Research Design
This study is an exploration of how students, teachers and leaders of one Catholic secondary school experience a CIDC. It examines how participants experience digital citizenship (DC) teaching and learning opportunities in the curriculum, how they engage with a CIDC, and how it influences their practice.

The conceptual framework synthesises the literature into three interrelated themes: digital citizenship, society in the Network Age and schools as Network Age learning communities.

The research design focuses on three specific research questions that were generated and justified in the literature review:

1. How do members of a secondary school community experience a CIDC?
2. How do members of a secondary school community engage with a CIDC?
3. How does a CIDC influence members of the school community?

This study adopted an Interpretivist approach to its Research Design. Moreover, as the research concerns how participants experience a CIDC, a Constructionist epistemology is adopted (Feast & Melles, 2010). Students, teachers and leaders engage with each other and the CIDC to construct meaning through the process (Crotty, 1998). Through their social interaction, members interpret the research phenomenon from different perspectives (Candy, 1989). Therefore, the lens chosen to offer a particular focused understanding of the theoretical perspective is Symbolic Interactionism (O’Donoghue, 2007). This approach conceptualizes the research to acknowledge the interconnectedness of global, digital society and education. As the research explores the phenomenon of DC in the curriculum at one secondary school,
an evaluative case study methodology is adopted (Merriam, 1998). The perspectives of student, teacher and leader participants of St Eliza’s College bind this case study. Participants were purposely selected for their knowledge of the research phenomenon (Creswell, 2012). A total of 300 Year 8 and 9 students, teachers, curriculum leaders and SLT members participated in the period 10 March 2014 to 4 December 2014. This figure accounts for those participants who were involved in more than one data gathering strategy.

Data gathering strategies are:

- Focus group interviews (eight focus groups with 48 participants)
- Individual, in-depth, semi-structured interviews (19 participants)
- Online questionnaires (two open-ended questionnaires with 100 participants)
- Lesson Observations (eight lesson observations involving 145 students and 4 teachers)

During the conduct of the research, data-gathering and participant selection processes comply with the ethical standards required by the ACU Research Ethics Committee and Brisbane Catholic Education (see Appendix A).

7.3 Limitations of the Research

This research is conducted in one Catholic secondary College administered by Brisbane Catholic Education. The selective representational nature of responses from the participants limits the research (Maxwell, 2013). However, multiple data-gathering strategies are implemented to address this limitation (Merriam & Associates, 2002). In addition, the research methodology adopts an analytic rather than statistical generalization to generate a theory that may assist researchers to understand other similar situations (Cohen et al., 2011).

A second limitation is the personal and professional relationship of the researcher to some of the participants. As a part-time employee of St Eliza’s College, the researcher is conscious of the possible influence this may have on the research process. The professional integrity of the researcher as well as the use of trustworthiness strategies such as triangulation (Silverman, 2006), a comprehensive
audit trail (O’Donoghue, 2007), member checking (Lincoln & Guba, 1986), and an extended period of data gathering (Creswell, 2013) have sought to minimise researcher influence (Merriam & Associates, 2002).

7.4 **New Understandings Concerning Each of the Research Questions**

This section addresses each of the specific research questions that focus the conduct of the study.

7.4.1 **Research Question 1**

The first research question is:

**How do members of a secondary school community experience a curriculum that integrates digital citizenship?**

New understandings contribute to the general conclusion that DC should be included in school curriculum. The research generates two new understandings about staff and students’ experiences of one approach to integrating DC throughout subjects and across year levels in a school curriculum.

The **first new understanding** concerns the inclusion of DC teaching and learning opportunities in a school curriculum. There is agreement that DC belongs in school curricula. Staff and students experience CIDC as a connected educative approach to developing students’ understandings of appropriate technology use. There is consensus that DC is a necessary and relevant focus for contemporary education. Staff and students confirm that schools, in partnership with families, are “well placed” to prepare youth for responsible digital participation (Brooks-Young, 2010; Gearhart, 2008; Hollandsworth et al., 2011; Ribble, 2011; Toteda, 2012).

The **second new understanding** concerns how students and staff experience DC teaching and learning opportunities in a curriculum. A CIDC is considered to be an appropriate initiative for preparing members of a school community for participation in digital society. It contributes to this goal in three ways. First, a CIDC develops students and staff members’ capacities to understand their rights and responsibilities in the online world. A CIDC, as it is experienced, demonstrates the
interconnectedness of activities in online and offline contexts, and sensitises participants to virtual behaviour standards.

Second, a CIDC introduces members to a framework and decision-making process for responsible participation in digital community. Through guided practice in implementing the decision-making process, members enhance their abilities to consider online activities in a balanced and respectful manner.

Third, a CIDC also develops members’ online skills, including digital literacy and 21st century competencies that equip them to more effectively participate in digital community.

These new understandings contribute to the existing scholarship concerning the productiveness of DC being included in school curricula (Hollandsworth et al, 2011; Kolb, 2009; Ribble, 2015; Toteda, 2012; Winn, 2012).

7.4.2 Research Question 2
The second research question is:

_How do members of a secondary school community engage with a CIDC?_

While DC is considered a necessary focus for contemporary education, procedural, human and leadership dimensions of engaging with a CIDC are challenging for stakeholders. The research generates seven new understandings about engaging with a CIDC.

The first and second new understandings address the procedural dimension of engaging with CIDC. The first understanding is that the CIDC audit and planning process prepares staff to identify and facilitate DC teaching and learning opportunities in school curricula. Funded planning experiences that generate the time and space for staff to meaningfully engage with the audit and planning process are optimum. This new understanding contributes further knowledge to the research on suggested approaches to implementing a plan for DC in schools (Pescetta, 2011; Ribble, 2011; Ribble & Bailey, 2007).
The second new understanding is that there are procedural influences in a school setting that inhibit the CIDC audit, planning and teaching processes. Staff members identify paucity of time, multiple curriculum priorities and ICT challenges as key impediments to implementing CIDC. This reality inhibits staff members’ ability to engage confidently and professionally with DC in the curriculum. This understanding contributes to existing scholarship concerning the challenges of developing and implementing curriculum that includes DC (Bennett, 2005; Farmer, 2010; Hollandsworth et al., 2011), global citizenship education (Brooks & Holford, 2009; McCormack & O’Flaherty, 2010) or civic education programs (Fonseca & Bujanda, 2011).

The third, fourth and fifth new understandings relate to the human dimension of engaging with CIDC. The third understanding concerns three main influences on teachers’ engagement. The first is their knowledge of digital communication technologies, DC, and the Australian Curriculum’s DC implications. The second influence is teachers’ willingness to commit energy and time to developing the curriculum initiative, and the third is how the students respond to learning about DC. The understanding contributes further knowledge to research concerning the deficit of teacher DC knowledge and its implications for DC education (Cunha, 2012; Farmer, 2010; Gearhart, 2009).

The fourth new understanding is that students’ experiences engaging with CIDC vary depending on the expertise of staff members facilitating the curriculum. Students distinguish teachers as the fundamental influence on their CIDC participation and learning. They agree that their engagement is enhanced when teachers acknowledge their online experiences, demonstrate willingness to discuss the digital reality in a balanced manner, and use real life examples to illustrate DC themes.

The fifth new understanding is that students experience generational dissonances between their own and their teachers’ online knowledge, approaches and experiences when engaging with CIDC. These differences are often less pronounced with younger teachers whose locus of experience is perceived by students as more aligned with the digital generation. This understanding confirms research that
students value and approach technology differently from their teachers (Rosen, 2010, 2011).

The sixth and seventh new understandings concern the leadership dimension of engaging with CIDC. The sixth new understanding is that operating a CIDC requires leadership. Senior Leadership Team and Curriculum Leaders’ visioning of DC and its priority in the community is a pivotal influence on the initiative’s effectiveness. Teachers and leaders confirm that when there is sustained focus on DC in the school community, CIDC gains momentum.

The seventh new understanding is that there are considerable inconsistencies in Australian educational policy documents concerning DC. There is a need for Government, school system and school informed leadership concerning DC’s importance to student learning outcomes. The lack of academic leadership is challenging for teachers and leaders striving to facilitate CIDC in a school setting. This understanding contributes further knowledge to scholarship concerning Australian policy implications for school leadership of DC initiatives (Moyle, 2014).

7.4.3 Research Question 3
The third research question is:

How does a CIDC influence members of the school community?

The research generates two new understandings concerning the influence DC education has on the school community.

The first new understanding is that a CIDC offers a relevant educative approach to cultivating a culture of responsible technology use in a school setting. When a school integrates DC across curricula it is able to influence five areas of school life: knowledge base, language, expectations, community interactions and practice.

The first area concerns staff and student awareness of DC. By placing a curriculum focus on DC, members’ capacities to appreciate their own and others’ digital rights and responsibilities are enhanced. In particular, the emphasis generates
fundamental changes in staff members’ understanding of appropriate online participation.

The second influence concerns language. A CIDC introduces staff and students to a common language for discussing online experiences. The Nine Elements Framework (Ribble & Bailey, 2007) offers a defensible strategy for including DC themes in teaching and learning processes. However, while the shared DC vocabulary is productive for clarifying learning, students do not readily relate to the term “digital citizenship” and the Nine Elements Framework. Therefore, while the terminology offers guideposts for staff members concerning the digital context, it may be superfluous for students.

The third area of influence is professional practice expectations. A CIDC promotes shared responsibility among staff for DC education. It minimises the “ad hoc” nature of teachers addressing DC themes in lessons, by reinforcing the priority a school places on DC.

The fourth influence concerns community interactions. Teaching and learning about DC enhances members’ capacities to engage in meaningful conversations about the digital reality. It also improves staff and student interactions by promoting a proactive and informed approach to online participation. In particular, staff members experience an increased ability to discuss online choices and consequences with students, rather than reactively managing student behaviours.

The final area of influence concerns practice. When staff and students become informed about DC, they are presented with opportunities to reframe their thinking and actions concerning the digital context. The research is emphatic, CIDC influences teachers’ professional practice. While many staff members experience sustained change in their planning and pedagogy, CIDC does not appear to consistently influence students’ online behaviour. Nevertheless, CIDC sensitises students’ awareness of digital rights and responsibilities. There is indeed, dissonance between students’ apparent understanding and their online activities. Regrettably, irresponsible online behaviours reflect a combination of students’
disregard for DC, their developing maturity, and their inability to appreciate the responsibility of appropriate online decisions.

The second new understanding concerns the complexity in determining the influence of CIDC on students’ actions. There are challenges associated with identifying the affect learning about DC has on students’ actions. Staff members distinguish a difference between assessing students’ knowledge of DC principles, and their appropriate application of online standards of behaviour. Indeed, it is possible to identify changes in students’ understanding of DC by testing students pre and post exposure to DC education. However, determining the influence that learning about DC has on how students ultimately choose to act in an authentic situation is complex and is unable to be assessed by tests.

7.5 Conclusions of the Research

7.5.1 Contributions to New Knowledge
There are a number of conclusions generated by this research that contribute to new knowledge.

7.5.1.1 Theory into Practice
While there are pedagogical recommendations for implementing DC education in schools (Brooks-Young, 2010; Churches et al., 2010; Ohler, 2010; Ribble, 2011; Ribble & Bailey, 2007), these are largely based on theoretical models and invite an empirical foundation. The important pioneering contribution this thesis makes to scholarship concerns how teachers, leaders and students experience a curriculum that integrates DC. Such research is rare.

This research explores teachers’ use of a DC framework (Ribble & Bailey, 2007) and how students experience DC themes by integrating the Nine Elements into their subjects across year levels. This study is in the vanguard of research addressing the paucity of empirical studies concerning educative approaches to DC (Boyle, 2010; Miani, 2015; Pescetta, 2011).
The Nine Elements Framework

In addition, this thesis concludes that Ribble & Bailey’s Nine Elements Framework (2007) offers a productive strategy for school educators to conceptualise the issues concerning digital participation. Moreover, it provides a defensible framework to prepare curriculum that incorporates DC themes. Teachers and leaders identify the Nine Elements Framework as an important professional heuristic that attracts staff to engage more confidently with DC. Importantly, the framework offers a structure for professional dialogue, planning and community discussions.

What is particularly insightful is that the Nine Elements Framework and DC terminology appear to be more meaningful for staff than students. Staff and students agree that the term “digital citizenship” and the Nine Elements offer a vocabulary for discussions concerning the digital context. While they confirm that a shared DC language is productive for clarifying learning, students do not appear to readily relate to the Nine Elements terminology. Instead, students tend to discuss technology related issues rather than associate them with DC themes. Consequently, understandings from this study suggest that students may not require the identical guideposts as staff do, when discussing DC.

These conclusions offer new understandings into staff and student engagement with the Nine Elements Framework. They confirm the effectiveness of Ribble & Bailey’s (2007) Framework as a lens “for teachers and technology leaders [to] gain a better understanding of how the issues of digital technology relate to the concept of digital citizenship” (2007, p. 12). They also invite further refinement of the Nine Elements terminology to enhance student understanding. These conclusions contribute new insights to the application of existing frameworks.

It is Appropriate for DC to be Included in School Curriculum

This study concludes that DC teaching and learning opportunities enhance the quality of the school curriculum. Contextualising DC education throughout subjects and across year levels prepares members of a school community to participate in the digital context. Teachers, leaders and students consider DC as a necessary and relevant focus for schools. This conclusion contributes new insights to existing
justifications for including DC in school curricula (Brooks-Young, 2010; Gearhart, 2008; Hollandsworth et al., 2011; Ribble, 2011).

### 7.5.1.4 A CIDC Promotes Online Standards of Behaviour in Schools
A CIDC offers a relevant educative approach for developing staff and students’ capacities for responsible online participation. Engaging with a CIDC offers members the opportunities to better understand the rights and responsibilities associated with the online context. Staff and students experience an enhanced appreciation for the interconnectedness of online and offline contexts, and virtual behaviour standards. Importantly, a CIDC introduces members to an online decision-making process, and offers them opportunities to practise considering online activities in a balanced and respectful manner. This conclusion offers new knowledge concerning the ways in which DC curriculum promotes online behaviour standards in schools.

### 7.5.1.5 The Need for Informed Leadership of DC in Schools
While staff members genuinely believe DC should be integrated in school curriculum, they experience difficulties in planning, teaching and sustaining a CIDC. Teachers and leaders report that there are three main reasons for ignoring DC in curriculum: first, the paucity of time for planning and teaching, second, the competing of multiple curriculum priorities, and third, a lack of external authority and school-based accountability processes.

This research concludes there is a need for government informed leadership to school systems and schools concerning DC. Direction on the relationship between DC and Australian education priorities is required. Currently, the research indicates that leadership is not noticeable in these areas (Moyle, 2014). The lack of leadership is problematic for school staff striving to facilitate CIDC. Indeed, teachers and leaders report inconsistencies between CIDC goals, and those student learning outcomes prioritised by national curriculum requirements and established reporting processes.
7.5.1.6 Preparing Teachers for DC Education
The fifth conclusion concerns more and improved quality teacher education for DC. Teachers’ understandings of the online context and DC themes appear inconsistent. With limited DC knowledge, teachers often experience difficulties appreciating the Australian Curriculum’s DC implications. Consequently teachers report reluctance to confidently facilitate CIDC. Importantly, school leaders recognise this deficit and identify DC professional development as an area of need. However, school funded professional learning budgets are overextended, and DC education is considered one of multiple priorities competing for funding.

This conclusion confirms research that identifies a deficit in teacher knowledge and confidence in teaching DC (Cunha, 2012; Farmer, 2010; Hollandsworth et al., 2011; Ribble, 2007). It contributes to existing research concerning a lacuna in teacher preparation for DC education (Curran, 2012) and a need for specialised training (Cunha, 2012; Pescetta, 2011). The empirically based conclusion offers insights from teachers and leaders attempting to facilitate a CIDC in the Australian education context.

7.5.1.7 Developing DC is a Shared Responsibility
This thesis concludes that schools and families share responsibility for developing students’ digital citizenry (Gibbs, 2010; Hollandsworth et al., 2011). Staff and students report that DC is productively developed when parents and teachers cooperatively guide the process. When this occurs, students’ DC capacities are informed by family values and established online behaviour standards.

7.5.2 Contributions to Practice
The following conclusions generated from this study contribute to practice.

7.5.2.1 A DC Teaching and Learning Model
This study concludes that a CIDC is a preferred teaching and learning model for staff and students. Contextualising DC learning in the established educational program encourages a school-wide DC focus. Moreover, it generates connections for students between online and offline contexts. Indeed, staff and students identify
“stand-alone” DC programs and approaches involving a single Faculty DC focus, as disconnected from the holistic learning process.

The three-stage CIDC audit and planning approach used to support this DC model is productive. The flexible structure of the process is “user-friendly” for staff and generates DC teaching and learning opportunities in school curriculum. This conclusion offers new insights concerning students and teachers’ preferred approaches to DC education.

7.5.2.2 DC Enculturation
This thesis concludes that a CIDC is a productive approach to the enculturation of DC in a school community. The process of involving all staff across all curriculum areas amplifies the learning premise that every teacher is a DC teacher, and offers students continuous exposure to the DC focus. Indeed, explicit and contextualised teaching of the DC themes develops five areas of school life: DC awareness; common language concerning the digital context; staff and student interactions; professional expectations and practice.

7.5.2.3 Staff Development
This study concludes that specialised professional development is critical for all in a school facilitating DC education. Staff members require initial, and ongoing professional development concerning the digital context and DC themes. The development should particularly engage with Australian Curriculum DC requirements and implications. Importantly, relevant teacher education offers opportunities for staff to learn about how the digital generation approaches, values and relates to digital technologies.

7.5.2.4 School-based and Systems’ DC Accountabilities
This thesis concludes that in a school where DC is a curriculum priority, related accountability processes promote a sustained focus for staff and students. Therefore, it is productive for school generated reflection and feedback processes to include DC. In particular, a DC emphasis is required in staff members’ annual goal setting, reviews and appraisals. Likewise, it is effective for Middle Phase (Years 7-10) assessment to regularly involve DC themes.
This research offers insights at the systems level. If DC is purposefully addressed in Strategic Renewal Framework (SRF) and Individual Performance Management processes, then strategies, intentions and outcomes concerning DC are to be articulated in annual planning and reporting.

7.5.3 Contributions to Policy
The following conclusions generated from this study contribute to policy.

7.5.3.1 Strategic Leadership of DC Priority
This study concludes there is a need for informed active leadership concerning the role of DC in contemporary education. School leaders and teachers’ professional practices are guided by government education policy (Moyle, 2014). Indeed, principals interpret government and system policies and apply them at the local school level. Therefore, key educational policies with limited or negligible DC emphases restrain the capacity of schools to offer a sustainable DC focus. Accordingly, specific policies prescribing DC in the Australian Curriculum should be mandated.

7.5.3.2 Establishing DC Formation as an Outcome of Quality Teaching and Leadership in Schools
The importance of establishing the development of DC as an indicator of quality leadership and teaching in Australian schools emerges as a contribution to policy in this study. This conclusion highlights a need for education funding agreements and professional standards to include DC formation and accountability of use.

7.6 Recommendations from the Research
This research suggests recommendations concerning policy and practice. The recommendations attempt to address issues that emerge in the conclusions and thereby enhance the development of school staff and students' DC.

7.6.1 Policy
The recommendations for policy are:

- That national and state education authorities review curriculum, assessment and reporting requirements concerning DC. Australian Curriculum guidelines,
essential learnings and standards, and syllabuses include specific references to DC.

- That professional registration and standards include appropriate emphases on developing DC in Principals’ professional learning, and teachers’ performance-based accountabilities.
- That national education funding agreements include developing DC as an indicator of quality leadership and teaching in Australian schools.
- That pre-service teacher education programs include a dedicated focus on DC themes, the digital context, and Australian Curriculum DC requirements and implications. In doing so, the pre-service training explores how the digital generation approaches, values and relates to digital technologies.

7.6.2 Practice
The recommendations for practice are:

- Professional development be offered at systems level to meaningfully support the enculturation of DC in schools. These initiatives include the clarifying of system expectations concerning DC through Strategic Renewal and Individual Performance Management processes, teacher induction and systems learning frameworks.
- Research be undertaken concerning digital citizenship and the Nine Elements terminology, in reflecting student understandings concerning DC.
- Action research/professional development be conducted into a companion student framework for the Nine Elements Framework. This work incorporates student suggestions for terminology and concepts that promote student understanding of DC.
- Future research be initiated exploring how Preparatory to Year 6 students learn with a CIDC. This research may incorporate a comparison of the effectiveness of a CIDC with alternate DC teaching and learning models for younger students.

7.7 Conclusion
This research explores how students, teachers and leaders experience a secondary school curriculum that integrates digital citizenship. The understandings and
conclusions illuminate a number of issues that staff and students encounter when engaging with a CIDC. This research confirms the appropriateness of integrating digital citizenship in contemporary curriculum. In doing so the research argues for government leadership and action concerning the relationship between DC and education priorities in Australian schools.
Reference List


APPENDICIES

APPENDIX A: APPROVAL DOCUMENTATION

AUSTRALIAN CATHOLIC UNIVERSITY COMMITTEE APPROVAL FORM

This appendix has been removed in accordance with Human Research Ethics Committee requirements.
This appendix has been removed in accordance with Human Research Ethics Committee requirements.
ST ELIZA’S COLLEGE RESEARCH PERMISSION LETTER

This appendix has been removed in accordance with Human Research Ethics Committee requirements.
## APPENDIX B: CIDC AUDIT TOOL

### DIGITAL CITIZENSHIP TASKFORCE AUDIT TOOL - PART 1 & 2 (Where are elements of digital citizenship CURRENTLY being covered? & Where do the NATURAL CONNECTIONS occur?)

<table>
<thead>
<tr>
<th>FACULTY:</th>
<th>SUBJECT:</th>
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<tr>
<th>Unit Title/Duration</th>
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<table>
<thead>
<tr>
<th>Category</th>
<th>Digital Citizenship Element</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EDUCATE</strong></td>
<td>DIGITAL LITERACY</td>
<td>The capability to use digital technology and knowing when and how to use it</td>
</tr>
<tr>
<td><strong>EDUCATE</strong></td>
<td>DIGITAL COMMUNICATION</td>
<td>The electronic exchange of information</td>
</tr>
<tr>
<td><strong>EDUCATE</strong></td>
<td>DIGITAL COMMERCE</td>
<td>The buying &amp; selling of goods online</td>
</tr>
<tr>
<td><strong>PROTECT</strong></td>
<td>DIGITAL HEALTH &amp; WELLNESS</td>
<td>The elements of physical and psychological well-being</td>
</tr>
<tr>
<td><strong>PROTECT</strong></td>
<td>DIGITAL SECURITY</td>
<td>being related to digital technology use The precaution s that all technology users must take to guarantee their personal</td>
</tr>
<tr>
<td><strong>PROTECT</strong></td>
<td>DIGITAL RIGHTS &amp; RESPONSIBILITIES</td>
<td>The privileges &amp; freedoms extended to all digital technology users, &amp; the behaviours expectatio ns that come with them</td>
</tr>
<tr>
<td><strong>RESPECT</strong></td>
<td>DIGITAL ACCESS</td>
<td>Full electronic participatio n in society</td>
</tr>
<tr>
<td><strong>RESPECT</strong></td>
<td>DIGITAL</td>
<td>The</td>
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<tr>
<td><strong>ETIQUETTE</strong></td>
<td>standards of conduct expected by other digital technology users</td>
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</tr>
<tr>
<td><strong>RESPECT</strong></td>
<td>DIGITAL LAW</td>
<td>The legal rights &amp; restrictions governing technology use</td>
</tr>
</tbody>
</table>
APPENDIX C: DC INDEX OF CODES

DC INDEX OF CODES

Digital Citizenship codes:

L  – Digital Literacy
C  – Digital Communication
A  – Digital Access
S  – Digital Security
E  – Digital Etiquette
RR – Digital Rights and Responsibilities
H  – Digital Health and Wellness
LA – Digital Law
C$ – Digital Commerce
APPENDIX D: ISTE NATIONAL EDUCATIONAL TECHNOLOGY STANDARDS FOR STUDENTS (STANDARD 5)

5. Digital Citizenship
Students understand human, cultural, and societal issues related to technology and practice legal and ethical behaviour. Students:
   a. advocate and practice the safe, legal, and responsible use of information and technology
   b. exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity
   c. demonstrate personal responsibility for lifelong learning
   d. exhibit leadership for digital citizenship

(Ribble, 2015, p. 190)
APPENDIX E: EMAIL TO STAFF CONCERNING RESEARCH OPPORTUNITY

From: talitha.kingsmill@bne.catholic.edu.au
Date: Monday, 24 February 2014 3:32 pm
To: All Staff
Subject: Digital Citizenship Research Project

Dear All,

As many of you know I am currently undertaking doctoral research in the area of digital citizenship.

The research itself is concerned with how staff and students experience a curriculum that integrates digital citizenship, a curriculum initiative introduced at the College in 2012.

The research has been granted ethical approval by Australian Catholic University and Brisbane Catholic Education Office.

Participation is completely voluntary, and all information resulting from the study will not identify participants in any way.

If you would like to be involved you will be invited to participate in one or more of the following – an online questionnaire (5-10 minutes), a focus group interview (30-60 minutes), an individual interview (30 minutes) and/or lesson observation.

Year 8 and 9 students will also be invited to participate in the research and share their experiences of learning about digital citizenship across their subjects.

I do appreciate so many people’s interest in, and support of my research – thank you. I believe this is a cutting edge piece of research to be involved with, at an exciting time of exploration around the formation of contemporary citizenship and engagement in virtual community. It is my hope that you share this view.

If you are able to be involved in the research please remember to shoot me a quick email.

Talitha
PARTICIPANT INFORMATION LETTER - TEACHERS

PROJECT TITLE: The Experience of Digital Citizenship in a Secondary School Curriculum
PRINCIPAL SUPERVISOR: Dr Louise Thomas
STUDENT RESEARCHER: Talitha Kingsmill
STUDENT’S DEGREE: Doctor of Education

Dear Participant,

You are invited to participate in the research project described below.

What is the project about?
The research project investigates how members of a secondary school community experience a curriculum that integrates digital citizenship. It is anticipated that better understanding how teachers, leaders and students experience such a curriculum has the potential to inform future educational practice. Participation in this project will provide an opportunity for you to reflect on how you are responding to teaching a curriculum that integrates digital citizenship. It is likely that this research will also be of interest to other education professionals.

Who is undertaking the project?
This project is being conducted by Talitha Kingsmill and will form the basis of the degree of Doctor of Education at Australian Catholic University under the supervision of Dr Louise Thomas.

Are there any risks associated with participating in this project?
While it is not anticipated that you will experience any risks as a result of your participation beyond the normal experience of everyday life, please note that your participation is voluntary. Provision is also available through the Employee Assistance Program to support you, if required at anytime.

What will I be asked to do?
If you decide to participate you will be invited to be involved in one or more of the following - a focus group with other teachers, an individual interview, lesson observation and/or an online questionnaire.

The focus group and individual interviews will be held at your school and will be of approximately one-hour, and 30 minutes duration respectively. The interview and focus group will concentrate on your perspectives and experiences of a curriculum integrating digital citizenship. With your consent, the interviews will be audio-taped for research purposes. Participants involved in the focus group are asked to maintain confidentiality of the group discussions.

A selection of two Year Eight and two Year Nine classes across subject areas will then be invited to participate in the lesson observations. The student researcher will negotiate mutually convenient times to visit the classes for observation during the data gathering period. The online questionnaire will be administered on SurveyMonkey and should take approximately five to ten minutes.
Can I withdraw from the study?
Participation in this study is completely voluntary. You are not under any obligation to participate. If you agree to participate, you can withdraw from the study at any stage without adverse affect. You have the right to withdraw your data from the study at any time up until the end of the data gathering period – this does not include data gathered from the online questionnaire, as it is non-identifiable and therefore cannot be withdrawn.

Will anyone else know the results of the project?
All information resulting from this project will not identify you in any way, ensuring the confidentiality of your responses. You will not be identified by name in the findings of the project and every attempt will be made to protect your privacy (e.g. by changing the names of individuals in reports of the project, and removing other information that could be used to identify you or your colleagues). In the online questionnaire, focus group and interview you will not be required to answer any questions you consider personal, intrusive, or potentially distressing. No information that is confidential to school families that arises during the data gathering, or that has the potential to identify a child or their family, will be used.

An Executive Summary of the project will be made available for staff participants at the completion of the project. Results of the project may be reported at conferences, in practitioner and academic journals. No findings of a personal nature, or data which could have the potential to cast a negative light on you, your colleagues, or your school, will be included in these reports. Data from the project will be retained for up to seven years then destroyed. You will see that, on the attached Consent Form, you are asked whether you give permission for data in this project involving you to be used by me as part of other projects during this time period. This is entirely optional.

Who do I contact if I have questions about the project?
If at any time you have any questions, concerns, or require further information regarding the project please contact either the Student Researcher, Talitha Kingsmill, XXXXXXXXXX or tjking001@myacu.edu.au or the Principal Supervisor, Dr Louise Thomas, XX XXXXXXXX or LouiseThomas@acu.edu.au.

What if I have a complaint or any concerns?
The project has been approved by the Human Research Ethics Committee at Australian Catholic University (approval number 2013 300Q), and Brisbane Catholic Education. In the event that you have any complaint or concern about the conduct of the project, you may write to the Chair of the Human Research Ethics Committee care of the Office of the Deputy Vice Chancellor (Research).

Chair, HREC  
c/o Office of the Deputy Vice Chancellor (Research)  
Australian Catholic University  
Melbourne Campus  
Locked Bag 4115  
FITZROY, VIC, 3065  
Ph: 03 9953 3150  
Fax: 03 9953 3315  
Email: res.ethics@acu.edu.au

Any complaint or concern will be treated in confidence and fully investigated. You will be informed of the outcome.

I want to participate! How do I sign up?
If you are interested in participating in the project, please read and sign both of the attached Consent Forms, keep one for yourself, and return the other to me via my pigeonhole in
PARTICIPANT INFORMATION LETTER – FACULTY CO-ORDINATORS

PROJECT TITLE: The Experience of Digital Citizenship in a Secondary School Curriculum

PRINCIPAL SUPERVISOR: Dr Louise Thomas
STUDENT RESEARCHER: Talitha Kingsmill
STUDENT’S DEGREE: Doctor of Education

Dear Participant,

You are invited to participate in the research project described below.

What is the project about?
The research project investigates how members of a secondary school community experience a curriculum that integrates digital citizenship. It is anticipated that better understanding how teachers, leaders and students experience such a curriculum has the potential to inform future educational practice. Participation in this project will provide an opportunity for you to reflect on how you are responding to leading the implementation of a curriculum that integrates digital citizenship. It will also provide an opportunity to reflect on teaching a curriculum that integrates digital citizenship. It is likely that this research will also be of interest to other education professionals.

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What will I be asked to do?
If you decide to participate you will be invited to be involved in one or more of the following - a focus group with other Faculty Co-ordinators, an individual interview, lesson observation and/or an online questionnaire.

The focus groups and individual interviews will be held at your school and will be of approximately one-hour, and 30 minutes duration respectively. The interview and focus group will concentrate on your perspectives and experiences of a curriculum integrating digital citizenship. With your consent, the interviews will be audio-taped for research purposes. Participants involved in the focus groups are asked to maintain confidentiality of the group discussions.

A selection of two Year Eight and two Year Nine classes across subject areas will then be invited to participate in the lesson observations. The student researcher will negotiate mutually convenient times to visit the classes for observation during the data gathering period. The online questionnaire will be administered on SurveyMonkey and should take approximately five to ten minutes.

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Will anyone else know the results of the project?
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Who do I contact if I have questions about the project?
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Dear Participant,

You are invited to participate in the research project described below.

**What is the project about?**
The research project investigates how members of a secondary school community experience a curriculum that integrates digital citizenship. It is anticipated that better understanding how teachers, leaders and students experience such a curriculum has the potential to inform future educational practice. Participation in this project will provide an opportunity for you to reflect on how you are responding to leading and managing student and staff digital technology use in a school that offers a curriculum that integrates digital citizenship. It will also provide an opportunity to reflect on teaching a curriculum that...

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**I want to participate! How do I sign up?**
If you are interested in participating in the project, please read and sign both of the attached Consent Forms, keep one for yourself, and return the other to me via my pigeonhole in the envelope I have provided. Please also keep this Information Letter for your own reference.

Yours sincerely,

Talitha Kingsmill  
Student Researcher  
c/- Faculty of Education and Arts  
Australian Catholic University  
1100 Nudgee Rd  
BANYO QLD 4014

Dr Louise Thomas  
Principal Supervisor  
Faculty of Education and Arts  
Australian Catholic University  
1100 Nudgee Rd  
BANYO QLD 4014

PARTICIPANT INFORMATION LETTER – SENIOR LEADERSHIP TEAM

**PROJECT TITLE:** The Experience of Digital Citizenship in a Secondary School Curriculum

**PRINCIPAL SUPERVISOR:** Dr Louise Thomas  
**STUDENT RESEARCHER:** Talitha Kingsmill  
**STUDENT’S DEGREE:** Doctor of Education

You are invited to participate in the research project described below.
integrates digital citizenship. It is likely that this research will also be of interest to other education professionals.

Who is undertaking the project?
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Are there any risks associated with participating in this project?
While it is not anticipated that you will experience any risks as a result of your participation beyond the normal experience of everyday life, please note that your participation is voluntary. Provision is also available through the Employee Assistance Program to support you, if required at anytime.

What will I be asked to do?
If you decide to participate you will be invited to be involved in one or more of the following - a focus group with other Senior Leadership Team members, an individual interview, and/or an online questionnaire.

The focus groups and individual interviews will be held at your school and will be of approximately one-hour, and 30 minutes duration respectively. The interview and focus group will concentrate on your perspectives and experiences of a curriculum integrating digital citizenship. With your consent, the interviews will be audio-taped for research purposes. Participants involved in the focus groups are asked to maintain confidentiality of the group discussions.

The online questionnaire will be administered on SurveyMonkey and should take approximately five to ten minutes.

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Email: res.ethics@acu.edu.au

Any complaint or concern will be treated in confidence and fully investigated. You will be informed of the outcome.

I want to participate! How do I sign up?
If you are interested in participating in the project, please read and sign both of the attached Consent Forms, keep one for yourself, and return the other to me via my pigeonhole in the envelope I have provided. Please also keep this Information Letter for your own reference.

Yours sincerely,

Talitha Kingsmill
Student Researcher
c/- Faculty of Education and Arts
Australian Catholic University
1100 Nudgee Rd
BANYO QLD 4014

Dr Louise Thomas
Principal Supervisor
Faculty of Education and Arts
Australian Catholic University
1100 Nudgee Rd
BANYO QLD 4014

TEACHER CONSENT FORM
Copy for Researcher

TITLE OF PROJECT: THE EXPERIENCE OF DIGITAL CITIZENSHIP IN A SECONDARY SCHOOL CURRICULUM

PRINCIPAL SUPERVISOR: DR. LOUISE THOMAS
I ......................................................... (the participant) have read and understand the information provided in the Participant Information Letter to Teachers. Any questions I have asked have been answered to my satisfaction. I agree to participate in data gathering activities at my workplace when required over terms I, 2 and 3 of 2014. I understand that the data gathering activities will include and consent to be involved in:

- an online questionnaire of approximately 5 to 10 minutes duration
- a focus group interview for one hour
- an individual interview for 30 minutes
- lesson observation (at mutually agreed times)

(Please place a tick in the boxes above to indicate your consent to participate in that data gathering strategy).

I understand that if I participate in the focus group interview or individual interview, these will be digitally recorded. I realise I can withdraw my consent at any time without any adverse consequence either personally or professionally. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way.

NAME OF PARTICIPANT: ............................................

SIGNATURE ................................................................. DATE ............................................

SIGNATURE OF PRINCIPAL SUPERVISOR:

.......................................................... DATE:............................................

SIGNATURE OF STUDENT RESEARCHER:

.......................................................... DATE:............................................

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FACULTY CO-ORDINATOR CONSENT FORM

Copy for Researcher

TITLE OF PROJECT: THE EXPERIENCE OF DIGITAL CITIZENSHIP IN A SECONDARY SCHOOL CURRICULUM

PRINCIPAL SUPERVISOR: DR. LOUISE THOMAS

STUDENT RESEARCHER: TALITHA KINGSMILL
I ....................................................... (the participant) have read and understand the information provided in the Participant Information Letter to Leaders. Any questions I have asked have been answered to my satisfaction. I agree to participate in data gathering activities at my workplace when required over terms 1, 2 and 3 of 2014. I understand that the data gathering activities will include and consent to be involved in:

- an online questionnaire of approximately 5 to 10 minutes duration
- a focus group interview for one hour
- an individual interview for 30 minutes
- lesson observation (at mutually agreed times)

(Please place a tick in the boxes above to indicate your consent to participate in that data gathering strategy).

I understand that if I participate in the focus group interview or individual interview, these will be digitally recorded. I realise I can withdraw my consent at any time without any adverse consequence either personally or professionally. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way.

NAME OF PARTICIPANT: ........................................

SIGNATURE ............................................................ DATE ................................

SIGNATURE OF PRINCIPAL SUPERVISOR:

.................................................. DATE:.................................

SIGNATURE OF STUDENT RESEARCHER:

.................................................. DATE:.................................

SENIOR LEADERSHIP TEAM MEMBER CONSENT FORM

Copy for Researcher

TITLE OF PROJECT: THE EXPERIENCE OF DIGITAL CITIZENSHIP IN A SECONDARY SCHOOL CURRICULUM

PRINCIPAL SUPERVISOR: DR. LOUISE THOMAS

STUDENT RESEARCHER: TALITHA KINGSMILL

I ....................................................... (the participant) have read and understand the information provided in the Participant Information Letter to Leaders. Any questions I have asked have been answered to my satisfaction. I agree to participate in data
gathering activities at my workplace when required over terms I, 2 and 3 of 2014. I understand that the data gathering activities will include and consent to be involved in:

☐ an online questionnaire of approximately 10 minutes duration
☐ a focus group interview for one hour
☐ an individual interview for 30 minutes

(Please place a tick in the boxes above to indicate your consent to participate in that data gathering strategy).

I understand that if I participate in the focus group interview or individual interview, these will be digitally recorded. I realise I can withdraw my consent at any time without any adverse consequence either personally or professionally. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way.

NAME OF PARTICIPANT: …………………………………

SIGNATURE ………………………………………………………… DATE ………………………

SIGNATURE OF PRINCIPAL SUPERVISOR:
…………………………………… DATE:…………………………

SIGNATURE OF STUDENT RESEARCHER:
…………………………………… DATE:…………………………

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APPENDIX G: ST ELIZA’S COLLEGE NEWSLETTER EXTRACT

DIGITAL CITIZENSHIP UPDATE

Years 8 & 9 Students
In coming weeks our Year 8 and 9 students will hear about an opportunity they have to be involved in a research project being conducted with members of the College community. The aim of the project is to establish how students, teachers and leaders experience teaching and learning about digital citizenship in a secondary school curriculum.

The research has been granted ethical approval by Australian Catholic University and Brisbane Catholic Education Office.

Participation is completely voluntary, and all information resulting from the study will not identity participants in any way.

If students would like to be involved they will be invited to participate in one or more of the following – an online questionnaire, a focus group interview with other students from their year level, an individual interview with the researcher and/or lesson observation.

Students that are interested in participating will be provided with an Information Letter and a Consent Form to discuss and sign with their parents/care providers.

Enjoy the coming week!

Talitha Kingsmill
Director Special Projects
APPENDIX H: INFORMATION LETTERS AND CONSENT FORMS FOR STUDENTS AND PARENTS

PARTICIPANT INFORMATION LETTER - STUDENTS

PROJECT TITLE: The Experience of Digital Citizenship
in a Secondary School Curriculum

PRINCIPAL SUPERVISOR: Dr Louise Thomas
STUDENT RESEARCHER: Talitha Kingsmill
STUDENT’S DEGREE: Doctor of Education

Dear Participant,

You are invited to participate in the research project described below.

What is the project about?
The research project investigates how students experience learning about digital citizenship in their subjects. Being part of this project will provide an opportunity for you to reflect on how you are responding to learning about digital citizenship in your subjects. It is likely that this research will also be of interest to other schools and education professionals.

Who is undertaking the project?
This project is being conducted by Talitha Kingsmill and will form the basis of the degree of Doctor of Education at Australian Catholic University under the supervision of Dr Louise Thomas.

Are there any risks associated with participating in this project?
There are no immediate risks identified by participating in this project. Please note that your participation is voluntary. Provision is also available through the College Counsellors to support you, if required at anytime.

What will I be asked to do?
If you decide to participate you will be invited to be involved in one or more of the following - a focus group with other students from your year level, an individual interview with the student researcher, lesson observation and/or an online questionnaire.

The focus group and individual interviews will be held at your school and will take approximately one-hour, and 30 minutes respectively. The interview and focus group will concentrate on your experience of learning about digital citizenship. With your consent, the interviews will be audio-taped for research purposes. Participants involved in the focus group are asked to keep what is said in the group discussions confidential.

A selection of two Year Eight and two Year Nine classes across subject areas will then be invited to participate in the lesson observations. The student researcher will negotiate mutually convenient times with your teachers to visit the classes for observation. The online questionnaire will be administered on SurveyMonkey and should take approximately ten minutes.

Can I withdraw from the study?
Participation in this study is completely voluntary. You are not under any obligation to participate. If you agree to participate, you can withdraw from the study at any stage without adverse affect. You have the right to withdraw your data from the study at any time up until
the end of the data gathering period – this does not include data gathered from the online questionnaire, as it is non-identifiable and therefore cannot be withdrawn.

Will anyone else know the results of the project?
All information resulting from this project will not identify you in any way. You will not be identified by name in the findings of the project and every attempt will be made to protect your privacy (e.g. by changing the names of individuals in reports of the project, and removing other information that could be used to identify you or your colleagues). In the online questionnaire, focus group and interview you will not be required to answer any questions you consider personal or distressing. No information that is confidential to school families that arises during the data gathering, or that has the potential to identify a child or their family, will be used.

An Executive Summary of the project will be made available for student participants at the completion of the project. Results of the project may be reported at conferences, in practitioner and academic journals. No findings of a personal nature, or data which could have the potential to cast a negative light on you, or others at your school, will be included in these reports. Data from the project will be retained for up to seven years then destroyed. You will see that, on the attached Consent Form, you are asked whether you give permission for data in this project involving you to be used by me as part of other projects during this time period. This is entirely optional.

Who do I contact if I have questions about the project?
If at any time you have any questions, concerns, or require further information regarding the project please contact either the Student Researcher, Talitha Kingsmill, XXXXXXXXXX or tjking001@myacu.edu.au or the Principal Supervisor, Dr Louise Thomas, XX XXXXXXXXXX or LouiseThomas@acu.edu.au.

What if I have a complaint or any concerns?
The project has been approved by the Human Research Ethics Committee at Australian Catholic University (approval number 2013 300Q), and Brisbane Catholic Education. In the event that you have any complaint or concern about the conduct of the project, you may write to the Chair of the Human Research Ethics Committee care of the Office of the Deputy Vice Chancellor (Research).

Chair, HREC
c/o Office of the Deputy Vice Chancellor (Research)
Australian Catholic University
Melbourne Campus
Locked Bag 4115
FITZROY, VIC, 3065
Ph: 03 9953 3150
Fax: 03 9953 3315
Email: res.ethics@acu.edu.au

Any complaint or concern will be treated in confidence and fully investigated. You will be informed of the outcome.

I want to participate! How do I sign up?
If you are interested in participating in the project, please read and sign the attached Consent Forms, keep one for yourself, and return the other to me in the envelope provided via your PC. Please also keep this Information Letter for your own reference.

Yours sincerely,
INFORMATION LETTER FOR PARENTS (OF STUDENT PARTICIPANTS)

PROJECT TITLE: The Experience of Digital Citizenship in a Secondary School Curriculum
PRINCIPAL SUPERVISOR: Dr Louise Thomas
STUDENT RESEARCHER: Talitha Kingsmill
STUDENT’S DEGREE: Doctor of Education

Dear Parent/s,

Your daughter/son has been invited to participate in the research project described below.

What is the project about?
The research project investigates how members of a secondary school community experience a curriculum that integrates digital citizenship. It is anticipated that better understanding how teachers, leaders and students experience such a curriculum has the potential to inform future educational practice. Participation in this project will provide an opportunity for students to reflect on how they are responding to engaging with a curriculum that integrates digital citizenship. It is likely that this research will also be of interest to other education professionals.

Who is undertaking the project?
This project is being conducted by Talitha Kingsmill and will form the basis of the degree of Doctor of Education at Australian Catholic University under the supervision of Dr Louise Thomas.

Are there any risks associated with participating in this project?
While it is not anticipated that your daughter/son will experience any risks as a result of their participation beyond the normal experience of everyday life, please note that participation is voluntary. Provision is also available through the College Counsellors to support students, if required at anytime.

What will my child be asked to do?
If your daughter/son decides to participate they will be invited to be involved in one or more of the following - a focus group with other students from their year level, an individual interview with the student researcher, lesson observation and/or an online questionnaire.

The focus group and individual interviews will be held at school and will be of approximately one-hour, and 30 minutes duration respectively. The interview and focus group will concentrate on your daughter/son’s perspectives and experiences of a curriculum that integrates digital citizenship. With your child’s consent, the interviews will be audio-taped for research purposes. Participants involved in the focus group are asked to maintain confidentiality of the group discussions.
A selection of two Year Eight and two Year Nine classes across subject areas will then be invited to participate in the lesson observations. The student researcher will negotiate mutually convenient times to visit the classes for observation during the data gathering period. The online questionnaire will be administered on SurveyMonkey and should take approximately ten minutes.

**Can your daughter/son withdraw from the study?**
Participation in this study is completely voluntary. Your daughter/son is not under any obligation to participate. If your daughter/son agrees to participate, they can withdraw from the study at any stage without adverse affect. Your child has the right to withdraw their data from the study at any time up until the end of the data gathering period – this does not include data gathered from the online questionnaire, as it is non-identifiable and therefore cannot be withdrawn.

**Will anyone else know the results of the project?**
All information resulting from this project will not identify your child in any way, ensuring the confidentiality of their responses. Your child will not be identified by name in the findings of the project and every attempt will be made to protect your daughter/son’s privacy (e.g. by changing the names of individuals in reports of the project, and removing other information that could be used to identify your child). In the online questionnaire, focus group and interview your daughter/son will not be required to answer any questions they consider personal, intrusive, or potentially distressing. No information that is confidential to school families that arises during the data gathering, or that has the potential to identify a child or their family, will be used.

An Executive Summary of the project will be made available for student participants at the completion of the project. Results of the project may be reported at conferences, in practitioner and academic journals. No findings of a personal nature, or data which could have the potential to cast a negative light on your daughter/son or the school, will be included in these reports. Data from the project will be retained for up to seven years then destroyed. On the attached Consent Form, you are asked whether you give permission for data in this project involving your daughter/son to be used by me as part of other projects during this time period. This is entirely optional.

**Who do I contact if I have questions about the project?**
If at any time you have any questions, concerns, or require further information regarding the project please contact either the Student Researcher, Talitha Kingsmill, XXXXXXXXXXX or tjking001@myacu.edu.au or the Principal Supervisor, Dr Louise Thomas, XX XXXXXXX or LouiseThomas@acu.edu.au.

**What if I have a complaint or any concerns?**
The project has been approved by the Human Research Ethics Committee at Australian Catholic University (approval number 2013 300Q), and Brisbane Catholic Education. In the event that you have any complaint or concern about the conduct of the project, you may write to the Chair of the Human Research Ethics Committee care of the Office of the Deputy Vice Chancellor (Research).

Chair, HREC  
c/o Office of the Deputy Vice Chancellor (Research)  
Australian Catholic University  
Melbourne Campus  
Locked Bag 4115  
FITZROY, VIC, 3065  
Ph: 03 9953 3150
Any complaint or concern will be treated in confidence and fully investigated. You will be informed of the outcome.

I am happy for my child to participate! How does my child sign up?
If you are interested in your daughter/son participating in the project, please read and sign both of the attached Parent/Guardian Consent and Student Assent Forms with your child. Then keep one for yourself, and return the other to me in the envelope provided via your child’s PC. Please also keep this Information Letter for your own reference.

Yours sincerely,

Talitha Kingsmill
Student Researcher

c/- Faculty of Education
Australian Catholic University
1100 Nudgee Rd
BANYO QLD 4014

Dr Louise Thomas
Principal Supervisor

Faculty of Education
Australian Catholic University
1100 Nudgee Rd
BANYO QLD 4014

PARENT/GUARDIAN CONSENT FORM

Copy for Researcher

TITLE OF PROJECT: THE EXPERIENCE OF DIGITAL CITIZENSHIP IN A SECONDARY SCHOOL CURRICULUM

PRINCIPAL SUPERVISOR: DR. LOUISE THOMAS

STUDENT RESEARCHER: TALITHA KINGSMILL

I ........................................................................ (the parent/guardian) have read and understand the information provided in the Letter to the Participants. Any questions I have asked have been answered to my satisfaction. I agree that my child, nominated below, may participate in data gathering activities at my child’s school when required over terms I, 2 and 3 of 2014. I understand that the data gathering activities will include and consent to my child being involved in:

☐ an online questionnaire of approximately 10 minutes duration
☐ a focus group interview with other students from the same year level for one hour
☐ an individual interview for 30 minutes
☐ lesson observation

(Please place a tick in the boxes above to indicate your consent to participate in that data gathering strategy).
I understand that my child will not be identified in any way when the project findings are published. I understand that if my child participates in the focus group interview or individual interview, these will be digitally recorded. I realise that I can withdraw my consent at any time without adverse consequences. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify my child in any way.

NAME OF PARENT/GUARDIAN: .....................................................

SIGNATURE .................................................. DATE:..................

NAME OF CHILD ..........................................................

SIGNATURE OF PRINCIPAL SUPERVISOR:
.................................................. DATE:..........................

SIGNATURE OF STUDENT RESEARCHER:
.................................................. DATE:..........................

ASSENT OF PARTICIPANTS AGED UNDER 18 YEARS

I ............................ (the participant aged under 18 years) understand what this research project is designed to explore. What I will be asked to do has been explained to me. I agree to take part in:

☐ an online questionnaire of approximately 10 minutes duration
☐ a focus group interview with other students from the same year level for one hour
☐ an individual interview for 30 minutes
☐ lesson observation

(Please place a tick in the boxes above to indicate your consent to participate in that data gathering strategy).

I understand that if I participate in the focus group interview or individual interview, these will be digitally recorded. I realise that I can withdraw at any time without having to give a reason for my decision.

NAME OF PARTICIPANT AGED UNDER 18: .....................................................

SIGNATURE: .................................................. DATE: .........................

SIGNATURE OF PRINCIPAL SUPERVISOR:
SIGNATURE OF STUDENT RESEARCHER:

…………………………………

DATE:………………………..

…………………………………

DATE:………………………..
APPENDIX I: FOCUS GROUP INTERVIEW QUESTION GUIDES

FOCUS GROUP INTERVIEW QUESTIONS – STUDENTS
(RUNNING SHEET)

The following questions represent the type of question that will guide the focus group interview process. Additional follow-up questions may emerge in response to answers that are given.

1. Let’s have a conversation about digital citizenship. When did that term first arise in your learning?
   - What does digital citizenship mean to you?
   - Is it something that should be covered in the school curriculum? Why/why not?
   - What has been your experience of learning about digital citizenship in your subjects?
     - Is it relevant?
     - Do you think you should learn about it at school? Why?
     - Does it interest you?

2. What is your sense of the kind of influence that learning about digital citizenship has had on students? Share a story as an example of your observations.
   - Has learning about digital citizenship in your subjects changed the way teachers teach? Share a story/reflection as an example of your observations.
   - Would you like to continue learning about digital citizenship in your subjects? Why?
FOCUS GROUP INTERVIEW QUESTIONS – TEACHERS
(RUNNING SHEET)

The following questions represent the type of question that will guide the focus group interview process. Additional follow-up questions may emerge in response to answers that are given.

1. Let’s have a conversation about digital citizenship. When did that term first arise in your teaching?

PROMPTS
• What does digital citizenship mean to you?

• Is it something that should be covered in the school curriculum? Why/why not?

• What has been your experience/s of working with a curriculum integrating digital citizenship (CIDC) so far?
  • What has worked well?
  • What has been challenging?

2. What is your sense of the kind of influence the CIDC has had on students, teachers and/or leaders of STE so far? Share a story/reflection as an example of your observations.

PROMPTS
• So thinking back to your teaching prior to 2012 and then your teaching after that point (after the Staff Retreat and the introduction of our CIDC)? Is it the same or are there differences?

• What are those differences?

• What is the greatest need to develop in staff in continuing to develop and implement a CIDC?

• What’s the greatest challenge to the identified need/s?
FOCUS GROUP INTERVIEW QUESTIONS – FACULTY CO-ORDINATORS
(RUNNING SHEET)

The following questions represent the type of question that will guide the focus group interview process. Additional follow-up questions may emerge in response to answers that are given.

1. Let’s have a conversation about digital citizenship. When did that term first arise in your teaching, planning and curriculum management?

PROMPTS

o What does digital citizenship mean to you?

o Is it something that should be covered in the school curriculum? Why/why not?

o What has been your experience of working with a curriculum integrating digital citizenship (CIDC) so far?
  - What has worked well?
  - What has been challenging?

2. What is your sense of the kind of influence the CIDC has had on students, teachers, Faculty Co-ordinators and/or Senior Leadership Team so far? Share a story/reflection as an example of your observations.

o So thinking back to your teaching, planning and curriculum management prior to 2011 and then your teaching, planning and curriculum management after that point (after joining the DC Taskforce, Staff Retreat and the introduction of our CIDC)? Is it the same or are there differences? *accounting for different joining points of course*

o What are those differences?

o What is the greatest need to develop in staff in continuing to develop and implement a CIDC?

o What’s the greatest challenge to the identified need/s?
APPENDIX J: INDIVIDUAL INTERVIEW QUESTION GUIDES

INDIVIDUAL INTERVIEW QUESTIONS – STUDENTS

The following questions represent the type of question that will guide the semi-structured individual interview process. Additional follow-up questions may emerge in response to answers that are given.

1. Can you tell me about digital citizenship within your subjects?
2. What influence do you think learning about digital citizenship in subjects has had on the school community (eg. students, teachers or leaders)?

Prompt Questions
If required these are the type of prompt questions that I might use:

1. Can you tell me about how you have experienced learning about digital citizenship in your subjects? Provide examples to explain.
2. Is it important to learn about digital citizenship?
3. Do you think learning about digital citizenship in your subjects is effective?

INDIVIDUAL INTERVIEW QUESTIONS – TEACHERS

The following questions represent the type of question that will guide the semi-structured individual interview process. Additional follow-up questions may emerge in response to answers that are given.

1. Can you tell me about digital citizenship within the curriculum?
2. What influence, if any, do you think a curriculum that integrates digital citizenship has had on members of the school community?

Prompt Questions
If required these are the type of prompt questions that I might use:

1. Can you tell me about your experience of a curriculum integrating digital citizenship?
2. Is it important for schools to offer a curriculum that integrates digital citizenship? Why?/Why not?
3. Other comments…
INDIVIDUAL INTERVIEW QUESTIONS – FACULTY CO-ORDINATORS

The following questions represent the type of question that will guide the semi-structured individual interview process. Additional follow-up questions may emerge in response to answers that are given.

1. Can you tell me about digital citizenship within the curriculum?

2. What influence, if any, do you think a curriculum that integrates digital citizenship has had on members of the school community?

Prompt Questions

If required these are the type of prompt questions that I might use:

1. Can you tell me about your experience of a curriculum integrating digital citizenship?

2. Is it important for schools to offer a curriculum that integrates digital citizenship? Why?/Why not?

3. Other comments…

INDIVIDUAL INTERVIEW QUESTIONS – SENIOR LEADERSHIP TEAM

The following questions represent the type of question that will guide the semi-structured individual interview process. Additional follow-up questions may emerge in response to answers that are given.

1. Can you tell me about digital citizenship within the curriculum?

2. What influence, if any, do you think a curriculum that integrates digital citizenship has had on members of the school community?

Prompt Questions

If required these are the type of prompt questions that I might use:

1. Can you tell me about your experience of a curriculum integrating digital citizenship?

2. Is it important for schools to offer a curriculum that integrates digital citizenship? Why?/Why not?

Other comments…
APPENDIX K: STAFF AND STUDENT ONLINE QUESTIONNAIRES

STAFF QUESTIONNAIRE
THE EXPERIENCE OF DIGITAL CITIZENSHIP IN A SECONDARY SCHOOL CURRICULUM

All staff: please read this introduction

This open-ended questionnaire aims to gather information on opinions of secondary school educators about digital citizenship in a school curriculum. This questionnaire is part of a doctoral research project exploring how members of a secondary school community experience digital citizenship in the curriculum. The research has been approved by the Human Research Ethics Committee at Australian Catholic University.

Expected completion time: 10 minutes

INFORMATION CONTAINED ON INDIVIDUAL QUESTIONNAIRES REMAINS STRICTLY CONFIDENTIAL

Participation in this questionnaire is strictly voluntary.

Your name or your school’s name is not to be indicated on this form.

When you have completed the questionnaire please click on the submit button at the end of the document.

Thank you for your participation in this questionnaire.

SECTION A BASIC INFORMATION

1. Which of the following describes your role in the school?
   o Teacher
   o Faculty Co-ordinator / Position of Added Responsibility
   o Senior Leadership Team member
   o Other: ____________

2. Please select your applicable age bracket from the list below.
   o 25 years of age or under
   o 26 – 34 years of age
   o 35 – 44 years of age
   o over 45 years of age
3. How long have you been working with a curriculum that integrates digital citizenship teaching and learning?
   o 12 months or less
   o 1 – 2 years
   o 3 – 4 years
   o 5 or more years

SECTION B Explores your understanding of teaching digital citizenship.

4. Please outline briefly what digital citizenship means for you?
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

5. How important is it to teach students how to be responsible digital citizens?
   o Very important
   o Somewhat important
   o Unsure
   o Partially important
   o Not important

6. Please explain your response to question 5 regarding teaching students about digital citizenship.
   _______________________________________________________
   _______________________________________________________

7. What experiences have you in digital citizenship?
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

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SECTION C  Explor{es} your beliefs about integrating digital citizenship into the curriculum.

Please indicate your level of agreement with the following statements.  Indicate your opinion by selecting the appropriate descriptor.

SA  Strongly agree  
A   Agree  
U   Unsure  
D   Disagree  
SD  Strongly disagree

8  Digital Citizenship education has little to do with contemporary curriculum.

9  Teaching about what it means to be a citizen of the digital community is an optional extra for schools.

10 Teaching and learning about digital citizenship is part of the holistic formation of students in schools in 2014.

11 Teaching and learning about digital citizenship is closely associated with education in a 1:1 laptop environment.

12 Students find digital citizenship difficult to understand.

13 There are opportunities for integrating digital citizenship within my subject areas.

14 I feel capable of teaching about digital citizenship in my subject areas.

15 There is insufficient time to prepare for the inclusion of digital citizenship in my subject areas.

16 Please explain your response to question 15.

____________________________________________________________________________________________________________________________________________________

SECTION D  Focuses on the influence that a curriculum integrating digital citizenship has had on members of a secondary school community.

17. Has working with a curriculum that integrates digital citizenship influenced your professional practice?
    o Yes
    o Unsure
    o No – go directly to Question 20
18. Using the scale below indicate how digital citizenship has influenced your professional practice

5---------------------------------------------3---------------------------------------------1
MAJOR NOTICEABLE MINOR

19. Which of the following best describes the area of change in your professional practice? Please indicate one or more responses.
   o Teaching
   o Lesson content
   o Lesson preparation
   o Awareness of digital citizenry issues
   o Management of student behaviour
   o All of the above
   o Other: ________________________________

20. Please indicate your level of agreement with the following statements. Indicate your opinion by selecting the appropriate descriptor.

   SA    Strongly agree
   A     Agree
   U    Unsure
   D   Disagree
   SD Strongly disagree

   a) Students are interested in learning about how to participate in a digital community.
   b) Staff are more aware of their own rights and responsibilities when participating in digital community.
   c) Students use their laptops and mobile phones more appropriately.
   d) Teaching and learning about digital citizenship has not influenced our community.

21. Have you experienced challenges implementing a curriculum that integrates digital citizenship? Please describe them.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
STUDENT QUESTIONNAIRE
THE EXPERIENCE OF DIGITAL CITIZENSHIP IN A SECONDARY SCHOOL CURRICULUM

INFORMATION CONTAINED ON QUESTIONNAIRES REMAINS STRICTLY CONFIDENTIAL

All students: please read this introduction

This open-ended questionnaire aims to gather information on opinions of secondary school students about digital citizenship in a school curriculum. This questionnaire is part of a doctoral research project exploring how members of a secondary school community experience digital citizenship in the curriculum. The research has been approved by the Human Research Ethics Committee at Australian Catholic University.

Expected completion time: 10 minutes

Participation in this questionnaire is strictly voluntary.

Your name is not to be indicated on this form.

When you have completed the questionnaire please click on the done button at the end of the document.

Thank you for your participation in this questionnaire.

SECTION A BASIC INFORMATION

8. What year level are you currently enrolled in at school?
   o Year 8
   o Year 9

9. Please indicate your gender.
   o Female
   o Male

10. When did you begin school at St Eliza’s College?
    o Start of 2013 school year
    o Part way through 2013
    o Start of 2014 year
    o Part way through 2014
SECTION B  Explores your understanding of digital citizenship.

11. Please outline what digital citizenship means for you?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

SECTION C  Explores your beliefs about learning about digital citizenship.

12. Where do you learn most about digital citizenship?
   o At home
   o At school
   o At both home and school
   o Somewhere else such as _______________________

13. What do you learn about digital citizenship in your subjects at school?

________________________________________________________________________

________________________________________________________________________

14. How do you learn about digital citizenship in your subjects at school?

________________________________________________________________________

________________________________________________________________________

SECTION D  Focuses on the influence that learning about digital citizenship has had on students a secondary school community.

15. How has learning about digital citizenship increased your awareness of responsible use of digital technologies?

________________________________________________________________________

________________________________________________________________________

16. How has learning about digital citizenship changed the way you use digital technology such as your laptop, iPad, mobile or iPod?

________________________________________________________________________

________________________________________________________________________
APPENDIX L: PARTICIPANT OBSERVATION SHEET

LESSON OBSERVATION – PARTICIPANT OBSERVATION

<table>
<thead>
<tr>
<th>Class, Date, Time:</th>
</tr>
</thead>
</table>

| Descriptive observation: |
| (The setting, people, activities, events, apparent feelings) |

| Elements related to research aims: |
| (Describe and include provisional explanations) |

Things to check up on or find out:
Personal feelings/impressions/hints: