

Digital Capital and Socio-Economic Disadvantage: An Examination of the  
Digital Practices and Online Career Information Seeking of Year 11 Students in  
New South Wales Government Schools

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*A thesis submitted for the degree of Doctor of Philosophy*

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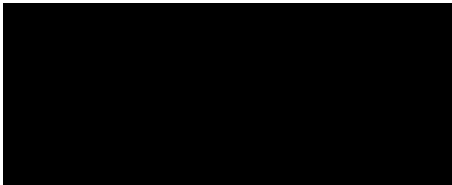
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This thesis is dedicated to all the strong women in my life who have supported me throughout this process. First and foremost, my mother, June, thank you for your unwavering love and support. Sera Harris and Toni McPherson, thank you both for sharing the drama and convincing me that I could finish. Professor Megan Watkins for your support, patience and persistence and Dr Susan Mowbray for bringing light into my journey in its darkest hour.

## Statement of Authentication

The work presented in this thesis is, to the best of my knowledge and belief, original except as acknowledged in the text. I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution.



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## Acronyms and Abbreviations

AATSI	Aboriginal and Torres Strait Islander
ABC	Australian Broadcasting Corporation
ABS	Australian Bureau of Statistics
ACARA	Australian Curriculum, Assessment and Reporting Authority
ACER	Australian Council for Educational Research
ADF	Australian Defence Force
ADFA	Australian Defence Force Academy
AIFS	Australian Institute of Family Studies
AIHW	Australian Institute of Health and Welfare
ANT	Actor Network Theory
ATAR	Australian Tertiary Admission Rank
BECTA	British Educational Communications and Technology Agency
BYOD	Bring Your Own Device
CESE	Centre for Education Statistics and Evaluation
CIBER	Centre for Information Behaviour and the Evaluation of Research
CICA	Career Industry Council of Australia
CMS	Course Management System
COAG	Council of Australian Governments
DER	Digital Education Revolution
DND	Did Not Declare
DoE	Department of Education
DTBWs	Digital Task-Based Workshops



ELIS	Everyday Life Information Seeking
EMI	Effectively Maintained Inequality
EOI	Expression of Interest
ESB	English-Speaking Background
FTTN	Fibre to the Node
FTTP	Fibre to the Premises
FYA	Foundation for Young Australians
Go8	Group of Eight (Australian Universities)
HECS	Higher Education Contributions Scheme
HEPPP	Higher Education Participation and Partnership Program
HREC	Human Research Ethics Committee (Western Sydney University)
HSC	Higher School Certificate
ICSEA	Index of Community Socio-Educational Advantage
ICTs	Information Communications Technologies
IT	Information Technologies
ITL	Innovative Teaching and Learning
LBOTE	Language Background Other Than English
LMS	Learning Management System
MCQs	Multiple Choice Questions
MOODLE	Modular Object-Oriented Dynamic Learning Environment
NAPLAN	National Assessment Program – Literacy and Numeracy
NBN	National Broadband Network
NESA	New South Wales Education Standards Authority
NIDA	National Institute of Dramatic Arts

NSW	New South Wales
OECD	Organisation for Economic Co-operation and Development
OISPs	Online Information Seeking Practices
PC/s	Personal Computer/s
PDF	Portable Document Format
PiL	Partners in Learning (Microsoft Australia)
PISA	Programme for International Student Assessment
PS4	(Sony) PlayStation 4
RAAF	Royal Australian Air Force
RePEc	Research Papers in Economics
SEA	Socio-Educational Advantage
SERAP	State Education Research Applications Process
SES	Socio-Economic Status
TAFE	Technical and Further Education
TIMSS	Trends in International Mathematics and Science Study
UAC	University Admissions Centre
UMAT	Undergraduate Medical and Health Sciences Admission Test
UNSW	University of New South Wales
WSU	Western Sydney University
WWC	Working with Children
YAW-CRC	Young and Well Cooperative Research Centre

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## Abstract

This study examines the online career information seeking practices of Year 11 students within five New South Wales (NSW) state secondary schools of different socio-economic status (SES). The broader context of this study is the ongoing inequality within the Australian education system, particularly the continued underrepresentation of students from low SES backgrounds in tertiary education. With the large-scale adoption of information and communications technologies (ICTs) within Australian secondary schools, the study shows the powerful ways in which ICTs can inform and influence students' post-secondary school career transitions and opportunities. A growing body of literature over the last three decades indicates the interconnected nature of these phenomena, particularly among low-SES students; however, little research has been conducted from an Australian perspective. Indeed, an examination of the career information needs that motivate young people, how they resolve these needs online, the sources and channels they use and how these practices differ within this large heterogeneous group is lacking globally.

This study adopts a mixed methods approach, drawing together insights from survey, interview and observational data from a range of participants: students, teachers, university admissions and marketing directors and a former NSW Department of Education (DoE) information technologies (IT) director. It develops Ignatow and Robinson's (2017) concept of *digital capital* to highlight the relationships between young people's digital practices and the structural constraints of their social environment which mediate them. It also builds on the work of Park, (2017a) which uses the notion of digital capital to examine new forms of digital inequalities across Australia. By further developing the notion of digital capital, this thesis progresses research on digital divides away from simplistic binary analyses of haves and have-nots, skilled and unskilled, to include potential real world outcomes from varied levels of digital capital and differential OISPs, thereby creating a more nuanced account of young people's digital practices. It also highlights the connections between young people's SES, digital capital and their position concerning on-going digital divides.

The study proposes a typology of four distinct groups of students based on their differing online information seeking practices (OISPs) to illuminate how young people in Australia seek and use online information to inform their post-high school career choices. These are the Traditional Job Seekers, the Social Networkers, the Future Professionals and the Creative Dreamers. Each category represents students' future career aspirations and digital practices, highlighting their differing stores of objectified and embodied digital capital and the opportunities and constraints of each. Except for the Social Networkers, this research shows that young people largely underinvest in online career information seeking, preferring traditional sources of information, particularly parents, older siblings and careers advisors, along with serendipitous factors such as accumulated self-knowledge to inform their post-school career and educational options.

In a hyper-digitalised world, digital inequities have the potential to shape key life chances of young people in multiple ways, including their educational and career outcomes. This study suggests that the widespread proliferation and adoption of ICTs within secondary schools and the everyday lives of young people have done little to promote equal opportunities for all. It therefore suggests that teachers, parents, researchers and education policymakers need to move beyond the current one-size-fits-all approach to secondary school ICT initiatives, to instead develop flexible, school-based programs that more accurately reflect the highly differentiated digital contexts in which young people now find themselves.

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## Prologue to the Research

Prior to undertaking my PhD research, I often used the free public access computer terminals in the library at the University of Sydney. As a Group of Eight (Go8) university, the University of Sydney is considered one of Australia's premier educational institutions, attracting many of Australia's best and brightest students, a fact reflected in the university's Australian Tertiary Admission Rank (ATAR) entry requirements. The public-use terminals were located only metres from the university IT Helpdesk, which meant I overheard numerous student inquiries, and it quickly became apparent that many of the students' IT issues revolved around simplistic operations such as logging into email, updating software and navigating the university website. I was struck that these high-achieving students were asking such basic IT questions, and wondered: If these students are having trouble with such elementary aspects of using ICTs, how are less advantaged students coping?

It was this thought that drew me to a renowned blog entry by Marc Scott (2013), a computing teacher in the United Kingdom, titled "Kids can't use computers". In the blog he argues that the prevailing wisdom that young people are digital natives, who intrinsically know more about computers than older generations, is incorrect. Scott (2013) states that while today's young people are the most connected generation in history, with a greater number of devices, they do not possess a deep understanding of how to use them. Scott also explains that while young people might have higher levels of proficiency in software, particularly in web-based social applications such as Facebook and Twitter, as well as a good understanding of Microsoft Office, that is about all they know. Scott's blog, combined with my experience sitting alongside the University of Sydney's IT Helpdesk, inspired me to investigate further how young people in Australia were using ICTs and the internet and if their SES was influencing their digital practices. In so doing, I would consider if traditional social inequalities offline were in fact being replicated online.

# Introduction

*The internet is among the few things humans have built that they don't truly understand.*

Eric Schmidt and Jared Cohen (2013, p. 1)

Given the wide-ranging significance and relevance of information communications technologies (ICTs) and the internet in the lives of young Australians today, it is of utmost importance to research how young people access and use ICTs to search for career information online, and the degree to which socio-economic status (SES) affects their digital practices. Although young people are increasingly reliant on these technologies in their daily life, the role ICTs play in processes such as information retrieval and informing future career choices is yet to be fully explored. To date, Australian studies investigating online information seeking practices (OISPs) have largely focused on either undergraduate students (Kennedy, Judd, Churchward, Gray & Krause, 2008; Oliver & Goerke, 2007) or people in the general population aged 18 or older, rather than school-aged young people (Vromen, 2007). In her study of the participatory practices and internet use of 18–34-year-old Australians, based on survey responses, Vromen (2007) identified a need for more in-depth qualitative research on internet use and the continuing digital divide amongst Australia's young people. Indeed, Thomas et al., (2017) describes how the digital divide in Australia is still prevalent, and while this divide is narrowing, it is also getting deeper. More recently, Beckman, Apps, Bennett and Lockyer (2018) utilised Bourdieusian conceptualisations (1977; 1984; 1986) to review 16 large-scale studies investigating student ICT practices across Australian secondary and primary schools over the previous decade. They concluded that large disparities remained in student school-based ICT practices and encouraged researchers to do more to understand the varied digital needs and abilities of these young people. In combination, these findings indicate an Australian study examining the OISPs of secondary-school aged young people as provided here is timely.



Current Australian Bureau of Statistics (ABS) (2018a) data show that the vast majority of Australians are regularly engaging with technology, with 85% of Australians aged 15+ now listed as internet users. While households with school-aged children are more likely to have internet access, this is not uniformly distributed across the population: 98% of households with annual incomes over \$120,000 are online, compared to just 57% of households with annual incomes below \$40,000 (ABS, 2016). Further, according to the annual digital inclusion index, which measures access, affordability and digital skills of the Australian population, three million Australians are still not online, with the digital gap between low- and high-income households widening between 2013 and 2017 (Thomas et al., 2017). The rollout of the National Broadband Network (NBN) has done little to address the ongoing digital divides across Australia, particularly the divide between urban areas and the regional and remote areas where crucial ICT infrastructure is still lacking (Freeman, Park, Middleton & Allen, 2016; Park, 2017b). In fact, a significant geographical divide remains: only 79% of regional households are online compared with 88% of households in major cities (ABS, 2016). The responsibility for this lack of digital access is generally framed in simplistic terms as a matter of individual *choice* rather than acknowledging the influence of structural forces and what Ignatow and Robinson (2017) identify – drawing on Bourdieu – as a lack of economic, social and cultural capital.

Ignatow and Robinson (2017) develop Bourdieu's (1984; 1986) various notions of capital to highlight the relationship between young people's digital practices and the structural constraints in their social environment which mediate their digital access, usage, skills and subsequent outcomes. Van Dijk's (2005) definition of information capital forms the foundation from which Ignatow and Robinson (2017) conceptualise digital capital, which he defines as

...the financial ability to pay for the costs of computers and networks...the technical skill to deal with them...the capacity to filter and evaluate information, and...the motivation to look for information and the capacity to use this information [successfully] in society.

(van Dijk, 2005, pp. 72–73)

One of the key strengths of Ignatow and Robinson's notion of digital capital is its ability to link social and digital inequalities. They consider both the objectified aspects of technology, such as access to and the supply of devices and digital equipment, and embodied aspects such as digital usage orientation and digital skills, aspects of Bourdieu's theorisation of cultural capital. Also, of interest to them is how young people's existing cultural, social and economic capital can be transmitted into digital capital. Park (2017a) also makes use of a notion of digital capital in her analysis of digital inequalities amongst rural populations across Australia. However, where she differs from Ignatow and Robinson (2017), is in the limited extent to which she draws on Bourdieu's (1986) conceptions of capital. Park's (2017a) focus on the individual over the structural also tends to downplay the influence of SES on young peoples' digital capital.

Broadly, an individual's digital capital is, "accumulated over time, through processes of accumulation, learning and acculturation..." (Park, 2017a, pp. 6). These processes in turn guide how young people engage with their ICTs and the internet. The methods of acquiring and maintaining digital capital are lengthy, requiring not only a substantial financial investment but also considerable time and on-going skill acquisition, both of which are very much influenced by a student's SES. Naturally, those with access to the latest ICTs at home and school will benefit more than those with basic or no access, with internet connection in Australia still highly dependent on cost and location. Thus, the notion of digital capital is utilised to avoid simplistic assumptions that young peoples' ICT usage, skills, and literacy are related only to the technology itself. Overall, digital capital plays a vital role in a range of outcomes for young people, from academic performance to labour market success.

## **The Research Aim and Research Questions**

The main aim of this thesis is to employ and extend the way in which Ignatow and Robinson (2017) conceive of a notion of digital capital, to critically explore the OISPs of young people from diverse economic and, to some extent, geographical backgrounds within NSW, focusing on how they use ICTs to inform post-secondary career and educational options. As such, this study

operates at the intersection of sociology of education, digital media and youth studies. The research also builds on existing studies addressing the influence of SES on information seeking practices, principally van Deursen and van Dijk's (2009; 2010; 2014) work within a Dutch context and that of Gripsrud (2010) whose longitudinal study in Norway found that SES differences were, in fact, maintained and strengthened by digital media. This research led to the conclusion that far from bringing people together, the internet mostly maintains traditional class differences. This thesis, therefore, contributes an Australian perspective to the existing international literature on OISPs. To date, little research has been conducted in Australia using SES to link structural and skills-based issues to OISPs and how they may contribute to post-high school outcomes. While the focus of this project is to assess the digital capital of young people, it will nevertheless try to avoid a normative account of student online habits. The thesis does, however, report practices considered advantageous in informing young people about their post-secondary options. The following three research questions informed these aims:

1. What forms of digital divides and digital capital exist across a variety of NSW high schools and amongst students in these schools of varied SES?
2. In what ways does a student's SES influence their online information seeking practices, both in general and in specific relation to seeking information on post-high school career options?
3. How does a student's SES affect their perceived post-high school career options, particularly their perceptions of gaining successful entry into higher education as viewed by themselves and by others?

These research questions inform the overarching thematic structure of this mixed methods thesis. Each question aims to illuminate the influence of young people's differentiated digital capital on their online search practices and potential futures as they transition out of secondary school. The various data sets, including surveys, interviews and observation, work together to provide a more detailed understanding of the varied digital divides affecting these students.

## The Research Context

Over the past three decades, there has been a substantial shift in the way individuals connect, communicate, create and source information. ICTs are now embedded in multiple forms in most peoples' daily lives, particularly by young people. Currently, over 4.2 billion people worldwide are classified as internet users, representing an increase from approximately 1% of the world's population in 1995 to over 55% in 2019 (Internet Live Stats, 2019a). The domain name Google.com was only registered on 15 September 1997 and Apple's first iPhone was released in the United States nearly a decade later, on 29 June 2007. In 2003, no-one had heard of Facebook, nor had the term 'social media' entered the popular lexicon.<sup>1</sup> These landmark moments, inventions and events have all occurred in the past 22 years and have significantly influenced global social, economic and political changes. Entire industries and occupations have been created, transformed or wholly disappeared as new digital technologies, software and services have entered homes, workplaces, and government and education sectors (Foundation for Young Australians [FYA], 2017). The unprecedented proliferation and penetration of digital devices and the internet means many people, and particularly young people, find it difficult to function in daily life without them.

The spread and adoption of ICTs has also triggered an explosion in academic literature that explores almost every aspect of these new technologies. This has led some to announce the dawn of a new era, known variously as the 'computer age' (Dertouzos & Moses, 1980), the 'information age' (Castell, 1996) and more recently the 'digital age' (Schmidt & Cohen, 2013). Terminology such as this can create the impression that social change is determined by technology, and while acknowledging technologies' determining role, as per actor-network theory (ANT) (Callon, Law & Rip, 1986; Latour, 1996), it also obscures the fact that change, and indeed technology, are primarily products of human actions and interactions (Martin & Madigan, 2006). Social change rarely occurs in revolutions resulting in a new age; rather, it occurs

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<sup>1</sup> Six Degrees, created in 1997, is largely credited with starting the social media phenomenon (CBS, 2019). Facebook entered and started to transform social communication from February 4<sup>th</sup>, 2004 (CBS, 2019).

gradually and incrementally in many complex ways (Haferkamp & Smelser, 1992). New age proponents also arguably fail to consider how factors such as SES are affected, seemingly assuming such change is felt universally, yet there is no evidence that social and economic structures are fundamentally changing for the better (Piketty, 2014). These symbolic terms draw power from their assumed or accepted grounding, and this acceptance gives credence to a particular understanding (Piketty, 2014). Nevertheless, while debates continue over ICTs' influence on the education sector and society at large, there is no doubt that the development and proliferation of digital devices has facilitated an explosion in the amount of information potentially available online.

In the early days, many politicians and scholars were caught up in the excitement of the potential of these technologies; some even likened the availability of information via the internet to the invention of the printing press, with the key difference being the internet disperses information at a much faster and cheaper rate than any prior technology (Katz & Rice, 2002). This excitement, combined with the reduction in the cost of ICTs, saw the uptake and rapid spread of ICTs into homes and schools across the globe (De Sola Pool, 1993) with the internet expanding rapidly throughout the 1990s and 2000s. Gore (1991), envisioning the increased availability of information, conceptualised the internet as an "Information Superhighway"; a route that would revolutionise and change almost all aspects of society, particularly the education sector, and create equal and free access to information for all. Bell (1973) and Schiller (1984) recognised access to information as a defining feature of developed societies, and Savolainen (1995, p. 259) observed that to perform "everyday life information seeking (ELIS)" – that is, the ability to locate, critically evaluate and use information – was now essential for everyday functioning. As early as 1973, however, academics were highlighting the impact of the development and advancement of ICTs on social issues such as employment and education. Gotlieb and Borodin (1973) drew attention to the potentially negative outcomes of computing such as the invasion of privacy, disruption of work–life balance, shifts in political power and changing societal values. These early voices of caution would remain, for the most part, muted as the world rushed to get online.

By the early 2000s, however, deep divisions amongst users along socio-economic lines were emerging. Theorists had begun to see that the internet and its associated technologies were exacerbating socio-economic inequities between and within countries (Unwin, 2009). Others expressed concern that the opportunities provided by these new technologies were not being distributed equally amongst the entire population (DiMaggio, Hargittai, Celeste & Shafer, 2004). These concerns stemmed from the view that mere availability of ICTs did not equal accessibility, nor did it necessarily provide a realistic chance that people would come across the information they require (Hargittai, 2002). More recently, Robinson et al. (2015) argue that new forms of digital inequalities have surfaced alongside the long-standing forms of social inequalities. However, while these digital inequities are relatively new, they are emerging along traditional “macro-level domains” including SES (Robinson et al., 2015, p. 569). Digital inequalities cannot be divorced from more traditional social inequalities and both need to be considered in contemporary sociological research. This recognition has led researchers to conclude that as education and everyday life becomes increasingly digitised, those with more significant online access and skills can participate and benefit more from their online activities, both in regard to learning and in critical aspects of everyday life (Cheong, 2008; Zillien & Hargittai, 2009). These influences are particularly acute when considering the life choices and trajectories of young people (Robinson et al., 2015). As a result, digital access and digital skills, particularly OISPs, are increasingly vital to the success of young people’s daily activities.

Since the development of web search engines such as Google in 1997, the assumption has long been that young people are easily able to find all the information they require. Referred to variously as the ‘net generation’ (Tapscott, 1998), ‘digital natives’ (Prensky, 2001), ‘millennials’ (Howe & Strauss, 2000; 2003) and ‘homo zappiens’ (Veen & Vrakking, 2006), it was naively and widely held that young people lived their lives online, shared a common global culture and were collectively savvy with ICTs. Prensky’s digital natives thesis (2001), with its principal proposition being that all young people born after 1980 and each subsequent generation will be uniquely distinct from all generations prior, has been particularly influential. This assertion is based on the assumption of these generations having ‘natural born’ digital abilities which will shift how they learn, study, write, interact and connect with each other and educators (Palfrey & Gasser, 2008).

The implication of such a perspective is both overly simplistic and dangerous as it potentially masks larger digital and social inequalities (Buchi, 2017; Robinson et al., 2015; Robinson, Chen, Schulz & Khilnani, 2018). The idea in ‘digital natives’ that each generation of young people possesses progressively more advanced digital practices and skills is not supported by empirical evidence (Bennett, Maton & Kervin, 2008; Kirschner & De Bruyckere, 2017; Selwyn, 2009) and its “bluntly essentialist dichotomy” misses the considerable variations in how young people use the internet and ICTs (Nash, 2014, p. 67). Nor does the term take account of the many digital immigrants<sup>2</sup> that may have a far greater understanding of ICTs than the younger *natives*, particularly those responsible for building the digital infrastructures and products of the past and today (Scott, 2013). These different perspectives show that a focus on the *digital native* obscures ongoing social and digital inequalities.

In fact, numerous studies confirm that young people vary significantly in their level of confidence and competence with communication technology (Beckman et al., 2018; boyd, 2014; Davies & Eynon, 2013; Hargittai, 2010). While there is no denying the central role that ICTs play in young people’s lives and their ubiquitous presence in most households, many young people complain of being overloaded, confused and frustrated when using their digital devices and the internet (Rideout, Foehr & Roberts, 2010; Robinson, 2011; 2013). And while the internet offers young people convenient access to an unprecedented level of information about a diverse range of subjects, there is a significant disconnect between popular discourses around young people’s use of technology and the proportion of young people who cannot access the internet due to social circumstances and inequalities. Thus, they do not have the opportunity to develop the required digital skills to meaningfully engage online.

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<sup>2</sup> Anyone born prior to 1980 (Prensky, 2001).

## The Digital and Education in Australia

The Australian federal government also recognises the important role of ICTs in young people's futures. Skill development in ICTs is an Australian educational priority in the national curriculum, with OISPs explicitly recognised in three sub-sections in which students must demonstrate proficiency:

1. Defining and planning information searches
2. Locating, generating and accessing data and information
3. Selecting and evaluating data and information

(Australian Curriculum, Assessment and Reporting Authority [ACARA], 2015, p. 1)

At a policy level, in 2007, the Rudd Labor Government launched the Digital Education Revolution (DER). A central tenet of the policy was that every child in Year 9 and above would receive a laptop computer to prepare "...students for further education, training and to live and work in a digital world" (Commonwealth of Australia, 2011, para 1). Consequently, between 2008 and 2013, under consecutive Labor governments, over one million laptops were issued to secondary school students across Australia. By the end of 2013, the responsibility for funding the program shifted to state governments and this effectively shelved the program.

Studies conducted into similar programs in the United Kingdom found a range of measurable outcomes including improved engagement with homework, better overall ICT skills and higher confidence in the classroom (Jewitt & Parashar, 2011). However, despite these findings and strong political support, two influential international studies have questioned the role of ICTs in schools. The Organisation for Economic Co-Operation and Development's (OECD) report,



*Students, Computers and Learning* (2015a) found that despite substantial investment in ICTs in Australian secondary schools since the 1980s, between 2009 and 2012 the digital reading performance of students declined. The study found

No appreciable improvements in student achievement in reading, mathematics or science in the countries that had invested heavily in ICT for education...[with] students who use computers very frequently at school do[ing] a lot worse in most learning outcomes, even after accounting for social background and student demographics.

(OECD, 2015a, pp. 3–4)

Prior to the OECD report, Hattie (2009) found that ICTs had only a marginal effect on improving student learning outcomes. Significantly for this study, neither Hattie (2009) nor the OECD (2015a) called for the abandonment of ICTs in educational settings; they instead suggested that appropriate, educationally focused digital skills need to be developed so young people can successfully transition into the workforce or tertiary study. Since the end of the DER, both Labor and Coalition federal governments (2013–present), and the NSW State Government, have pursued a Bring Your Own Device (BYOD) policy. The BYOD policy effectively shifts the cost and supply of a laptop for secondary students from the government to families.

Equity issues arise from such an initiative, most evidently in low-SES families' ability to maintain, upgrade and replace digital devices and schools that do not have the digital infrastructure to support multiple student, teacher and staff devices. The issue is further complicated by the lack of uniform ICT policies and protocols within state schools. This has resulted in highly variable delivery of student ICT training as it is largely dependent upon individual teachers' motivation and school ICT infrastructure (Janssen & Phillipson, 2015). Perhaps the biggest issue with the BYOD program, however, is the preference of many students, particularly those of a low SES, to use their smartphone as their device of choice (Taneja, Fiore & Fischer, 2015). Numerous studies have identified a negative correlation between students' overall academic performance and attempting to multitask on devices, such as their smartphones, while in the classroom (Junco &

Cotton, 2012; Sana, Weston & Cepeda, 2013; Taneja et al., 2015). The non-educational use of smartphones and other mobile devices in NSW schools was addressed in a recent NSW Department of Education (DoE) review. The review necessarily stopped short of banning smartphones in secondary schools altogether,<sup>3</sup> instead leaving it up to individual schools to decide which devices are permissible in their classrooms (Carr-Gregg, McLean, Third, 2018). Overall, under the BYOD system, there are clear winners and losers, lending weight to the view that the education system continues to contribute to social reproduction and inequality in Australian society.

A growing body of local and international research continues to detail disparities in secondary school students' technology access, practices and skills associated with a range of social and cultural factors across Australian schools (OECD, 2016). Jamrozik (2009, p. 205) refers to the Australian schooling system as operating as a "sorting out mechanism", whereby the division of schools into categories such as private/public/Catholic,<sup>4</sup> selective/non-selective<sup>5</sup> effectively serves to 'weed out' undesirables in a process of continuous social reproduction (Bourdieu & Passeron, 1990). The 'undesirables' in many cases are young people of a low SES and the weeding out process generally occurs prior to entry into tertiary education (Jamrozik, 2009). Additional research from the OECD (2016) confirms that inequalities in outcomes persist in the Australian education system, with worse outcomes for low-SES secondary students than in comparable countries such as Canada. Two recent Australian Council for Educational Research (ACER) reports (Thomson, Wernert, O'Grady & Rodrigues, 2017a; Thomson, Bortoli & Underwood, 2017b) analysed the results of two OECD measures of educational capabilities across secondary schools in Australia: *Trends in International Mathematics and Science Study*

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<sup>3</sup> The NSW DoE review did recommend a complete ban on smartphones in primary schools (Carr-Gregg et al., 2018).

<sup>4</sup> Schools in Australia are classified as Government (Public), Non-Government (Private) or Catholic. In 2016, 65.7% of students were enrolled in Government schools, 19.7% in Catholic schools and 14.6% in Private schools (ABS, 2018b). However, the majority of all schools receive government funding and teach to a uniform National Australian Curriculum (Australian Curriculum, 2019).

<sup>5</sup> There are 22 government-funded, fully academically selective schools across NSW, with entry based on the results of an academic *Placement Test*, which students sit at the beginning of Year 6 (NSW DoE, 2019).

(TIMSS) (Mullis, Martin, Foy & Hooper, 2015a; Mullis, Martin, Foy & Hooper, 2015b) and the *Programme for International Student Assessment (PISA)* (OECD, 2015b). These reports conclude that the difference between young people who attend disadvantaged, low-SES schools and those who attend more privileged schools in Australia is the equivalent of almost three years of education (Thomson et al., 2017a; Thomson et al., 2017b).

These findings confirm that in Australia, disadvantage within the education system remains a significant issue and the school a student attends continues to significantly influence their future outcomes, including the likelihood of gaining entry to tertiary education. After 30 years of computers in classrooms, and a decade on from the Digital Education Revolution, educational outcomes for Australia's most vulnerable young people have seen little improvement. In fact, by many accounts, both digital and social inequalities have worsened (Thomson et al., 2017a; 2017b). Across OECD member countries, individual schools and their students' SES profiles remain the most significant background variable when considering a young person's post-secondary career and education choices and future income levels (D'Addio, 2007).

Income levels also contribute to this. Income inequality in Australia is growing. According to the Australian Institute of Health and Welfare (AIHW) (2017), 13% of the Australian population is now living in relative poverty. This equates to almost three million people, many of whom are children and young people (McCarthy & Wicks, 2013). The ABS shows that over the last 40 years there has been a 59% increase in full-time wages in high-income jobs, but only a 15% increase in the lowest income jobs (ABS, 2017a; Leigh, 2013). The Council of Australian Governments (COAG) Reform Council's (2013) report on education and skills found that the growing precarity within the Australian youth labour market<sup>6</sup> is partly due to young people failing to navigate the transition from school to study or employment successfully. In concert with this shift, or perhaps due to it, there has been a rise in ICTs in the workplace. An estimated 90% of future jobs will involve digital skills, with 50% of these jobs requiring advanced digital skills, many of which can

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<sup>6</sup> COAG uses the *National Strategy for Young Australians* definition of youth, which is measured in two age groups, 15–19 and 20–24, when considering youth economic productivity (COAG, 2013).

only be obtained through university study (FYA, 2015). These demands will only increase as the next generation attempts to enter the workforce with university education now seemingly becoming the minimum requirement for workforce entry. The costs for those that miss out, or are excluded from tertiary entry, can be profound.

## **Structure of the Thesis**

This thesis explores the issues and concepts briefly outlined above in the introduction, starting with Chapter 1, *Exploring Digital Capital and Divides*, which further investigates the notions of digital capital and the digital divide, outlining where they intersect with literatures on SES, online information seeking and digital and social inequities. The chapter highlights the paucity of qualitative examination of young people's specific digital practices and digital capital, particularly concerning their sourcing of information pertaining to their post-secondary career options. It considers the literatures across ICTs, SES and schooling to provide another picture of young people's ICT use. Chapter 2 elaborates the mixed methods methodology employed in the study and examines my positionality as the researcher. It profiles the study sites and participants, the process of recruitment, and the data collection techniques and analysis. The chapter also considers how the convergent points within this process established the key arguments addressed in each of the three empirical chapters.

Chapters 3 to 5 detail the key findings of the thesis through the development of four online information seeking practices (OISPs) groups based on the student participants' varied digital capital and career ambitions: the Traditional Job Seekers, the Social Networkers, the Future Professionals and the Creative Dreamers. It is critical to distinguish between subgroups of young people in this manner, as assumptions about the homogeneity of their usage are continually used to influence and shape education policies and programs at the federal, state and school level. Each of these three chapters starts with an exploration of the overall school ICT infrastructure and digital curriculum, followed by an examination of the students' digital supply, usage, skills (including OISPs) and their preferred source of career information. In so doing, a

clear relationship between the students' SES and levels of objectified and embodied digital capital is demonstrated. Chapter 3 focuses on the students attending the two urban-based schools classified as low SES, Coventry High School and Glencross High School.<sup>7</sup> The relatively uniform digital practices and digital capital of these students led to them being termed the Traditional Job Seekers, the first of the four OISPs groups. Chapter 4 concentrates on the students attending the two urban-based schools classified as high SES, Peckham High School and Pineridge High School. The digital practices of the students from these schools were not only more advanced than the Traditional Job Seekers at Coventry and Glencross, there was also more variation amongst these students resulting in the second and third OISPs groups, the Social Networkers and the Future Professionals. Chapter 5 focuses exclusively on the regionally based Bradford High School. Bradford was the most diverse school in terms of the SES of the student body. This variation was reflected in the digital practices and digital capital of the students. In addition to Bradford having students that could be considered Social Networkers and Future Professionals, there was also a fourth OISPs group, the Creative Dreamers. The thesis concludes by detailing the contributions of this study to broadening understandings of the varied digital capital and practices of young people in Australia, developed and discussed in terms of these four OISPs groups. It also considers the implications of these findings concerning government policy and research, particularly in the fields of ICT, education and young people's post-high school transitions.

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<sup>7</sup> Pseudonyms are used throughout this thesis for all schools, universities, locations and participants.

## Chapter 1: Exploring Digital Capital and Divides

This thesis critically explores the multifaceted digital divides that persist amongst Australia's young people and the subsequent inequalities these create. Despite the popular myth that the digital divide has closed in affluent countries such as Australia, Servon's claim from 2002 (p. 4) that, "...deep divides remain between those who possess the resources, education, and skills to reap the benefits of the information society and those who don't", remains true today. Studies continue to demonstrate that the unequal educational outcomes for students of a different SES in secondary schools have changed little since the widespread adoption of ICTs into their everyday lives (Beckman et al., 2018; Redmond, Wong, Bradbury & Katz, 2014). Indeed, there is growing evidence that since the widespread adoption of ICTs into the schools, homes and lives of Australia's young people, both social inequality and educational outcomes have worsened (Thomas et al., 2017). Given this, more could be done from a sociological perspective to examine how young people engage with ICTs and the internet when making critical life decisions such as which future study and career options to pursue.

There remains a substantial minority of young people, particularly those of a low SES, who not only lack the skills to optimise their ICT usage but also continue to lack basic access to the internet (Beckman et al., 2018; Park, 2017a; Selwyn, 2013). Access issues are compounded by the increasingly rapid product life cycle of ICTs, leading to individuals of a low SES constantly playing a game of "catch-up" with their high SES peers (Park, 2017a, p. 6). Broader international research exploring how young people use the internet and how it is shaping their everyday lives continues to demonstrate just how critical digital devices are to conducting even the most basic daily activities (British Educational Communications and Technology Agency [BECTA], 2008; Eynon & Malmberg, 2011; Robinson, 2011). It is becoming ever more apparent that more than a basic working knowledge of various ICT devices is required if young people are to attain their potential regarding both education and career outcomes (Litt, 2013), with Warschauer (2003 p. 9) observing that being able to navigate the online realm successfully is "critical to social inclusion". Research linking SES and higher education with how young people use ICTs is an

underrepresented area of research. Beckman et al. (2018), for example, suggest that further research is required that examines the links between digital skills and educational and career outcomes, to better understand and address ongoing social stratification in Australia. Internationally, DiMaggio and Bonikowski (2008) identify major repercussions such as lower wages for individuals who are not proficient internet users or who do not possess adequate digital skills. This thesis builds on this work by exploring the impact of SES on the digital capital of a group of young Australians and considers their digital supply, usage, skills and the potential outcomes of this. This approach recognises that the digital practices of young people are context laden and heavily influenced by social structures; as such “...they cannot be studied in isolation from society or from one another” (Sterne, 2003, p. 385). This chapter, therefore, examines various perspectives on the digital access, usage and skills of young people – their digital capital – and the influence of two crucial networks of support, their parents, and careers advisors.

### **Digital Capital: An Emerging Form of Power**

*Capital is what oils the wheels of social mechanisms.*

Michael Grenfell (2008, p. 214)

As indicated in the introduction, Bourdieu’s critical sociological constructs are a means to explain, understand and represent the constraints and opportunities of young people’s different social worlds. To this end, Bourdieu’s concept of capital provides one way of analysing how young people interact with ICTs and the internet (Bennett & Maton, 2010). Capital is an ideal notion to frame young people’s ICT use as it combines an analysis of the macro-level structures surrounding them and explores how these structures influence their agency (Bourdieu, 1984). An analysis of capital can also capture the reproduction of inequalities in social systems, such as the education system (Bourdieu, 1984). While Bourdieu’s work was largely completed before the rise of ICTs and the internet, increasingly, his ideas are being conceptualised in the field of digital sociology. Davies (2015), for example, argues that Bourdieu offers the conceptual vocabulary to best analyse the complex social networks in which young people are often positioned as well as

the wider social arrangements within which they use ICTs and the internet. For Park (2017a, p. 74), digital capital is the “...essence of how people are exposed to, acquire and accumulate the capital necessary to thrive (succeed) in a digitalised society”. Ignatow and Robinson’s (2017, p. 952) concept of digital capital provides a focused and contemporary reframing of capital for such an inquiry, in that it “...corresponds to the reach, scale and sophistication...” of young people’s ICT interactions and digital skills. Like other forms of capital, digital capital is accumulated over time, its acquisition is ongoing and cumulative. Digital capital is not permanent and given a change in circumstances, particularly a change in family economic capital, it can also be regressive (Park, 2017a).

The reason digital capital is so important to measure is because divergent ICTs access, usage and skills now influence outcomes in young peoples’ offline lives (Park, 2017a). As Patel (2014, para. 10) explains, “The internet isn’t an adjunct to real life; it’s not another place. You don’t do things ‘on the internet’, you just do things”. So, when discussing young peoples’ OISPs and subsequent educational and career goals and offline outcomes, exploring the role and influence of digital capital in both its embodied and objectified forms is critical. These approaches to digital capital recognise the differing outcomes young people can realistically achieve, given the limitations or benefits derived through their varied digital access and practices. Digital capital can be understood as quite strongly interrelated to other forms of how Bourdieu conceived of capital, particularly cultural capital in its objectified and embodied forms. As a consequence, digital capital can also be converted into and influence other types of capital, including economic and social capital. For example, Ignatow and Robinson (2017) emphasise that coding, a form of digital capital, can be converted into economic capital.

Bourdieu, in line with early theorists such as Max Weber (1946), shifted the focus away from a purely economic explanation of power and dominance, arguing that power may also be derived from the possession of cultural and social resources (Crossley, 2008; Hurst, 2015). Broadly, cultural capital includes knowledge, tastes, skills and lifestyle choices which can promote social mobility. Social capital consists of beneficial social connections, which can result in material or symbolic gain (Bourdieu, 1984; 1986). Each of these forms of capital is located within a system of



competition and exchange whereby different capitals have different values, with one source of capital having the potential to be transformed into another (Bourdieu, 1984; 1986). Bourdieu's (1984; 1986) principal concern in relation to capital was regarding its continual transmission and accumulation in ways that perpetuate social and educational inequities. Through this transmission, families of a high SES continue to secure advantages for their children over others in the education system (Reay, 2001). For example, Bourdieu uses the concept of cultural capital to refute the idea that academic success and failure are due to natural aptitude, arguing instead that educational success is a product of the cultural capital transmitted through socialisation within the family and beyond. Parents of a high-SES student, for example, have long used their cultural and social capital together with their economic capital to reproduce this educational advantage. Ignatow and Robinson (2017) argue that ICT access and the cultivation of advanced and educationally focused digital skills constitute yet another form of capital that may be similarly transmitted along SES lines.

Bourdieu's notion of capital is useful to link digital capital to non-digital forms of capital. Empirical studies show how similar ICT engagements can yield vastly different payoffs for more and less disadvantaged groups (Beckman et al., 2018; Ragnedda & Ruiu, 2017). Bourdieu's approach places young people at the centre of their varied social worlds and facilitates a more nuanced understanding than previous studies that draw sharp lines between young people's everyday world and their educational contexts. The strength of the notion of digital capital is its ability to be operationalised to link digital and social inequalities, as exemplified in digital divides. This linkage is achieved through two means; firstly, by examining new pathways for capital development created by the digital realm, and secondly, by linking economic resources to digital capital (Ignatow and Robinson, 2017). Commonly studied in isolation, this connection has often escaped the scrutiny it deserves (Ignatow & Robinson, 2017; Park, 2017a). As with the unequal distribution of other forms of capital, digital inequities have the potential to shape the crucial life chances of young people in multiple ways, including their educational and career outcomes. As education, and life in general, become increasingly digitised, those with greater stores of digital capital will arguably participate and benefit more from their online activities. Young people who possess this capital will therefore have advantages over their digitally less advantaged peers.

Bourdieu (1984; 1986) understood cultural capital as taking three forms; embodied, objectified and institutionalised.<sup>8</sup> The first two of these, objectified and embodied cultural capital, are useful to explore the varied digital capital that young people possess. Objectified cultural capital are material objects, while embodied cultural capital represents the internalisation, in mind and body, of understandings, habits and practices (Bourdieu, 1984; 1986). Objectified digital capital involves the constant acquisition of the latest digital devices, equipment and tools needed to access the internet (and access itself), while embodied digital capital involves the development of critical digital skills that appropriate these ICT devices in capital enriching ways (Beckman et al., 2018). In general, the higher the objectified and embodied digital capital an individual has acquired, the greater their levels of digital skills (Beckman et al., 2018). However, the use of objectified digital capital in different ways, i.e. either a predominantly educational or entertainment focus, will lead to different levels of embodied digital capital.

The acquisition of this capital begins in early childhood with a child's first use of technology and requires a substantial investment of time by parents and other family members to ensure, as with other forms of capital, it accumulates (Bourdieu, 1986). The embodiment of various beneficial digital practices is critical to this process, as Bourdieu (1997, p. 50) acknowledged in one of his few comments regarding technology:

To possess the machines, he [sic] only needs economic capital...[however] to appropriate them and use them in accordance with their specific purpose he must have access to embodied cultural capital...either in person or in proxy.

Young people's successful engagement with ICTs is also very much influenced by their social capital. The relationship between the embodied individual and the social world is fundamental to Bourdieu's capital construct (Beckman et al., 2018). The primary sources of social capital include institutions, organisations, peers, educators and, crucially, parents. As Bourdieu (1997, p. 51) explains, "...membership of a group...which provides each of its members with the backing of the

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<sup>8</sup> Institutionalised cultural capital is largely concerned with educational qualifications and their outcomes (Bourdieu, 1986).

collectively-owned capital”, offers substantial cumulative benefits. Thus, social capital is recognised as an important element of young people’s ability to access and effectively engage with ICTs, i.e. their ability to draw on friends and family to assist them in acquiring the required ‘digital’ capital. In this way, young people’s offline support networks and activities can help generate more significant social ‘digital’ capital online (Ignatow & Robinson, 2017). A further strength of acknowledging social forms of digital capital is its ability to capture the critical role parents can play in nurturing beneficial ICT practices.

Parents are critical to both young people’s uptake of online activities (Eynon & Malmberg, 2012) and the development of digital skills, including online information seeking (Cilesiz, 2009; Rieh, 2004). The diverse contexts of individuals also affect how, why and what young people do once they are online (Rieh, Hilligoss & Yang, 2007; Shenton, 2007). Giacquinta, Bauer and Levin (1993, p. 9) refer to “the social envelope” to explain how ICT learning does not take place in a vacuum. Rather, for ICT learning to occur, a “conducive social environment” must exist (Attewell & Battle, 1999, p. 9). For many young people, this occurs in the family home and involves their parents; research indicates that home access to ICTs, rather than school access, more profoundly affects young people’s depth of understanding and range of skills online (Facer, Furlong, Furlong & Sutherland, 2003). The role and potential of ICTs and the internet in a young person’s life is thus primarily shaped by their parents, with schools an important secondary point of contact.

The role of parents has long been recognised in the intergenerational transmission of educational and social advantage (Lareau, 2003; Reay, 2001; Reay, Crozier & Clayton, 2010). The influence of parents’ economic, cultural and social capital, as well as their cultivation of beneficial digital practices in their children, is critical. The different resources, practices and dispositions that parents have toward ICTs, and education more broadly, can drastically influence their child’s overall educational and career trajectories (Lareau, 2003; Reay, 2001; 2017; Reay et al., 2010). Lareau (2002; 2003; 2011) uses the notion of “concerted cultivation” to refer to how parents of a high SES control and focus their child’s energy towards enrichment pursuits that enhance their cultural and social capital, priming them for success later in life. Lareau (2002; 2003; 2011) draws heavily on Bourdieu’s work and shows how parents of a high

SES recognise the critical role of capital transmission and thus dedicate significant amounts of time to assure the educational success of their child. This process is believed to be, in part, responsible for the higher levels of academic and professional achievement amongst high-SES young people (Brown, Lauder & Ashton, 2011). Such an approach is in stark contrast to the “natural growth” belief that Lareau (2003; 2011) argues is more commonly found amongst families of a low SES, who tend to let their children find their own way and allow them greater freedom to select school subjects and extracurricular hobbies. In this way, families of a low SES are said to place much less of an emphasis on grooming their children for future success, instead allowing them to grow into their future selves without constant adult direction (Lareau, 2003; 2011). As a result, the role of parents in fostering skills and competencies that prepare students for their digital futures is significant (Beckham et al., 2018). One of the most notable shifts in education in Australia over the past 20 years has been the changing expectations of the role of parents (Selwyn, Banaji, Hadjithoma-Garstka & Clark, 2011) with the “engaged parent” (Selwyn et al., 2011, p. 314) often featured in government education policies.

Parental decisions concerning how and when to allow children to engage with ICTs and the internet is very much informed by parents’ SES (Livingstone & Bober, 2004), with significant differences between how parents of varying SES conceptualise ICTs and internet use (Schofield Clark, Demont-Heinrich & Webber, 2005). For example, even though all parents express concern over ICT use for entertainment as opposed to educational purposes, low-SES parents more often use this as a reason for limiting screen time (Schofield Clark et al., 2005). Many high-SES parents rather see the increased time online as beneficial for skill development and social and cultural cultivation (Schofield Clark et al., 2005). Low-SES parents also tend to focus considerable energy on controlling the online content of their children (Schofield Clark et al., 2005). Paradoxically, while this control is attempted, it is generally more common for low-SES families to have a greater number of digital devices in the household (Pugh, 2009). It is believed that such forms of regulation are a way for low-SES parents to exercise their parenting skills, as limiting children’s interaction and exposure to entertainment and media has long been viewed as a parental virtue (Hoover-Dempsey et al., 2005; Schofield Clark et al., 2005; Seiter, 1999). Studies further show that low-SES parents are less confident online, less likely to have an IT ‘expert’ in their social field

and rely heavily on “public scripts of media use” that express familiar narratives of fear around young people’s use of ICTs and the internet (Hoover, Clark & Alters, 2004, p. 7).

The above discussion makes it clear that one of the most critical aspects of digital capital is that individuals have varied levels and access, creating an uneven and competitive social environment. It also highlights that evolving uses of Bourdieu’s (1984; 1986) concept of capital, such as Ignatow and Robinson’s (2017) notion of digital capital, provide a productive means for understanding the various digital divides in more sophisticated ways as “...a hierarchy of access to various forms of technology in various contexts, resulting in differing levels of engagement and consequences...” (Selwyn, 2004, p. 351). Park (2017a, p. 78) concurs with these scholars adding that an analysis of digital capital is also the ideal framework through which to “...enhance our existing understandings of the digital divide”. By exploring young people’s objectified and embodied digital capital, the analysis of digital divides shifts away from simplistic binary divisions, such as online/offline or skilled/unskilled, toward more nuanced accounts of young people’s digital practices. It also captures the pervasive internal and external influences that can affect the way young people think and act as a result of both their socialisation and their adaptation to the possibilities and the limitations of their daily lives over time, highlighting the varied notions of digital divides that young people experience.

### **Conceptualising the Digital Divide**

*The digital divide is one of the most discussed social phenomena of our era. It is also one of the most unclear and confusing.*

Mark Warschauer (2003, p. 1)

In recent decades, the internet, as an unlimited and primarily free source of information, has been seen as potentially offering a new conduit to higher education entry for marginalised groups such as those of a low SES. A recent review of national digital policies across the Australian population shows that having access to and using ICTs and the internet are considered

fundamental aspects to fully participating in society today (De Spinola, 2018). Digital skill development is seen as a critical prerequisite for successfully exploring and locating high quality reliable educational and career information online. Further, scholars believe that as the internet becomes increasingly ubiquitous, it will continue to reflect traditional divisions already prevalent in society and potentially create greater inequality both online and offline (Beckman et al., 2018; van Deursen & van Dijk, 2014; Wei & Hindman, 2011). It is these divisions and assumptions that led Norris (2001) to conclude that a new form of inequality was emerging, a phenomenon she termed “the digital divide”.

The notion of the digital divide can be understood in various ways. The original debate regarding this idea centred on the presence, or not, of the ICT equipment itself, a classic binary distinction between the haves and have-nots, or as Castells (2000, p. 93) put it, a “technological apartheid”. This initial digital divide, otherwise known as the first level digital divide, was said to facilitate an information gap between those of various SES, as the high costs of the early adoption of ICTs divided families into those who could afford the hardware, software and internet access and those who could not (van Dijk, 2005). The advantages were manifold for those who could access this new technology, both at school as well as in the home environment. Tichenor, Donohue and Olien (1970) observed 40-odd years ago that when new media and information is first made available to society, it is nearly always individuals of a high SES who have the financial means to obtain earlier access, who gain the subsequent benefits early access to objectified forms of digital capital affords. This “systemic lag” between those families with the economic capital to adopt newer ICTs earlier and continuously persists today (Park, 2017a, p. 51). In fact, due to the dynamic nature of digital divides, there has been a renewed interest in researching all levels of the digital divide. The fluid nature of the internet, combined with the rapid pace of technological change can quickly shift ‘haves’ back into ‘have nots’ in terms of access, skills, and usage. As Park (2017a, p. 29) remarks, “connection to the internet, or connectivity, is not a one-time event”. More recently, digital divide research has identified that it is no longer enough to look at differences between users and non-users. In countries such as Australia where the proportion of

the population with access to an internet connection has almost reached full saturation,<sup>9</sup> the first level divide is no longer considered the primary barrier to benefiting from ICTs and the internet (De Spinola, 2018).

Hargittai (2002) was amongst the first to note the distinction between digital access and digital skills. The difference in the development of these online skills and usage patterns amongst both young people and the general population, i.e. the forms of embodied digital capital they may possess, is known as the second level digital divide (Hargittai, 2002). Scholars argue that the development of these skills is necessary for social inclusion as an increasing number of educational, governmental and employment services move exclusively online (Davies & Eynon, 2013; Yates, Kirby & Lockley, 2015). Also, to truly address the repercussions of these first and second level digital divides, the outcomes of online and offline access and skills must be addressed. Thus, Wei, Teo, Chan and Tan (2011) argue that research should move beyond these first and second level digital divides and start to focus more on the outcomes of internet use and digital skills. They labelled this measure the third level digital divide. At its most basic, this third digital divide involves simply asking “Who benefits most?” from online access, skills and usage (van Deursen, van Dijk & Helsper, 2014, p. 3). Differences in internet outcomes are likely to have profound consequences, both generally and specifically, regarding students’ post-high school education and career options, thereby reinforcing and potentially worsening existing social inequalities. As outlined by van Deursen et al. (2014), the study of outcomes is a measure of what is at stake for all three levels of the digital divide. Hence, the notion underpinning all digital divide research is that there are benefits associated with ICT and internet usage and that non-usage has negative consequences.

The first and second level digital divides have been criticised for being overly deterministic (Gunkel, 2003; van Dijk, 2005) and conceptually simplistic (Selwyn, 2004; van Dijk & Hacker, 2003). Gunkel (2003, p. 517) takes particular exception to the persuasiveness of this technological determinism, arguing that many “...socioeconomic problems are reduced to

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<sup>9</sup> Amongst the general Australian population there is an 88% internet penetration rate (ABS, 2018a).

technological issues, so that investment in technology is directly associated with social and economic improvement". Gunkel (2003) further cautions that the term "digital divide" itself is confusing due to the ambiguous nature of the gaps to which it refers. The dichotomous nature of the first and second level digital divides is also criticised by Selwyn (2004), who maintains they fail to accurately capture the range of different positions young people may occupy on the access and skill development divides (Selwyn, 2004). Still, both Gunkel and Selwyn appreciate the practicality and applicability of such a term to research on social and digital inequities, with Gunkel (2003, p. 516) commenting that

To have second thoughts about the digital divide is not to question the validity or importance of the different social and technological issues that are identified by this term. What is needed, therefore, is not a precise and exclusive definition, but an understanding of the essential polysemia that already characterizes the term 'digital divide'...

Early critics, including Gunkel, led to the acknowledgement among digital divide researchers that the first level digital divide of access needed to be expanded to consider broader issues, such as digital skills and outcomes. Consequently, some researchers deserted the digital divide terminology altogether. Instead, they discussed *gradations of digital inclusion* (Livingstone & Helsper, 2007), *digital gaps* (Wei & Hindman, 2011) and even *digital access rainbows* (Schofield Clark et al., 2005). More recently, Park (2017a), while acknowledging that digital capital was the ideal framework to explore the digital divide, nonetheless contends that the digital divide concept had evolved into *digital exclusion*, which she believes better captures the varying levels of ICT use and the subsequent online and offline consequences of ICT practice. However, Helsper (2017) argues against adopting terms such as these as they focus more on the individual rather than on their broader social environments and unlike the multifaceted and dynamic digital divide concept can be static in their analysis. Other researchers, recognising the validity of these counter-arguments and the polysemic nature of these dynamic and complex digital divides, expanded the notion of the digital divide to at least the three divisions outlined above.



There is scant evidence to support the idea of a disappearing digital divide on any level in Australia (Thomas et al., 2017). A small, but significant, proportion of young people of a low SES still do not have internet access at home, and an even larger number has substandard access (Thomas et al., 2017). The principal reasons for the lack of access and use of ICTs and the internet amongst young Australians under the age of 25 are SES factors such as household income. A lack of home access means that many young people are missing out on time to practise and develop critical digital skills (Davies & Eynon, 2013). These continuing digital divides within Australia threaten to exacerbate the gap between families of a high and low SES. Recent studies demonstrate the continuing existence of both the first and second level digital divides amongst varied demographics including populations in rural and regional locations (Freeman et al., 2016; Park, 2017b), Aboriginal communities (Rennie, 2018), amongst senior Australians (Nycyk & Redsell, 2015; Redsell & Nycyk, 2010) and immigrant populations (Alam & Imran, 2015). Rural digital divides based on a lack of infrastructure and access, remain one of the most enduring domestic and global first level digital divide dilemmas (Park, 2017a, Park, 2017b). In Australia, the two most commonly cited factors preventing families from accessing ICTs and the internet are affordability and living in a remote, rural or regional location (ABS, 2016). In low-income households with internet access, the cost of their connection is likely to be reported as unaffordable (Ewing, van der Nagel & Thomas, 2012). This suggests that studying the contours of ongoing digital divides should be a priority for scholars investigating social stratification. In Australia, as outlined above, studies in this field continue to focus almost exclusively on minorities, hard to reach groups and geographical location as barriers, excluding mainstream groups, particularly young people living in urban areas. This is a result of two ongoing pervasive assumptions; firstly, that the first level divide has been overcome, and secondly, the view that young people are now born *digital natives*, naturally hard-wired to be tech savvy.

### **An Australian Digital Native?**

Young Australians reflect international trends amongst other Western nations concerning both the number of devices owned and the level of usage and interaction with ICTs and the internet (Thomas et al., 2017). However, while it is well established that young Australians are high users

of the internet and other new technologies, little is known regarding how they “are distributing their engagement across the various resources of the internet and what this may mean for their education and life transition outcomes” (Crook, 2008, p. 18). As much as ICTs have penetrated every aspect of young people’s lives across the globe, there is a surprising lack of research that focuses exclusively on secondary school-aged young people and the digital divides they experience (Livingstone & Sefton-Green, 2016). To date, much of the research in this field remains heavily focused on university and college students (Cingel & Hargittai, 2018; Mansfield, 2017), younger children (Flewitt, Messer & Kucirkova, 2015), the general population (Helsper, van Deursen & Eynon, 2015; van Dijk, 2013), families (Vigdor, Ladd & Martinez, 2014) and minority groups (Alam & Imran, 2015; Cranmer, 2010; 2013; Rennie, 2018). Researchers such as Davies and Eynon (2013) argue that this lack of emphasis on secondary school-aged young people is due mainly to the continuation of the pervasive ‘digital natives’ discourse.

Prensky’s (2001) ‘digital natives’ thesis argues that today’s young people are wired differently from any previous generation due to the omnipresence of digital devices in their lives. Prensky described young people as competent digital multitaskers, with a preference for graphics over text, instant gratification, playing computer games and fast-paced information delivery. However, the popular image of young people as frequent and uniformly confident users of ICTs and the internet, demonstrating both homogenous digital skills and usage profiles, is oversimplified and contributes to deepening the digital divide across all three levels (Bennett et al., 2008). Despite this myth of a uniform category of youth being ‘naturally’ technologically sophisticated, youth studies conducted over two decades demonstrate that different groups of young people vary greatly in what is referred to here as their level of objectified and embodied digital capital (Cotten, Davison, Shank & Ward, 2014; Facer & Furlong, 2001; Livingstone & Bober, 2004; Livingstone & Sefton-Green, 2016). Previous research has shown that there is significant heterogeneity amongst young people’s internet usage as well (Hargittai & Hinnant, 2008; Livingstone & Helsper, 2007; Posso, 2016; Robinson, 2011). Numerous scholars have also problematised the popular belief that young people are largely self-taught ICT experts (Davies, 2015; Hargittai, 2010; Livingstone & Helsper, 2010). It would seem that, just as sitting a child in a room full of books will not make that child literate, the mere act of supplying multiple ICT

devices and ample usage time to the same child will not make them tech savvy. Rather, a young person's perceived natural aptitude on ICTs is not due to an innate ability or a 'digital gene' but is rather far more likely to be a direct result of their varied digital capital.

An exploration of the varied digital divides is also useful to examine and update the assumptions inherent in the notion of Australia's young people being digital natives. Further, the social processes and institutions in which young people's ICT and internet use are embedded are critical avenues of investigation to achieve a complete picture of how social constraints affect their accumulation of digital capital (Ignatow & Robinson, 2017). Institutional access for many young people remains limited, with a continuing digital divide between schools of differing SES and geographical location in Australia. For example, in the state of Queensland, Lupton (2013) found substantial differences between publicly funded state secondary schools and private schools, particularly regarding internet speed and school bandwidth. The slow internet speeds and limited bandwidth in these public schools would have reduced their ability to cope with the demands of the multiple student and teacher digital devices brought to school each day under the BYOD program. Therefore, young people's digital capital, both objectified and embodied, is also a reflection of their varied school digital environments.

### **Australia's Evolving First Level Digital Divide**

Australia is one of the few Western nations to have witnessed a renewed interest in the study of the first level digital divide, with questions again been asked around infrastructure and access brought about by the rollout of the National Broadband Network (NBN) (Thompson, Carter & Richards, 2017). The NBN was a policy initiative launched by the Labor government in 2009 to modernise Australia's slow and ageing copper line network and to supply Australian households, schools and businesses with some of the fastest internet speeds in the OECD (Swan, 2009). The original objective was to supply fibre optic cabling, known as Fibre to the Premises (FTTP), direct to the premises of 93% of Australian households and businesses by 2020 (Swan, 2009). However, by the time the Abbott Coalition government was elected in 2013, only one in five Australians were linked via the expensive FTTP option. The new government opted for a cheaper and slower

Fibre to the Node (FTTN) option for the remainder of the rollout (The National Broadband Network Corporation [NBN Co.], 2013; Turnbull & Cormann, 2014a; 2014b). Unlike FTTP which supplied cabling direct to each premise, FTTN delivers the fibre optic cabling to the street level and then uses the older existing copper network or pay television cabling to deliver the service to individual households, schools and businesses, dramatically slowing the connection speed. While many Australians are now connected to the internet, increasingly the connection is not equal nor is it uniformly reliable. A recent study found that a majority of the households who received FTTP were located in high-SES suburbs (Thompson et al., 2017). A report compiled by Schram et al. (2018) examining the rollout of the NBN to December 2016, found that low-SES areas overlapped with regions receiving the lesser quality and slower FTTN. A more detailed analysis of the report reveals that of the highest rated 10% of households in urban areas across Australia, 93% received FTTP while this was the case with only 29% of lowest ranked urban households. This represents a considerable structural limitation faced by many low-SES families across Australia. So far, the only solution being offered to families and businesses wanting the faster FTTP service is for them to pay for the installation themselves at considerable cost (Thompson et al., 2017). Increasingly then, SES will influence access to ICTs and the internet and also decide the quality, reliability and speed of home access. If young people are not able to move beyond this first level digital divide, due to issues such as the uneven distribution of the NBN, then there is little hope of them developing the digital skills now considered so critical to social inclusion.

Australian secondary schools have also been affected by the differential rollout of the NBN across the country. The provision of digital infrastructure in schools across Australia remains somewhat mixed and highly dependent on the SES makeup of a school's surrounding catchment area and geographical location (Lupton, 2013). While schools are less of an influence on a young person's digital capital than parents, they nevertheless provide a valuable secondary point of access to ICTs and the internet. School ICT access can help students who lack household digital access to potentially overcome aspects of the first level digital divide. A lack of school ICT infrastructure and internet connection remains a critical issue for schools in regional, rural and remote locations across Australia. With one of the lowest population densities in the world,

Australia remains plagued by considerable internet access divides between its rural and urban populations (Park, 2017b; Stokes, Stafford & Holdsworth, 2002; Thomas et al., 2017). The importance of bridging the substantial gap between digital services in regional, rural and remote and urban locations was first highlighted in the 2002 *Rural and Remote School Education Report* conducted by the Human Rights Commission (Stokes et al., 2002, p. 64), which made the following recommendation:

... [there is a] need to develop a long-term, strategic approach to the improvement of infrastructure in rural and remote Australia with a particular view to resourcing extensive application of new technologies to educational utilisation.

The report stressed that the cost and reliability of internet access needed to be improved if rural schools were to play a role in helping to close the digital divide evident between them and their peers in urban areas (Stokes et al., 2002). The situation in these areas has improved little in the 17 years since the release of this report (Philip & Williams, 2019). In fact, the situation may be getting worse as schools in rural locations continue to slip further behind better resourced urban-based schools, putting young people living in these areas at a considerable digital disadvantage (Park et al., 2015; Philip & Williams, 2019). Overall, it is clear that the allocation of ICTs in schools across Australia has not occurred equally. Of course, many urban-based secondary schools also continue to face considerable first level digital divide challenges, while others are incredibly well resourced. These divisions in ICT resourcing are largely divided along SES lines, serving to bring the digital divide inside the school gates.

There is also the suggestion that even if young people successfully cross this first level digital divide, there remain numerous differences in terms of the digital practices in which they engage on a daily basis (Davies, 2015; Harris, Straker & Pollock, 2017). Hence, young people from high-SES households continue to achieve greater educational gains from access to home computers than their peers from low-SES households (Lee, Brescia & Kissinger, 2009; Vigdor et al., 2014). These studies demonstrate that “access is a far more complex issue than mere provision of facilities” (Furlong, Furlong, Facer & Sutherland, 2000, p. 94), because the availability of ICTs

does not necessarily equal genuine access. Ultimately, digital access is only the first rung on the digital divide ladder, and having regular and reliable access to ICTs and the internet is not enough to overcome *all* digital divides, particularly those associated with digital usage and skills, i.e. embodied digital capital.

### **Australia's Developing Second and Third Level Digital Divides**

Acknowledging the polysemic nature of digital divides, over the past decade, the majority of digital divide research has shifted focus from the first level divide of access to the second level digital divide of usage and digital skills (Scheerder, van Deursen & van Dijk, 2017), the embodied forms of digital capital already discussed. Digital skills are a vital facet of interpreting the differences in the types and range of activities people use the internet for (van Deursen & van Dijk, 2009; 2016). Unsurprisingly, more skilled young people tend to undertake a broader range of activities online and are more likely to potentially benefit from these practices both for learning and in their everyday life (Helsper et al., 2015; van Deursen & van Dijk, 2016). An exploration of the second level digital divide is essential as digital skills are a critical aspect of digital inclusion (Litt, 2013; Robinson et al., 2015), with the study of young people's skills and outcomes vital to understanding and addressing contemporary social stratification (boyd, 2014; Scheerder et al., 2017). Further, digital divide research, particularly regarding digital skills and usage divides, continues to lack empirical investigation (van Dijk, 2013). This lack of research is due in part to the contentious nature of digital skills, with many different conceptualisations used to explain what these skills involve and their development and relevance (Pask & Saunders, 2004; Scheerder et al., 2017). Gilster (1997, p. 1) argues that digital skills are about "mastering ideas, not [just] keystrokes" and that critical thinking should also play a role throughout the process of skill development. Bowler and Nessel (2013) are of a similar view, arguing that due to the ubiquitous and fragmented nature of information online, young people must develop strong digital skills including information seeking and the ability to critically evaluate this information. In this way, they argue, the development of embodied digital skills is essential and should be done alongside the traditional learning of literacy and numeracy.

Much digital divide research is based on the premise of full literacy. Indeed, ICT use and digital skill development are highly dependent on traditional literacy, something that is often neglected in digital divide and digital inequalities debates (van Deursen & van Dijk, 2016). Supporting this view is the strong causal link found between people with high levels of traditional literacy and those with sophisticated digital skills (van Deursen & van Dijk, 2016). Van Deursen and van Dijk (2016) argue further that traditional literacy is a more critical prerequisite to the development of higher digital skills than technological access and ability. Over decades, young people of a high SES have consistently demonstrated higher rates of general literacy than their low-SES peers, and this remains the case today (Hemmerechts, Agirdag & Kavadias, 2017). Due to their higher levels of traditional (offline) literacy, young people of a high SES are more likely to possess the skill base required to maximise their interactions with ICTs and the internet (van Deursen & van Dijk, 2016). There is a view that, without substantial change, these young people of a high SES will continue to possess a greater level of digital capital through which to maintain their relative positions of power, whereas young people of a low SES will continue to demonstrate low levels of skills online, including basic OISPs (Davies, 2015).

Robinson et al. (2015) built on this work and found that existing social inequalities offline were being replicated online because pre-existing differences in capital do not disappear once someone logs onto the internet. This study not only observed the influence of SES on ICT and internet use but also started to investigate the interrelations of digital inequities between institutions such as labour markets, schools and the state. Livingstone and Helsper (2007) researched the influence of inequalities by age, gender and SES amongst school students aged 9–19 years in the United Kingdom and found that simplistic binary distinctions such as skilled/unskilled failed to capture an accurate picture of digital skills amongst these young people. In order to avoid these crude divisions, Livingstone and Helsper (2007) proposed a “digital continuum of inclusion” whereby participants’ digital skills are plotted along a segmented scale from *non-user to user* and from *basic digital skills to all-round skills*. This continuum of digital inclusion recognises that young people are not natural digital natives but rather develop forms of embodied digital capital at different rates. From this perspective, digital skills and usage are not dissimilar to standard learning development and, like traditional learning and literacy,

pathways are highly differentiated along SES lines (Livingstone & Helsper, 2007). While the idea of a digital inclusion continuum still resonates today, Livingstone and Helsper's (2007) model requires updating, in particular, the categorisation of participants into non-user versus user. This is something van Deursen and van Dijk (2010) achieve in their four stages of digital skill development.

Each level of van Deursen and van Dijk's (2010) four stages of digital skill development represents a higher degree of digital skills, understood here as differing levels of embodied digital capital, and thus potentially a more significant educational and career payoff for young people looking for information online. Van Deursen and van Dijk (2010) plot participants' appropriation of these digital skills in a hierarchical manner. At the most basic level is *operational skills*. This level involves the capacity to operate ICT hardware and software at a base level involving "button knowledge" only, including switching devices on and off, keyboard use and other simple operations (van Deursen & van Dijk, 2010, p. 891). The next two levels are *formal skills*, which encompasses elementary browsing and navigating skills within the ICT interface, and *information and communication skills*, which includes the searching, selecting and evaluation of information quality and credibility. It is the skills demonstrated in these two levels that encompass much of young people's online information seeking practices. At the pinnacle of van Deursen and van Dijk's (2010) digital skills development is *strategic skills*. These skills include high-end skills such as content creation and the ability to use ICTs to develop, nurture and exploit online tools and contacts to potentially improve offline and online outcomes, more valued forms of embodied digital capital.

On the whole, three critical types of digital usage and skills have been shown to contribute to the second level digital divide between young people of a low and high SES; namely, usage for educational versus entertainment purposes, total screen time and the amount of self-discipline young people exercise regarding their ICT usage. DiMaggio et al. (2004), in their study on internet usage habits amongst the general American population, were amongst the first to confirm the influence of SES on the differential way ICTs and the internet were being used. They discovered two main categories of online activities amongst their participants. The first category



was labelled 'capital enhancing' activities, which included such actions as looking for career information, while the second category was labelled 'recreational' activities, which covered gaming, social media and entertainment pursuits. DiMaggio et al. (2004) observed that capital enhancing practices exhibited substantial benefits for users while recreational practices offered little payoff regarding one's social status. Critically, they also found that participants from high-SES backgrounds, with higher levels of education and income, were more likely to use the internet for capital enhancing activities such as participating in community affairs and politics and less likely to use it for social or entertainment purposes (DiMaggio et al., 2004). Conversely, the participants of a low SES were shown to preference recreational use over capital enhancing practices. The lead researcher on this study, Paul DiMaggio, was one of the first researchers to apply Bourdieu's notion of cultural capital in the United States. In this early study, DiMaggio (1982) linked varied levels of cultural capital amongst a group of secondary students to their level of academic success at school. Some 22 years later, his study conducted with Hargittai, Celeste and Shafer (2004) would be one of the first to highlight the influence of what here is called embodied digital capital on activities conducted online.

Research repetitively shows that ICT usage for entertainment purposes is more likely to be found amongst young people of a low SES who focus heavily on chatting and online gaming with little educational and vocational benefit (Bonfadelli, 2002; Eynon & Malmberg, 2012). Rideout (in Richtel, 2012, para 4) has labelled this the "time-wasting gap" between low-SES young people and their more affluent peers. Predictably, a high level of ICT usage for entertainment-only purposes has been shown to negatively impact academic performance (Mesch & Talmud, 2011). Hence, low-SES young people tend to suffer the most academically from this practice (Richtel, 2012). While high-SES young people are not immune from entertainment-focused pursuits online, overall they tend to use the internet in a more sophisticated way, focusing on work, education and communication applications that serve to maintain and strengthen their social and digital capital (van Dijk, 2013; van Dijk & Hacker, 2003). By and large, though, no matter what the young person's SES background, their total daily ICT and internet usage continues to increase (Posso, 2016).

Rideout et al. (2010) surveyed 2002 young people aged 8–18 from across America, with a subsample of 702 individuals completing a seven-day media use diary. The results of this study highlight a profound relationship between young people and their ICT devices. Rideout et al. (2010) found that young people spend an average of just over seven and a half hours consuming media each day, an increase of one hour and seventeen minutes from the same study completed five years earlier. While the report did not measure the influence of demographic factors such as SES and geographical location, it did note that there were ethnic variations with those classified as ‘Hispanic’ and ‘Black’ spending more time online than ‘Whites’<sup>10</sup> (Rideout et al., 2010). Notably, in America, Hispanic and Black Americans are disproportionately overrepresented amongst families living in poverty and children with poor educational and career outcomes (Farkas, 1996; 2003; 2017).

Digital device usage amongst the general Australian population is also quite high. For example, it was found that the average Australian adult aged 16–64 years spends approximately five hours and 34 minutes using the internet each day (De Spinola, 2018). Australians also watch a daily average of three hours of TV programming, via traditional broadcast media and via streaming and on-demand services (De Spinola, 2018). According to the findings of Rideout et al. (2010) and De Spinola (2018), both the general population and young people, in particular in Western countries, have embraced digital media in multiple forms in their everyday lives. The debate over the appropriate amount of screen time young people should experience each day is highly contentious, and expectations are incredibly variable within the literature (Eynon & Malmberg, 2012; Livingstone & Sefton-Green, 2016; Schofield Clark et al., 2005). The debate around appropriate levels of online usage is made more complicated by the discovery that both rationing and excessive screen time have been demonstrated to be detrimental to digital skill development (Livingstone & Helsper, 2008; Robinson, 2009; 2012). Robinson (2009) found that while screen time rationing impedes digital skill development, unrestricted and unmonitored access to non-academic activities online such as gaming was also shown to harm academic performance and skill development in young people. Parental monitoring and regulation of

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<sup>10</sup> The US racial categories Hispanics, Blacks and Whites are the terms used in Rideout et al. (2010).

screen time and excessive use of ICTs and the internet amongst young people was most commonly found in households of a low SES (Huang et al., 2018; Robinson et al., 2015).

The final variation in digital usage and skills amongst young people is the level of self-discipline exercised toward their ICT engagement, which is very much a form of embodied digital capital. Burhanna, Seeholzer and Salem's (2009) study of students' use and understanding of Web 2.0 technologies shows some students can set very clear boundaries between educational and social spaces online. Rose (1999) argues that this self-regulation is influenced not only by parents and schools but also by the internalised forms of self-discipline students accrue as an outcome of their learning. Such internalised and learnt discipline, generally cultivated by parents, facilitates the motivation to control and limit adverse ICT practices to accomplish long-term educational goals (Brown, 2013; Lareau, 2003; 2011). The different levels of self-restraint shown by young people is very much associated with what Lareau (2003; 2011) conceives of as the "concerted cultivation" exercised by their parents. Consequently, a young person's level of self-discipline is heavily influenced by practices within the home and forms of parenting. Indeed, parents also play a critical role in how young people develop, inform and perceive the likelihood of success of their future career and educational choices, and the outcomes of these cultivated practices constitute a measure of the third level digital divide.

The concept of the third level digital divide is relatively new to the digital divide literature. Hence, there is a paucity of studies addressing this issue. However, those conducted thus far have been performed by leading figures in the digital divide field; namely, Wei et al. (2011), van Deursen et al., (2014), Helsper et al. (2015) and van Deursen and Helsper (2018). Helsper et al. (2015) were among the first to identify the underdeveloped research area of tangible outcomes, both online and offline, which were derived from people's varied levels of digital access, usage and skills. Helsper et al. (2015) argue that understanding this can only be achieved by creating a clear separation between the different types of online activities and the real-world outcomes of these activities. It was, they argue, only through linking online activities with offline outcomes that social inequalities and digital exclusion could be explained. However, it is difficult to argue that a single outcome, such as gaining employment, could be 100% attributed to online or offline

activities alone. Indeed, Helsper et al. (2015) acknowledge that linking digital skills to beneficial outcomes is problematic; thus, they describe their early findings as speculative. Yet, this is an area that needs further investigation as outcomes of varying levels of objectified and embodied digital capital are vital aspects of contemporary social inclusion, particularly as young people transition into tertiary education and the labour force. For example, a longitudinal study conducted by Nahuis and De Groot (2003, p. 11) examining labour markets in the 1980s and 1990s across 14 countries including Australia found that high-level ICT skills helped create a “skills premium” amongst potential employees. They showed that what amounts to differing levels of embodied digital capital contributed to increasing long-term income inequality across participant countries. While the third level digital divide is not a focus of this research, it is noted where relevant. Overall, one of the best ways for young people to achieve ideal educational and labour market outcomes from their online activities is to embody the required digital capital to develop their online information seeking practices (OISPs).

### **Online Information Seeking Practices as Digital Capital**

*[A]ccess to information technology and the ability to use it increasingly [have] become part of the toolkit necessary to participate and prosper in an information-based society.*

Lisa Servon and Marla Nelson (2001, p. 279)

Even though information seeking is one of the most popular online activities conducted by young people, a complete picture of how young people conduct online information seeking remains elusive (Eynon & Malmberg, 2012). To date, there is little in either sociological or educational literature in Australia focusing on these information seeking processes, even rarer still are studies addressing this phenomenon by utilising digital capital as their theoretical frame. The amount of information available online is almost incomprehensible in terms of expansion and accumulation. The digitalisation of information has in theory provided the opportunity for all those connected to the internet to access vast stores of information not previously available in the pre-digital era for free (Park, 2017a). However, a plentiful and unlimited supply of

information is a relatively new phenomenon brought about by the advent of the internet and the widespread adoption of ICTs (Martin & Madigan, 2006). Before, this information was dispersed across the world, found in libraries, unconnected computers, offices, studies, filing cabinets, and locked away within individual minds. Therefore, information was not easy to locate and share, and certainly, at times, access was prohibitive owing to costs, the tyranny of distance or merely due to a lack of the skills required to locate it (Harris & Dewdney, 1994). However, with the advent of the internet, these different channels and sources of information have now collapsed into one mode, and one massive repository of data, potentially available to all equally. Thus, investigating how young people are navigating this new reality particularly regarding educational and career information is of considerable interest. The internet has expanded from one website in August 1991 to over 1.5 billion in May 2019 (Internet Live Stats, 2019b). On average, over three hundred hours of new video content is added to YouTube every minute of every day (Every Second, 2019). Given this, there is little wonder that so many young people feel overwhelmed online and seek to simplify their searches through massive online directories such as Google. Rowlands et al. (2008) argue that information overload is potentially contributing to an increased state of ignorance in society, the opposite of that postulated by early technological optimists such as Gore (1991).

Actively searching for information is an essential part of being human; however, as with many individual daily actions, it is heavily influenced by social forces (Bates, 2002). These information searches, while seemingly being conducted autonomously, are highly socially situated, and their success and failure are profoundly influenced by an individual's social environment and digital skills. A young person's social networks are not only instrumental in the supply of ICTs and the internet but also play a critical role in the development of OISPs (Cilesiz, 2009). As mentioned above, young people of a low SES are at a distinct disadvantage as their immediate social support networks often struggle to support their online needs, interests and digital skill development (Zillien & Hargittai, 2009). Thus, young people from less privileged backgrounds are less likely to have the necessary embodied digital capital of sophisticated online information seeking skills (Robinson, 2009).

As individuals grow, both passive and active information seeking will become a practice so common that it will escape consciousness until a new problem presents itself or a gap in knowledge is identified (Case, 2008). The substantial nature of this information gap will for many young people result in a period of sustained active information searching (Julien, 1997). No doubt, the vast majority of these active information searches will be performed online (Segev, 2010). An analysis conducted by the Centre for Information Behaviour and the Evaluation of Research (CIBER) which looked at young people's information seeking practices over the preceding 25 years concluded that the idea that young people are expert information searchers is "a dangerous myth" (CIBER, 2008, p. 20). So, while "The empty space around us is seething with potential information..." (Brookes, 1980, p. 132), young people who do not possess the digital skills to locate it are no better off than before the development of digital technologies and the internet.

A growing body of research indicates that young people vary considerably in their level of skill in seeking information online (Livingstone & Sefton-Green, 2016; Rowlands et al., 2008; van Deursen & van Dijk, 2010). Their practice seems to be far from homogenous and has also been shown to reflect existing lines of inequality (Davies, 2015; Eynon & Malmberg, 2012; Zillien & Hargittai, 2009). Numerous studies continue to demonstrate that young people from varied demographic and SES backgrounds differ significantly in their level of competence and type of engagement with ICTs and the internet (boyd, 2014; Davies & Eynon, 2013; Hargittai, 2010; van Deursen & van Diepen, 2013). Young people, particularly those of a low SES, are less likely to have sophisticated information searching skills (Robinson, 2009). Graef (2000) was amongst the first to report a unique paradox amongst young people searching online, observing that while the volume of digital information available continued to expand, the conceptual tools young people were utilising to navigate this environment were increasingly simplified and standardised. The lack of sophistication in young people's information searches was later confirmed by researchers including Chung and Neuman (2007), Rieger (2009) and Shenton (2007) who observed that most students when searching for information online would immediately turn to a search engine and, in nearly every case, this was Google.

In fact, for a large segment of the Australian population, when they head online looking for information, no matter what their age, gender or SES, they will inevitably end up 'Googling it'. As of April 2019, Google was the number one search engine in Australia, handling 95% of all online search inquiries (Statscounter, 2019). Google's dominance is highlighted further when considering the market share of Microsoft's Bing and DuckDuckGo, the second and third most popular search engines, which represent only 3.66% and 0.52% respectively of the remaining Australian search engine market (Statscounter, 2019). Accordingly, the very word 'Google' has become synonymous with information. Indeed, Google is the preferred search engine across all demographic groups, which led Rowlands et al. (2008, p. 308) to proclaim over a decade ago that "We are all the Google generation". Goulding (2001) suggests the underlying reason for young people's preference for aggregate search engines, such as Google is their ability to alleviate the anxiety caused by information overload, as they select and reject information for the user, making the internet *seem* more manageable and accessible. However, while there may be a certain uniformity in the use of Google as a search tool, differences in usage have been observed amongst young people of varied SES (Segev, 2010).

Little is known about what young people do with the search results generated by Google algorithms. Further, Segev (2010) found that Google marginalises people with low education levels by preferencing commercial sites and popular trends over more specific results. Google has also been shown to discriminate through its utilisation of advanced customisation algorithms, which present the searcher with search results it believes they want rather than the most accurate result. Circumventing these more complex aspects of Google's search engine results requires significant levels of embodied digital capital. Segev's (2010) work confirmed Lazarus and Mora's (2000) earlier research findings that websites were originally designed with little allowance for social differences and levels of education. This was achieved by creating content-related barriers, including literacy and language barriers, and by presenting content lacking in cultural diversity. These findings indicate a need to understand better how young people of a low SES are adapting to an environment which was initially built with little regard for their informational needs.

In the process of shifting vast amounts of information into the public domain, the internet has also de-coupled and fragmented how information is presented (Large, Beheshti & Breuleux, 1998). Large and Beheshti (2000, p. 1069) label this form of displaying information as “unpacked” and discuss how this type of information, presented in an abbreviated and often context-free fashion, can intensify individuals’ difficulty in locating and gauging its usefulness and credibility. It can be much more challenging to assess the reliability of information found on a website when compared to more traditional information sources such as books. For example, information about the author, their affiliations and any underlying commercial or political interests may be deliberately veiled (Martin & Madigan, 2006). In contrast, in more traditional information sources such as printed books, the author, publisher and author affiliations are all clearly marked and easy to locate (Martin & Madigan, 2006). These act as important markers of quality and thus the credibility and trustworthiness of the information found within can be taken as given (Martin & Madigan, 2006). Nevertheless, younger users from all backgrounds have been shown to place considerable trust in Google’s ranking of search results (Olsen & Diekema, 2012). Research conducted amongst the Dutch population by van Deursen and van Dijk (2009) found that 91% of all searchers did not go past the first page of search results and in fact over 50% of participants did not go beyond the first three results on page one. This trust leads many people to believe that if they are unable to locate information through Google, it must not exist (van Deursen & van Dijk, 2009). As a result, they do not feel compelled to search anywhere else online (Segev, 2010). This is despite Segev (2010) having shown that Google rarely produces the most credible or most accurate information available. Beheshti and Large (2013) found that many young people lacked the digital skills required to make informed judgements about the reliability and credibility of the information they find online. As noted by Lorenzo and Dziuban (2006), fears over young people’s lack of critical thinking online is of great concern considering the role of the internet as their primary source of general information.

Digital skills and research in various disciplines around OISPs has become such a crucial area of academic interest principally because these skills are “learned abilities that can be enhanced through education and training” (Litt, 2013, p. 613). However, as mentioned in van Deursen and van Dijk (2010) and discussed above, these skills and practices, to date, seem to be primarily



nurtured amongst young people of a high SES, who not only have access to the materials and services but also have the time and support required to maximise their online searches and interactions. This fact leads to Shenton's (2007) oft-cited cruel paradox of OISPs, which is that the young people who would benefit the most from the materials and services available online, those of a low SES, continue to lack the skills essential to access these resources. Therefore, increasing the amount or the flow of information to individuals will not automatically influence their practice, particularly if the information challenges core values and beliefs. Identifying the different patterns of OISPs amongst young people can contribute to a better understanding of the different relationships young people have with ICTs and how these forms of embodied digital capital can lead to a variety of different career and educational outcomes.

### **Differentiated Career and Educational Outcomes**

*As an instrument of reproduction capable of disguising its own function, the scope of the educational system tends to increase, and together with this increase is the unification of the market in social qualifications which gives rights to occupy rare positions.*

Pierre Bourdieu (1986, p. 55)

In considering the OISPs of students and the extent to which offline inequalities are similarly evident online, it is essential to explore how broader societal shifts over recent decades have changed the role and perception of universities and higher education, not only in Australia but globally. International education systems and policies continue to reproduce unequal access to and varied outcomes of education for students of a low SES (Reay, David & Ball, 2005). In Australia, inequalities are evident at all levels of education, and the long-standing view has been that "unless there is some (government) policy intervention, social disadvantage is reinforced and perpetuated through the school system" (Erebus International, 2005, p. 11). However, despite various government initiatives, programs and incentives, large-scale inequity persists in the Australian education system (Jamrozik, 2009). While scholarly discourse around academic success or failure often focuses on individual effort and choice, SES remains a strong predictor of

academic success both at school and within tertiary education in Australia (Connell, Ashenden, Kessler & Dowsett, 1982; Connell, 1993; Gale & Parker, 2015a; 2015b; Jamrozik, 2009).

Due to shifting economic and labour market forces, it is argued that undergraduate degrees are now so commonplace in Australia that they have become a minimum requirement for those hoping to obtain stable full-time employment (Cuervo, Crofts & Wyn, 2013). Consequently, the notion that “learning equals earning” is now firmly entrenched within the psyche of most Australian families (Brown et al., 2011, p. 5). Driven by the demands of the modern knowledge economy, Australians born after 1980 are spending more time in higher education and are more likely to have completed some form of postgraduate qualification than those born before 1980 (FYA, 2016). Hence, there is now much greater competition for university courses and the costs for those that miss out or are excluded from entry can be profound. Nevertheless, despite several policy initiatives directly aimed at increasing the number of low-SES student enrolments introduced by federal Labor governments since the 1970s,<sup>11</sup> Australia’s universities remain dominated by the more affluent members of the community. This makes understanding how young people, particularly those of a low SES, locate and use the information found online regarding their post-school options so critical.

Research has repeatedly demonstrated that Australians who are less educated are more likely to be in part-time, casual or precarious employment (ABS, 2009; Campbell, 2013; Chauvel, 2010; Furlong & Kelly, 2005; White & Wyn, 2013). Moreover, those who leave the education system before completing Year 12 are more likely to end up in long-term low-paying service jobs or potentially permanent unemployment (Aronowitz, 2004). Indeed, with unemployment and underemployment the reality for so many young Australians, particularly those of a low SES,

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<sup>11</sup> The Whitlam Labor government (1972–1975) abolished university fees from the 1st of January 1974, with the stated aim of making universities more accessible to working- and middle-class people (Reid, 1976). Due to the success of this program, the Hawke Labor government (1983–1991), while reintroducing university fees in 1989, allowed students to defer the payment of fees until after they graduated and reached an income threshold, under a new Higher Education Contributions Scheme (HECS) (Gardner, 2015). Finally, in response to the Bradley Review (2008), The Rudd Labor government (2007–2010, 2013) introduced a demand-driven tertiary system which uncapped undergraduate places in many university courses. Rudd also redesigned the Higher Education Participation and Partnership Program (HEPPP) to increase access, retention and completion rates amongst students of a low SES, through such measures as scholarships and bursaries (Australian Government, 2015).

researchers such as Healey (2015) caution that job insecurity may be a defining norm of the new labour market for many disadvantaged individuals. Wilson and Ebert (2013, p. 264) affirm that the “general rise of precarious work [in Australia] has increased the vulnerabilities and levels of distress, not only for individuals but for whole societies”, with young people particularly vulnerable to this stress.

Owing to the detrimental effects of not having some form of higher qualification, the Rudd Labor government (2007–2010) sought to promote broader participation in Australian universities amongst those of a low SES. In 2008, the Bradley Review reported minority groups including Indigenous Australians, those living in regional or remote areas, and those from socio-economically disadvantaged backgrounds continued to be severely underrepresented in higher education, with low-SES students three times less likely to go to university than those of a high SES (Bradley, Noonan, Nugent & Scales, 2008). In response to the Bradley Review, the government (2007–2010) set ambitious growth targets for the attainment of a bachelor’s degree. From 2008 through to 2025, the goal was to improve degree attainment amongst the general population of 25–34-year olds from 32% to 40% and amongst low-SES individuals from 15% to 20% (Edwards & Radloff, 2013). There is a role for ICTs and the internet in achieving these ambitious goals. These policies have led to some success in the uptake of tertiary study by young people of a low SES with an increase of 1.5% in enrolment between 2008 and 2015 (Group of Eight [Go8], 2016). Despite the modest gains in low-SES tertiary enrolments in recent years, these young people continue to be underrepresented on university campuses across Australia, particularly at the most elite Go8 universities (Gale & Parker, 2015a).

Therefore, many university enrolment, outreach and promotional campaigns are aimed at encouraging interest and a further increase in admissions of low-SES secondary students. The guiding principle of these programs is often the assumption that students of a low SES have lower future aspirations than their higher SES peers (Polidano, Broadway & Buddelmeyer, 2012). However, research conducted across Australia within the field of education studies presents a vastly different story. It shows that the majority of these young people *are* aspiring to tertiary study. Bowden and Doughney’s (2010) survey of 2,000 secondary students drawn from low-SES

schools in Melbourne's western suburbs found approximately 75% of participants aspired to attend university. In Central Queensland, Gale and Parker (2015b) surveyed 244 students from 14 low-SES schools in Years 8 through 10 and found over 67% of them aspired to university study. Further research conducted across low-SES schools in South Australia found that most of the 450+ respondents had high hopes for their futures, which for many included university studies despite their current challenging social environments (Prosser, McCallum, Milroy, Nixon & Comber, 2008). High aspirations, therefore, do exist amongst low-SES secondary students across Australia, so the fact that overall enrolments remain low strongly suggests that the problem is not a lack of motivation. Indeed, this may be due to these students not having the required digital capital to obtain the information needed to translate these aspirations into university enrolment, or to make the links between school, university and professional careers. It is increasingly important, therefore, to understand how young people conduct information seeking to inform their career choices and potential university study.

Overall, up to a third of academically capable and higher education aspirational young people do not end up pursuing university pathways and young people of a low SES are more likely to be amongst this group (Rothman, 2003). For example, in NSW, low-SES students' Higher School Certificate (HSC)<sup>12</sup> completion rates are consistent with the state average; however, they remain less likely to go to university (NSW Government, 2012). Carroll et al. (2009) attribute this trend to both financial costs and young people of a low SES exhibiting less confidence in their educational abilities and ambitions. Further, young people of a low SES are particularly vulnerable to the discourse surrounding individual choice and often subscribe to the dominant negative explanations and stereotypes of themselves and their position in relation to others (Bourdieu, 1984). In so doing, they contribute to their marginalisation and stigmatisation as they often adopt aspirations and roles that they see as fitting for their social standing (Bourdieu, 1984). Bok (2010) asserts that low-SES students often lack the necessary information and cultural capital such as an understanding of the different facets of education systems including

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<sup>12</sup> The Higher School Certificate is awarded to high school students in NSW who successfully complete their senior year studies (generally Years 11 and 12) (Education Standards Authority, 2019).

curriculum demands, pedagogic practices and academic-specific communication skills. Thus, these low-SES students are described as attempting to do “a play with no script” and often abandon this course of action (Bok, 2010, p. 175). A focus on OISPs can potentially help to flesh out why so many young people of a low SES decide against pursuing tertiary education, although, as with Bok, it is important to frame this as much more than merely an individualised activity and to consider, through an analysis of digital capital, the structural constraints that affect young people’s OISPs.

The number of risks young people are willing to take in pursuing their future aspirations is also highly reliant on their access to different types of capital, particularly economic capital (Bourdieu, 1984; 1986). As Dow, Adams, Dawson and Phillips (2010) argue, one of the most commonly cited barriers to low-SES students entering higher education is the perception that the investment will be of little value to them. This perception is primarily informed by young people’s “...personal socioeconomic circumstances and individual community context” and changing this value is seen as one of the critical links to increased participation in higher education amongst low-SES students (Dow et al., 2010, p. 66). It is yet to be investigated if access to a greater range of career and education information online is influencing the tertiary enrolments amongst students of a low SES, or if the availability of this information may be having the opposite effect and increasing doubts and anxiety amongst these young people thinking of pursuing tertiary education. To date, ICTs have had little impact on young people’s career and educational choices, which remain heavily linked to their SES (Chesters & Smith, 2015; Lareau, 2011).

SES continues to influence young people’s practical evaluation of the likelihood of success of different educational and career pathways (Abrahams, 2016; Harvey, Andrewartha & Burnheim, 2016; Lareau, 2011). Further, contrary to talk of the transformative nature of ICTs and the internet, social inequalities have failed to dissolve online, and social forces still exert considerable influence both online and off. Indeed, it could be argued that these attitudes and practices may be proliferated and enforced online. However, while the discourse has shifted to focus on individual choice, aided by neoliberal forces impacting education and society more

broadly, real options for many low-SES young people remain limited (Gale & Parker, 2015a; Galliot & Graham, 2014). While most young people “speak the language of individual choice, control and agency”, very few possess the required capital to truly exercise free choice over their future because they remain vulnerable to the decisions, actions and policies of those within their social environments, namely parents, teachers, schools and the government (Thomson et al., 2002, p. 351). It is also important to highlight a significant distinction between *making* and *having* a choice. Due to limited resources and various forms of capital, young people of a low SES often have fewer opportunities and choices presented to them as viable regarding life transitions than their higher SES peers (Reay, 2001; 2017).

Young people of a low SES also may deal with a phenomenon Ingram (2011, p. 290) has labelled “habitus tug”. Drawing on Bourdieu’s notion of habitus, Ingram uses the term to explain what occurs when family demands struggle for supremacy in a young person’s life against outside influences such as the young person’s social life, work commitments and educational demands (Ingram, 2011). Ingram (2011) argues that the pull of family connections and responsibilities can be strong enough to influence the perceived and actual success of university aspirations and transitions. Young people in this situation fear that attending university may leave them feeling isolated, as they may not fit in at university, while simultaneously worrying that their families may reject them for making this choice (Ingram, 2011). Consequently, habitus tug may contribute to students of a low SES struggling to envisage themselves as a university student and lacking support from their families, they may desert aspirations of attending university.

Overall, young people’s career choices and transitions are a multifaceted formative process informed by personal characteristics and resources, as well as social surroundings, family capital and personal educational experiences. When considering their future career and educational goals, many young people will also draw heavily on their digital and social capital to help inform and facilitate the transition from school to work (Beckman et al., 2018). It has been shown that many low-SES young people lack the “navigational capacity” to achieve successful university enrolment (Appadurai, 2004, p. 69). Here Appadurai (2004) acknowledges that while many low-SES young people have high future aspirations, individual circumstances, such as access to

objectified and embodied forms of capital, can enhance or diminish the likelihood of them realistically achieving these aspirations. Graham, van Bergen and Sweller (2015) also found that in Australia, many young people from a low-SES background did have high aspirations, but their goals did not necessarily involve university study. Instead, Graham et al. (2015) highlighted a policy preoccupation with getting low-SES secondary school students into university at all cost, thereby framing all other outcomes as failures. Consequently, the aspirations of young people are awarded different levels of legitimacy in education and policy discourse, with a lack of aspiration for higher education viewed as problematic and the individual often held in contempt (Graham et al., 2015). However, what is not yet clear is the impact ICTs and the internet have had on young people's navigational capacity and in the forming of their perceptions of success in pursuing various educational and career pathways.

### **Digital Capital: In Summation**

There is significant variation in the digital capital that young people possess, suggesting that rather than being a homogenous generation of digital natives, there is a plethora of diversity in their digital access, usage, skills and outcomes. Thus, multiple digital divides are still evident across Australia, with a sizable minority of young Australians lacking forms of objectified digital capital and remaining stuck on the first level digital divide, disconnected from the internet and ICTs at home and school. Understanding the impact of these divides on young people is vital because the foundations of their digital practices are developed and set throughout their schooling years and remain mostly unchanged into their adult working lives (Davies & Eynon, 2013). As more government and educational services move exclusively online, young people who have limited ICT access and skills are at a far higher risk of being socially excluded. This exclusion will have a detrimental effect not only on young people's opportunities to engage with tertiary education and the labour market but potentially also in their ability to participate in the democratic process (Wessels, 2014). While trying to avoid simplistic normative assumptions that digital acquisition and skill development are a universal good, it is nevertheless the case that ICTs and the internet are now such an integral part of managing everyday life that a lack of access or

the ability to utilise these tools is incredibly limiting. Also, the context of a young person's social environment continues to significantly affect their level of digital access, usage and skills. In Australia today, it remains the case that economic, social, cultural and digital capital continue to influence how young people learn and benefit from ICTs and the internet. Thus, to date, the benefits derived from these technologies in Australia remain disproportionately concentrated in high-SES families (Harris et al., 2017).

While the digital divide literature considers the numerous ongoing difficulties that many young people are facing as the digital transformation of society continues apace, significant gaps remain in the understanding of the effects of a number of these processes. As outlined above, the assumption that once young people go online issues of inequality are no longer a concern is overly simplistic as SES is as much an influence online as offline. Consequently, to better understand the contours of digital and social inequality in Australia, it is necessary to examine the differentiated levels of digital capital young people possess and the extent to which this affects their educational and career outcomes. As Berker, Hartmann, Punie and Ward (2005, p. 6) explain, it is essential

...to provid[e] tools to analyse the exchanges between everyday practices and the encompassing cultural and societal structures...not los[ing] track of the bigger picture while allowing deep explorations into micro-practices of [young people's] everyday life.

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## Chapter 2: The Research Design

As explored in the previous chapter, the focus of this thesis is to investigate how young people in a selection of New South Wales (NSW) schools, who come from diverse SES backgrounds and geographical locations and have varied digital capital, use ICTs to inform their future career decisions. It is evident that there is a substantial gap in empirically grounded research from an Australian perspective in this field. Given the wide-ranging significance and relevance of ICTs and the internet in the lives of young Australians today, it is of vital importance to conduct research on the specifics of how these young people are accessing and searching for information online and the degree to which SES affects these processes. This chapter details and justifies the mixed methods research approach used to explore these issues, in particular, students' digital access, usage, skills and outcomes, i.e. their objectified and embodied digital capital. A comparative approach was employed to explore this topic centred on identifying similarities and differences across multiple data sets including a survey, interviews with a variety of stakeholders and school-based observation.

This investigation is part of a broader research program conducted with the Young and Well Cooperative Research Centre (YAW-CRC)<sup>13</sup> in partnership with Western Sydney University (WSU). It sits under *Program 2: Connected and Creative*, specifically within *Project 4: Transforming Communities and Institutions*. The YAW-CRC brought together researchers, not-for-profit bodies, government and corporate sector partners with young people to research the role of ICTs, the internet and networked media in improving the mental health outcomes and general well-being of young people in Australia aged 12–25 years (YAW-CRC, 2017). The broad focus of Project 4 was to better understand how young people experience institutions and communities both online and offline, paying attention to the factors and issues shaping their digital inclusion (YAW-CRC, 2017).

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<sup>13</sup> The Young and Well CRC closed in June 2016, after a five-year funding agreement with the Australian Government's Cooperative Research Centres Program concluded (KordaMentha, 2019).

This research project was approved by the WSU Human Research Ethics Committee (HREC) (No. H10779), with further clearance to conduct research onsite in NSW public high schools obtained through the Department of Education's (DoE) State Education Research Applications Process (SERAP) (Approval Number: 2014245). I also obtained a NSW Working with Children Blue Card (#WWC0354471E). To ensure participant confidentiality, pseudonyms have been used when referring to all schools, students, careers advisors, universities and other participants. The anonymity of the survey respondents and interviewees was further assured by not asking any identifying questions such as their date of birth or full name when collecting general demographic information.

### **Employing Mixed Methods: A Rationale**

A mixed methods approach is ideal for this study, as measuring students' digital capital would be difficult to accomplish using only a single source design. The mixed methods design employed here was a two-phase sequential design, whereby qualitative data was used to build on initial quantitative findings (Creswell & Plano Clark, 2007). Following this design, the first phase of data collection involved a quantitative student survey, distributed to each of the participant schools, with the results of this survey used to inform the semi-structured interviews conducted in phase two with a variety of stakeholders. As this research design placed a greater emphasis on the interview data collected in phase two, particularly from the student and careers advisor interviews, it varies slightly from more traditional sequential designs (Creswell & Plano Clark, 2007). Researcher observation was also conducted throughout both phases of the data collection. The focus of this observation was on each of the school sites, with in-depth field notes made after every school visit, meeting and interview. In pursuing this mixed method design, the thesis adheres to Mertens and Hesse-Biber's (2012) assertion that the exclusivity of research methodologies is outmoded, and that qualitative and quantitative data collection and dissemination are now intrinsically linked.

The incorporation of multiple data collection techniques, such as those conducted here, were popular in earlier studies on online information seeking practices (OISPs), such as Hargittai (2002, p. 1243), as she reasoned they could lead the researcher

...to the type of rich data set that allows us not only to understand people's very diverse set of search strategies but also explore what social factors explain the differences in their actions.

Mixed methods, when employed well, can bring the researcher closer to a fuller appreciation of social phenomena than one method alone, because they incorporate a wider range of perspectives on key issues. Despite these benefits, much recent research in this field has been mostly quantitative, with a heavy focus on surveys (Litt, 2013). Given this emphasis on survey research and quantitative methods, there is a lack of detail on the varied digital capital of young people, particularly from an Australian perspective.

A sequential mixed methods mode of inquiry can also help overcome the claims of research bias commonly levelled at research studies utilising only a qualitative research design (Johnson & Onwuegbuzie, 2004). However, scholars such as Silverman (2013) caution against the simplistic hope that by employing a mixed method approach, the researcher will arrive at a "whole picture" of the phenomenon under investigation. While the mixed methods design employed here may not have provided the *whole picture*, it did allow for a better grasp of the issues around young people's digital capital than what could be obtained from focusing on surveys or interviews alone. Graham and Dutton (2014) validate this choice of mixed methods further by maintaining that the demands of present-day research on ICTs and the internet cannot be successfully addressed from any single method of inquiry, or theoretical perspective, for that matter.

Following this vein of thought, a comparative analysis was used to explore the data collected throughout each of the two phases, combined with the researcher observations. Consequently, each data set was coded, cross-referenced and compared, with similarities, differences and

associations across and between the different groups of participants referred to above (Flick, 2014). The student interviewees remained at the forefront of this continuously evolving process. Indeed, one of the strengths of pursuing a comparative analysis lies in its ability to maintain the focus on participant perspectives throughout the empirical chapters (Flick, 2014). The examination of the data in this manner also lends itself to a more general use of theory, prioritising the search for themes or patterns across different contexts and categories, in this case, student SES.

### **Profiling the Research Sites and Participants**

To conduct the necessary comparative analysis, five schools with diverse SES profiles were selected from the MySchool website. Another factor used in the selection of these schools was their populations of students with a Language Background Other Than English (LBOTE). While the focus of the study was on SES, the relationship between ethnicity, socio-economic background and academic achievement is vital to consider. The ethnic mix in some schools clearly affected educational performance and levels of digital capital. Four of these schools were located within the greater metropolitan area of Sydney, with a fifth regionally based school selected to provide a further point of comparison and to help identify any rural/urban divides. The schools' levels of dis/advantage were measured using the Index of Community Socio-Educational Advantage (ICSEA). The Australian Curriculum, Assessment and Reporting Authority (ACARA) created the ICSEA to enable the reporting of fair comparisons of the results of the National Assessment Program – Literacy and Numeracy (NAPLAN) test (ACARA, 2018). A school's ICSEA value is calculated by summing the *student* Socio-Educational Advantage (SEA)<sup>14</sup> enrolment of Aboriginal and Torres Strait Islander (AATSI) students and level of remoteness, which produces an ICSEA for each student that is then used to calculate the school's overall ICSEA (ACARA, 2013). The ICSEA median rank of schools across Australia is 1000, with a standard deviation of 100 (ACARA, 2013). Any school falling below the 1000 mark is considered educationally

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<sup>14</sup> This figure is calculated based on parent occupation and level of education, obtained either directly upon student enrolment or indirectly through the ABS Population and Housing Census data (ABS, 2017a; ACARA, 2013).

disadvantaged; conversely, any school above 1000 is considered educationally advantaged (ACARA, 2013). Therefore, to achieve optimal comparison amongst the four Sydney-based schools, two schools with an ICSEA below 1000 (i.e. low SES) and two schools above 1000 (i.e. high SES) were selected. For further comparison, it was decided to include one high-SES and one low-SES school with a total LBOTE enrolment above 70%. The average LBOTE enrolment amongst secondary schools based in Sydney is 52%, while in regional locations, the figure is 7.7% (Centre for Education Statistics and Evaluation [CESE], 2016).

Once these parameters were established, the MySchool website<sup>15</sup> was consulted to find the required schools' ICSEA ranking. This process identified multiple potential schools of *best fit* in each required category. Once identified, each school's principal was contacted with five schools agreeing to take part in the study. The participant schools, outlined below in Table 1, are Coventry High School (Low SES/Low LBOTE), Glencross High School (Low SES/High LBOTE), Pineridge High School (High SES/Low LBOTE) and Peckham Selective High School (High SES/High LBOTE).<sup>16</sup> Peckham High School is one of 22 government fully academically selective schools across NSW. As will be explored further below, this can create a situation reflected at Peckham where the student body does not mirror the SES or ethnic makeup of the surrounding suburbs. The regionally based Bradford High School (mixed SES) was recruited later. Bradford High School was not only geographically distinct from the other schools but also offered a unique SES profile, with an ICSEA rank of 1045, which was incredibly close to the national median average of 1000, indicative of the mixed SES of its students.

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<sup>15</sup> The MySchool website aggregates and reports the results from the annual NAPLAN tests conducted in Years 3, 5, 7 and 9 across all Australian schools (ACARA, 2018). It also collates and displays general school information such as total school funding, staffing levels and basic student demographics (ACARA, 2018).

<sup>16</sup> To maintain anonymity, pseudonyms were used for school names.

Table 1. Participant High School Profiles

School	SES Category	ICSEA Value	Location	% LBOTE Enrolment	% AATSI Enrolment
<b>Bradford</b>	Mixed	1045	Regional North-Eastern NSW	10%	4%
<b>Coventry</b>	Low	915	Outer Western Sydney	9%	14%
<b>Glencross</b>	Low	883	Southwest Sydney	90%	1%
<b>Peckham</b>	High	1171	Outer Western Sydney	78%	0%
<b>Pineridge</b>	High	1082	Northern Beaches of Sydney	18%	0%

In addition to selecting schools with the appropriate demographic profile, the year group of the participating students required careful consideration. Given Year 12 is the final year of Australian secondary school and students would be preparing for the Higher School Certificate (HSC), and students in Years 9 and 10 may not have started to consider their future career options seriously, Year 11 students were the most appropriate participants. Year 11 students, aged 16–17 years old, have also been shown to be more active online than younger teenagers, and to have more significant information needs, as they start to juggle their school, work, social and home lives (Lenhart, Purcell, Smith & Zickuhr, 2010). With Year 11 also being the penultimate year of secondary education in Australia, many students would have already completed work experience and attended career information sessions and hence are more seriously considering their post-high school education and career options. Once this year group was selected the entire cohort of Year 11 at each of the five participant schools were invited to take part in phase one of the data collection: The Student Online Practices Survey. Each survey concluded with an Expression of

Interest (EOI), allowing the student participants the opportunity to indicate if they would be interested in being interviewed in phase two of the data collection. From within this sample of survey respondents, 31 students from across the five participant schools were interviewed, as were each of the school's careers advisors.

The final group of participants in this study also included four university marketing and admissions staff members and a former NSW DoE IT Director. The university staff were drawn from two Sydney-based universities with contrasting student SES enrolment profiles. There were two interviewees from Veteris University,<sup>17</sup> an elite university with a below-average percentage of low-SES enrolments despite a well-funded social inclusion program. The remaining two university staff members were from Novus University,<sup>18</sup> which has traditionally attracted a higher number of low-SES students. The former NSW DoE IT Director was recruited to shed light on the official NSW DoE policy position on the role of ICTs in public secondary schools both past and present. The rationale for interviewing these institutional actors was to gain a fuller understanding of how the link between students' digital capital and career aspirations is socially constructed. It is only through gaining a picture of the broader social context at play that adequate explanations of digital inequalities and their outcomes amongst young people can start to be understood. A more immediate institutional influence in the life of these students was their school.

As will be outlined below, there was considerable variation in terms of the natural, built and digital environments of the five schools that participated in this research. My researcher observations proved crucial when exploring the levels of digital dis/advantage at each school. The observations were conducted throughout both phases of the data collection and covered in detail interactions that occurred between the students, teachers, principals and non-participant students and myself. As most of the student and careers advisor interviews were conducted in

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<sup>17</sup> For confidentiality, pseudonyms were used for each of the universities.

<sup>18</sup> A further pseudonym.

the library, this allowed me access to observe each school's digital equipment.<sup>19</sup> Drawing on this observational data, I was able to create a relatively thorough profile of the ICT facilities on offer at each of the schools.

### **Peckham Selective High School**

Peckham High School is a state selective high school located on Sydney's western fringe. Peckham's inclusion in this study was based on its high ICSEA of 1171 and the high number of LBOTE students, constituting 78% of the total student enrolment. Peckham's ICSEA was the highest of all five schools, reflecting the high SES of many of its students, with over 70% of the students coming from families inside the top quartile of the ICSEA's student distribution of socio-educational advantage measure<sup>20</sup> (My School, 2019). Peckham's ICSEA was up to 261 points (over 2.5 full standard deviations) above the ICSEA of all five of the state government high schools in the region (My School, 2019). Due to its classification as a selective school, Peckham was exempt from the usual school suburb zoning rules (Ho & Bonner, 2018). The decision to exempt selective public high schools from these zoning regulations is in keeping with the neoliberal policies of "school choice" pursued by successive NSW governments since the 1980s (Watkins, 2017). Enrolment at Peckham and the other 21 fully selective schools across the state, therefore, is dependent on students' performance on the annual selective schools entry exam sat in the final year of primary school (Year 6) (NSW DoE, 2019). Given this, selective schools in NSW are among the most advantaged in the state, with six of the ten most socio-economically advantaged schools in NSW listed as selective (Ho & Bonner, 2018). This exemption from school zoning rules resulted in a daily mass migration, via train, bus and car, into and out of the suburb, as most of Peckham's 931 students did not live locally.

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<sup>19</sup> At Bradford and Peckham High Schools, the interviews were conducted in an empty classroom and private office respectively. However, at each of the five schools a comprehensive school tour was provided.

<sup>20</sup> As mentioned above, the ICSEA Quartiles are calculated using parental background data, including their occupation and educational qualifications. Once calculated, the ICSEA Quartiles rank Australia's student population from advantaged (the top 25%) to disadvantaged (the bottom 25%) (ACARA, 2013).



A further characteristic of selective schools across NSW is their high LBOTE student populations. While, overall, many LBOTE students continue to underperform in the Australian schooling system, students of various Asian language backgrounds consistently outperform not only other LBOTE students but also many of their English-speaking background (ESB) peers (Watkins, 2017). Indeed, these LBOTE students tend towards greater academic and career outcomes across all educational measures and levels in Australia (Ho & Bonner, 2018). As mentioned above, the student population at Peckham reflected this trend, with 78% of the students listed as LBOTE, most of them coming from Chinese and Indian backgrounds. The ongoing dominance of these LBOTE students in NSW selective schools can be seen in the 10% increase in LBOTE enrolment at Peckham to 88% of total students in just the four years since the data collection for this thesis occurred (My School, 2019). Many of these LBOTE students are children of skilled migrants with professional and high managerial occupations, hence the high SES of the students and the school's high ICSEA. This led to a situation where the student demographics at Peckham were vastly different from other schools in the surrounding area. Many suburbs surrounding the school continue to be ranked as socio-economically disadvantaged, with an overall local LBOTE population of just 14.7% (ABS, 2017a). Further, while 3.9% of the local population self-identified as AATSI, at Peckham there were no student AATSI enrolments (My School, 2019).

As for the school itself, externally there was nothing to reflect either Peckham's selective school status or the high SES of most of its students. The only building of any architectural significance on the school grounds was a small, centrally located, heritage-listed building that housed the reception area and the leadership offices. Technologically, however, Peckham was by far the best-resourced school in the study. Its digital infrastructure appeared years ahead of the others. An indication of the ICT superiority of Peckham was the presence of smartboards in most classrooms, a 'Mac Lab' computer room comprised entirely of late-model Apple iMacs, and all class notes and newsletters posted weekly onto the school's Moodle<sup>21</sup> platform, a free open-

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<sup>21</sup> Moodle is an acronym for Modular Object-Oriented Dynamic Learning Environment. Moodle is a Learning Management System (LMS) designed to provide schools with a free, secure and integrated system on which to personalise their learning environments (Moodle, 2019).

source software educational website utilised by many high schools across NSW (Moodle, 2019). Peckham's careers and Year 11 advisor, Susan, also issued her quarterly careers newsletter online only and used this platform to help facilitate the student surveys and interviews for this study.

The Peckham students who volunteered to be interviewed represented an even mix of four LBOTE students, Peter, Tracey, Pauline and Henry, and four of Anglo-Australian background, Paul, Carmen, Marion and Andrea. Tracey was the only student who lived locally. While an EOI was included at the end of the student survey, due to student timetabling conflicts, this process was deemed not feasible. Hence, the offer to be interviewed at Peckham was made to the entire Year 11 cohort the day prior to my arrival at the school, both online and in the morning roll call. The selection of the eight students for an interview, by the careers advisor, Susan, seemed to be done without bias and based on their availability that day. All the student interviewees came from two-parent households considered to be of a high SES. Amongst this group, career aspirations varied. However, regardless of their future career aspirations, they were all committed to future tertiary study. Six of the eight students reported at least one family member who had either graduated from university or were currently enrolled. None of the interviewees had part-time employment, choosing instead to focus on their studies leading up to the HSC. See Table 2 below for a summary of participant details.

Key insights were also gained from Peckham's careers advisor, Susan, who was also interviewed. Susan had been the careers advisor at Peckham for several years and seemed to relish her role. As expected at an academically selective high school, Susan did feel some pressure to transition every student into university. Despite this pressure and mentioning the "*intense parents*" she had to deal with, Susan nevertheless referred to all of Peckham's students warmly as "*my kids*". Susan also saw her job as extending to teaching the students how to find career and study information online, showing the students step-by-step how to navigate university websites. This online career training would be unique to Susan, and Estelle, the careers advisor at Coventry, the first of the two participant schools in this study classified as low SES.

Table 2. Summary Demographics of the Peckham Student Interviewees

Student Name <sup>22</sup>	Household SES	Cultural Background <sup>23</sup>	Household Configuration & Occupations <sup>24</sup>	Family Tertiary Experience	Student Career Aspirations	Student Tertiary Ambitions
<b>Andrea</b> (F)	High	Anglo-Australian	Two-parent household.	Father graduated from university. Mother finished Year 12. Both older sisters are currently enrolled at university.	Dentist.	Yes
<b>Carmen</b> (F)	High	Anglo-Australian	Two-parent household.	Did Not Declare (DND).	PR/Advertising.	Yes
<b>Henry</b> (M)	High	Chinese-Australian	Two-parent household. Father is an accountant. Mother is a stay-at-home mum.	Grandfather, uncle and father all graduated from university.	Humanitarian Law/Veterinarian.	Yes
<b>Marion</b> (F)	High	Anglo-Australian	Two-parent household.	Older brother is currently enrolled at university.	Music/Talent Agent.	Yes
<b>Paul</b> (M)	High	Anglo-Australian	Two-parent household. Father is a high school teacher.	Both parents are university graduates.	Music and the Arts.	Yes
<b>Pauline</b> (F)	High	Asian-Australian	Two-parent household.	DND.	Medicine.	Yes
<b>Peter</b> (M)	High	Asian-Australian	Two-parent household.	Older brother is currently studying medicine at a Go8 university.	Physiotherapy and/or Medicine.	Yes
<b>Tracey</b> (F)	High	Asian-Australian	Two-parent household.	Both older siblings are currently enrolled at Go8 universities.	Medicine.	Yes

<sup>22</sup> All student names are pseudonyms.

<sup>23</sup> The generalised term 'Asian-Australian' is used when the student did not disclose their ethnic identity.

<sup>24</sup> This demographic information was not disclosed by every student.

## Coventry High School

Only a short drive from Peckham, Coventry High School is also located on the outer western fringe of Sydney. This area of Sydney has experienced considerable economic and population growth in previous years. However, this growth has done little to change the overall demographic makeup of the region, particularly in the suburbs surrounding Coventry. Coventry High School's ICSEA value of 915 is almost one full standard deviation below the national average, indicating a significant level of disadvantage amongst its students. This disadvantage is also reflected in the 57% of the school's total enrolment of pupils in the lowest ICSEA Quartile (My School, 2019). Coventry's students are mainly from Anglo-Australian and AATSI backgrounds, representing 77% and 14% of the student population, respectively. The percentage of AATSI students at Coventry is well above the national average of 5.6% (ABS, 2017b). As articulated throughout the federal government's *Closing the Gap* report, AATSI Australian students remain a highly disadvantaged group within Australian secondary schools (Guthrie et al., 2019). These two demographic measures, as well as an LBOTE enrolment of just 9%, well below the Sydney high school average of 52.3% (CESE, 2016), were the main reasons for Coventry's inclusion in this study.

Coventry High School is perched on top of a natural rise in the landscape, flanked by sports fields on two sides, together with a housing estate and an old shopping centre with a large liquor retailer on the others. Upon approaching Coventry, the most prominent feature of the school was the complex security fencing enclosing it. Hexagon-shaped wire fencing approximately 3 metres high, with rolled barbed wire at the top, lined the outer boundary of the school grounds, while another 2-metre high fence enclosed the school itself. The principal explained that the fencing was designed to protect the students and staff, given the high degree of crime in the area, as well as to prevent people from shortcutting through the school grounds. Once inside the fence, the school grounds were austere with few green areas. While Coventry did have a large quadrangle, assembly hall, basketball court and a general-use sporting field, these facilities were largely in a state of disrepair. This disrepair was mirrored in the school's ICT infrastructure. Coventry's digital infrastructure was dated in terms of both the physical products and their

associated software. Of the 12 computer terminals located in the library, only four loaded to the start screen, while the software on these computers was so dated that students preferred to go home to conduct all their IT-related tasks, including online information seeking and word processing. The dire state of the ICT infrastructure at Coventry was also noted by Estelle, the school's careers advisor, who also helped with the survey distribution.

Unlike the open invitation to be interviewed for this study made to all Year 11 students at Peckham, at Coventry, this invitation was only extended to students in one of the school's academically selective classes, known as the Gifted and Talented Program. These classes were offered across the curriculum, throughout Years 7 to 12, to more academically engaged students. Coventry's English head teacher, responsible for finding students for an interview, turned down my list of students who had responded to the EOI in the survey, openly admitting that she preferred to select students who would reflect better on the school. While this 'interview stacking' did not obviously negatively influence the data collected, as each of the four students interviewed at Coventry still came from households classified as low SES, with digital practices reflective of other students of a low SES in this study, it may have coloured the type of aspirations of these students. Those outside this group may have had very different ideas of their lives after school and the choices available to them.

Consequently, three of the four students interviewed at Coventry, Zoe, Hamilton and Lucas, were enrolled in one of these classes. Sophie, the fourth interviewee, an AATSI student, who replaced one of the 'selected' students who had gone home sick on the day of the interviews, was a fascinating last-minute inclusion. As Sophie was not in any of the academically selective classes, she was outside the gatekeeping of the head teacher; indeed, the reason Sophie was out of class at the time was because she was assisting the school principal with her younger brother, who had just been suspended. While all the students interviewed were of a low SES, Sophie's level of disadvantage was certainly more pronounced. Overall, Sophie exhibited only basic communicative skills and openly discussed her profound struggles with her education and ICT usage. Sophie was hoping to head directly into childcare, through a work placement program run by the school specifically for AATSI students.

The three other students interviewed at Coventry were from Anglo-Australian backgrounds and discussed traditional blue- and white-collar career aspirations, including joining the police force and pursuing business management. All three were also hoping to transition into university study. However, two of the three students only had tertiary aspirations because a bachelor's degree was a prerequisite for entry into the NSW Police Force.<sup>25</sup> If successful in their goals of transitioning into tertiary education, all three of these students would be the first in their family to attend university, as all four students reported no previous family tertiary education experience. Further, the parents and older siblings of these young people were all employed in precarious, low-wage occupations; for instance, Sophie's older sister worked at a fast-food outlet, her father was a forklift driver, and she reported that her mother was a stay-at-home mum as she was unable to secure any work. Sophie, along with Hamilton and Lucas, worked part-time jobs because they needed the money, with Hamilton and Lucas coming from single-parent households, both living full time with their fathers. See Table 3 below for a summary of participant details.

The careers advisor at Coventry, Estelle, had been at the school for several years and, like Susan from Peckham, spoke with genuine warmth and concern for her students. Estelle also empathised with students over the obstacles they faced at home and school in terms of their lack of access to educational and career opportunities. Due to this, Estelle had reached out to the local community for help and had connected with charities such as The Smith Family to get students involved in *"anything that can get them out of the area"*. Also, like Susan from Peckham, Estelle ran IT-focused careers workshops with senior-year students, where she introduced them to online resources, including university websites. However, these workshops were limited in nature due to the school's lack of ICT facilities and were therefore largely conducted offsite or one-on-one using Estelle's computer.

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<sup>25</sup> The educational requirements for entry into the NSW Police Force are dependent on how many years of relevant employment a candidate has. As a school leaver heading directly into the police force, a degree is the minimum requirement.

Table 3. Summary Demographics of the Coventry Student Interviewees

Student Name	Household SES	Cultural Background	Household Configuration & Occupations	Family Tertiary Experience	Student Career Aspirations	Student Tertiary Ambitions
<b>Hamilton</b> (M)	Low	Anglo-Australian	Single-parent household. Lives with his two siblings and his father, who is a retired police officer.	None.	Police Officer.	Yes
<b>Lucas</b> (M)	Low	Anglo-Australian	Single-parent household. Lives with his father. Two older siblings, one is a barista and the other manages a fast-food franchise.	None.	Police Officer.	Yes
<b>Sophie</b> (F)	Low	Aboriginal and Torres Strait Islander	Two-parent household. Mother is a stay-at-home mum. Father is a forklift driver. Older sister works full-time at a fast-food outlet.	None.	Childcare.	No
<b>Zoe</b> (F)	Low	Anglo-Australian	Two-parent household. Mother is a stay-at-home mum and father has worked various jobs in the transport industry.	None. Both parents left school in Year 10.	Business Management or Finance.	Yes

## Glencross High School

Glencross High School is in Sydney's southwest and by all measures was the most disadvantaged school in this study. With an ICSEA value of just 883, Glencross is over one full standard deviation below the national average and 288 points below Peckham High School. Moreover, 74% of the 556 students enrolled at Glencross were from families in the lowest ICSEA Quartile (My School, 2019). Most of Glencross's students were also from a LBOTE, representing 90% of the total enrolment. These students were mainly of various Middle Eastern backgrounds. Glencross was also the only school in this study to report the enrolment of several refugee students, who can often possess complicated personal histories, disrupted education and limited English-language proficiency (NSW DoE, 2017). One percent of Glencross's students identified as AATSI. These student demographics are reflective of the school's surrounding suburbs, some listed amongst the most disadvantaged in Sydney, with the region reporting an average annual household income of just \$36,375 per annum, well below the national average of \$80,704 (ABS, 2017a). Further, the local area has an unemployment rate of 10.4%, more than double the national average, with just 9.8% of the local population possessing a tertiary qualification, and only 62.8% of households in the region with internet access<sup>26</sup> (ABS, 2017a; ABS, 2018a). Finally, 65.3% of local households reported speaking a language other than English at home, mainly Arabic, with the majority of these families being of Lebanese background (ABS, 2017a).

A decade before this research was conducted, Glencross High School had been earmarked for closure. However, with the burgeoning immigrant and refugee population in the region, the decision was reversed and the school remained open. The legacy of the lengthy decision process regarding the school's future meant that over the years little had been spent on infrastructure, resulting in a school equipped with only the most basic of facilities, including its digital infrastructure. Like Coventry, the ICT infrastructure at Glencross was limited and outdated. In fact, Glencross seemed to be in even worse digital shape than Coventry, with students openly discussing the challenges they faced, including some computer terminals lacking basic Microsoft

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<sup>26</sup> The Australian national average in 2017 was 79% (ABS, 2018a).



Office software. Due to the low number of functioning desktop PCs at the school, Glencross had become heavily reliant on returned Digital Education Revolution (DER) issued student laptops, from 2009–2013, for their IT needs. Given the average lifespan of laptops is just 3–5 years, students reported these devices as highly volatile and unreliable. Glencross’s careers advisor Sharon also had issues with digital resourcing, for example, the monitor on her office computer had a large crack on the screen and her printer had been out of order for months.

Like the students at Coventry, all the students interviewed at Glencross had been selected by the Year 11 advisor, no doubt to reflect positively on the school. However, as with Coventry, these students all came from low-SES families. Several positive outcomes resulted from being *supplied* with these aspirational students, as opposed to the students who had filled in the EOI on the surveys. For example, unlike the interviewees at Coventry, who often referred to neoliberal ideas of meritocracy, whereby they equated their future success with them working harder, the students at Glencross expressed incredible insight into the limitations of their home and school environments, blaming these circumstances for their lack of academic success and opportunities, rather than themselves. Further, these students were able to capture and articulate their school’s challenges in a manner that many of the other students being of a LBOTE background may have struggled to so clearly convey. Finally, the fact that these ‘good’ students seemed to possess such limited digital capital further highlights the challenges that both low-SES schools and their students continue to face.

All five students interviewed at Glencross, Aisha, Amber, Ghassan, Saabir and Zara, reflected the demographics of the surrounding suburbs, as such they were from Lebanese backgrounds. Like Coventry, all five expressed traditional blue- and white-collar career aspirations, including flight attendant, real estate agent and surveyor, with only Aisha and Saabir expressing interest in attending university. Due to the limitations of the education her school could provide, Aisha had accepted that she would need to go through a pathway program after Year 12 to enter

university.<sup>27</sup> Indeed, all the students were circumspect about their chances of getting into university, aware that of the 72 students who completed Year 12 the year prior, only four had successfully transitioned into university study. Further, none of the students' parents had attended university, although both Saabir and Zara had older siblings currently enrolled at Novus University and a Go8 university, respectively. Also, like Coventry, the parents and older siblings of these students were in insecure employment including baristas, security guards and labourers. The only exception to this was Ghassan's mother, who was a paramedic. Zara and Amber were from single-parent households, living with their mothers as their fathers were based in the Middle East permanently. Zara and Amber, along with Ghassan and Saabir, also had part-time employment. While Aisha wanted to work, due to religious reasons, her father forbade it. See Table 4 below for a summary of the Glencross participants.

The careers advisor at Glencross was Sharon, who had been in the role for less than a year. She shared little of the optimism that Susan at Peckham and Estelle at Coventry had expressed towards their students. Instead, Sharon seemed overwhelmed by the enormity of her workload, and from early in her interview, her struggles became apparent. As captured above, there is no doubt that Sharon was working in a challenging environment at Glencross. Adding to her difficulties was the fact that there were no timetabled career lessons at Glencross. Due to this lack of contact time and the school's poor ICT, Sharon was also unable to offer digitally focused workshops, with much of her work focused on securing apprenticeships and employment for early school leavers. Sharon also explained that due to low attendance in the past, Glencross no longer ran student/parent career information evenings. The digital inequalities discussed thus far at both Glencross and Coventry High Schools was not only captured in the differences between them and Peckham but also when comparing them to the second school of a high SES, Pineridge High School.

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<sup>27</sup> Many universities, including Novus University, offer students who miss out on direct entry into university a college option. These programs run in Novus College for six to eighteen months and are focused on developing students' academic skills, with the goal of them eventually entering into a degree program.

Table 4. Summary Demographics of the Glencross Student Interviewees

Student Name	Household SES	Cultural Background	Household Configuration & Occupations	Family Tertiary Experience	Student Career Aspirations	Student Tertiary Ambitions
<b>Aisha</b> (F)	Low	Lebanese-Australian	Two-parent household. Mother is a stay-at-home mum and father owns a pizza shop.	None. Both parents completed high school. Older brother is at TAFE. <sup>28</sup>	Unsure.	Yes
<b>Amber</b> (F)	Low	Lebanese-Australian	Single-parent household. Lives with her mother, who is a barista, and older brother, who is a labourer.	None. Both parents completed high school.	Flight Attendant or Nursing.	Unsure
<b>Ghassan</b> (M)	Low	Lebanese-Australian	Two-parent household. Mother is a paramedic. Father is unemployed.	None. Both parents completed high school. Older sister left in Year 10 and studied hairdressing at TAFE.	Real Estate Agent.	No
<b>Saabir</b> (M)	Low	Lebanese-Australian	Two-parent household.	Yes. Older sister is at Novus University. Mother completed high school and father completed primary school.	Biology – General Sciences.	Yes
<b>Zara</b> (F)	Low	Lebanese-Australian	Single-parent household. Lives with her mother, who is a stay-at-home mum. Five older siblings work ‘normal’ jobs such as security guards.	Yes. One older brother is studying at university.	Surveyor.	No

<sup>28</sup> Technical and Further Education (TAFE) colleges are government-run educational institutions that provide affordable access to a wide range of predominantly vocational courses. Most courses run between six months and two years full-time. TAFE courses can also form part of the senior-year curriculum at certain NSW government high schools (TAFE NSW, 2019).

## Pineridge High School

Located on the Northern Beaches of Sydney, Pineridge High School is in an area long associated with upper- and middle-class privilege. Evidence of this can be seen in the region regularly ranking inside the Top 10 most advantaged local government areas in NSW (ABS, 2017a). Regional demographic statistics reinforce this image of privilege, including an average annual household income of \$113,256, well above both Glencross \$36,375 and the national average of \$80,704 (ABS, 2017a). The region also has one of the lowest rates of unemployment in NSW of just 3.5%, well below the national average of 5.2%, with 25.2% of the population holding a bachelor's degree or higher (ABS, 2017a). Like Coventry High School, Pineridge also had a predominately Anglo-Australian student population with only 18% of its total of 906 pupils having a LBOTE (My School, 2019). However, this is where the similarities with Coventry end, because Pineridge's ICSEA of 1082 is 167 points above Coventry. This classifies Pineridge as relatively advantaged. Further evidence of this classification can be seen in the 73% of Pineridge students from families in the top two ICSEA Quartiles (My School, 2019). Pineridge reported a zero enrolment of AATSI students.

The school itself was set amongst thick bushland, the grounds blending seamlessly with the natural wetlands running alongside two of its borders. The school's environment, both built and natural, seemed to mirror the general sense of calm exhibited by the students and staff. Pineridge's library was extensive, clean and well equipped in terms of books, computer terminals, support staff and additional services. Senior students had their own workspace known as the 'Senior Learning Centre'. The centre contained curriculum-related books, a bank of working computers and a dedicated librarian. The school's careers advisor, June, also had her office in this space. June acknowledged that the moving of her office from the central administration area at the front of the school to the Senior Learning Centre had seen the number of students visiting her increase significantly. Across both the library and the Senior Learning Centre, the ICT infrastructure observed was both late model and in working order.

All six of the students interviewed at Pineridge, Andrew, Chad, Harrison, Justine, Mary and Sera,

volunteered in response to a general call out for participants made to the entire Year 11 cohort. As at Peckham, no attempts were made to 'stack' the interviews. Five of the students were Anglo-Australian; Chad was born in Australia of Chinese background. All interviewees came from two-parent households, with at least one parent holding a tertiary qualification. Reflecting this, nearly all the parents were reported as employed in professional careers, including Andrew and Harrison's parents all teachers, as was Sera's mother, while Mary's mother was a psychologist and her father was a manager of an Asia Pacific company. Four of the students, Mary, Justine, Chad and Andrew, also had at least one older sibling currently enrolled at a Go8 university. Consequently, all six students aspired to university study and traditional white-collar higher professional or managerial careers, including as an architect, economist and criminologist. Finally, Andrew, Mary and Harrison had part-time employment. See Table 5 below for a summary of participant details.

As mentioned above, June was the careers advisor at Pineridge. She had been in the role for many years, and like most of the careers advisors in this study was deeply invested in helping her students achieve their post-secondary aspirations. As June had taught at a few schools across Sydney, she believed she was more than qualified to claim that both the students and the staff "*were very lucky*" to be at Pineridge High School. While June did not offer online careers training, she did conduct 20 structured and timetabled career classes with every student throughout Year 10. June also held multiple career and university student/parent information evenings throughout the year, with attendance open to anyone. Overall, June found the parents at Pineridge to be highly engaged and invested in their children's future. It is clear that Peckham and Pineridge had very similar ICT infrastructure and careers support, both superior to Coventry and Glencross and to Bradford High School, the regionally based school.

Table 5. Summary Demographics of the Pineridge Student Interviewees

Student Name	Household SES	Cultural Background	Household Configuration & Occupations	Family Tertiary Experience	Student Career Aspirations	Student Tertiary Ambitions
<b>Andrew</b> (M)	High	Anglo-Australian	Two-parent household. Father is a high school teacher and mother is a teaching learning support officer. <sup>29</sup>	Father graduated university and mother finished high school. Three older siblings all currently enrolled at university.	Undecided.	Yes
<b>Chad</b> (M)	High	Chinese-Australian	Two-parent household.	Both parents completed high school overseas. Father studied university in China and TAFE in Australia. Older brother is currently enrolled at a Go8 university.	Economist/Banker.	Yes
<b>Harrison</b> (M)	High	Anglo-Australian	Two-parent household. Both parents are high school teachers.	Both parents are university graduates.	Architecture/The Arts.	Yes
<b>Justine</b> (F)	High	Anglo-Australian	Two-parent household. Mother is an artist.	Both parents are university graduates. Older brother on full scholarship at a Go8 university.	Criminology/Film Production.	Yes
<b>Mary</b> (F)	High	Anglo-Australian	Two-parent household. Mother is a psychologist. Father is an Asia Pacific IT manager.	Both parents are university graduates. Older brother currently enrolled at a Go8 university.	Hospitality/Drama/Acting.	Yes
<b>Sera</b> (F)	High	Anglo-Australian	Two-parent household. Mother is a high school teacher. Father works in construction.	Both parents are university graduates.	Events Manager.	Yes

<sup>29</sup> Learning support officers provide in-classroom assistance to teachers, generally within challenging teaching environments, such as students with learning difficulties and/or physical or emotional disabilities.

## Bradford High School

The regionally based Bradford High School is located on the NSW North Coast, an area known for its relaxed alternative lifestyle, pristine surfing beaches and great natural beauty. The region has also experienced considerable population growth over the previous two decades, attracting families, retirees and wealthy professionals from around the world in search of a 'sea change'. Unlike the growth in Western Sydney, however, Bradford's growth has transformed both the local housing market and the overall demographic makeup of the area, long associated with anti-establishment hippie culture, i.e. low SES. While the influx of wealthy families into the region has made the local housing market one of the most expensive in NSW, pockets of considerable disadvantage are still evident across the region. These areas are primarily concentrated on the outskirts of Bradford, as less affluent families can no longer afford to live in the main township. Living on the periphery of small country towns in NSW can significantly reduce access to essential services such as internet and phone connection (Freeman et al., 2016; Park, 2017b).

The shifting nature of the SES of Bradford's residents is highlighted further in the macro-demographics of the town, with the average annual household income of \$59,748; while much higher than at Glencross and most other regional townships across the state, it remains well below the national average of \$80,704 (ABS, 2017a). The mixed SES of the region is further highlighted in the student demographics at Bradford High School, the only government high school within 20 kilometres of the township. Even though Bradford's ICSEA value of 1045 is slightly above the national average of 1000, indicating marginal advantage amongst the students, of the 816 pupils enrolled at Bradford, 42% came from families classified in the bottom two ICSEA Quartiles (My School, 2019). Due to Bradford's appeal to international families, it had a LBOTE enrolment of 10%, which while lower than most schools in Sydney is higher than the NSW average of 7.7% for regional locations (CESE, 2016). Bradford's AATSI percentage enrolment of 4% was just below the national average of 5.6% (ABS, 2017b).

Bradford High School is nestled amongst bushland, just 300 metres from the ocean. Like Pineridge, Bradford had an abundance of trees, sporting facilities and built places for students to

relax during breaks. The entire school was in the shape of an oval, with all the buildings boasting inward-facing verandahs overlooking a central leafy courtyard. Despite its beautiful built and natural environment, Bradford was facing two pressing issues: overcrowding and a lack of ICT resourcing. Bradford's school internet was universally described as unpredictable, with slow download speeds and regular dropouts, while the digital hardware was reported as unreliable and dated. Due to a lack of functioning desktop PCs, Bradford, like Glencross, had attempted to repurpose old DER-issued student laptops as a means of maintaining some form of digital access. Still, several of the students interviewed would mention that most of the laptops, like the PCs, were either broken or too slow. Accordingly, the students who could afford to do so brought their own devices from home. The effect of Bradford's lack of ICT infrastructure on students was compounded by the fact that many students also lacked home internet access.

Robert, the school's careers advisor who facilitated the distribution of the student surveys, was determined that the highly varied SES of the student body be represented in the interviewees for this study. Therefore, Robert also overlooked the student survey EOI; instead, he selected eight students he believed would best represent the diverse social environments experienced by the student cohort. As a result, of the eight students interviewed, two students, Brendan and Kate, were of a high SES, while Wade and Gemma were living in public housing,<sup>30</sup> with the four remaining participants, Alison, Amy, Kris and Luke, classified as low SES. This diversity was reflected in the students' university and career aspirations. These aspirations, more than any other school, encompassed the full spectrum of career goals, from pilot to electrician, from actress to ski instructor, to simply expressing a desire for multiple gap years.

Three students expressed a desire to transition into university: both students of a high SES, Brendan and Kate, as well as Amy who planned to become an actress. Coincidentally, it was also only these three students who had a family member with personal experience of tertiary education. Both of Kate's parents were university graduates, so was Brendan's father, while

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<sup>30</sup> The NSW Government provides a range of public and community housing, for individuals and families on very low or low incomes (NSW Government, Family & Community Services, 2019).



Amy's father had recently enrolled in nursing as a mature-aged student. The household configurations and parental occupations were also largely divided along SES lines, with Kate's mother working in IT and father an architect and Brendan's father, a former teacher, now owning a landscape gardening business. The reported parent occupations amongst the remainder of the students included removalist, chef, construction worker and one unemployed. Wade, along with Luke, Brendan, Alison and Gemma, all came from single-parent households, with Amy describing her living arrangements as communal because she shared a house with her father, uncle, cousins and paternal grandmother. Finally, all the students, except Amy and Kate, were employed part-time. See Table 6 below for a summary of participant details.

Robert had been the careers advisor at Bradford for two years, and in that short period he had established close relationships with many of his students and had developed an acute awareness of the highly varied socio-economic backgrounds of his students. For instance, Robert noted that Bradford's regional location created a 'tyranny of distance' that complicated the career and education aspirations of the students, particularly those of a low SES. To compensate for this, Robert was the only careers advisor interviewed to discuss ongoing structured contact with the students throughout Years 11 and 12. Robert also held student/parent career information evenings for Years 11 and 12 and subject selection nights for students and parents in Year 10. Given the poor state of Bradford's ICT infrastructure, Robert did not conduct any career lessons with students focused on using ICTs to access course and career information online. However, he did allow students to use his office computer to look up information.

Table 6. Summary Demographics of the Bradford Student Interviewees

Student Name	Household SES	Cultural Background	Household Configuration & Occupations	Family Tertiary Experience	Student Career Aspirations	Student Tertiary Ambitions
<b>Alison</b> (F)	Low	Anglo-Australian	Single-parent household. Lives with her mother.	DND for parents. Older brother dropped out in Year 10.	Events Management or Singer.	No
<b>Amy</b> (F)	Low	Anglo-Australian	Communal household. Lives with her father, uncle, cousins and paternal grandmother.	Father is currently enrolled at university studying nursing. Mother finished Year 12.	Actress.	Yes
<b>Brendan</b> (M)	High	Anglo-Australian	Single-parent household. Lives with his father, a former teacher who now owns a landscape gardening business.	Father graduated university, and his mother finished Year 12.	Personal Trainer or Physiotherapist.	Yes
<b>Gemma</b> (F)	Low	Anglo-Australian	Single-parent household. Lives with her father, who is a chef. Her mother works in hospitality.	None. Parents finished Year 12. Older brother dropped out in Year 10.	Maybe Psychology?	Unsure
<b>Kate</b> (F)	High	Anglo-Australian	Two-parent household. Mother worked in IT in the military, and her father is an architect.	Both parents are university graduates.	Pilot in the Royal Australian Airforce (RAAF).	Yes
<b>Kris</b> (M)	Low	Anglo-Australian	Two-parent household. Father is a removalist and older sister works in construction.	None. Parents and older sister all finished Year 12.	Mechanic, Music Producer or Motorsports.	No
<b>Luke</b> (M)	Low	Anglo-Australian	Single-parent household. Lives with his mother.	DND.	Maybe Astronaut, IT...or Music?	No
<b>Wade</b> (M)	Low	Anglo-Australian	Single-parent household. Lives with his father. Mother is unemployed in a different state.	None. Neither parent completed Year 10.	Maybe a Radio DJ?	No

## Research Phases and Data Collection

### Phase One – Quantitative: The Student Online Practices Survey

As outlined above, a two-phase sequential mixed methods design was utilised in this thesis. Phase one of the data collection involved the issuing of the Student Online Practices Survey to Year 11 students at each of five participant schools. Only once all the surveys had been completed, returned and coded, with early themes established, did phase two commence. The student survey provided an early opportunity to explore the relationships and distribution of trends across these diverse groups of young people. The survey had two main objectives: firstly, to build a preliminary picture of the young people's varied digital capital by investigating their digital practices and family background; and secondly, to examine if the schools' macro-demographic measures, such as their ICSEA values, were reflected in the research sample. The survey was designed and formatted through the online platform Survey Monkey.<sup>31</sup> A pilot survey was vetted and approved by the five school principals, the WSU HREC and the SERAP. During this editing process, concerns were raised by the principal at Coventry High School regarding the wording used in some of the questions. As up to 60% of his senior year students<sup>32</sup> had mild to severe literacy issues, he requested some questions be rephrased. These academic literacy concerns highlight an additional challenge faced by some low-SES schools attempting to teach educationally focused digital skills to their students. Based on the principal's feedback and comments, the survey was successfully revised and administered to students at the schools.

The survey was organised into three sections. As the issue of maintaining the students' attention was stressed several times in meetings with the schools' principals, the survey design followed the recommendation of Secor (2010) to use different question styles for each survey section. Accordingly, section one, which concentrated on the students' ICT supply and usage, used a variety of eight Multiple Choice Questions (MCQs). These questions began with simplistic inquiries such as, "*Where do you most commonly go online?*", "*How*

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<sup>31</sup> A complete copy of the Student Online Practices Survey is included in Appendix 1.

<sup>32</sup> Years 11 and 12 are considered senior years at NSW high schools.

*often do you use the internet or spend time online?” and “Do you have regular and reliable access to the internet at home?”. From here the questions were more detailed and focused on the extent to which students’ embodied digital practices had led them to make more effective use of their digital devices, hence they were asked, “When conducting searches online, I am willing to spend as much time as necessary to find the information I need”, “In general I prefer using online resources to books and magazines” and “No matter what information I am looking for I always go to my favourite websites first”.*

Section two of the survey focused on the students’ digital skills. Accordingly, the questions in this section focused heavily on the students’ OISPs and used a five-point Likert Scale, where students ranked their responses from *Strongly Agree* through to *Strongly Disagree*. These questions were much more direct and included, “*I carefully plan my information searches before going online*”, “*When searching for information online, it often takes longer than I first thought*” and “*I always think carefully about whether I can trust the information I find online*”. Finally, the focus of section three was on collecting students’ demographic information to link their varied social contexts to their digital capital, captured in the first two sections, some of which is discussed above. The questions in section three also focused on capturing more background information such as their parents’ employment status, occupation and their highest level of education. The answers to these questions offered a further guide to the potential household income of these students and an insight into the possible level of cultural and economic capital of their household.

Survey Monkey was initially chosen as the means to deliver the survey, in line with the increasingly popular practice of distributing surveys to young people online (Bryman, 2012). However, all five schools pushed back on this method of delivery, with principals and teachers alike maintaining that giving students the freedom to complete the survey online would result in a low response rate. This consistent feedback further discredits the ‘digital natives’ thesis, particularly its claim that young people prefer all materials to be delivered electronically. For this reason, the survey at the five schools was distributed on paper during morning roll call, to a total of 608 Year 11 students. This method of distribution resulted in a strong overall response rate of 61%, with 368 useable surveys. The survey response rate at each of the schools was 55% at Bradford High School, 22% at Coventry High School, 87% at

Glencross High School, 74% at Peckham High School and 84% at Pineridge High School<sup>33</sup>. These student surveys were manually entered into the Survey Monkey website for analysis. This process of manual entry, while time-consuming, allowed me to become familiar with the data, and to identify early themes and initial codes. Indeed, even at this early stage of data collection, distinct differences associated with students' SES and digital practices were becoming evident. The survey findings also helped to inform and develop the questions for the interviews conducted in phase two of the data collection.

### **Phase Two – Qualitative: The Interviews and Researcher Observation**

The second phase of the data collection involved qualitative interviews with the Year 11 students from across the five participant schools referred to above who had already completed the student survey, their careers advisors and various university and Department of Education (DoE) staff<sup>34</sup>. The interviews sought to expand on and clarify the quantitative findings of the survey, and through building a deeper understanding of the students' wider social environments, link these early findings to their career and university aspirations. As Bertaux (1981, p. 39) explains, "If given a chance to talk freely, people appear to know a lot about what is going on". A semi-structured interview format was selected as the best way to capture the personal perspectives and experiences of the interviewees. The flexibility of the semi-structured interview offered participants the freedom to veer off course, resulting in remarkably honest assessments of the students' digital practices and the structural constraints many faced. Pilot interviews, assessing each of the four interview schedules, were conducted with colleagues at WSU. The purpose of this was to gauge the appropriateness of the order of questions and to aid in the development of consistent prompts and redirection strategies across critical themes and issues (Brown & Danaher, 2017). Feedback from this process refined the final interview questions.

All interviews commenced after consent forms, containing statements guaranteeing anonymity and the confidentiality of results, had been signed by the participants and if under the age of 18 years, also a parent or guardian. The student and careers advisor interviews

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<sup>33</sup> Table 7 in the Appendices provides a further summary of the student survey respondents at each of the five schools.

<sup>34</sup> Table 8 in the Appendices provides a summary of each of the career advisors and other interview participants.

took place first onsite at each of the five schools. The interviews with the other participants were run next, in either their workplace or a local cafe. By conducting interviews in familiar environments such as these, the hope was that participants would relax and thereby have a positive effect on the quality of the data collected (Anderson, 2004). All interviews were conducted one-on-one, in person, were audio recorded and ran no longer than 90 minutes. The only exception to this was the student interviews at Glencross High School, which were conducted in pairs with a teacher supervisor present for the researcher's safety. This teacher protection was a school-based decision, as at no time during my three visits to Glencross High School did I feel threatened or unsafe. As the process of interviewing was sequential, the collected interview data was continuously being coded and analysed, with the results of each interview conducted used to inform the next. Even with these preliminary analyses, the highly differentiated nature of young people's digital practices was already emerging. All the school-based interviews were conducted first in the sequence.

### ***Student Interviews***

The student interviews focused on their digital access, usage and skills (particularly their OISPs), and their post-high school educational and career aspirations. The interviews also addressed the students' social environments, especially their digital experiences at school and home. For instance, specific questions were asked investigating their parents' perceptions of technology and any potential parental 'concerted cultivation' around their digital usage. Students were also asked what their parents and teachers thought of their future aspirations and where they saw themselves in five years' time. The semi-structured style of interview used not only encouraged a free flow of conversation, the schedule of set questions taken into each interview as researcher prompts also facilitated the comparison between the student participants when analysing the data.

### ***Careers Advisor Interviews***

The interviews with the five school careers advisors were conducted on the same day, after the student interviews. These interviews sought to expand on the understanding of SES factors and the influence they were having on students' digital skills and subsequent access to career information. Incorporating careers advisors as participants created the opportunity

to explore how diverse agents can shape students' digital practices and aspirations. Careers advisors can have a significant influence on young people's perceptions, particularly in their senior years as they start to formulate future career and educational goals. These interviews also helped gain a sense of the entire student cohort, as they were free to discuss all student experiences both past and present.

### ***Other Participant Interviews***

Once the school-based interviews were complete, the final round of interviews were conducted with the four university staff members from Veteris and Novus Universities and the former NSW DoE IT Director. These interviews served to supplement and 'fill some of the gaps' in the data collected throughout the prior interviews and the student surveys. Given that the lack of student digital skills at a Go8 university played a critical role in the genesis of this thesis, I was curious to discover if this crucial aspect of university life was addressed as part of their social inclusion program or general student support. These interviews also established their student admission requirements, overall student social inclusion and support programs and practices, and their traditional and digital marketing mix. Finally, the former IT Director was asked about the NSW DoE policy position on the role of ICTs in public secondary schools and the impact of school SES on this provision.

### ***Researcher Observation***

An ongoing aspect of the two phases of data collection was researcher observation, with all observations recorded in a researcher diary. Detailed field notes were compiled during and after every meeting, interview and school visit, providing considerable insight into the complex and situated nature of the young people's different social worlds. The observations had three main aims:

- i. to observe each school's physical environment, taking note of how the students and careers advisors responded to and moved within their surroundings;

- ii. to observe each school's ICT infrastructure, by testing machines and observing study participants and non-participants interacting with computer terminals, laptops and their own digital devices;
- iii. to study each of the interview participant's demeanour in response to the questions asked, noting their verbal and non-verbal reactions.

These observations sought to move beyond the contributors' conscious understandings, spoken words and world view (Geertz, 1973). The participants' non-linguistic communication, such as gestures, posture and physical use of space, or what Geertz (1973, p. 10) refers to as participant "symbolic action", proved critical in developing a deeper understanding of the students' everyday lives, including the influence of the varied school ICT environments on their digital practices and career aspirations. Overall, the informal and unguarded moments of these young people and their careers advisors captured throughout this process offered a rare glimpse into the opaque "back-stage" of NSW high schools (Goffman, 1959, p. 128).

#### ***A Note on the Proposed Digital Task-Based Workshops***

Digital task-based workshops (DTBWs) were originally planned as part of the research design. Student interviewees were to complete the workshop as a group, in a school's computer room before their interviews. The workshops were designed to capture how students sought information online. The format involved students being given a list of tasks to be completed online related to the retrieval of information regarding their post-secondary study and career options. Besides data collected through observing the workshops, an examination of the students' online practices would also be tracked using a software program called InputLog. The workshop was completed at Peckham High School, the first school visited for data collection, without issue. The experience at Peckham, however, would prove to be the exception, and due to a lack of operational ICT hardware at both Glencross and Coventry High Schools, the workshops as a method of data collection were abandoned. While issues had been foreseen in testing conducted prior to attempting the DTBWs in schools and various contingencies put in place, the multiple complications faced at these two low-SES schools highlights a considerable digital disadvantage faced by their students. So, while unsuccessful as a method of data collection, when combined with the researcher



observations, this process proved a useful exercise in what it revealed about the ICT facilities at these two schools, which will be drawn upon in the following chapters.

### **Researcher Bias and Reflexivity: 'The Myth of Objectivity'**

How a researcher understands and allows for their bias is essential to consider when undertaking any form of social research, particularly when conducting research with more qualitative aspects such as interviews and researcher observation. Critical social theorists have long debated the subject of researcher bias. For instance, Max Weber, as early as 1946, stated that all research, even hypothetical 'objective' scientific research, is bound by the researchers' own value judgements. This "myth of objectivity" exists in the social sciences as well (Walford, 1991, p. 1). For example, even the simple choice of what does and does not get studied is shaped by the researcher. Given this, it is argued that "the age of value-free inquiry for the human disciplines is over", as researchers cannot help being socially located individuals (Denzin & Lincoln, 1998, p. 24). Accepting this, the research methodology employed here recognises that the nature of social science research means it cannot be conducted in an environment of absolute impartiality, completely free from researcher bias (England, 1994).

Therefore, it is important to acknowledge my own positionality and background by asking myself, "...who am I and what do I value; what's of importance to me; what are the beliefs that I hold?" (Mertens, 2009, 1:12–1:17). As a mature-aged, Anglo-Australian male coming from a low socio-economic background, it is important that I am aware of my own reflexivity. I am the first in my family to attend university and struggled with both the initial transition to university life and the ongoing conflicting demands between my home and study worlds. These opposing forces maintain an uncomfortable sense of anxiety in me, as I find myself lost between these two worlds, never feeling a sense of true belonging in either, something Bourdieu refers to as a "cleft habitus" (Bourdieu, 1999; 2000). Given my own unique positionality, and accepting that researchers cannot ever be completely neutral, it is necessary, therefore, to take steps to limit this bias.

As recommended by Case (2008), one of the most effective ways to limit potential researcher bias is through the appropriate choice of methodology and methods. Together with allowing for a range of perspectives to be given consideration, the decision to utilise a mixed methods approach was made in a conscious attempt to limit potential researcher bias. Researcher bias can also “slant” the data collection, analysis and interpretation (Rodriguez & Ryave, 2002, p. 22). Hence, the researcher has the power to both highlight and to “distort, silence, and misrepresent” what their participants reveal (Kirsch, 1999, p. xv). As a result of this, I needed to be aware of the structural and social inequalities of both my participants *and* my own authority and power in the processes of data collection, analysis and reporting (Eglinton, 2013). Reflecting on my own interpretative paradigms and position in relation to those I research, I took direct measures to circumvent this type of potential researcher bias. Overall, I adopted Abrahams and Ingram’s (2013) view that my cleft habitus is a positive resource when attempting to connect with and legitimately understand students from a similar background to myself, to a degree that other researchers may struggle to appreciate.

## Conclusion

The sequential mixed methods approach detailed in this chapter was the best way to illuminate the similarities and differences in students’ digital capital and career aspirations across the five research sites, and to capture the different institutional settings in which these digital practices and career decisions are situated. The interpretation of the data collected through the two phases outlined above is presented through a comparative analysis, focused on the five schools, in the following three chapters. The initial analysis of the data drawn from these phases established significant differences in the digital practices between students of different SES, while also noting that small differences also existed between young people of similar SES. Yet, amongst these differences, uniform practices appeared, suggesting four groups with remarkably similar digital practices, capital and future goals: the Traditional Job Seekers, the Social Networkers, the Future Professionals and the Creative Dreamers. The following chapters consider each of these four different groups commencing with the Traditional Job Seekers, consisting entirely of the students drawn from the two high schools of a low SES, Coventry and Glencross.

## Chapter 3: Glencross and Coventry High Schools – The Three-Legged Stool

*...you know how they say, there's three legs on a stool; the children, the parents, and the teachers, [and] they need to work together...If one [leg] is not working, the stool falls apart...*

Estelle, Coventry's Careers Advisor

This chapter analyses the digital capital of the students from the two low-SES state comprehensive high schools, Glencross and Coventry. As previously mentioned, the students interviewed at these two schools expressed remarkably uniform digital capital and career aspirations, thus, together they formed the first of the four OISPs groups, the Traditional Job Seekers. Despite a significant difference in the two schools' LBOTE and AASTI enrolments,<sup>35</sup> these students nevertheless had remarkably uniform digital capital in terms of their digital supply, usage and skills. The lack of digital skills amongst these students was a direct reflection of the dire state of their school-based ICT resources. Further, the modest digital skills of these students resulted in them remaining dependent on personal networks for career information, particularly parents. The limited educational and career experience present amongst their personal networks resulted in very few viable options being presented to these students. Consequently, the career aspirations of the Traditional Job Seekers, while legitimate, were constrained and remained highly gendered and conventionally working class in nature. Despite this, many of the students in this group were university aspirational, while simultaneously acknowledging that their tertiary pathways and choices would potentially be more complex and protracted than those of other students. It is through an exploration of the Traditional Job Seekers' social environment and digital capital that the strength of each leg on Estelle's three-legged stool holding up the students' digital capital and career and educational aspirations, will be tested, commencing with an examination of their schools' digital infrastructure. As Annie, the former NSW DoE IT Director, explained:

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<sup>35</sup> As outlined in Chapter 3, the student enrolments at Coventry included 14% AASTI students and 9% LBOTE students, while at Glencross 1% of total enrolments were AASTI and 90% were LBOTE students (MySchools, 2019).

*I have never seen a computer lab in any school, ever, where 100% of the computers are working at the same time, and the ones that are, all have significant issues with the browsers and so on...*

Overall, Annie's quote regarding the state of digital resources in schools across NSW fails to fully appreciate the truly dire state of the ICT facilities at these two schools of a low SES, particularly Glencross, which had the poorest digital resourcing of all five participant schools.

### **Glencross High School's Digital Infrastructure**

*I'm ashamed to say I'm from Glencross.*

Amber, Glencross High School Student

As discussed, Glencross was one of the two schools of a low SES selected for this study. As captured in the school profile in Chapter 2, both the school and students attending Glencross faced considerable economic disadvantage. Glencross also had the highest enrolment of LBOTE students as well as a significant number of refugee students, each of whom offer their own unique set of challenges. Arguably, then, Glencross's students would have benefited the most from strong ICT infrastructure at the school, however, it had the least sophisticated ICT facilities of all the participant schools. The state of Glencross's digital infrastructure was captured most bluntly by Zara, who added to Amber's comments with:

*It's a shit school...like compared to other schools...it's like very down...I've been to other schools, seen other schools, [the] only reason I haven't changed my school is because I know my friends. So, I didn't wanna, that's it...*

Students such as Zara and Amber, who had experienced other schools and education systems, felt the challenges present at Glencross more acutely. Both Zara and Amber had attended private schools in the Middle East. This exposure had made them much more aware and critical of the level of disadvantage at Glencross. As Zara explained: "Coming from overseas it's a bit different from being here...overseas private schools and even public schools, they're very strict...students are very polite...it's a different environment...". Amber agreed:

*"Yeah, the way of study, the way of life...teachers are different...the system...everything"*. The school's careers advisor, Sharon, also referred to the level of disadvantage at Glencross. Sharon had only been in the role for less than a year and openly discussed feeling overwhelmed with the gravity of her position: *"I picked up the role last year. There was nothing here [prior]...I'm one person, there are lots and lots of needs...this environment is very different...this is my reality..."*. In total, 60 Year 11 students from Glencross completed the Student Online Practices Survey, and five of these students, Amber, Zara, Aisha, Ghassan and Saabir, were interviewed along with Sharon, the school's careers advisor.

Of the five schools in this study, the ICT infrastructure at Glencross was the most inadequate, in terms of resourcing for both students and staff. This is not to suggest that the other schools were well resourced. Indeed, all five schools reported varied levels of frustration with ICT resourcing, with Coventry, the second school of a low SES, and the regionally based Bradford, both reporting a critical lack of digital infrastructure. Aisha shared a major digital resourcing issue at the school, *"...we don't have [any working] laptops..."*. Amber lamented how even the small number of school desktop computers lacked critical software, *"...there's no Windows on it [the classroom computers]"*. Zara [laughing] added, *"Yeah, she [Amber] wants to install Windows 7 on it [them]..."*. It is alarming that Zara and Amber were joking about installing an operating system which at the time was already seven years old, to bring the school computers *up to date*. Hence, software programs such as Microsoft Word and Excel, considered baseline software by the NSW DoE,<sup>36</sup> were not available to these students. This is of concern given research has repeatedly demonstrated that formal school-based IT training has consistently been shown to improve students' Microsoft Office skills, particularly word-processing skills (Microsoft Word) and spreadsheet skills (Microsoft Excel) (Mumtaz, 2001; van Braak & Kavadias, 2005). Given this, the operational capacity of these terminals at Glencross were reduced to merely offering access to the school's library catalogue. Lacking this equipment, the students at Glencross were missing out on valuable instruction and digital skills development. A basic understanding of these critical programs is necessary even for more simplistic functions including constructing a cover letter and resume, applying for

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<sup>36</sup> At the time of this study. Indeed, Microsoft Partners in Learning (PiL) have strong linkages with the NSW DoE, collating on projects and reports including on the Innovative Teaching and Learning (ITL) study (NSW DoE, 2011).

jobs and accessing government services. Lacking these crucial digital skills can potentially contribute to a worsening in offline social inequalities.

The teachers at Glencross also experienced considerable digital disadvantage. Careers advisor Sharon, for example, explained that both her computer monitor and printer were broken. They had been out of action *“for months”*, even though she had reported the issue to the local IT maintenance team on multiple occasions. Annie, the former NSW DoE IT Director, was *“not surprised”* to hear about Glencross’s digital circumstances, as in her former role she had worked with schools whose digital software *“...could be [up to] eight versions older than what [the department] can run on...”*. Annie added that the DoE *“...can’t keep backward mapping [new software] ...to the very old stuff”*, such as what was still in service at Glencross. Annie agreed, therefore, that the students at Glencross were missing critical digital skill development, and she expressed concern that the lack of adequate ICTs across Glencross could limit teachers’ ability to access educational resources issued exclusively online by the DoE. Compounding the dire state of the ICT infrastructure at Glencross was the puzzling admission by the student interviewees that they had not been issued with the government-funded DER laptops in Year 9.<sup>37</sup> This, no doubt, made the transition from the DER programs to the BYOD initiative more problematic for both students and teachers.<sup>38</sup> Lacking these DER laptops, the device of choice for Glencross students, under the BYOD, was their smartphones. Smartphones were the only digital device these students at Glencross reported bringing to school each day. Only Glencross and Coventry, the second school of a low SES, permitted smartphones in the classroom as the student devices of choice under the state government’s BYOD initiative.

Glencross was also the only high school that had no online educational platform other than the basic DoE supplied school website. All four of the other schools utilised an interactive Moodle course management system (CMS) where students could access online learning

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<sup>37</sup> This finding is contrary to official NSW DoE policy that all students be issued with DER laptops in NSW schools. It may be simply that these students *no longer* had these devices, rather than not being issued with them.

<sup>38</sup> As outlined in Chapter 1, data collection was conducted during the first full year of the implementation of the NSW DoE BYOD policy.

resources anywhere, as well as remotely connect with fellow students and teaching staff. At the time of the interviews, an online student learning centre was still under consideration at Glencross. Sharon, the school's careers advisor, commented:

*...I know Sally (the deputy principal) has been working on different platforms, but I don't know at the moment where we're going because there's a number of things that we're trying...*

School-based interactive learning platforms such as Moodle teach students critical digital skills that are highly applicable to post-secondary tertiary education. For example, Moodle is the platform of choice for TAFE NSW and two Sydney-based universities. Instructing and exposing students to this and other similar online platforms not only helps with digital skill development but also builds familiarity with these online programs. Such familiarity and skill development could potentially help to remove an additional barrier these young people at Glencross may encounter if they enter tertiary study. Insignificant digital infrastructure such as this only exacerbated the disadvantage experienced by the students at Glencross. To their credit, they had tried to adapt to these challenges, but the lack of working digital infrastructure and IT training at Glencross had no doubt left them years behind students at better-resourced schools.

## Coventry High School's Digital Infrastructure

*...we're striving to become a 21<sup>st</sup> century school.*

Zoe, Coventry High School Student

Coventry was the second of the two low-SES high schools in this study. At Coventry, 34 Year 11 students completed the Student Online Practices Survey, with four of these, Hamilton, Lucas, Sophie and Zoe, interviewed along with the school's careers advisor, Estelle. All four students interviewed at Coventry could also be classified as Traditional Job Seekers; in fact, their digital capital and career aspirations were remarkably similar to the students at Glencross. The similarities evident amongst the students extended to the ICT infrastructure at each of the two schools, with the students at Coventry reporting many of the same issues as those discussed at Glencross. Anecdotally, Coventry had the worst reputation of all the schools. As Zoe pointed out,

*...when I came here at first, the community of Coventry had a bit of a bad reputation, but that went out the window. It didn't exist, I didn't understand where the whole bad reputation thing fit, because it wasn't bad...*

Yet, as outlined by Zoe in the opening quote above, there nevertheless remained significant room for improvement. For instance, when conducting the student interviews in Coventry's library, only four of the 12 available desktop computers could load their home page, with two of these terminals running slow and the other two crashing.

The lack of reliable devices at the school was not limited to the library. As Hamilton explained, students were forced to access the internet at home:

*I have a lot of free periods and I'll just go home myself and have a look at things on my computer. These ones [at school] are old and slow, so I just go home and use my own laptop or whatever, it's a lot easier...*



The precarity of the digital hardware at Coventry resulted in a situation very similar to Glencross where attempts to introduce digital devices into the classroom produced mixed results. As Hamilton added, while some of the classrooms had digital smartboards, others “...still have blackboards...”. Hamilton went on to discuss how the lack of ICTs in the classroom was also a result of the cancellation of the DER’s Laptop for Every Child Policy in favour of BYOD, a year prior. “So, the year above us like my sister, they have laptops, but they kinda cut it off so like none of us get laptops anymore...”.<sup>39</sup> Consequently, the students at Coventry were at a distinct digital disadvantage and, like the students at Glencross, had only basic online digital skills. In addition, as with the students at Glencross, the students at Coventry had become dependent on their smartphones in the classroom. Lucas, for example, remarked that, “...I only bring my phone to school”, and this was the case with all the students at Coventry. Indeed, at both Glencross and Coventry, the smartphone had become a proxy laptop. The implications of this switch from desktop PCs and laptops to smartphones and their subsequent acceptance into the classroom is discussed further below. Overall, the students at Coventry experienced similar levels of school-based digital disadvantage to those at Glencross. The similarities in the school-based ICT infrastructure present at these two schools of a low SES was a further justification for these students being classified as Traditional Job Seekers.

### **The Traditional Job Seekers: The First OISPs Group**

*...[I’d] like a job where I’m not just part-time...something I can see myself doing for ages and it’s set [the hours]...like five days a week...something stable...*

Lucas, Traditional Job Seeker, Coventry High School

The Traditional Job Seekers were comprised entirely of students from Glencross and Coventry High Schools. Consisting of Hamilton, Lucas, Sophie and Zoe from Coventry, and Aisha, Amber, Ghassan, Saabir and Zara from Glencross, the Traditional Job Seekers were one of two OSIPs groups to consist entirely of students of a low SES. The digital skills of the

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<sup>39</sup> Like the students at Glencross, it is likely that the students at Coventry did receive a DER laptop. Hence, when Hamilton uses the plural pronoun “us” he is referring to the remainder of the student body who missed out on DER issued laptops.

Traditional Job Seekers were categorised using van Deursen and van Dijk's (2010) classifications as "operational skills", the most limited of all internet skills. The defining features of this skillset are the ability to choose an appropriate website to conduct an information search, to execute a basic search operation and to navigate through to a website listed in the search results successfully. However, those with *operational skills* cannot further refine their searches when initial results prove unsatisfactory, and so their online searches often prove unsuccessful. As a result, these students at Glencross and Coventry remained stuck on the second level digital divide, which is the divide based on skills. Possessing only operational digital skills meant these Traditional Jobs Seekers remained heavily dependent on personal networks for career information. These networks included parents, siblings, careers advisors and those already in their field of interest, the latter being contacts in and outside school. Therefore, as captured in Lucas's comments, the Traditional Job Seekers had a preference for careers that were stable and secure over more creative and aspirational career options. Thus, the Traditional Job Seekers aspired to conventional blue- and pink-collar roles, with any potential tertiary study focused on local or regionally based universities.

Amber, from Glencross, for example, acutely aware of the educational and ICT limitations of her home and school environments, had adjusted her career aspirations accordingly:

*I wanted to be a radio oncologist that was when I was in a private school in the Middle East...but when I came to this school [Glencross], I'm like that's shut up those dreams and just be a nurse or flight attendant...*

This move from more ambitious career goals was also discussed by Zoe, at Coventry, who shifted from "...fashion design...at NIDA"<sup>40</sup>, which "...faded for some weird reason..." to "business management". Aisha, from Glencross, offered a further example when she moved from "...psychology...because I really liked helping people". However, once she realised "how high [an ATAR] you needed to get...", she added that "I thought it wouldn't be bad teaching business". Amber, Aisha and Zoe illustrate a process commonly reported by low-SES young people as they adjust career aspirations based on the limitations of their capital resources

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<sup>40</sup> Based in Sydney, the National Institute of Dramatic Arts (NIDA) is Australia's leading performing arts school.

and their evolving perceptions of success of different options (Gore et al., 2017). This finding captures the “aspiration gap” that is considered a significant reason why university enrolments of students of a low SES across Australia remain below expectations (Bowden & Doughney, 2010, p. 121).

Despite adjusting their career aspirations, these Traditional Job Seekers still discussed tertiary ambitions. Even here, however, they remained cognizant of the limitations of their social and educational environments. Thus, the Traditional Job Seekers were the only OISP group that discussed alternate pathways into tertiary study. Lucas, for instance, said, *“I don’t want to have to do an alternate path, but if I don’t get the ATAR [I need], I’ll be willing to do like whatever the path”*. Aisha, from Glencross, also recognised that she might need to enter university through a pathway program: *“I’m going to have to choose a college pathway to go into uni, because I’m not going to get a 99 ATAR, especially in this school...”*. Even when Zara from Glencross was encouraging her friend Amber to pursue her dream of becoming a radio oncologist, alternative pathways were discussed: *“...you can do it...you can still do it, but it will just take more time...”*. These comments, while demonstrating incredible insights on behalf of the Traditional Job Seekers, also exposed their lack of knowledge of the numerous social inclusion scholarships available to them at many universities.

The boys at these schools primarily discussed gendered blue-collar occupations, with both Hamilton and Lucas, from Coventry, aspiring to be police officers. Ghassan, from Glencross, on the other hand, was interested in becoming a real estate agent and Saabir was focused on *“something”* in the general sciences. Of these four, only Hamilton had investigated the required pathways toward achieving his career ambitions. In general, these young men discussed exposure to only a limited number of viable career options when forming their career aspirations, as was particularly evident in the remarks of Hamilton and Lucas. Hamilton’s father was a retired police officer and had inspired Hamilton to follow in his footsteps. As a result, Hamilton had wanted to become a police officer since *“...as soon as I could decide what I wanted to do seriously, probably in Year 5 or 6...pretty young”*. Hamilton had, in turn, motivated his best mate, Lucas, to join the police force. As Lucas explained, *“...my mate [Hamilton] wanted to be a police officer, in like Year 5, and that kinda took me from [wanting to be] a firefighter to being a police officer”*. Accordingly, both Hamilton and

Lucas expressed tertiary aspirations, as a bachelor's degree is a prerequisite for direct entry into the NSW Police Force from high school. If successful in the pursuit of this goal, both Hamilton and Lucas would be the first in their family to attend university. This would also be the case for Amber, Aisha and Zoe. Overall, while all legitimate, the Traditional Job Seekers' career aspirations were also highly constrained and, as will be explored further below, based on exposure to very few career information sources, a situation made worse by their limited digital skills.

A further defining feature of the Traditional Job Seekers was their employment status. Except for Zoe and Aisha, all of the Traditional Job Seekers were in some form of employment. At Coventry, both Hamilton and Lucas worked part-time at a local fast-food establishment, while at Glencross, Ghassan worked at a gaming store and Saabir a large department store, with Amber *"...a barista in a café..."*. Each of these five students stated the same reason for wanting a job, *"money"*. This economic imperative is captured best by Lucas who commented, *"I really just wanted money, I knew I wanted to work...I was sick of being at home, when I could just be like getting money..."*. For Hamilton, it was about money and a desire for greater independence: *"I just wanted to start umm you know start paying for some things myself and kinda like be an individual you know"*. Estelle, the careers advisor from Coventry, encouraged young people at her school to find employment *"...a lot of them do have part-time jobs, which is fantastic...most of them just want to have their own money to do stuff with...it comes from the parents..."*. Saabir, from Glencross, pointed out how he *"...started applying [for jobs] as soon as I was 15"*. Schneider (2000) reports on a similar trend in her research on the financial contributions made by young people in low-income families in Australia suggesting that these parents encourage their children into the workforce earlier than in high-SES households. This economic imperative to work from an early age was also expressed by the low-SES Creative Dreamers at Bradford discussed in Chapter 5. This early entry into the workforce, even if only casually or part-time, no doubt took time away from the Traditional Job Seekers' educational pursuits and their digital skill development.

## The Traditional Job Seekers' Abundant Digital Supply

*At home, I have a laptop...yep-smart phone, iPhone, laptop...TV, PS4, that's about it...*

Lucas, Traditional Job Seeker, Coventry High School

Parents play the most significant role in shaping the context of young people's initial supply of and access and connection to ICTs and the internet (Hollingworth, Mansaray, Allen & Rose, 2011; Livingstone & Bober, 2004). An analysis of the literature on parental decisions concerning how and when to allow children to engage with ICTs and the internet shows that it is highly dependent on parents' SES (Livingstone & Bober, 2004). As Lucas's comment reveals, he owned a rather voluminous assortment of digital devices, and this was common among the Traditional Job Seekers. This finding reinforces Pugh's (2009) study of consumer culture amongst American parents and children and Livingstone and Sefton-Green's (2016) study of young people and technology in a secondary school in the United Kingdom. Pugh (2009, p. 10), for example, found that families of a low SES tended to invest in technological items in an act of "symbolic indulgence" while wealthier families more commonly practised "symbolic deprivation". Pugh discovered that many families of a low SES saw the ownership of technological devices as a worthy investment and would discuss and display these in overly ostentatious ways, such as with large flat-screen televisions and surround sound systems.

Hamilton, another student from Coventry, offered a glimpse into his own family's 'symbolic indulgence' when he referred to the number of digital devices in his home: *"...I have my own personal laptop, as well as my sister, we have a family PC and the iPads...we have all that... we've got smartphones...and a gaming device..."*. The way Hamilton discusses his own and his family's digital devices is similar to that discovered in Livingstone and Sefton-Green's study (2016) where they record how families of a low SES view the ownership of multiple ICT devices as a good thing because it can imply family financial success. The supply of digital devices is the first instrumental step in forming and developing young people's digital usage and skill development (van Deursen & van Dijk, 2016). Yet, this supply alone does not guarantee that these students will develop the beneficial educationally focused digital skills to acquire the required digital capital needed for successful participation in and after school.

However, the symbolic indulgence evident in these comments clearly signals this group has successfully bridged the first level of the digital divide.

Paradoxically, while these students discussed high rates of digital device ownership, they also reported the heaviest parental monitoring and restrictions. Parents of a low SES have long been shown to focus considerable energy on controlling the online content of their children (Schofield-Clark et al., 2005). These students discussed a variety of means that their parents used to try to control and regulate their screen time. Saabir's father, for example, resorted to threats: *"If I'm just stuck in my room on my phone, my dad [will]...tell me to get out or he'll take my phone and smash it..."*. Zoe's parents, on the other hand, had managed to install a sophisticated Net Nanny Software program on her and her brother's digital devices: *"...they've got a virus scanner set up on our computers...they block us from using certain things...they blocked Facebook...they block photo searches and stuff..."*. Amber, from Glencross, interpreted her mother's monitoring of her digital devices as a necessary part of her Islamic faith,

*...because of like our religions [sic]. So, they have to see who I'm talking to and what I'm talking about... she goes through my newsfeeds, messages, she clicks on them and replies...oh my God, I don't how she reads them all...*

In fact, every one of these students spoke of either parental concerns over how digital devices should be used, such as Sophie's parents who *"think technology is good to use for school and that's it"*, or types of usage, such as Lucas's father who *"just doesn't like games..."*. No other group of students in the study disclosed similar parental attempts to control digital usage, providing a further point of difference between these students as Traditional Job Seekers and those in the other OISP groups. The contradictory stance of the Traditional Job Seekers' parents, i.e. supplying their children with multiple entertainment-focused devices while also attempting to heavily regulate their screen time, is an important point as parental behaviour and attitudes regarding the benefits and limitations of ICTs and the internet not only affect supply of devices but also influence digital usage patterns.

## The Traditional Job Seekers' Digital Usage

*...if I'm on the computer...I'm playing games or reading or on YouTube...I've got my X-Box...I've got my [smart] phone...I've got it right here...*

Saabir, Traditional Job Seeker, Glencross High School

Perhaps one of the starkest findings across SES categories and OISPs groups was regarding student digital usage. Digital usage is a key element of the second level digital divide because it includes practices that can lead to the development of embodied digital capital and thus the ability of young people to successfully access and locate information online. In the Student Online Practices Survey far fewer students of a low SES reported using the internet daily (73%), compared to those of a high SES (86%) at the other schools. However, a significant minority of the 73% of students of a low SES who did report daily internet usage discussed total screen time bordering on excessive. In fact, 45% of the students of a low SES, at Coventry and Glencross, reported daily usage on a weekday (Monday to Friday) of more than five hours. This figure increased to 65% of respondents on the weekend. The corresponding totals amongst the students of a high SES at the other schools were just 14% during the week and 30% on the weekend. Unrestricted access focused on non-academic online activities, as discussed by the Traditional Job Seekers (exceeding three hours per day), has consistently been shown to harm academic performance (Mesch & Talmud, 2011; OECD, 2015a). However, determining the students' digital usage does not merely involve calculating their total screen time but rather, as outlined in Saabir's opening comments, also involves students' choice of device and the focus of their digital activities.

Regarding the choice of digital device, the Traditional Job Seekers listed the smartphone as their most common access point to the internet, and reported higher daily usage of tablets, gaming devices and television, compared to the high-SES students at the other schools. The mixture of the convenience and functionality of the smartphone, combined with its relatively cheap cost, saw it listed not only as the most used device amongst the Traditional Job Seekers but also as their device of choice under the BYOD. The smartphone was only accepted as a BYOD device at Glencross and Coventry, likely a result of these schools'

acknowledgement of the constrained capacity of families to afford higher functioning devices such as laptops.<sup>41</sup>

A further consequence of smartphone usage versus the school laptop in the classroom is that the mode of connection has shifted from the educationally focused and regulated school Wi-Fi network to each student's own network provider. Amber and Zara from Glencross, for instance, never logged onto the school Wi-Fi network. Thus, apart from their own monthly data limits, and parental controls, there were no site or browsing regulations in place. Perhaps unsurprisingly, then, several of the Traditional Job Seekers discussed the common practice labelled 'cyberslacking'. *Cyberslacking* is the act of using the internet in the classroom for non-academic purposes (Gerow, Galluch, & Thatcher, 2010). For example, at Glencross, the students struggled to keep their digital usage educationally focused. As Saabir outlined, "...we use them in class...if the teacher lets us...after we do the [school] work...look at your phone for a bit...put it back when the teacher's looking...". This was a practice shared by Amber, also at Glencross:

*...they gave us this thing called BYOD, that's like if they ask us to bring it [the smartphone] out and like search on the internet or something, we can get it out... [however sometimes] we're not allowed to...but...under the table...*

While cyberslacking has raised several concerns (Ragan, Jennings, Massey & Doolittle, 2014; Sana et al, 2013), little can be done to curb this practice if smartphones continue to be permissible in classrooms. In fact, research has shown that even just the presence of a smartphone can negatively influence trust and conversation in a face-to-face environment (Przybylski & Weinstein, 2013). Research has also shown that young people responding to distractions such as incoming push notifications, texts and calls on their smartphones can take up to 20 minutes to return to their prior state of concentration (Gonzalez & Mark, 2004). Overall, distracted students also take longer to learn new material and report feeling more stressed (Bowman, Levine, Waite & Gendron, 2010). The acceptance of smartphones as a BYOD device at Glencross and Coventry put the Traditional Job Seekers at an educational and

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<sup>41</sup> In recent years, many smartphones have become more expensive than entry-level laptops, yet due to affordable monthly plans, the overall *perceived cost* of smartphones can seem less than laptops (Kastrenakes, 2019).



digital disadvantage when compared to the high-SES Future Professionals and Social Networkers at Peckham or Pineridge discussed in the next chapter.

The dominance of smartphone usage over laptops and computers amongst these students at Glencross and Coventry confirms Pearce and Rice's (2013) finding that not only is there a digital usage divide but also a *device divide* between students of varying SES. This is an important point as young people can engage in greater *activity breadth* when using a laptop or PC computer compared to a smartphone. Due to certain attributes, such as their smaller screen size, reduced menus, limited input abilities, and non-mobile formatted pages, smartphones represent a form of second-class digital access (Crawford, 2011; Dunaway, Searles, Sui & Paul, 2018; Pearce & Rice, 2013). Of course, smartphone-focused usage also affects the young person's digital skills development, particularly regarding critically important software skills such as those developed using the Microsoft Office programs Word, Excel and Outlook.

A further distinguishing feature of the digital usage of these young people was the focus of their online usage. The Traditional Job Seekers and the low-SES students from the survey reported a preference for social media, gaming and television over educational pursuits when online. Aisha, from Glencross, for example, preferred social media, as was the case with most of the other Traditional Job Seekers: "*Anything...umm Instagram, Facebook, umm Snapchat, Tumblr...*". Hamilton, from Coventry, expressed a similar preference: "*...Facebook, Skype, Snap Chat and all that...YouTube...a lot of YouTube...*". For Saabir, the focus was on "*...fan fiction, oh yeah...it's basically people just posting pictures and crap and funny stuff*". Studies have shown that young people of a low SES, such as these Traditional Job Seekers, tend to use home digital devices predominantly for entertainment, rather than educational purposes (Vigdor et al., 2014), which has consequences for both their learning outcomes and in the embodiment of beneficial digital skills such as OISPs. Further, low-SES young people are more likely to juggle homework and entertainment simultaneously, thus multitasking their digital activities, which suggests they are less focused on their learning, as discussed above by Gerow et al., (2010).

Also, reflecting previous research (Bonfadelli, 2002; van Dijk, 2013), the young people of a low SES in this study expressed a strong preference for gaming device usage. Certainly, the Traditional Job Seekers, who were interviewed, discussed the highest rates of gaming device ownership compared to the three other OISPs groups. The survey results also exposed a significant difference in the daily usage of these gaming devices between students at Coventry (44%) and Glencross (53%), compared with Peckham (14%), Pineridge (10%) and Bradford (17%). This preference was also evident in the interview data where, amongst the Traditional Job Seekers, Lucas, at Coventry, had a “PS4”, with Hamilton reporting “...a gaming device at home”.

Despite the popularity of gaming over the past three decades, studies addressing its advocacy in classrooms, particularly in terms of long-term comparative outcomes, remain limited (Beavis, 2017). The research to date has primarily focused on individual classrooms, rather than broader school-wide investigations, with the successful utilisation of gaming observed in these classrooms seen as highly dependent on teacher digital engagement (Beavis, 2017). While research has demonstrated possible educational benefits of certain types of gaming (Beavis, 2017; 2018), the significant screen time disclosed by the Traditional Jobs Seekers and discussed amongst their classmates in the Student Online Practices Survey has been shown to decrease overall academic performance (Harris et al., 2017; Koivusilta, Lintonen & Rimpelä, 2007). Due to their preference for social media, gaming and entertainment usage over educational pursuits, when the Traditional Job Seekers did a search online for information, their searches were often undirected, frustrating and frequently unsuccessful.

## The Traditional Job Seekers' Digital Skills

*I'm sure the information will be out there...but I just won't be able to find it...*

Lucas, Traditional Job Seeker, Coventry High School

Online information seeking is a critical digital skill for young people, not only for their educational outcomes but also when sourcing information regarding post-high school career and study options. Overall, the Traditional Job Seekers at Coventry and Glencross reported poor digital skills and a lack of understanding of their online information needs, as captured in Lucas's comments above, and thus they found it difficult to develop effective online search strategies. The Traditional Job Seekers' OISPs were so rudimentary that they largely consisted of them simply Googling every online inquiry. In fact, the practice of Googling it was reported by all the students no matter what their SES. Indeed, so universal was the Google response when referring to searching for information online, the word 'Google' had become synonymous with information for all these participants. This Google dependence and basic search techniques were best captured in discussions with Hamilton and Zoe, from Coventry. Zoe, for example, always started on Google: *"...if it's an assignment...that requires me to look further in-depth into a certain aspect of something I'll go into Google and I'll just type in..."*. Hamilton shared this search method: *"...you Google it in [the question] and get a couple of sources...say you get Wikipedia, you might get...a couple of [other] sites...I'd just find the answer through that..."*. Hamilton highlighted a second practice common amongst the low-SES students in this study, using Wikipedia as a primary source of information, even though he acknowledged that *"...you know it's not too good because it can be changed and stuff like that, like it can be edited and give false information..."*. Even though Hamilton was aware of the dangers of relying on Wikipedia and Google, he did not know of any alternative search methods.

For Saabir, Aisha and Amber at Glencross, basic Google searches were also their only means of finding information online. As Saabir explained: *"I guess I would type it in...I'd type the question...on Google and make my way from there"*. Similarly, Aisha's online searches always started with Google:

*Yeah, I go to Google, I'll search in the question, see if I can find anything relating to that question and then put it in my own words, and then answer it like that.*

Amber expressed the frustration she felt from her lack of success when relying exclusively on this Google search method: *"...like sometimes...you're putting the question in and you just don't get the answer for it. It just burns my life"*. The frustration experienced by these young people when discussing their online searches was palpable. While they all seemed aware that the information they required existed online, they lacked the digital skills to be able to locate it. In this way, the Traditional Job Seekers' actions reflect that of the first-year American college students in Olsen and Diekema's (2012) study who remained Google-dependent and fearful of using Wikipedia, though their lack of digital skills meant they continued to use it anyway. By searching online in such a narrow manner, the Traditional Job Seekers were missing out on numerous sources of information. As a result, the Traditional Job Seekers disclosed the highest levels of frustration when searching online.

This frustration was multifaceted. For example, the frustration experienced by Lucas from Coventry stemmed from his general mistrust of online processes: *"...yeah like online I get frustrated a lot, just cause like so many things can go wrong..."*. Zoe and Saabir, on the other hand, expressed the more common frustration that stemmed from their inability to locate the information they required. As Zoe from Coventry commented:

*...it's hard to try and navigate and find certain things... if you're looking for a specific thing it's kinda hard to navigate...for someone my age at least...it's hard to navigate around how to find that information, analyse that information and turn it into a useful response...*

Saabir, from Glencross, agreed:

*...you know when you type [in] a question but there's a whole bunch of websites that put up [sic] and they don't really have it, yeah like finding out which website's actually got the information...*

In fact, Zoe joked that she got *"...so frustrated with it...I was about ready to chuck me computer out the window..."*. For Amber and Zara from Glencross, the frustration they experienced from their lack of digital skills meant that after spending a substantial amount of time trying to locate information online, when they found what they were looking for, they were tempted to plagiarise it. Zara explained: *"Sometimes it's hard to find information that you want...yeah but it's very hard to not copy the whole thing"*. The struggle to locate information and not to simply duplicate it could be due to a lack of confidence amongst the Traditional Job Seekers in being able to locate further sources and in their ability to successfully integrate source material without plagiarising. Shenton (2007) observed similar online search practices amongst secondary students in the United Kingdom. These students discussed an identical cycle of simplistic search procedures that nearly always commenced by accessing an aggregate search engine (usually Google), entering an obvious keyword or essay question, selecting the first link listed (usually Wikipedia), then accepting the material with minimal editing before copying and pasting the content directly into a word file for submission.

A further point of frustration experienced by the Traditional Job Seekers when searching for information online was how to gauge the reliability and accuracy of the information found. The ability to appraise the trustworthiness of websites and the information sourced online successfully is not only a critical digital skill but also a key tenet of OISPs. Traditional Job Seekers, such as Sophie from Coventry, struggled with identifying which sites to trust, *"Like all different websites have different answers, to the same thing and it's hard to pick what one to use"*. Sophie's inability to quickly establish the trustworthiness of information found online no doubt affected her overall productivity and the likelihood that she would continue to use online sources in the future. Trust was also an issue for the Traditional Job Seekers from Glencross. Zara, for instance, spoke about her struggles with *"...trying to find specific information, reliable information..."*. When pressed as to how she gauged if a website was trustworthy, she replied, *"...you have to see where it comes from...there's a lot of stuff you have to look for in a website to see if it's reliable or not"*. Zara, however, was unable to articulate what specifically she would look for and any processes she used online to establish the validity of the information she found. Lucas, from Coventry, expressed a general mistrust of all information found online:

*...online the information is kinda like dodgy... when I do assignments I just prefer to have my information like there [in books] like I don't want to search over and over to get something that could or couldn't be right...*

Lucas's mistrust of information located online was shared by his Coventry classmate Zoe, who believed that *"...the internet doesn't have all the information most of the time, and that information is either correct or mostly incorrect..."*. Unsurprisingly, Zoe, like Lucas, preferred to go straight to books when looking for information: *"I'll either go to a book...find a book and I'll go through it that way"*. While Lucas did start his information searches online, due to his limited digital skills and general mistrust of information online, he believed *"textbooks...have the most information in them, they're definitely the best"*. While some of these attitudes of mistrusting online sources and that *books are best* were no doubt coming from parents and educators, due to their limited digital capital, the Traditional Job Seekers lacked the required OISPs to circumvent this mindset. The frustrations expressed by the Traditional Job Seekers in their inability to distinguish between factual and false information online helps to explain the reluctance expressed by a number of these students to use the internet not only for educational purposes but also for career information seeking.

Despite their limited digital skills, the six Traditional Job Seekers who expressed interest in attending university had all previously accessed university websites. However, these websites have a long way to go before they can be considered user-friendly. All six of the Traditional Job Seekers who had visited university websites expressed varied degrees of difficulty when trying to locate course information. For example, Lucas was initially confident he would find the information he required online but found it was *"...harder than what I thought it would be to find what the basics are or what you do afterwards or what's included in the course..."*. Coventry classmate, Zoe, also found it harder than she originally thought: *"...For me at least they're a little bit confusing to kinda navigate, because I'm not used to it..."*. Hamilton found it easier to search university websites by conducting external Google searches rather than using the university's own website navigation bar. Aisha, from Glencross, struggled to locate specific course information:

*...it was a bit difficult, especially with finding law, to find out because there's so many different types, and you don't know what to do so, especially at my age, I'm not really understanding of what types of law and stuff like that...*

Due to their inability to locate study and career information on these websites, several of the Traditional Job Seekers discussed using offline methods of obtaining career information, specifically, through printed university materials and *The Jobs Guide*.<sup>42</sup> As Amber stated, *The Jobs Guide* and university brochures can also act as an initial *call to action* and help direct less digitally capable young people online:

*...when we went to that careers thing, they gave us these booklets and they gave us names of places to go [online]...they had the [online] maps to tell us...where there's universities and that stuff...so that really helped a lot...*

Estelle, the careers advisor at Coventry, reinforced this link between hardcopy books and university guides and online searches: “...*the children love their books...*”. Colin, the marketing director at Novus University, also acknowledged this preference amongst potential students:

*...they like it in a book because it is instantly accessible, it is able to be taken home and shown to mum, and discussed with mum, and they can get the bits of information they want quickly...*

Nevertheless, universities continue to make vast amounts of information available *only* online and schools no longer cater for such preferences for hardcopy information. As Estelle remarked, “[Coventry] used to provide a copy of *The Jobs Guide* to every child in Year 10 up until about two years ago”. The decision to halt this practice seems to have been driven more by cost than by a preference by young people, such as the Traditional Job Seekers, to access

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<sup>42</sup> *The Jobs Guide* was an annual publication aimed at senior year students (Years 11 and 12), which catalogued career options and their relevant TAFE and university pathways at higher education providers across Australia. Due to the termination of government funding, the final hardcopy of *The Jobs Guide* was published for purchase in 2015, with the associated website permanently taken offline in 2016 (Career Industry Council of Australia [CICA], 2016). All inquiries related to *The Jobs Guide* are now redirected to *The Good Universities Guide*, a government-contracted provider predominately focused on tertiary education options (CICA, 2016).

online material. As Colin from Novus University added, “...I would love to lose the \$100,000 a year it costs me to print those bloody things [information booklets] ...” and move everything online. This left careers advisors, such as Estelle, to lament “...you hope that the student can work their way through it [online resources]. Um, [but] some of them can’t you know...”. Given this, it is clear that the Traditional Job Seekers were a group of students who fitted this description.

Therefore, while higher education providers continue to place vast amounts of information online for students to access, if students do not possess the digital skills required to search for this information, it remains invisible thus limiting their tertiary options and outcomes, particularly amongst low-SES students such as the Traditional Job Seekers. As will become clearer in the forthcoming chapters when comparing the digital skills of the Traditional Job Seekers with the Future Professionals and Social Networkers, digital skills such as OISPs are highly class specific. The Traditional Job Seekers’ lack of trust online was no doubt a result of their poor digital skills, which resulted in them being both ineffective and unenthusiastic in their online career information searches. Hence, this explains their ongoing reliance on personal networks for all their career information needs.

## **The Traditional Job Seekers’ Career Information: A Preference for Personal Networks**

### **Sources of Career Information: Careers Advisors**

While many of the Traditional Job Seekers expressed tertiary ambitions, at this stage of their lives they had little agency to realise these aspirations independently. As a result, they were reliant on the decisions and guidance of the adults around them, particularly their careers advisors and parents. The perceptions and information supplied by the careers advisors, in particular, were critical to the Traditional Job Seekers, as they may have been the only people these young people encountered with experience in successfully navigating pathways into higher education. Therefore, the school careers advisors at Glencross and Coventry had a significant role to play. The role of the careers advisors in these two schools was to balance the student aspirations with their own perceptions of success. Hence, they played the roles of both facilitator and obstructor of the Traditional Job Seekers’ plans. Indeed, as we shall



see, the varied expectations of the different careers advisors across the five schools were stark.

For most students, including the Traditional Job Seekers at Glencross and Coventry, the earliest experience with their careers advisor was in Year 10 when selecting their senior year subjects. Of interest here is the availability of courses via correspondence. A fundamental aspect of both the DER and BYOD government digital initiatives was the promotion of easy access to *blended* and correspondence courses offered exclusively online. These online courses, designed to overcome gaps in course offerings at individual schools, were made available and encouraged by the careers advisors at both Peckham and Pineridge High Schools. However, this was not the case at Coventry and Glencross, nor at Bradford, the regional school. As Zara from Glencross explained, taking subjects offered exclusively online through correspondence was highly discouraged by Sharon, her careers advisor:

*...I wanted to do physics, but they don't offer it here...and I spoke to my careers advisor, she said 'don't worry about it, just stick to something else, science other than physics', but I'm like I really want to do this subject. I'm good at it...but she goes to me 'just do biology'. I'm like...I'm not good at biology, why do you want me to do this subject?... [she replied] 'it's corresponding...it's too hard for you's [sic]' ...and I'm like coming from overseas, it's probably easy for us... we've already studied physics in [the Middle East]...and we wanted to continue with it...especially with me surveying it would be very good for me to do physics instead of biology because biology's got nothing to do with surveying...*

Amber added that both her and Zara studied Arabic through correspondence, but “*when we asked for physics she was like 'don't worry about it'...*”. It is impossible to know exactly why Sharon discouraged this subject, although the lack of reliable digital infrastructure at Glencross was likely a factor. Significantly, though, the desire of Zara and Amber to take more challenging courses refutes Marks’ (2013) notion of Effectively Maintained Inequality (EMI) wherein educational inequalities are “maintained” by low-SES students taking less-advantageous subjects, negatively influencing their post-school destinations. What limited these students was not *their* educational goals but rather the structural obstacles impeding

access to these programs. This highlights, once again, the detrimental effects of Glencross's dire ICT resourcing and the profound and consequential role teachers can play in gatekeeping student access.

A further point of contact the Traditional Job Seekers had with their careers advisor was regarding work experience. Overall, the Traditional Job Seekers were exposed to minimal variety in their work experience opportunities. The work experience that was organised at both Glencross and Coventry seemed primarily focused on preparing the Traditional Job Seekers for part-time roles in retail and hospitality rather than professional careers requiring a degree. For example, Sharon, at Glencross, *"...insisted on them [students] doing work experience..."*. This work experience was largely conducted at *"...Woolworths, Coles and Target..."*. These were the types of jobs these students were doing part-time anyway, and so this work experience did not expose them to alternative career options. A similar situation was found at Coventry where Estelle discussed the companies she focused her work experience on, including *"...McDonalds and then next week they are going to visit a real estate [agent], and the council and then also with the music ones, they took them over to TAFE..."*. Yet, Estelle later acknowledged that the work placements had not resulted in any real changes in student employment outcomes: *"...in a way I am a bit disappointed that they haven't been able to offer real [employment] opportunity"*. Overall, both of these careers advisors seem to focus very little attention on tertiary aspirational students, even though the majority of the Traditional Job Seekers expressed interest in university.

Sharon, however, disclosed that she actively discouraged students at Glencross from applying for direct entry to university:

*[It] wasn't time for them to try to enter university and fail and walk away but go through an alternative pathway [such as] TAFE...with the intention of [if] they like what they're doing, to progress into some kind of, you know university course...*

She added, *"...not that they didn't have the cognitive ability...and some of them umm, their marks weren't bad, they would've made it, they would've scraped in..."*. Yet, Sharon believed

that by discouraging these students from entering university, she was “...*setting them up for success not failure...*” and in her eyes that meant something other than university:

*...when you enter those doors at any university...you've gotta be independent, you've gotta be able to research, you've gotta be able to put the long hours in and to have the right tools, and they just, they just didn't have it...*

Sharon's negative perception of her students' likelihood of success at university led her to believe that her actions were justified based on the premise that she was protecting them.

When Sharon was asked what her career expectations were for the students once they graduated from Glencross, she replied, “*trades, trades, trades...*”. Thus, the Traditional Job Seekers at Glencross recognised that the focus of Sharon's position was not to help students like them transition into university but rather to find apprenticeships, training programs and jobs for their classmates exiting school early. As Aisha astutely identified, “*...I'll be honest...my careers teacher...she's more focused on people who want to drop out. I think that's better because then they know what to do, and where to go...*”. Sharon's actions here are clearly indicative of the role education plays in social reproduction (Bourdieu & Passeron, 1990). Combined with the students' lack of digital capital and precarious socio-economic position, this left them with few avenues through which to source information. Yet, none of the interviewees from Glencross expressed a desire to drop out. In fact, Saabir, Aisha and Amber all expressed interest in attending university and Ghassan was interested in TAFE. Further, none of the Traditional Job Seekers at either Glencross or Coventry were aware of the incentivised social inclusion programs available to them at even the most elite universities including Veteris University.<sup>43</sup>

George, the marketing director from Veteris University, discussed aspects of the social inclusion programs available to students from low-SES schools, including Glencross and Coventry:

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<sup>43</sup> Programs such as these at Veteris University were instigated in response to the Bradley Review's (2008) goal of having low-SES students represent 20% of all university enrolments by 2020.

*...we [Veteris University] have got various programs, for example, the F24<sup>44</sup> program, which we created only for students of a low SES...if you are not in one of those schools...you can also apply [as an individual] ...and that goes on the parents' income...*

George went on to discuss the benefits of this program, which included a reduced ATAR entry score, for example, *"The ATAR for law, you need 99.5, but for this one [under the F24 program] I think it's 89 to 90..."*. Students in this program also receive *"...\$5000 in [their] first year...a special welcome [orientation program] ...and [an introduction] to student support services..."*. Social inclusion programs such as F24 could reduce the pressure on tertiary aspirational Traditional Job Seekers like Zoe, who was aiming for a school record ATAR of 95.5, *"...the only person who's ever come close [to] getting that was one of the girls I used to know...and she got a 92..."*. Through the F24 program, Zoe would need to achieve just 85–86, however, she was completely unaware of this option. None of the Traditional Job Seekers were aware of either their school's status as low SES or of the financial assistance available to them due to this classification. As all of them, except for Saabir and Zara, would be the first in their family to attend university, social inclusion programs such as F24 could help reduce the stress and uncertainty the Traditional Job Seekers reported feeling about their future study options, but they were unable to locate this information from sources either on or offline.

Neither Sharon nor Estelle discussed these programs with their students, as Sharon acknowledged, *"...no, it's not something I talk to them about in Year 10; it's something that starts happening in Year 11 and 12..."*. Yet, none of the Year 11 students interviewed at Glencross were aware that such a scheme existed. The communication of programs such as the F24 program to tertiary aspirational students at Glencross and Coventry becomes even more important given that Novus University, long the first choice for students such as the Traditional Job Seekers, was quietly beginning to court students with higher ATARs. Colin from Novus University pointed out that while the university had a long history of enrolling low-SES students, it nevertheless *"...costs us a lot of money to support low-ATAR kids through the process and keep the attrition rate down. To get these kids through academically...it is*

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<sup>44</sup> A pseudonym.

very time consuming". Thus, Novus University had decided to target "high-ATAR kids" instead as they,

*...cost less to support and you don't have to build academic programs around them, [or] support programs around them. They are more likely to do an Honours year...they are more likely to do a postgraduate course with you...*

Further, "...you don't keep good academics who just teach marginal kids. Good academics want to work with bright kids". Ultimately, the decision to pursue this was purely "economic". Yet, it appeared that Novus University was still targeting low-SES students in much of their advertising. This is yet another layer of institutional obstruction faced by the Traditional Job Seekers as they aimed to transition into higher education. The fact that so many of the Traditional Job Seekers were still aspiring to university study served as a testament to their resolve and determination. Overall, their lack of digital skills resulted in them remaining reliant on their personal networks, such as their careers advisors, their parents, siblings and other people associated with their fields of interest, for career information.

### **Sources of Career Information: Parents**

None of the parents of the Traditional Job Seekers were tertiary educated and all were either unemployed or working in non-tertiary qualified roles in traditional blue- and pink-collar fields. As Adam, the marketing director at Novus University, stated: "...for those [low-SES] students who are having conversations about university at home around the dinner table, they're talking to parents who haven't been to university...". Of the Traditional Job Seekers at Coventry, Hamilton lived with his father who was "an ex-police officer".<sup>45</sup> Zoe's father worked for "a company called Fleet Partners, they do...it's kinda like a lease on trucks", and her mother "...doesn't work". Sophie's father was "a forklift driver for Linfox and my mum doesn't have a job at the moment". These parents' occupations were similar to those of the students at Glencross. Aisha's and Zara's mothers did not work, while Amber's mother was a barista

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<sup>45</sup> When Hamilton's father enlisted in the NSW Police Force, a tertiary qualification was not an entry requirement.

and Ghassan's mother "*started off as a nurse and now she's an ambulance driver*". Regarding parental education, Saabir's situation was representative of the group as a whole:

*... [my] mum finished high school but didn't go to uni or TAFE...my dad...he dropped out. Like I think...he finished primary school, but then after that he just started working...*

Higher education was unfamiliar to both the Traditional Job Seekers and their parents. This suggests that navigating pathways into tertiary study and graduating would be substantially more difficult for these students, given the structural and institutional constraints they face (Bourdieu & Passeron, 1990).

The lack of knowledge of higher education led to some of these parents disengaging from discussions with their university aspirational children altogether. As Estelle, Coventry's careers advisor, conceded, "*...well I suppose they care for their children and hope for the best sort of thing but...they certainly don't [always] show it...*". Sharon, at Glencross, reported a similar situation:

*...we don't have [careers] information nights, I believe they used to in the past, they stopped that in the last umm three years or so because there was a lack of parental commitment...*

Amber, at Glencross, offered a student perspective on the lack of parental advice in the following exchange. When asked what guidance her mother gives her regarding her future career and educational options, Amber replied, "*No, no, my mum's not that kind of person...*".<sup>46</sup> When asked what her mother thought her chances of getting into university were, Amber stated frankly, "*I dunno...they don't care do they?*". Even so, despite this lack of interest, the parents of the Traditional Job Seekers had very high expectations of what their children *should* achieve after school, particularly if the parents were of a LBOTE.

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<sup>46</sup> Amber lived with her mother as her father was based permanently in the Middle East.

The Traditional Job Seekers interviewed at Glencross were all from a LBOTE and all their parents had high expectations for their futures, such as Saabir, “...my mum thinks it would be better if I was a doctor or something...”, and Aisha, “...my dad wants me to do teacher [sic]...and my mum is really encouraging for psychology...”. Sharon, the careers advisor from Glencross, believed these high expectations were due to the parents being “... still very limited in their understanding of the Australian fabric of the community...and many parents...are illiterate, so that causes a challenge in itself...”. Sharon clarified that when she referred to the “*fabric of the community*”, she was talking about both the limitations their children face at Glencross and in the Australian educational system more broadly. She explained:

*... [despite] high expectations by the families...the reality is that [university entry is] not possible for many of them. They [the students] know what their limitations are, but they don't know how to express that to their parents...*

These contrasting demands can leave young people feeling pulled in opposing directions and create internal conflict generally not experienced by young people of a high SES.

Parental pressure also played a role in another unique aspect of the career and educational ambitions of the Traditional Job Seekers: *habitus tug*. *Habitus tug* refers to the conflict between the young person's internal drives for things such as university and moving away from home and the demands of their family and local community (Ingram, 2011). While several of the Traditional Job Seekers stated their desire to escape the economic hardship they grew up with, they simultaneously felt a strong sense of responsibility to their families and communities. *Habitus tug* can be seen in the strongly stated desire amongst the Traditional Job Seekers to remain local after graduating from school and thus remain close to family. Zoe, from Coventry, expressed this the strongest:

*I'm just trying to find a way so I'm close to home, so I can come back and see my parents because...I feel like I kinda need to go back home over the weekends or something, just to make sure they're ok...I've always been close to them...*

Lucas and Amber also referred to the importance of maintaining close links with their family as a priority when considering which university they may attend. Lucas, for example, stated, *"I'd probably go to...the closest ones [campuses] around here..."*. Amber agreed: *"I was seeing which ones [universities] are the closest"*. Even students such as Hamilton, who conceded that he might have to temporarily move away for study purposes, expressed a desire to return home after graduation: *"I'd be coming back here [after qualifying], my family's based around here, I wouldn't want to leave my family."* The strength of this experience expressed by the Traditional Job Seekers may also be related to their lack of digital skills. As discussed earlier, the Traditional Job Seekers had little trust in the online environment and therefore remained dependent on their family and community for information and support in terms of career information but also more broadly. Logically, this dependence could be a driving factor, in their minds, as to why they may wish to remain local.

### **Sources of Career Information: Siblings**

Evidently, the Traditional Job Seekers did not have parents who could advise and guide their post-secondary school career and educational choices, especially if these choices included tertiary ambitions. Usually, young people of a low SES lacking parental support turn to older siblings or extended family members for advice and career information (Evans, 2006; Lamb & Sutton-Smith, 1982). As Estelle explained, *"...it's just having that influence in the home...the familiarity with something...even just the experience of going there [to a university campus] ..."*. However, amongst the Traditional Job Seekers, only Saabir and Zara, from Glencross, had older siblings at university. For Zara, however, this familiarity had not resulted in a desire to follow her older brother. Despite this, he was still instrumental in helping Zara plan her future career: *"...my brother, he's a civil engineer, so he mentioned it to me [surveying], I was like ok...interesting..."*. Coincidentally, Zara's maths teacher had organised a surveying excursion at the behest of a local construction company, which led to Zara securing *"...work experience at the beginning of this year...and then at the end of my week...they actually offered, do I wanna work with us [sic] in the holidays..."*. Even though surveying does not require a university degree, it did move Zara into a non-traditional role for someone of her gender and no doubt created a goal which could potentially keep her focused and motivated for the remainder of her secondary studies.



Amongst the other students at Glencross, Amber's "...older brother didn't like studying so he just went on like just a labourer, like plumbing...", Ghassan's older sister "dropped out in Year 10...so she's a professional hairdresser", and of Aisha's older siblings,

*...my sister finished Year 12, and my brother was expelled from this school, so he finished Year 12 [elsewhere]...my sister went to TAFE, but she didn't finish her diploma, I think it was in childcare and my brother went to TAFE and he did accounting...*

At Coventry, Hamilton's "...older sister [is] doing the HSC right now... she doesn't really know what she wants to do...", Sophie's older sister went straight into work at a local fast-food outlet, while of Lucas's two older sisters,

*My oldest one...went and did another TAFE course, for baristering [sic]...my other sister...she left and went straight into management [at the fast-food restaurant where Lucas and Hamilton now work part-time]...*

While all these positions are legitimate, the siblings' careers highlight the reproduction of class positions through constrained occupational "choices" (Bourdieu & Passeron, 1990). So, only Zara and Saabir, amongst the Traditional Job Seekers, had benefited from an older sibling successfully navigating their way to university. The rest of the Traditional Job Seekers with university aspirations would have to find an alternate source of support in this regard.

### **Sources of Career Information: Other Sources**

For Hamilton and Sophie from Coventry, further career information was sourced from people already employed or well versed in their fields of interest. While Sophie received this information from a source known to her, Hamilton approached an unknown uniformed officer in a local shopping centre. Hamilton, who aspired to become a police officer, discussed how he and his father became frustrated by their search online for information, "...I got my dad to do it with me...[we] Googled...looked at some Yahoo sites but you know they're not always correct...there wasn't much information on it [the internet] ...". Hence, having exhausted all other avenues of information collection, Hamilton "...went directly to a police officer and asked him...". He explained, "I was actually at [work] and there was an officer [so]

*I was sitting down with him and had a chat with him". Sophie, who was thinking of going into childcare, described a similar process of information acquisition:*

*I'm gonna try and work out [sic] with a traineeship for childcare...first I started talking to mum, and now I just need to go see John to see if he can help me...John is an Aboriginal helper...advisor.*

Due to the high number of AATSI enrolments at Coventry, John was employed full-time and worked alongside Estelle, the school's careers advisor, to help place AATSI students into employment and further education. Hamilton and Sophie's comments are similar to those in Weiler's (2004) study of American students and Julien's (1997) Canadian study of high school seniors which found that students lacking digital skills preferred human beings, even strangers, whom they perceived to be knowledgeable in their field of interest, over websites when acquiring career information. In Hamilton and Sophie's cases, leveraging these personal networks was potentially a good source of information for the occupation fields that interested them. Although in Hamilton's case there was no certainty that the information he had received was factually correct, he nevertheless confirmed that he had received answers to all the questions he and his father were unable to source online.

## **Conclusion**

This chapter has established that, despite having abundant objectified digital capital, the Traditional Job Seekers had acquired very little embodied digital capital, and so they remained stuck on the second rung of the digital divide. The dire state of the ICT infrastructure within these two schools, combined with a student preference and reliance on smartphones as their BYOD device of choice, made it difficult for teachers to integrate ICTs into their classrooms to teach educationally focused digital skills to these students. The Traditional Job Seekers also faced several explicit and implicit barriers in terms of their post-school options, particularly if they aspired to tertiary study. For instance, using their personal networks as their preferred source of career information proved problematic due to the lack of experience of higher education amongst the individuals in this group. The Traditional Job Seekers also had to contend with the well-intended, yet obstructionist, practices of their

schools' careers advisors, who seemed more focused on young people at risk of dropping out than on those aspiring to university study. This situation was further exacerbated by shifting university policies, quietly focused on attracting the most academically gifted students, which so often come from schools of a high SES. Thus, to return to Estelle's three-legged stool analogy, we can see that the stool holding the digital capital, career information support and educational aspirations of the Traditional Job Seekers is rather shaky. The stool would appear to be much sturdier for the Future Professionals and Social Networkers at Peckham and Pineridge High Schools, where the students possessed far greater stores of digital capital and their schools had vastly superior digital infrastructure. As a result, many of the digital issues discussed by the Traditional Job Seekers did not exist at these two schools that are considered in the next chapter.

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## Chapter 4: Peckham and Pineridge High Schools – Beyond the Digital Divide?

*Technology now is...like water.*

Henry, Peckham High School Student

This chapter examines the digital capital of students from the two schools with high-SES student enrolments; Peckham High School, a state selective school, and Pineridge High School, a state comprehensive. Henry's opening quote captures how differently the students from these two schools understood the role ICTs could play in their education and career information seeking, compared to the students in the previous chapter. For Henry, digital devices were as essential to everyday life as water. This chapter considers the vastly different types of digital capital possessed by Henry and his high-SES peers from Peckham and Pineridge compared to the Traditional Job Seekers from Coventry and Glencross. These digital practices were supported by the robust ICT infrastructure available to them at Pineridge and Peckham. Certainly, the advanced skills of the students discussed in this chapter demonstrate that schools continue to play a critical role in the development of students' digital skills and in the fostering of an educationally focused orientation online. The influence of parents' economic, cultural and social capital, as well as their cultivation of beneficial digital practices in their children, is also considered. The transmission of this capital contributed to the advanced digital skills of the two online information seeking practices (OISPs) groups to emerge from Pineridge and Peckham, the Social Networkers and the Future Professionals. The digital practices of these two groups yielded much greater payoffs both online and offline for these students compared to the Traditional Job Seekers who had not embodied an educationally focused digital orientation, continuing to use their ICTs primarily for social, gaming and entertainment purposes. As in the previous chapter, the digital capital of these two OISPs groups is explored by addressing the students' forms of objectified digital capital and embodied practices. Overall, these two groups not only had an abundance of this digital capital but also engaged in the most advanced digital practices of all the OISPs groups. The success of these young people's engagement with ICTs, and in their career information seeking, was also a result of their abundant social capital. Their digitally skilled and tertiary

educated personal networks consisting of their parents, older siblings and careers advisors helped them explore many potential career options, and when these individuals could not satisfy their information needs, their advanced digital skills allowed them to use the internet to *fill in* these information gaps. Given their plentiful social, economic and digital capital, it appeared that they had successfully bridged the first two levels of the digital divide, i.e. the divides based on digital access and skills. The examination of these students' digital capital also provides further evidence of the impact of SES on student OISPs, a critically important embodied digital skill, revealing the considerable educational and informational advantages that high-SES students accrue given their greater levels of digital capital both at home and at school.

### **Peckham Selective High School's Digital Infrastructure**

*The school really values technology.*

Marion, Peckham High School Student

Peckham High School was the only academically selective school in this study and, along with Pineridge, was classified as a high-SES school. Reflecting these two characteristics, Peckham was the best-resourced school in this study in terms of both ICT hardware and software. As Marion points out, Peckham had successfully incorporated the digital into the school's curriculum and within its teachers' pedagogic practice. Peckham was the second of the schools with a significant LBOTE enrolment, which constituted 78% of the total student body, corresponding to 59% of the 111 students who completed the Student Online Practices Survey and four of the eight students interviewed. The school's careers advisor, Susan, was also interviewed. The eight students interviewed could be divided evenly into the two OISPs groups of Future Professionals and Social Networkers, the former including Andrea, Pauline, Peter and Tracey, and the latter, Carmen, Henry, Marion and Paul.

The fact that the two most digitally skilled OISPs groups emerged from Peckham is further evidence of the benefits accrued from the school's ICT infrastructure and digitally focused teaching practices. For instance, not only were all of Peckham's computer labs equipped with late-model PCs, but Peckham also had a computer room nicknamed 'The Mac Lab', which

contained 20 current-model Apple iMacs. The morning roll call offered an example of how ICTs were integrated into the students' daily routines, as Carmen explained:

*...this year the roll went on the computer and all the [student] notices...so we don't get the notices on a sheet [of paper] in roll call anymore...the idea was it would be emailed to the students each day...*

Peckham, therefore, also encouraged daily student engagement with their email accounts, an additional routine beneficial for students developing their digital skills. Another critical digital skill Peckham cultivated in their students was the extensive use of online teaching platforms. Compared to those at the other schools, teachers at Peckham had incorporated the use of these platforms and the internet far more into their daily teaching practice. Tracey, another student, pointed out how “... the teachers embrace [technology] and they [say] ‘go onto Moodle’ or ‘go onto Edmodo’<sup>47</sup>, and they put up all the notes and stuff online for most subjects...”.

Peckham also taught university-level referencing, another form of embodied digital capital critical for future academic success. As Paul explained,

*...we're taught to use Bibliographies...at first, it was really basic but [now] we have to footnote them...that's what's expected...different subjects require different things for assignments...I think we use Harvard [referencing style] here...*

Carmen referred to an additional advantage of this emphasis on the early introduction of academic referencing techniques: “...everyone's [teachers are] all big on bibliographies and proper referencing [therefore] you feel more pressure to use PDFs and university documents rather than just dot.com websites...”. Google and Wikipedia searches were no longer considered adequate, with students encouraged to develop advanced online digital skills deemed necessary for academic success. These advanced referencing techniques were beyond anything discussed at the other schools. Clearly, much of the teaching practice in the

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<sup>47</sup> Similar to Moodle, Edmodo is an online educational platform that allows teachers and students to share content and communicate with each other and parents (Edmodo, 2019).

senior years at Peckham was focused on developing high-order digital skills – forms of embodied digital capital that inducted students into an academic culture that prepared them for post-secondary success. The daily functionality and incorporation of the digital into the lives of students at Peckham contrasts with the limited nature of school-based digital practices at Glencross and Coventry where, due to the lack of ICT resourcing, there remained a pronounced reliance on more traditional administrative procedures and teaching practices.

The teaching of these university-level digital skills was facilitated by the issuing of government laptops to every student interviewed at Peckham under the Digital Education Revolution (DER) program (2007–2013). It stands to reason that if every child in the classroom is using a laptop, teaching practices can be more consistent and more advanced digital skills developed. With the switch to the BYOD program, the students at Peckham were supplied with new high-quality devices by their parents. In this way, Peckham reflects the findings of two OECD *Equity in Education* reports (2012; 2018), which show that even in advanced economies such as Australia, high-SES schools continue to experience better resourcing, including in ICTs, than those of a low SES. Although, as good as the digital environment was at Peckham, it was not without its challenges. Every student interviewee from Peckham expressed frustration with the school's Wi-Fi connection, which was struggling to keep up with the demands of the BYOD program. Marion best captures the students' frustrations:

*...the school Wi-Fi sucks, and if everyone's using it, no one will be able to access anything...the school internet is just awful...it takes 30 minutes to check your email...they have to do something about that...*

Under the previous DER scheme, connection to the school Wi-Fi was limited to the government-issued student laptops and teacher PCs. However, under the BYOD initiative, multiple student devices could potentially be connected to the Wi-Fi with the school having very little control over downloads and content accessed. Similar Wi-Fi concerns were evident in Lupton's (2013) study conducted in Queensland schools, where she found that slow internet speeds and limited bandwidth were standard across the entire public school system, while private schools reported fewer ICT issues. Peckham's Wi-Fi issues could potentially be

resolved with the rollout of the NBN, which occurred in Peckham's catchment area in 2016 (NBN Co., 2019). However, as covered in Wilson's (2018) report on NBN connections in schools across Australia, even schools with an NBN connection continued to experience issues with bandwidth and connectivity. Yet, even with these Wi-Fi issues, overall, the ICT infrastructure at the school was well beyond anything found at Glencross and Coventry. The school's impressive ICT facilities were backed by the students' access to abundant digital capital at home. The only school which came close to Peckham was the second high-SES school in this study, Pineridge. While Pineridge lacked the volume and variety of hardware found at Peckham, its overall ICT infrastructure was still impressive.

### **Pineridge High School's Digital Infrastructure**

*We realise we are pretty lucky.*

June, Pineridge High School's Careers Advisor

Pineridge, located on Sydney's picturesque and affluent Northern Beaches, is the second high-SES school in this study. The school boasted excellent facilities including high-quality ICT infrastructure. In fact, it was difficult to find a critical word about Pineridge from any of the six students that volunteered to be interviewed. Even Justine, who seemed quite negative about her schooling, begrudgingly conceded that *"...it's pretty good, I mean it's just a school...it's [a] pretty good education I guess..."*. A total of 98 Year 11 students from Pineridge completed the Student Online Practices Survey, with six of these, Andrew, Chad, Harrison, Justine, Mary and Sera, interviewed along with June, the school's careers advisor. All six of these students could be categorised as Future Professionals and were also all satisfied with the level of ICT infrastructure and digitally based classroom practices at their school. As Sera stated, the students at Pineridge, like Peckham, were encouraged to integrate ICTs and the internet into their daily practice at school:

*...a lot of school homework and assignments rely on technology...you have to type it [assignments] up, and...they're like 'ok, research this on the internet', so it's pretty [much a part of] everyday life...*



Sera added, “...they [the teachers] use smartboards in class...they have to use PowerPoint...it’s just an easier way to teach. I think teachers actually really enjoy technology...”. These digital teaching practices encouraged the students to view the internet as an educational tool to assist in their learning rather than purely as a source of entertainment. The positive impact of teachers mediating and modelling beneficial ICT practices is well documented in educational literature (Howard, Thompson, Yang & Ma, 2019; Hsu, 2011; Ibieta, Hinostroza, Labbé & Claro, 2017). Teachers can be critical “agents of change” in training and encouraging the development of advanced digital skills, helping to make their students more confident when sourcing online information independently (Ertmer & Ottenbreit-Leftwich, 2010, p. 255). Harrison confirmed this:

*...the teachers only give you so much information, it’s up to you to gather the rest  
...there’s more options on the internet, and you find out for yourself, on your own terms...*

In this way, like Peckham, the teachers at Pineridge were promoting the early development of beneficial tertiary level digital research skills amongst their students.

Also, like Peckham, Pineridge had a variety of online platforms for both students and parents. In fact, Pineridge offered so many different online platforms that June, the school’s careers advisor, had received complaints from parents: “...we’ve got Moodle, and Edmodo...the parents get upset about having so many things [options]...they say there are too many different websites and platforms to keep track of...”. This ‘issue’ was unique to Pineridge and is in stark contrast to Glencross, which was yet to have a single online learning platform. However, like all the other schools in this study, Pineridge was also struggling to transition from the DER to the BYOD program successfully, as June explained:

*...Oh, it is a bit blurry at the moment, with the [smart] phones...they are trying to do the BYOD device thing, which they [the school] are aiming more for laptops and iPads...*

Like the students at Coventry and Glencross, the students at Pineridge were attempting to register their smartphones as their chosen BYOD. While June empathised with the students' position to a degree, she commented that,

*...I can understand why they [wouldn't] want to cart around a thing [laptop] that's big and heavy and breakable in their bag, when they can have their little phones [that] can do just about everything anyway...*

On the other hand, June also recognised that, from a teacher's perspective,

*...it is really hard to keep track of what they are actually doing on it [their smartphones] ...they tend to get distracted...the minute you look away they are searching a game ...it has its issues...*

She added that Pineridge “...still hadn't transitioned to accepting the [smart] phones...” as an acceptable in-class BYOD choice. In this way, Pineridge had pre-empted the findings of the NSW DoE review (Carr-Gregg et al., 2018) into the non-educational use of mobile devices in NSW classrooms. Recommendations from this review included banning all mobile devices from NSW primary schools and allowing high schools to either ban devices entirely or restrict their usage if permitted (Carr-Gregg et al., 2018). Given smartphones were not permitted as a BYOD within Peckham and Pineridge classrooms, the students at these two schools did not discuss classroom issues such as digital distraction and cyberslacking that were reported by several of the students at Glencross and Coventry. Due to their stronger digital and economic resources, both Pineridge and Peckham had also taken steps to formally institutionalise ICTs into both the school curriculum and everyday teaching practices. The greater digital capital of these two schools was replicated in the homes of most of the students that were interviewed. Therefore, it seemed inevitable that these students would develop digital practices that were more advanced than the Traditional Job Seekers from Glencross and Coventry. Certainly, two further OISPs groups would emerge from Pineridge and Peckham, the Future Professionals and the Social Networkers. These two groups consisting entirely of students of a high SES, while similar in terms of their digital capital, varied considerably regarding their digital skills and career aspirations.

## The Future Professionals

*I reckon it's going to be pretty good in the future.*

Peter, Future Professional, Peckham High School

The Future Professionals were the largest of the four OISPs groups, comprising a total of 11 students drawn from three schools, Andrea, Pauline, Peter and Tracey from Peckham, Andrew, Chad, Harrison, Justine, Mary and Sera from Pineridge, and Kate from Bradford, discussed in the next chapter. While drawn from schools across a variety of geographical locations, all the students classified as Future Professionals were of a high SES. Peter's comments capture the confident and optimistic outlook expressed by many of the Future Professionals toward their future. Regarding the digital, the Future Professionals enjoyed high-speed and high-quality home internet access, with frequent ICT device and software upgrades. The Future Professionals also seemed to have a strong educationally focused orientation to their use of digital technology. In keeping with this educational focus, the Future Professionals possessed more sophisticated *informational skills* (van Deursen & van Dijk, 2010). The defining feature of this skill level, as van Deursen and van Dijk (2010) explain, is the ability to seek and critically evaluate information sourced online successfully. When it came to sourcing career information, the Future Professionals used every information channel available to them, including personal networks, their teachers and the internet. Their career aspirations, while often expressed in vague terms, without exception involved university study and were primarily focused on the academically elite fields of medicine, engineering and law.

Overall, the Future Professionals remained largely non-committal when asked about their post-school options. This result is contrary to the findings of a comparable study in the United Kingdom conducted on high school students of a similar age by Livingstone and Sefton-Green (2016). Their student participants had developed set responses when asked about their future career and educational plans. Lareau (2011) argues that such rehearsed responses are due to society's obsession with what young people "will become" when they grow up. Here, however, the answers the Future Professionals provided about their career

aspirations, while confident and optimistic, were also vague and non-committal. Harrison, from Pineridge, offered an example of such a response:

*...I'm really interested in Architecture and [the] Arts [but] lately I've been getting really interested in sciences like biology...but, having these interests and knowing what I want to do with them is two different things...I'm still sorta experiencing new things and I don't think I'm set on anything yet cause we still haven't been offered all the things there are to learn...*

Andrea, from Peckham, provided a similar answer: *"...I hope to have a successful career in the health industry. I think that's definitely where I wanna be. As far as what exactly, I'm not 100% sure..."*. Yet, while unsure about which career path they would pursue, both Harrison's and Andrea's plans, like the rest of the Future Professionals, included university study.

For most Future Professionals, university plans were a given, unlike the Traditional Job Seekers who aspired to attend university but spoke of *"trying"* and *"hoping"* to get there. Andrea and Harrison's comments also exemplify a common dilemma expressed by many of the high-SES students, namely the burden of choice (Reay, 2017). Career choice was a predicament of several of the Future Professionals. The career uncertainty expressed by many in this OISPs group is reflective of the unrushed approach to post-schooling decisions often observed amongst high-SES students (Hargittai, 2010; Robinson, 2009). Due to their substantial social, economic and digital capital, they perceived themselves as having more time, and the freedom to explore, experiment and even fail at different career options. The length of time an individual perceives as being free from the economic necessities of life is directly related to the economic capital of their families (Bourdieu, 1997). The luxury of free time at the completion of high school is generally not available to students of a low SES, as these families do not have access to the same level of economic capital to prolong their child's education beyond the minimum necessary for them to enter the labour force. Hence, the Traditional Job Seekers, as discussed in Chapter 3, expressed much stronger certainty around their career aspirations and discussed a variety of feasible back-up options. Even though the Future Professionals were unclear about which career to pursue, these students nevertheless all had professional career ambitions, with well-established pathways through

university into employment. The vague, yet generally professional, ambitions expressed by the Future Professionals were in stark contrast to the aspirations of a small number of their classmates, the Social Networkers.

## The Social Networkers

*I've always viewed [technology] as just another part of my life.*

Henry, Social Networker, Peckham High School

Henry, here, captures the view of all the Social Networkers, that digital devices are completely embedded into their lives, even forming a part of their identities. Marion from Peckham, for example, discussed how she believed technology had facilitated the development of dual identities: *"I've got... my digital identity and obviously I live outside of that...it's definitely some kind of online identity that exists..."*. Marion's advanced digital skills had allowed her to craft a professionally focused online self, which she admitted often contrasted with her unguarded offline self. Marion regarded her online self as critical to her future success:

*I'm a big believer in the internet age is where everything's going to be soon, and so I think technology is like a real key thing... it means a lot to me... in a teenager self-obsessed way, as well as an important thing for the future...*

Unsurprisingly, it was the Social Networkers who had the most advanced understanding of the beneficial role ICTs could play in their everyday lives and future careers. Of the five students classified as Social Networkers, Carmen, Henry, Marion and Paul attended Peckham. The fifth member of the group was Brendan, a student from Bradford, the regionally based school, discussed in the next chapter. Like the Future Professionals, every one of the Social Networkers was of a high SES. Indeed, being socio-economically advantaged seemed a prerequisite for maintaining the necessary access to and supply of the latest devices, software and ancillary hardware. The Social Networkers also displayed the most strategic educational and career-focused digital usage. One of the key characteristics that set them

apart from the three other OISPs groups was the way they all used digital technology to their advantage, particularly regarding their future career options.

The Social Networkers had acquired key “strategic skills”, the most advanced level of digital capacity to which van Deursen and van Dijk (2010) refer. The defining feature of this skillset was the shift away from merely consuming online content to becoming content creators (van Deursen & van Dijk, 2010). A significant focus of their online interaction, therefore, was directed towards the achievement of an educational, professional or social goal. Due to their proficient online skills, the Social Networkers’ primary source of career information was the internet. While the Social Networkers did mention their personal networks and teachers as providing initial advice about their post-school opportunities, these seemed to operate more in an auxiliary manner, with the information acquired through the internet playing a more significant role, particularly once initial career directions had been made. The Social Networkers’ advanced digital skills allowed them to source career information online successfully, hence they were able to move beyond soliciting advice and information only from their personal networks and teachers. In this way, they overcame the information barrier apparent amongst the Traditional Job Seekers. By taking full advantage of the internet, the Social Networkers increased both their social and digital capital and subsequently strengthened the likelihood of positive career outcomes both online and offline.

The Social Networkers, like the Future Professionals, all expressed a desire to attend university, although they were far more concrete in their future planning and had mostly locked-in post-school plans, whether they be educational or otherwise. Paul and Marion, for example, were both looking to head into the music industry. Paul was an aspiring musician: *“...I want to become a musician...uni would [also] be nice, that’s what I’m looking at...”*. Marion was focused on becoming a music agent, Henry was considering environmental or humanitarian law, while Carmen was interested in a career in online media where she could utilise her advanced digital skills:

*...I like the idea of doing advertising and PR...my friend's friend works in social media [and] I like the idea of how people react to things and connect to things [online]...I didn't want to be a journalist...because I don't like writing...*

Yet, like fellow Social Networker Brendan, Carmen's primary focus over the next five years was on enjoying herself, a commonly expressed sentiment amongst all the Social Networkers. This became evident in the reasons she gave for her university aspirations: *"I want to go to uni, partially yes for fun and partially yes because I don't have to focus too much on jobs..."*. Carmen's desire for fun and delaying more difficult career decisions echoes the more relaxed approach to time discussed previously by the Future Professionals, who were similarly of a high SES. Unlike the Future Professionals, though, the Social Networkers aspired to careers that reflected their sense of self-identity and self-actualisation, and they were focused on pursuing a future that they would enjoy. Marion confirmed this: *"...I just hope that I'm happy in whatever I'm doing... that's my main focus"*. Overall, though, the Social Networkers shared more similarities than differences with their Future Professional classmates. To better capture the similarities and differences between the Social Networkers and the Future Professionals at Peckham and Pineridge, four critical areas of their digital capital are explored: abundant digital supply, cultivated digital usage, advanced digital skills and career information channels. An analysis of these four areas both highlights the differences between these two groups and addresses areas of significant variation between them and the Traditional Job Seekers. As there are many similarities between these two OISPs groups, much of the analysis to follow considers these groups together, with variations addressed when necessary.

### **The Future Professionals' and Social Networkers' Abundant Digital Supply**

*When I need a new phone, I get the next one...it's easy.*

Andrea, Social Networker, Peckham High School

In addition to having access to an abundance of high-quality ICT infrastructure at school, both the Social Networkers and the Future Professionals reported high levels of access to digital

devices at home, an objectified form of digital capital. The regularity of device replacement and associated software upgrades was a considerable point of difference when comparing the Social Networkers and Future Professionals with the Traditional Job Seekers. This was particularly the case when it came to more expensive devices such as personal laptops and household PCs. The constant supply and upgrading of devices, at both home and school, throughout their education was a major contributing factor in the development of the Social Networkers' and Future Professionals' more advanced digital skills. The abundant supply of digital devices amongst these two OISPs groups also served as a critical first step in the accumulation of their digital capital. Peckham student Andrea illustrates the unproblematic nature of digital supply common to these high-SES students:

*...all I've ever had for a phone has been iPhones...when I need a new phone, I get the next one because it's easy because I know how to use it...everyone in my family including my ten-year-old brother has an iPhone and everyone has an iPad and laptops...*

Andrea's use of the word "easy" demonstrates a taken-for-granted approach to accessing such technology, something most of her Pineridge and Peckham peers shared. The reported expectation of supply was much higher amongst the Future Professionals and Social Networkers when compared to the Traditional Job Seekers. This demonstrates that the parents of these young people recognise that digital skill acquisition is a fluid and dynamic process, which is also reversible, hence the constant supply of digital devices is necessary to maintain their digital advantage.

This finding contrasts with that of Pugh (2009), who refers to how higher income families practise "symbolic deprivation", viewing digital devices as competing with more traditional offline cultural objects and pursuits such as books, family time and other creative interests, comparing this to families of a low SES, who practise "symbolic indulgence" whereby ICTs are viewed as status symbols used to signify financial stability. However, while the Traditional Job Seekers from Coventry and Glencross seemed to conform to Pugh's principle of symbolic indulgence, most of the Future Professionals and Social Networkers were certainly not deprived of access to digital devices. Rather, these young people's constant updating of these



devices demonstrates an even higher level of symbolic indulgence than what was evident amongst the Traditional Job Seekers. This was best captured in Andrea's previous remarks and by Peckham Social Networker Henry, who commented that,

*When I'm at home the computer's right next to my bed. If I'm not on my computer, my headphones are on, just you know, lying on my bed, reading notes or something. So, I'm pretty much surrounded by it [technology]...*

Harrison was the only student of the 14 interviewed from Peckham and Pineridge whose parents' use and regulation of digital devices in the home bordered on symbolic deprivation,

*...my mum is really against it, she wants me to spend as little time on a screen as possible...[and] my stepdad and dad have the same opinions over the matter, they just think that...if there's a library available, then you should make the most of it. They bought me my [first] computer about a year ago...*

Harrison's parents, both high school teachers, while having the financial means to supply multiple digital devices, chose to limit Harrison's access until he was in Year 10. Yet, despite this, Harrison seemed to possess advanced information seeking skills, no doubt benefitting from the high-quality ICT infrastructure at Pineridge and the inclusion of the digital in the curriculum and daily teaching practices. For this reason, despite the bulk of digital exposure occurring at home, schools still have a critical role to play in the development of students' digital skills and the fostering of an educationally focused online orientation, particularly when they lack home access. Still, having the required economic capital to continuously supply new technology is only the first step in successful engagement with ICTs. As we saw with the Traditional Job Seekers, abundant supply of digital devices means little if digital capital is not embodied through cultivated, educationally focused digital usage and digital skill development.

## The Future Professionals' and Social Networkers' Cultivated Digital Usage

*My dad showed me.*

Paul, Social Networker, Peckham High School

The parents of the Social Networkers and Future Professionals played a significant role in shaping the context of these young people's initial access to devices and through assisting their children to embody digital practices and skills. Clear links have long been established between young people's use of ICTs and the internet for educational purposes and parents exhibiting a more "hands-on" approach (Hollingworth et al., 2011; Livingstone & Helsper, 2008). Parents with a higher level of educational attainment are more likely to use computers in both their work and daily lives, and so they tend to have better digital skills when compared to parents of a low SES (Gui & Argentin, 2011; Selwyn, 2005). The results from the Student Online Practices Survey showed that the parents of students attending Peckham and Pineridge were more educated than the parents of the students at Coventry and Glencross. For instance, 14% of the students surveyed at Coventry and Glencross reported that their parents' highest level of educational attainment was completion or partial completion of Year 10, with 29% reporting completion or partial completion of Year 12. This compares to just 5% and 11% of the survey respondents from Peckham and Pineridge, where 14% of respondents reported their parents' highest level of educational attainment was completing a diploma or trade certificate, with 29% completing a bachelor's degree and 26% completing a postgraduate qualification. The corresponding figures at Coventry and Glencross were 12% for a diploma, 8% for a bachelor's degree and 6% with a postgraduate qualification.<sup>48</sup> The role played by the parents of a high SES in shaping their child's ICT practices and understanding is captured best by Marion, who stated, "*...it's not instinctual, but it feels like it...we've all grown up with technology, so it feels like we've all just always known what we're doing...*". Marion's comments are suggestive of the subtle role her parents are likely to have played in the cultivation of her digital practices.

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<sup>48</sup> The two remaining categories were 'Completed Primary School' 5% of low-SES parents and 2% of high-SES parents, and 'Unsure' reported by 26% of the low-SES students and 14% of the high-SES students.

As considered in Chapter 1, parental cultivation of digital practices has much in common with Lareau's notion of "concerted cultivation", which she sees as the practice of high-SES parents in teaching their children educationally beneficial habits thus priming them for academic success later in life (Lareau, 2003; 2011). Such a perspective can be extended to include the shaping of beneficial digital practices and orientations. Paul, a Social Networker from Peckham, whose father was a high school teacher, offered a perfect example of a more overt form of parental cultivation of beneficial online practices:

*... I go to Google Scholar...you get a lot more academic articles...more university-level things...that's quite helpful...my dad showed me...my dad has been telling me to use it for a while...but I kind of gradually came into it...in maybe Year 8 or 9...*

Such guidance contrasts with the idea of "natural growth", which Lareau (2003; 2011) considers is characteristic of low-SES parenting wherein children are granted considerable autonomy over many areas of their daily lives, including their digital practices. From this perspective, academic success or failure is seen as a direct result of natural aptitude, rather than as a product of cultivated practices (Lareau, 2003; 2011). An aspect of natural growth parenting could include how young people learn to use digital devices themselves, without parental or teacher training, as was discussed with the Traditional Job Seekers in the previous chapter. While practices of natural growth may appear to offer children greater autonomy, there are limitations given the acquisition of specific skills, in this case the attainment of embodied digital capital that is simply left to chance.

The digital practices cultivated by parents also extended to the distinctive ways they used technology when disciplining their children. The way the parents of the Social Networkers and Future Professionals regulated their children's digital usage was markedly different from the parents of the Traditional Job Seekers in the previous chapter. The parents here understood that digital devices had the capacity to educate and distract their child equally. Consequently, when regulating their children's home digital usage, these parents separated social and entertainment usage from educational usage. For instance, Mary, a Future Professional from Pineridge, discussed the unique manner her father, an IT manager, used to discipline her:

*...a couple of times when I got grounded...they'd block specific sites as part of my grounding [laughs]. So, they would block...like Facebook or anything [social] like that...so I can [still] use my laptop for school [work]...*

Peter, a Future Professional from Peckham, also had parents who practised a rather sophisticated method of digital regulation. By placing Peter on a restrictive prepaid mobile agreement, they were able to maintain control of his online access while still allowing him the freedom to interact with his devices for communication and educational purposes. As Peter explained,

*...she [his mum] doesn't let me have a plan on the phone...she makes me pay upfront, like \$10 credit... she's like cause you can just use the internet at home... and I start complaining...because...a lot of people these days they just have plans on their phones, and they can use the internet anywhere.*

This form of regulation meant that Peter primarily accessed the internet at home, where his ICT and internet use could be both monitored and directed towards educational pursuits. These regulatory practices were vastly different from those discussed by the Traditional Job Seekers, who explained how their parents oscillated between complete freedom and outright confiscation. This finding shows that parents not only need to appreciate the difference between digital usages focused on entertainment versus education, they also need to possess the ICT skills to identify and regulate their child's behaviour successfully.

Such disciplinary techniques also developed the practice of *self-regulation* amongst these young people of a high SES. Self-regulation is understood here as the practice of students modifying their own digital practices in educationally beneficial ways. This practice was widely discussed by the Social Networkers and Future Professionals, particularly by those students with parents who had started to relinquish control over their child's digital activity. Henry, for instance, discussed how he had embodied his parents' digital regulation into his own study routine:

*... [in the past] if they heard me mashing my keyboard at 11[pm] they'll say, 'go to bed' and knock on my door...[So, now] I try to make a rule not to do it [use ICTs] past*

*11[pm] because I noticed the moment you go past 11 or 10:30, you get in bed, and you can't really shut your eyes and go to sleep. I know that's a problem, so I try to avoid that stuff...*

Student self-regulation also occurred at school. Peter, for example, was happy that he was not on social media as “...during school it would be more distracting, especially during class...if we're on social media...we won't be able to focus on what we're actually doing...”. A large part of Peter's self-regulation was focused on avoiding distraction, which ultimately led to him assigning different purposes for each of his digital devices:

*...I have the school laptop and my own [laptop]...sometimes I use my school laptop to get away from distractions, from using my home laptop, so like YouTube and all that...I use my school laptop [for] study notes...because the school laptop prohibits all those explicit sites...*

The practice of using the locked government-supplied laptop to avoid distractions was surprisingly common and was also mentioned by Andrea, “...well, my laptop I use solely for school purposes, so I don't actually use my laptop to go on social media, I mainly do that from my iPad...”. Andrea and Peter seem to have captured the principal strength of the DER laptops over the BYOD. All DER laptops came locked; therefore, only relevant educational sites and applications could be accessed. Clearly, exposure to the locked DER devices had demonstrated to these students the benefits of not being distracted and the potential for these devices to be used for educational purposes.

A further point of differentiation between the digital usage of the Social Networkers/Future Professionals and the Traditional Job Seekers was in their choice of digital device. Unlike the Traditional Job Seekers' heavy reliance on their smartphones, the Social Networkers and Future Professionals continued to have access to and preferred to use their laptops, both at home and at school. For Sera, a Future Professional from Pineridge, the choice was easy: “...I [use my] laptop mainly...I like using my laptop a lot at home; it's just easier to like set things out and easier to do things...”. Andrew, a fellow Future Professional from Pineridge, shared this preference: “I have a [smart] phone which I don't use much, and iPad which I use a fair bit

*and a computer [laptop] which I use a fair bit...".* The Student Online Practices Survey showed that these different preferences were delineated along SES lines. Hence, the students at the high-SES schools reported a significantly higher daily usage of laptops (71%) compared to 55% at Glencross and Coventry. The high-SES students from Peckham and Pineridge also preferred to access the internet on their laptops (46%) compared to the students at Glencross and Coventry (25%), who preferred to access the internet via their smartphone (62%) compared to just 35% of the high-SES students. Paul, a highly skilled Social Networker, referred to rarely interacting with his phone at school or for educational purposes, preferring his laptop:

*...I only turn this [his mobile] on every night, I don't expect a text or anything, I don't really talk to people using this. I go on Facebook if I need to, so that's [the phone] just for basic communication if I'm out somewhere and I need to text someone to pick me up...I have my own one [laptop] that I use...*

Indeed, as was discussed in the previous chapter, due to several factors, including affordability and school BYOD policy, the Traditional Job Seekers overwhelmingly preferred to use their smartphones for all activities at home and at school. The preference for laptops over smartphones was also apparent in the interviews with the Social Networkers and Future Professionals.

The difference in preferences regarding devices between the Future Professionals/Social Networkers and the Traditional Job Seekers is a further example of the "device divide" (Pearce & Rice, 2013), between young people of a high and low SES discussed in the previous chapter. The device divide highlights that not all access is equal and concentrating usage on certain digital devices such as smartphones can have a negative influence on digital skill development. When it comes to the development of embodied digital capital, it is clear that the *type of device* used matters. Therefore, it was not only a lack of ICT training and embodied digital capital that kept the Traditional Job Seekers stuck on the second level of the digital divide but also their lack of access to more expensive, educationally focused, late-model ICTs. The fact that neither Peckham nor Pineridge permitted smartphones as a BYOD no doubt helped to overcome some of the issues experienced by the Traditional Job Seekers.

Rather than leaving resourcing decisions such as these in the hands of individual schools, a clear DoE directive would have been preferable. Yet, the recent *NSW DoE Review into the Non-Educational Use of Mobile Devices in NSW Schools* stopped short of recommending a complete ban of these devices in high schools (Carr-Gregg et al., 2018). The experience of the students at Peckham and Pineridge demonstrates that students who have been encouraged to take steps to limit distractions and who are surrounded by better-resourced and more technically aware parents and educators are also better positioned to benefit from online opportunities. The advantage the Social Networkers and Future Professionals accrued in having access to the latest digital devices, particularly laptops, and developing an educationally focused orientation online over a lifetime is profound. However, the cultivation of the online practices of these young people was not limited to their usage alone, it was also focused on teaching them critical digital skills including OISPs.

### **The Future Professionals' and Social Networkers' Advanced Digital Skills**

*I'd research the context behind the question first.*

Peter, Future Professional, Peckham High School

As observed in the previous chapter, the Traditional Job Seekers, having embodied very rudimentary digital capital, remained heavily dependent on Google and Wikipedia when sourcing information online. Hence, their digital skills could be characterised as 'point and click' in nature. This basic search strategy resulted in many Traditional Job Seekers becoming frustrated and prematurely terminating their online information searches. In contrast, the advanced digital skills of the Future Professionals and Social Networkers saw them experience very little frustration when searching for information online and none within these groups reported ever terminating their information searches completely. For this reason, OISPs represented one of the most significant forms of digital capital that the high-SES students possessed, constituting a major difference between those of a high and low SES.

The first significant difference was in the Social Networkers/Future Professionals' meticulous preparation prior to commencing their online information searches. Peter, a Future

Professional from Peckham, explained his preparations: *"I'd research the context behind the question [offline] first...then I can get...the root ideas, for developing the question...I talk about it in class...with other people...then I... just check online"*. Tracey, another Future Professional from Peckham, also conducted initial information scoping offline: *"...I don't always use technology...I tend to use my actual physical resources...like my books [first]..."*. Similar to Peter, Tracey would then go online to confirm her findings: *"I might search up themes and concepts online...I tend to use it [the internet more] for definitions..."*. Pauline, another Future Professional from Peckham, also reported using Google to clarify ideas rather than to locate precise answers:

*I would type the keywords from the question into Google, and I'd try and find some ideas to help understand the concept[s] and then I'd brainstorm my own ideas and take it from there...*

Such practices not only show a strong preference for the pre-planning of online information searches, they also allude to the second difference between the OISPs of the Future Professionals/Social Networkers and the Traditional Job Seekers: the extensive use of educationally focused websites.

Sera, a Future Professional from Pineridge, for instance, used *"No Fear Shakespeare"*, a website that *"...converts what Shakespeare is saying to the modern way [vernacular]..."*. This was a simple tool that made Sera's essay writing for English much easier. Tracey discussed using the internet for mathematics: *"I have this website called wolframalpha.com...it can be really helpful..."*. Wolfram I Alpha is one of the world's most advanced mathematical answer engines. Paul, a Social Networker from Peckham, who discussed his father's encouragement to use Google Scholar earlier, also used the official NSW Board of Studies<sup>49</sup> website, *"...mainly because it has the syllabus on it...straight from the government...what you need to know..."*. These advanced digital skills, constitutive of an embodied digital capital, meant that the

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<sup>49</sup> Since January 1st, 2017 the NSW Board of Studies has been known as the New South Wales Education Standards Authority (NESA).



Social Networkers and Future Professionals reported much lower levels of frustration when searching for information online.

Unlike Zoe, the Traditional Job Seeker from Coventry who joked that she got *“...so frustrated with [online information searches] ...I’m like... about ready to chuck me [sic] computer out the window...”*, the Social Networkers and Future Professionals discussed multiple strategies to avoid frustration when searching online. Paul, for example, turned to his local public library website when he had exhausted his Google Scholar and Board of Studies online searches: *“...usually I just type [it] in on their website, what I’m looking for, cause they have all their books online...”*. As a Social Networker, Paul clearly had multiple search strategies. However, it was Andrea, a Future Professional also from Peckham, who discussed the most sophisticated search technique for overcoming frustration online: *“...if I’m having trouble, I do the thing where you put it [the topic] in quotation [marks], so you can get the exact results...”*. Using quotation marks, Boolean operators and asterisks when searching for information online is considered one of the most advanced methods of narrowing the breadth of online searches and producing more targeted search results. This online search technique is so advanced that it is usually only practised by university-level researchers (Currie, Devlin, Emde & Graves, 2010). The confident and almost nonchalant way the Social Networkers and Future Professionals discussed their online searches is a direct result of their embodied digital skills. Over time, the online world had simply become an integral part of who they are. This discussion has also drawn attention to the strong aptitude these high-SES students had in accessing traditional offline information resources, representative of their high levels of embodied cultural capital offline, an aspect of contemporary information seeking practice often overlooked.

The final area of variation when comparing the OISPs of the Social Networkers/Future Professionals and the Traditional Job Seekers was in how trust was established online. As outlined in the previous chapter, the Traditional Job Seekers struggled to confidently gauge the reliability of information found online. The Social Networkers and Future Professionals, on the other hand, had developed several successful strategies to gauge the validity of the information they discovered. For Future Professional Pauline, the question of finding trustworthy information online was a simple one: *“...sometimes I will check the authors, and*

*I'll check the URL and if it's a government website...those are the ones I trust completely...".* Andrea also trusted government websites *"...when they're .gov...cause they've got the exact [government] policies..."*. Andrea and Pauline's trust in government websites is consistent with other studies that have measured how young people gauge trust online. The student participants in Calvani, Fini, Ranieri and Picci (2011), for example, also cite the top-level domain name, such as dot gov (.gov) or dot org (.org) as reliable indicators of the trustworthiness of the information found on websites. Alternatively, Chad, a Future Professional from Pineridge, used a comparative technique to establish trustworthiness online: *"...well, I get my resources from many [different] websites, and I'll see which ones [information] comes out more often...then I use that to work out which is more trustworthy..."*. While Harrison, a Future Professional from Pineridge, articulated the most complex technique to ascertain trust, involving the identification of a series of credibility markers on the websites he visited, specifically, *"...the licences of the site...who supports the information...[and] when this information was printed [created]..."*. The ability of the Future Professionals and the Social Networkers to successfully evaluate the credibility and reliability of information sourced online is an additional characteristic of their more advanced digital skills.

Thus far, the digital skills of the Social Networkers and the Future Professionals have been relatively uniform, with the analysis focusing on the difference *between* these two OISPs groups and the Traditional Job Seekers. However, the Social Networkers had acquired one further critical digital skill that distinguishes them from all three of the other OISPs groups, i.e. their shift from being content consumers to content creators, evidence of their greater stores of embodied digital capital. It is this one key digital skill that saw the Social Networkers classified as 'strategic' internet users, the most skilled of all the OISPs groups. For example, Marion, who earlier in this chapter discussed the development of her online identity and who was an aspiring music agent, explained how she leveraged social media to promote herself online:

*...I make YouTube videos [and] I use Twitter like a promotional platform...So that's what I use it for, rather than more like a social aspect, I use it as marketing...*

Paul, who was also interested in a career in music, similarly promoted his music online: “...I’ve experimented...playing guitar straight into the computer...”. Carmen, an avid user of Twitter, offered another example: “I’ve been using it for a lot of years now, so I have a lot of followers, and I have people I can talk to [online]...”. The feedback these Social Networkers received online, through comments, reposts or increased numbers of followers, contributes to what Robinson (2011, p. 481) has labelled a “positive feedback loop”. In Robinson’s loop, the positive feedback that content creators such as the Social Networkers receive from their posts leads them to internalise the belief that their efforts online are beneficial and produce payoffs. Because of this positive reinforcement, the Social Networkers became incentivised to improve their digital skills and create more content.

Further, these experiences of the Social Networkers reflect past research (Calvani et al., 2011), which revealed the emergence of a two-tier system online, consisting of a small, highly skilled group responsible for the vast amount of content online while most people (including the Future Professionals and Traditional Job Seekers) remain passive consumers of this material. The Social Networkers’ ability to create, digitise and disseminate their content online to targeted audiences was only made possible by their high levels of digital capital. For example, to maintain their online presence and create content to share, they required consistent and reliable internet service, plus access to objectified digital capital, i.e. the latest digital devices, software and subsidiary digital equipment such as microphones. The advanced digital skills discussed by the Social Networkers here and the Future Professionals above highlight the benefits that accrue from the cultivation of embodied digital capital. The transmission of accumulated digital capital not only helped these students overcome the first and second level digital divide but also allowed the Social Networkers to contribute to the artistic field online through the production of their own original content. Given the advanced digital skills afforded by their embodied digital capital, it is unsurprising that the Social Networkers and Future Professionals would utilise online sources when searching for information regarding their post-secondary career and education options.

## The Future Professionals and Social Networkers: Mixed-Source Career Information Seekers

Another finding that proved significant was how every student interviewed across all five schools reported that an offline resource, be it a person or some form of written material, served as the initial impetus to pursue further career and education information. Indeed, even amongst the Social Networkers and Future Professionals, the government-funded *The Jobs Guide* was commonly cited as an initial 'call to action' when scoping for potential universities and courses. Susan, the careers advisor at Peckham, observed this trend amongst her students:

*...I know that they live on their phones but, my kids [at Peckham High] ... love having The Jobs Guide, they love having the UAC<sup>50</sup> Guide, they love having the University handbooks...the kids lap those up. They still read them...*

Given this, Susan lamented the funding decision to no longer supply *The Jobs Guide* free of charge to every student completing their HSC across NSW:

*...in the olden days...we had Jobs Guides in NSW [but] the government is cutting the funding...and saying... 'they can just go online'. But the kids are like 'we want a book, Miss, we want to be able to dog-ear the pages and highlight'...*

Paul, a Social Networker from Peckham who had recently purchased the UAC's *Careers Guide*, confirmed Susan's sentiments:

*...[there's] a UAC Guide, which is a universities guide...and they have a list of the courses and prerequisites and your diplomas and your minors...for [university] courses. So, I went through that recently and just highlighted all the things I was interested in...*

Carmen, another Social Networker from Peckham, had kept all the pamphlets she collected at a university careers day and these were her first port of call when initially considering her future career options:

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<sup>50</sup> The University Admissions Centre's (UAC) Guide leads students through all available course options and the application process.

*...I think it was through that career's thing...we got all the pamphlets...I've still got the pile at home. So, when I have a 'oh what am I gonna do?' [moment] I go through all the pamphlets and look at what uni offers what...*

However, while the initial driver to look for post-secondary information was consistent across all four OISPs groups, once the students committed to the information search, their information sources varied considerably. Overall, both the Social Networkers and the Future Professionals had spent a substantial amount of time considering their post-school futures and had consulted multiple information sources. In keeping with their abundant digital, social and economic capital, the Social Networkers and Future Professionals availed themselves of all sources of potential career information. The Social Networkers' primary source of career information was the internet, with personal networks and careers advisors playing an auxiliary role. For the Future Professionals, personal networks, particularly older siblings, were the primary source of information, while they used their careers advisors and the internet to 'fill in their information gaps'. The students also benefited from a school curriculum that understood the importance of the careers department to their future success.

### **Sources of Career Information: Careers Advisors**

A critical aspect of the role of each school's careers advisor was their ability to shape their students' perceptions of success of various future career options. As Thomson et al. (2002, p. 338) argue, "...young people may be understood as being particularly vulnerable to the decisions of others..." well into their late teens. Therefore, careers advisors through their actions, words and practices could profoundly influence their students' futures. As will become apparent in the following discussion, the differences between the careers advisors at Peckham and Pineridge compared to those at Coventry and Glencross was profound. Most of the careers advisors clearly had their students' best interests at heart (although some of the practices overseen by Sharon at Glencross were obstructionist in nature). Still, there were significant differences between the schools in how they defined the scope of their role in their students' future. The resources available to careers advisors both online and offline also mattered, as did the allocation of time to share these resources with students and their parents. For instance, both Susan at Peckham and June from Pineridge conducted fortnightly

timetabled careers lessons throughout Year 10. June outlined the purpose of these lessons at Pineridge:

*We do...fortnightly careers lessons...say 20 lessons each year...we talk about options and look into their [students'] skills and abilities...a range of activities that get them thinking about what they might like to do [after school] ...*

These fortnightly lessons permitted the students at Peckham and Pineridge the structured time to explore their future opportunities online. The high level of assistance given to these students also extended to university scholarship applications. For instance, Susan organised for a representative from every Sydney-based university to visit Peckham twice a year. She explained the purpose of these visits:

*...I have them [the universities] come out separately and do a scholarship roadshow, which is just about their scholarships and what they involve, what they are looking for, and how to do them [apply]...*

Susan also had an intimate knowledge of the application process for each of the available scholarships. She believed it was her job to assist every interested student individually with their scholarship applications:

*...if I have 156 [students] apply for university, 154 will get in, and a lot of them apply for scholarships...some of them apply for eight or nine scholarships, and I help them edit every single scholarship application...*

The level of support that Susan provided to her students regarding scholarships was beyond anything that Traditional Job Seeker Zoe, the aspirational university student from Coventry, discussed in the previous chapter, had received. Zoe believed that she required an ATAR of 95.5, a new school record, to gain entry to her desired course at university. However, as Zoe attended Coventry, a school the university in question recognised as disadvantaged, she qualified for the F24<sup>51</sup> scholarship, which would see 10 points added to her ATAR, meaning

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<sup>51</sup> An acronym.

Zoe only needed to achieve an ATAR of 85.5. Yet, both Zoe and Estelle, the careers advisor at Coventry, were unaware of this scholarship option. Susan's support in getting as many of her students not only into university but on scholarships clearly put them at a considerable advantage over the students of a low SES, such as Zoe, who needed to actively seek out and complete this process online themselves. Further, the willingness of universities from across Sydney to run these scholarship roadshows is an example of the "concours" of institutionalised cultural capital based on Peckham High School's name (Bourdieu, 1997, p. 51). In this, the universities are acknowledging the "credentials" of the students at Peckham, based on their experience with past students from the school (Bourdieu, 1997, p. 51). Thereby, the academic qualifications<sup>52</sup> obtained from Peckham are recognised as a guarantee of competence and consequently hold extra weight over students from non-selective schools.

The students and the careers advisors at Peckham and Pineridge both reported considerable parental involvement in their children's future and in the broader school community. As a result, Susan and June offered parents a much greater opportunity to engage with both the school and their child's future careers and study options. While Coventry and Glencross no longer held annual career information evenings for parents, Susan clarified that at Peckham these occurred, "*at the beginning of each Year 10, 11 and 12...[and] most of our parents do come to that...*". June, at Pineridge, also held annual career information evenings in these critical years, where the students and parents "*come together*". The higher level of involvement of the parents at these two schools is not only due to a greater number of opportunities to engage with the school but is an example of how parents of a high SES cultivate their child's practices beyond the household.

### **Sources of Career Information: Personal Networks**

A further point of difference observed across the four OISPs groups was the different levels of parental engagement in student career decisions more generally and in students' online career information searches. The university aspirational Traditional Job Seekers remained

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<sup>52</sup> In this case, the Higher School Certificate (HSC), awarded at the completion of Year 12 studies.

almost exclusively reliant on their parents for career guidance, and when they did head online, apart from Hamilton from Coventry, they conducted their online searches alone. Future Professional Sera, whose mother was an IT teacher and helped her search courses online, offered a contrasting experience to that of the Traditional Job Seekers: *"...I've just been looking up different universities in the area and researching them...mum's been to university... and she's like [helping] search..."*. Future Professional Mary's mother, a practising psychologist, was also involved with her daughter's online course information searches: *"My mum found this really cool course... for hospitality management, which sounded really cool...it's a management school...she thought I should go..."*. This assistance offers another example of how parents of a high SES cultivate not only their children's digital practices but also, concurrently, their university aspirations.

Parental university experience strengthened this cultivation amongst the Social Networkers and Future Professionals. As revealed in the survey data, 65% of the parents of the students at Peckham and Pineridge had professional careers, of which a bachelor's degree is a prerequisite. Yet, several of the students at Peckham and Pineridge interpreted this parental cultivation more as parental pressure. This finding reinforces that of Kim and Schneider (2005), who found that concerted cultivation works best when both the parents' and the students' goals are aligned. When these ambitions deviate, as was the case with several of the Social Networkers and Future Professionals, students will source their information elsewhere. For instance, Peter, a Future Professional from Peckham, had parents who expressed a strong desire for him to get into medicine: *"...my parents have pushed [me] to do the UMAT<sup>53</sup> this year, to try and get into medicine"*. As Peter was not completely sold on the idea of studying medicine, he turned to his older brother for the bulk of his future career information, rather than discussing it with his parents. For several of the Future Professionals at Peckham, the reliance on older siblings was likely due to them being first-generation children of migrants, albeit skilled migrants, in most cases. Thus, their siblings would have a better knowledge of the Australian education system. Indeed, while many of these students discussed feeling pressure from parents, very few discussed their parents as their primary career information source. As a result, another major finding in this study was the high

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<sup>53</sup> The Undergraduate Medical and Health Sciences Admission Test.



number of students, particularly amongst the Future Professionals, who turned to older siblings for career information.

Peter offers a perfect example of how the experience of his older brother had both inspired him and buffered him against the parental pressure to study medicine that he outlined above:

*My brother went to uni doing physiotherapy, and he got me into his practicals [classes]. That intrigued me [sic] into doing physiotherapy myself. After he had [finished] his four-year course, he worked at a hospital as a physio. He said he was enjoying that...so I'm [now considering] health science...he's pretty much influenced me into health-related stuff...now he's doing medicine in Queensland, so that's also an option...*

Peter's older brother served as a compelling role model, having navigated his way through university into employment and eventually graduate medicine. Due to his brother's tertiary experience, Peter, while facing considerable parental pressure, nevertheless felt unperturbed about potentially missing out on direct entry to medicine: *"...I don't mind getting into medicine, but if I don't that's ok because there's many other options out there..."*. Here Peter is benefitting from being the second in his family to attend university. In general, first in family students, in Australia, find university difficult no matter what their family SES, particularly when the young person comes from a LBOTE, as was the case with Peter and his brother (Southgate et al., 2014). Future Professional Chad, from Pineridge, was also inspired by his older brother, another who was first in the family (from a skilled migrant family) to attend university in Australia. Chad, like Peter, was a first-generation Asian-Australian whose parents had likely come to Australia through the skilled migration program. Chad was aware of his brother's influence on his own future career decision making. For instance, when asked when he started to think about going to university, Chad replied, *"...it was when my brother got into uni and when he started settling into what he wanted to do...about Year 9..."*. Because of his brother's influence, Chad was now aspiring to a degree in *"...economics and computer science..."* at the same university as his older brother. Considering that neither of Chad's parents went to an Australian university, his older brother's guidance proved critical.

Both Peter and Chad's university aspirations were no doubt also fostered by the strong academically supportive environments at Peckham and Pineridge.

Of the Social Networkers, only Marion discussed a family member, her older brother, assisting in her career decision making. For Marion, her brother was instrumental in helping her feel confident in her decision to pursue a career in music: "*...my brother goes to Novus University...he does the music course...that's why I know about that...I know the teachers there are good, and I know it's close to home...*". For each of these students, an older sibling with university experience proved an incredibly valuable source of information, highlighting the manner in which family networks continue to operate as powerful forms of social capital. Indeed, for several of the Future Professionals, older siblings were the primary source of career information. While personal networks were also the primary source of career information amongst the Traditional Job Seekers covered in the previous chapter, the personal networks of the Future Professionals had experience not only in navigating the tertiary education systems but also graduating into professional roles. When combining these strong personal networks with engaged careers advisors, the layers of educational advantage the young people at Peckham and Pineridge experienced become clearer.

### **Sources of Career Information: The Internet**

Due to their abundant digital capital, both these groups also used the internet as a source of career information. For the Future Professionals, this was done to confirm and supplement the advice of their personal networks and careers advisors. As the Future Professionals were largely focused on pursuing skilled white-collar and professional careers, such as in the areas of medicine, science and engineering, with well-established educational pathways, their information requirements were in many ways more straightforward than the Social Networkers. As discussed above, many of their career information needs were met by their older siblings and careers advisors, thus they used the internet to simply fill in their information gaps. However, for the Social Networkers, the internet served as their primary source of career information. Marion, the Social Networker from Peckham, who discussed the influence of her older brother above, also detailed how she used the internet for career

information after her initial interest was sparked at a music workshop organised by the school:

*...I did a performance workshop...at the [Sydney] Entertainment Centre through the Arts unit...a school thing...so then I went home and Googled all these people, like what they do and how you get into it...*

Through her advanced digital skills, Marion successfully located the key players within her chosen career field online and now “...follows [all] the record labels [and] the representatives from within [these companies] that are hard to find...”. It is these key industry figures Marion believes may assist her in breaking into the competitive music industry. Thus, Marion sends them all direct invites via Twitter to view her weekly YouTube videos: “...I tweet out about my videos and...communicate with other content creators...”. Paul, another Social Networker from Peckham and, like Marion, with a strong interest in pursuing a career in music, discussed an almost identical career information process. After initial career information exposure offline, Paul had located an American website that,

*...although it was American, it was about becoming a musician, to work in any field of music...it had some really good things on it, that were useful for a person [like me] who wants to become a musician...*

From this website, Paul had successfully connected with other international users via social media: “It can be really hard to do [work in the music industry], so that was quite useful to be able to talk to people in such an independent field”. It was presumably to these online contacts that Paul sent links to his demo videos. The discussion with Marion and Paul confirms previous research which demonstrates that the internet can serve as a substitute for a deficit in offline information resources in relation to careers and that the ability to derive this benefit remains SES dependent (Robinson, 2011; 2012; 2013). Without a doubt, Paul and Marion’s reliance on the internet for career information was also necessitated by their decision to keep their career aspirations to themselves. Paul did this because he believed that his goal of becoming a musician would not be encouraged at academically selective Peckham:

*...I don't really talk to people [about it] much...I know what I'm doing is a lot different to what a lot of people [at this school] are doing, and also, we're looked down upon when you go into music because it is very independent and often low pay...*

Marion also exercised caution when sharing her career aspirations:

*I did tell people, because it's the kind of thing when you find something that you're really passionate about you wanna share it with everyone...but the school is more focused on medicine...so I can't tell the careers advisor...I want to do a music course...so I don't need an ATAR<sup>54</sup> ...the school's focused more towards academic success...that's because we're an academic school, that's what we do, but for me personally, that's not what it's about...*

This presents an interesting juxtaposition whereby these Social Networkers kept their career choices to themselves due to a fear of their school pressuring them to pursue more traditional career options. This contrasts with the tertiary aspirational Traditional Job Seekers from Glencross, who kept their university aspirations to themselves due to their careers advisor's propensity to discourage university study altogether. So, while there was abundant support at both high-SES schools, this support, particularly at Peckham, was rather narrowly directed toward 'more acceptable' career pathways. Therefore, these Social Networkers, faced with offline networks devoid of supportive individuals, turned to the internet to create new professionally focused relationships to fill in their information gaps. Through their online contacts and support networks, both Paul and Marion were confident of success in their future career choices. The other Social Networkers, Henry, Carmen and Brendan, also expressed this same feeling of belonging online. By increasing their network of professional connections, the Social Networkers went about independently accumulating greater social capital. This extensive network of friends, followers and useful professional contacts online not only helped with career information but also potentially in connecting them with future employment opportunities.

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<sup>54</sup> The Australian Tertiary Admissions Rank (ATAR) is the primary criterion used for entry into most undergraduate courses in Australian universities.

## Conclusion

This chapter has highlighted the considerable advantages these students of a high SES accrued over time through access to substantial digital capital both at school and at home. The strong ICT infrastructure at Pineridge and Peckham and the incorporation of the digital into the curriculum and daily teaching practices helped the Future Professionals and Social Networkers develop the most advanced digital skills of all the OISPs groups. Given the considerable economic resources that the parents and school community offered these students, it is clear why they were far better positioned compared to the Traditional Job Seekers to deal with the transition from the DER to the BYOD in their schools. The abundant economic capital of these high-SES families allowed them to regularly upgrade their digital hardware and software, thus overcoming the device divide associated with the first level digital divide of supply. Further, the type of digital device these young people use daily, particularly at school, mattered. The Social Networkers and Future Professionals were supplied with, and preferred to use, their laptops, while the Traditional Job Seekers were heavy smartphone users. Being on the right side of this device divide also contributed to the development of the advanced digital skills of the Social Networkers and Future Professionals. The digital skills of these two OISPs groups were successfully embodied in a slow and continuous manner by parents over many years, thereby overcoming the second level digital divide.

The Social Networkers had also overcome the third level digital divide. For example, through their strategic digital skills, the Social Networkers had achieved the critical shift from merely *consuming* online content to *producing* it, demonstrating a greater level of digital capital that enabled them to form useful professional contacts online. It is only through these professional contacts and their advanced strategic digital skills that the Social Networkers were potentially able to convert their embodied digital capital into future economic capital. The conversion of digital practices into tangible and quantifiable offline outcomes, such as employment and income, often presented as possible for all young people in the 'digital age', is something that is extremely difficult to achieve, with the benefits continuing to be heavily weighted toward high SES (Scheerder et al., 2017) young people. The scarcity of acquiring the advanced digital skills required to achieve positive offline outcomes is a further mechanism

through which families of a high SES maintain and reproduce their class position. It is not simply by chance that the Social Networkers have overcome the three levels of the digital divide, but rather through a combination of their parents' concerted cultivation, institutional ICT investment and high teacher digital literacy and expectations that seemed to guarantee the success of these young people.

The Social Networkers and Future Professionals also benefited from the institutional cultural capital of their respective schools. This is an example of a type of institutionalised cultural capital known as a "certificate of cultural competence" (Bourdieu, 1997, pp. 50–51), whereby the reputation of Peckham and Pineridge and the positive experiences of the participating universities with past students confer an aura of competence, allowing these students to access scholarships more easily than students of a low SES such as the Traditional Job Seekers. It is this institutional transmission of embodied and objectified digital capital which contributes to the ongoing digital inequalities evident amongst the students of diverse socio-economic backgrounds in this study. Similar inequalities were apparent at the regionally based Bradford High School, the final school examined in the next chapter.

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## Chapter 5: Bradford High School – A Patched-Up School

*...it's very diverse...in some senses it's looked at as a patched-up school...there are very wealthy people...[and]...students in community housing*

Robert, Bradford High School's Careers Advisor

This chapter focuses on the fifth and final school in the study, the regional Bradford High School. Bradford's inclusion adds a unique regional perspective and, as captured in Robert's quote, it was also the only school to offer a blend of students from a wide variety of socio-economic backgrounds. These unique characteristics justify the decision to commit a stand-alone chapter to this one school and offer a fascinating and at times challenging final point of comparison to the four urban schools already considered. A total of 65 Year 11 students from Bradford completed the Student Online Practices Survey with eight of these students and the school's careers advisor, Robert, being interviewed. The varied SES of the students at Bradford was made evident when the eight students interviewed were divided into three OISPs groups.<sup>55</sup> As mentioned in the previous chapter, Kate, an aspirational pilot, was classified as a Future Professional, while Brendan, an affluent party animal with an abundance of digital and social capital, was a Social Networker. Both these students were of a high SES and benefited from their abundant family economic resources, which allowed them to overcome the substantial digital challenges discussed by the other six interviewees. These students, Amy, Alison, Gemma, Kris, Luke and Wade, were of a low SES and, together, they constitute the fourth and final OSIP group, the Creative Dreamers. Robert's inclusion of the high-SES students, Brendan and Kate, as well as Wade and Gemma, who lived in community housing and could be classified as rural poor, demonstrates a fulfilment of his promise to select a group of students that reflected the lived reality of the entire student body at Bradford. Among the six Creative Dreamers, Amy, Gemma, Kris and Wade continued to experience either limited or no internet or phone reception at home, with Alison and Luke also experiencing device and supply issues. Thus, the Creative Dreamers remained stuck on

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<sup>55</sup> As mentioned in the Bradford school profile in Chapter 2, Robert carefully selected eight students based on their varied social circumstances, to truly reflect the diverse experiences of the larger cohort.

the first level digital divide of access, a result that challenges the assumption evident in much educational policy of universal connectivity amongst young people in Australia.

The fact that most of the students interviewed at Bradford had yet to bridge the first level digital divide makes conversations around measures of digital capital, such as use of devices and the embodiment of digital skills, problematic. Hence, the format of this chapter varies slightly from the previous two chapters, with a greater focus on the students' access issues, career aspirations and complex social environments. Even though access was variable, these students still reported daily interactions with ICTs, such as Luke who spent on average "6–7 hours per day" gaming offline on his family's ageing desktop PC. Luke, however, would prove to be an outlier in terms of total usage time of ICTs among the Creative Dreamers with most reporting limited usage at home and school. Like the Traditional Job Seekers in Chapter 3, their usage was heavily focused on entertainment, social and gaming pursuits. This digital usage, combined with a lack of access to the internet and devices, in addition to little parental cultivation of beneficial digital practices, meant the Creative Dreamers had the most basic digital skills of all the OSIPs groups. Indeed, they discussed very few OSIPs, in terms of their educational requirements more broadly as well as for career information. Instead, as with the Traditional Job Seekers, they remained heavily reliant on personal networks, principally their parents, but also their careers advisor, Robert.

The Creative Dreamers would also express the vaguest plans in terms of their career and study ambitions. Their career aspirations fluctuated widely throughout their interviews from aspirational and artistic careers, like the Social Networkers, to more traditional blue-collar roles, such as those expressed by the Traditional Job Seekers. Given the compounding factors of career uncertainty, a lack of digital, social and economic capital, and their regional location, it is not surprising that overall the Creative Dreamers expressed the most anxiety and stress about their future. The fact that the experience of the six Creative Dreamers, all of a low SES, were so contrary to their two high-SES classmates provides additional evidence of the impact of SES on student digital capital, OSIPs and viable career aspirations. The experiences of these students *at the same school*, who varied only in terms of their SES, not only highlights the profound digital inequalities present amongst the Bradford student



population but also, through the comparison with the four other schools, illustrates a considerable regional/urban digital divide.

### **Bradford High School's Digital Infrastructure**

*The school in a way has kinda tried to be like 'oh yeah...embrace technology'...but they haven't really gone in the right direction.*

Amy, Bradford High School Student

Despite having a significant number of students of a high SES enrolled at the school, Bradford shared none of the ICT resourcing of the two urban high-SES schools, Peckham and Pineridge, in terms of both hardware and software. As Amy describes above, while token digital infrastructural adjustments, such as the rollout of the school's Wi-Fi, had occurred, the students reported very little digital engagement in their classrooms and across the school. Overall, the ICT facilities at Bradford were most like those experienced at Glencross and Coventry, the two schools of a low SES. As previously touched on in Chapter 3, Bradford, like Glencross, had also attempted to repurpose returned student DER laptops to compensate for the shortfall in functioning ICT equipment at the school. Also similar to Glencross, many of these devices no longer worked. Instead they remained dormant, collecting dust in the corner of staff rooms and storage cupboards.

Unlike the students at Glencross and Coventry, however, most of the students at Bradford reported receiving a government-issued DER laptop in Year 9. Yet, even here, there were inconsistencies in the allocation of these devices to students, as can be seen in three Creative Dreamers missing out. While Wade and Luke had changed schools during Year 9 and had therefore missed out due to bad timing, it was never made clear why Kris, who had been a student at Bradford since Year 7, was also not issued a DER laptop. The impact of this uneven allocation of laptops on the three other Creative Dreamers was profound. For instance, for Gemma, the DER laptop was the only high-functioning digital device she owned, other than her old smartphone. Even though Gemma used her smartphone more often, she admitted that she used her laptop mainly for educational purposes at school and at home, "...I bring

*my laptop [to school] ...because I'm lazy and don't like writing...*". The fact that Gemma was using her laptop almost exclusively for educational purposes, a practice shared by her high-SES classmates, Brendan and Kate, and the students at Peckham and Pineridge, is significant. It demonstrates that an educationally focused digital orientation can be fostered given the appropriate ICT supply and school-based training, even when home access is restricted.

Bradford's broader ICT resourcing, however, was ageing and limited. This condition is captured best in Amy's discussion of classroom digital interactions: *"We have smartboards all around the school, but they're ridiculous and dodgy and...they're just pointless, they don't work..."*. Bradford, as with all four of the other schools, also had issues with their Wi-Fi connection, which was universally reported as slow and unreliable by students and teachers. Brendan, the Social Networker, however, had circumvented his reliance on the school-based network: *"...we [I] don't need [the school] Wi-Fi, we're all got our own data"*. Brendan's ability to use his data was likely due to his more expensive mobile plan having a generous or unlimited monthly data allowance. For the low-SES Creative Dreamers, the opportunity to overcome limited home internet access by logging into the school's Wi-Fi remained largely out of reach. Brendan's ability to overcome this access barrier again highlights the educational and informational advantages that students can accrue given their greater digital capital, a direct result of their family's economic resources. Bradford also had a separate Seniors Learning Centre in the school library, like that at Pineridge. However, unlike the comprehensive ICT resourcing present in this area at Pineridge, the available digital infrastructure at Bradford was left wanting. As low-SES student Wade pointed out, whilst this area had *"all pillows and shit"*, it lacked access to reliable computer terminals. Although seniors could borrow laptops, they could only be used in the library and consisted of the unreliable returned student DER devices, hardly ideal for the complex OISPs of senior-year students.

The main critic of Bradford's Wi-Fi network and digital infrastructure more generally was the school's careers advisor, Robert. Similar to the conditions at Glencross and Coventry, Bradford's teachers also lacked critical ICT resourcing. As Robert outlined,

*...all the staff rooms...only have two computers or three maximum, and there are eight or nine teachers to each staffroom... [If the Wi-Fi drops out] ...they've got to put it on a thumb drive and take it somewhere else [to print] or [take] it down to the front office and print it from there...*

Bradford's teachers' lack of consistent access to reliable digital devices and a stable Wi-Fi connection no doubt contributed to their reported lack of digital skills and classroom ICT engagement, which Amy commented on: *"I think some teachers are pretty good with all that [ICTs], but a lot of them are really not technologically savvy..."*. Wade mentioned that many teachers still preferred *"hard copies"* of essay and assignment submissions. However, unlike the students at Glencross, where these assessment items were permitted to be handwritten, the students at Bradford were requested to submit typed copies. Given the established critical role teachers and schools play in the development of young people's digital skills (Eynon & Malmberg, 2012), this limited or varied use of technology in classrooms and staffrooms is concerning and would no doubt adversely affect the students' development of educationally focused digital skills, potentially influencing their career opportunities and their perceptions of gaining successful entry into higher education.

The limited use of ICTs in classrooms at Bradford, however, may have been the result of teachers merely reflecting the wishes of their students, as several of the Creative Dreamers expressed disinterest in ICTs altogether. This finding was only discussed by students in this OSIPs group; it may have been a result of their lack of digital access and supply, or perhaps their relaxed regional lifestyles. Whatever the reason, it was clear that these students were at times ambivalent toward ICTs. For instance, the Creative Dreamers were much more likely to claim that they could easily live without technology, compared to both their high-SES classmates, Kate and Brendan, and all their city-based peers. Kris expressed this sentiment the strongest: *"...Yeh, I could do that [live without technology], I don't depend on it...it's not really a necessity...it's just something that's there to use...I don't depend on it..."* Compare Kris's response to that of Brendan, the high-SES Social Networker, when asked the same question:

*I don't go anywhere without this [his iPhone] ...I probably don't go half an hour without looking at it...it's the last thing I do before I go to sleep and the first thing I do in the morning...*

These contrasting relationships with technology are considered below in a brief discussion of the two high-SES students, Brendan and Future Professional Kate.

The digital capital and career aspirations of these two students closely resembled their high-SES city-based peers. They experienced none of the access, supply and connection issues reported by their low-SES classmates, the Creative Dreamers. For instance, only the families of Kate and Brendan had the financial means to live in the expensive township, where high-speed broadband access was available. Compared to many of their low-SES peers, who lived outside of town, Kate and Brendan had a much more stable internet connection. The combination of consistent high-speed internet access with regular digital hardware and software upgrades meant they could develop more advanced digital skills and start to embody an educationally focused digital orientation. Predictably, then, Kate and Brendan were the only students from Bradford to refer to online information searches as “easy”, the exact word Andrea, a Social Networker from Peckham, had used to refer to her digital supply and use.

### **Bradford's Future Professional – Kate**

*Mum used to be a pilot...and my dad studied architecture.*

Kate's advanced *informational skills* (van Deursen & van Dijk, 2010) clearly marked her as a Future Professional. This skill level was evident in her finding university websites “easy to navigate”, and in her confidence in pursuing career leads online: “I was told by a friend's brother, who's actually going to the Australian Defence Force Academy (ADFA)...to check out the website and also like certain parts of the website...”. Kate's device of choice on which to conduct these online information searches was her laptop. Kate's preference for her expensive, and arguably more educationally relevant, laptop over her smartphone, as captured in her comment “...I could live without my phone... [but I'm] not sure about the laptop”, is further reflective of her categorisation as a Future Professional. Also, like the other

Future Professionals at Peckham and Pineridge, Kate's parents regulated her ICT usage from a young age, actively engaging in practices of concerted cultivation. For instance, Kate reported her parents as being *"very technology-driven...after architecture, my dad decided to go into graphic designing and mum with like [studying] IT, so they've always got technology with them"*. As a result, they were very supportive of Kate's use of ICTs in her senior years.

Kate's parents were also instrumental in her career choice, encapsulating how parental role modelling continues to influence young people's career and education aspirations. While the Future Professionals at Peckham and Pineridge primarily reported turning to older siblings for career advice and inspiration, Kate's career goal of becoming a pilot in the Australian Defence Force (ADF) mirrored her mother, a former ADF employee. Kate also offered an illustration of how families with the required economic capital can assure students' critical career advantages. For example, when asked if her parents supported her decision to become a pilot in the ADF, Kate replied, *"Yes, very much so, I've had many flying lessons"*, which her parents had paid for. As a result, Kate had recently qualified for her commercial pilot's licence. So, when asked if she had any contingencies were she to miss out on a place at the ADFA, her answer was quite relaxed: *"...if it doesn't work out, I have done my first solo in flying and I can easily pick it up [flying] anywhere else"*. The certainty and commitment that Kate demonstrated toward her career goal had also seen her receive excellent support from her teachers. She explained:

*I spoke with Robert [the school's careers advisor] briefly about it, and he encouraged it and told me a bit about it and then when I was selecting subjects for this year [Year 11] the deputy principal...talked me through it and she told me everything I needed for it and how to get in...she helped me out a lot.*

As with students across the four other schools, because Kate knew what she wanted to do after school, she received considerably more support than her classmates who remained non-committal or unsure regarding their future careers.

It was Kate's career certainty that was the only real variation between her and the rest of the Future Professionals who, as discussed, while professionally and university focused, had yet

to lock in any concrete plans. Still, like the rest of the students in this OISPs group at Peckham and Pineridge, Kate had availed herself of all sources of career information, including her parents, careers advisor and the school's deputy principal, using the internet to successfully 'fill in' her information gaps. Kate's certainty over her future career also allowed her to be much more optimistic about her future. This was another trait she shared not only with her fellow Future Professionals at Peckham and Pineridge but also with Brendan, the Social Networker from Bradford, although their future goals could not have been more divergent.

### **Bradford's Social Networker – Brendan**

*Every festival I lose a tooth and my phone.*

Brendan was the quintessential Social Networker. Like his peers at Peckham High School, he had embedded the digital into every aspect of his life, a process facilitated by his high SES. Brendan had certainly embodied beneficial digital practices and characterised his digital supply as regular and unproblematic. For instance, he commented that *"I got an iPhone in Year 8, and I've always just gotten new iPhones when I lose them...I've lost plenty too, which sucks..."*. Like his fellow Social Networkers, Brendan attempted to project an air of nonchalance regarding his advanced digital skills, stating that he only used his devices for *"girls and Snapchat"*. He went on, however, to discuss his advanced digital skills and his self-regulation. In Brendan's case, this involved differentiated ICT use on his various digital devices:

*I still use it [the government-issued DER laptop] ...for like not getting distracted and just doing work...so I use that as my work computer...and the other one [personal Apple MacBook Pro] just as my home computer.*

Self-regulation, such as that described by Brendan here, was most commonly reported by the high-SES students. This practice, cultivated by parents, contributed to Brendan's quite sophisticated embodied digital capital.

As with Paul and Marion at Peckham, Brendan had an extensive network of connections online, both locally based and overseas, with many of these contacts made during his trips to

the snowfields of Japan and New Zealand. Brendan cultivated and maintained these relationships exclusively online through his extensive use of social media. Thus, when discussion turned to opportunities for work, Brendan stated, *“I’ll be sweet...I know enough people...I’ll always have a job”*. Brendan’s career and future aspirations were also similar to the city-based Social Networkers, i.e. with a long-term focus on a rewarding and enjoyable career and a short-term focus on having fun. Brendan outlined these plans in some detail:

*I want to finish school...then go travelling...do three snow seasons [in Canada] like my dad did, just go live in the snow for ages and surf and party and do all that...my mum’s from Manchester [in England], so I can get a European passport, so I can stay there as long as I want, which will be pretty rad...just living it up...*

*“Living it up”* was a constant theme in Brendan’s interview. Indeed, he was leaving for a snowboarding holiday the following day: *“I’ve been to Japan and New Zealand [snowboarding]...this is the first time in the snow in Australia”*. Brendan’s ability to maintain a carefree and unrushed approach to life is common amongst young people of a high SES. For Bourdieu (1986, p. 48), the time Brendan was investing in accruing social and cultural capital over a prolonged period is a form of “self-improvement” that takes on a short-term personal cost in terms of potential lost earnings, that, in the long-term, is easily recouped.

Even though Brendan was planning an extended gap year, like his fellow Social Networkers, he still had no doubt that he would get into university when he was ready: *“...if I ever go to uni...I’d like to think one day I’d like to... [I’d] do physiotherapy”*. Brendan’s confidence toward future university study, despite his regional location, is likely the result of his father’s strong educational ethic. His father, a former high school teacher who had studied education at a Sydney-based university, was experienced in navigating not only the tertiary sector but also the challenges of moving to the city to undertake a period of study. The certainty expressed by Brendan and Kate regarding their future careers and their digital capital in both its embodied and objectified forms were in stark contrast to the six other students at Bradford, who together constitute the final OISPs group, the Creative Dreamers. So significant were the differences between these two students and the Creative Dreamers that it was difficult to believe they attended the same school.

## Bradford's Creative Dreamers

*For all I know I could be an astronaut.*

Luke, Creative Dreamer, Bradford High School

As with the Traditional Job Seekers from Glencross and Coventry, Bradford's Creative Dreamers were comprised entirely of students of a low SES. This, however, is where the similarities between these two groups end, as the six Creative Dreamers, Amy, Alison, Gemma, Kris, Luke and Wade, constituted a unique group of students with distinct digital circumstances. The distinctive nature of this group was evident in their career aspirations, which fluctuated wildly throughout their interviews. This was exemplified by Luke, who skipped from a fantasy career, such as the aforementioned "astronaut", to the vaguer "maybe music", to the traditional "something in IT". It was the presence of these artistic, expressive and highly aspirational career ambitions which led to these students being termed the Creative Dreamers. As outlined briefly above, this group's digital capital and OISPs were also unique. Certainly, the level of social and digital disadvantage shared by these students, particularly Gemma and Wade, was especially dire. Their socio-economic backgrounds combined with their regional location meant several of these students lacked even basic home internet and phone connection. As Amy shared:

*At my house? The entire area is a dead zone...I live in like Kangaroo Creek<sup>56</sup> area so like the entire place...there's just no reception...*

Amy's household digital situation was the more common experience shared by this group. Consequently, due to their lack of home and school digital access, their embodied and objectified digital capital were significantly affected.

Perhaps due to their lack of access and ongoing connection issues, the Creative Dreamers were the only OISPs group to express ambivalence toward both the online environment and digital devices. For example, Amy, in response to the question of surviving in an imaginary

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<sup>56</sup> Kangaroo Creek is a pseudonym.



world without technology, replied, “...definitely...I didn’t grow up with having an iPod or iPhone or computers and stuff like that...I just never really had them”. Yet, despite this disinterest and the digital challenges in their home environment, they were all performing well academically. Due to their challenging digital circumstances, the Creative Dreamers reported using the internet very little for education and OSIPs. Hence, their digital skills were classified in terms of van Deursen and van Dijk’s (2010), internet skills as the most elementary “operational skills”. As outlined in Chapter 3, the defining feature of this skillset is the ability to execute only basic online searches, mainly through search engines such as Google. However, these students lack contingencies and alternative online search strategies if these initial results prove insufficient. Given their lack of digital skills, the Creative Dreamers remained heavily reliant on personal networks, particularly their families and teachers, for career information. However, unlike the Traditional Job Seekers whose personal networks fostered more pragmatic career aspirations, the parents of these students from Bradford seemed to encourage their children to ‘dream big’ when considering their future aspirations. Consequently, the career ambitions expressed by the Creative Dreamers included actress (Amy), singer/music festival events manager (Alison), music producer/motorsports (Kris) and radio DJ (Wade), with Gemma and Luke mostly uncertain. Thus, the future career aspirations of the Creative Dreamers were, in fact, most like the Social Networkers. However, unlike these students, their lack of digital and social capital meant these dream careers remained highly aspirational.

Fantasy occupations such as these are commonly cited by young people in Australia before entering Year 10 (Baxter, 2017). It is a significant finding that the Creative Dreamers maintained these lofty career ambitions in the face of considerably constrained family capital. For example, despite her family’s limited economic resources, Amy still spoke of potentially moving to England to become an actress: “*I have been thinking...and it’s probably not going to happen but maybe studying abroad...in England*”, while Gemma spoke of becoming a psychologist despite replying “no” when asked if she had any interest in attending university or if she thought she stood a chance of getting in. The preservation of these fantasy career aspirations sets the Creative Dreamers apart, not only from the urban-based Traditional Job Seekers and Future Professionals but also from their high-SES classmates, Kate and Brendan, who in comparison remained much more traditional in their career aspirations. As Baxter

(2017) explains, many young people will grow out of these ambitions as they gain greater insight into the challenges and realistic opportunities available to them, as may have occurred with the Traditional Job Seekers.

The initial stages of this process can be seen in some of the responses of the Creative Dreamers, such as how Wade's career goal of *"I always wanted to be a radio host"* is tempered with a more traditional role working in construction, *"dad can get me work...labouring...get my tickets...like health and safety officer"*. Kris's career ambitions also fluctuated excitedly from *"music producer...or motorsports"* to *"I'm [currently] doing automotive...at TAFE...and I might be able to get an apprenticeship"*. However, this is not always the case, and of course some young people will go on to pursue these endeavours successfully. Yet this would probably be more the case for students of a high SES such as Social Networkers Paul and Marion at Peckham with greater cultural, social and digital capital to assist them to succeed. The preference for the fantasy careers expressed by the Creative Dreamers could go some way toward explaining the considerable gap between low-SES student aspirations and their actual university enrolment numbers. This is a phenomenon Bowden and Doughney (2010, p. 121) labelled the *"aspirations gap"* in their study on students in the western suburbs of Melbourne. The analysis presented here supports Bowden and Doughney's finding that the *aspirations gap* is more pronounced amongst students of a low SES who continue to struggle to make the connections between high school, tertiary study and their dream careers.

An additional characteristic of the Creative Dreamers was their strong desire from a young age to find part-time employment, with all except Amy doing so. Workforce entry further distinguishes this OISPs group from their classmates of a high SES, Kate and Brendan, who, consistent with most of their high-SES peers at Peckham and Pineridge, expressed no pressure or desire to work and thus were free to focus on their studies. Variations on the theme of *learning to work, becoming independent and earning money* were evident in discussions with all the Creative Dreamers, even Amy, who had only recently stopped working. Wade, for example, who had worked in a local supermarket since he was 16, expressed his motivations for working as *"...just to get money I guess...I don't like asking people for money..."*. Gemma echoed this sentiment: *"I work in retail...in a shop... [for the]*

...money". In this respect, the Creative Dreamers were like the low-SES Traditional Job Seekers from Glencross and Coventry.

Robert, the Bradford careers advisor, touched on the influence of parents in the forming of these dominant discourses and beliefs around work and becoming independent from a young age: "...the parents don't want their kids starting off leaving school, getting on the dole,<sup>57</sup> waiting for a job". Embedded within this parental desire is the importance of both gaining employment and standing on their own two feet as early as possible (Bok, 2010). Luke captured this parental pressure when asked why he had a part-time job: "the money...you need the money...but umm mostly because my mum pushed me like for it so much...you need money...". When asked why his mother was pressuring him to work while he was preparing for the HSC, Luke stated, "I dunno cause I'm nearly 17 in Year 11, she knows I'm going to want the money, and she's probably just sick of giving me money". Parental pressure was also the reason Alison gave for entering the workforce at a young age: "I work at a local takeaway café...I've had a lot of jobs...my mum never gave me money for jobs...no pocket money...it was more like you help around the house", adding, "...I just got to an age when I was like 'you're independent', if you want to get money...if you want to pay for clothes and [stage and cinema] shows, you can pay for it yourself". As the Creative Dreamers remained heavily reliant on their parents for career information, it is hardly surprising that they would embody their parents' rhetoric of working hard, making money and avoiding government support at all costs. Kris encapsulated each of these aspects well when he was asked about the lack of future work opportunities in and around Bradford:

*...if you're committed and apply yourself and if you're persistent, yes [you can get work], if you're uncommitted and expect everything to be handed to you...No...I think I can get work out of school...I'm a hard worker...*

These findings highlight how parents influence the digital practices of young people, and how they instil a particular orientation to higher education and work. The preference for work over study displayed by the parents of the Creative Dreamers represents a continuation of a

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<sup>57</sup> The 'dole' is a colloquial term for Government Unemployment Assistance, otherwise known as Newstart Allowance.

long-held ambivalence expressed towards education, particularly tertiary education, amongst low-SES parents (Reay et al., 2005). So, while the parents of the high-SES Future Professionals and Social Networkers encouraged a focus on study and tertiary entry, this was not the case with the parents of the Creative Dreamers. Therefore, like the Traditional Job Seekers, they were preoccupied with the necessities of earning money and supporting themselves rather than studying in their critical senior years of high school. The time allocated to work also took away time they could potentially have spent developing educationally focused digital skills. However, this process of digital skill acquisition was not merely dependent on the allocation of more time, it was also complicated by the Creative Dreamers' overall lack of objectified digital capital.

### **Stuck on the First Level Digital Divide**

*SOS only at my place.*

Kris, Creative Dreamer, Bradford High School

As captured in Kris's quote, the defining feature of the Creative Dreamers was their lack of consistent and reliable home internet access. For Amy, Gemma, Kris and Wade, their home internet access could be variously characterised as intermittent, unreliable and at times non-existent. Therefore, it was established that the Creative Dreamers had yet to bridge the first level digital divide of access. The two most commonly cited factors preventing Australian families such as these from accessing ICTs and the internet at home relate to affordability, i.e. being of a low SES and living in a regional location (ABS, 2016; Park, 2017b). Creative Dreamer Wade underscored the effect that this combination of issues could have on household digital access:

*I used to live in town, and I used to have it [an internet connection] all the time but [not] since we moved...we [now] live in the hills, so we don't have the internet all the time...we don't have enough money, or sometimes it isn't available, and we get bad coverage...*

Kris shared similar limitations with digital access:

*...black spot at my place...but that's because I live out of town...even with the TV reception...because where I'm located, there's a massive ridge literally a few K's [kilometres] that way...so yeah, the reception doesn't get over the hill...*

The connection issues of the Creative Dreamers were in stark contrast to the experience of both Kate and Brendan discussed earlier. Kate's family, who recently relocated to Bradford from Canberra, could afford to live in the township where an expensive high-speed broadband connection was available. Brendan also lived in the town with his university-qualified father and likewise expressed no access or connection issues. Given the substantial evidence linking home internet connection to better educational outcomes and digital skill development (Hargittai & Hinnant, 2008; Livingstone & Sefton-Green, 2016; van Deursen & van Diepen, 2013), the level of disadvantage the Creative Dreamers were experiencing is significant.

The lack of objectified digital capital amongst the Creative Dreamers was evident on multiple fronts and also included a lack of regular digital device supply. Thus, like the Traditional Job Seekers, a significant 'device divide' was evident between the Creative Dreamers and their high-SES classmates and the rest of the city-based Future Professionals and Social Networkers. Even the smartphone-dependent Traditional Job Seekers, while lacking in many regards, overall experienced better digital supply than the Creative Dreamers. Unlike their high-SES classmate, Social Networker Brendan, who discussed frequent iPhone upgrades and replacements, Creative Dreamers Wade and Luke expressed frustration with having to manage their outdated digital infrastructure. Luke, for example, owned an old iPhone that was unable to connect to the school Wi-Fi network: *"My phone can't get it [the school Wi-Fi] for some reason, but I know most [students] do with iPhone 5's [or newer], but my 4S can't pick it up"*. Luke's digital disadvantage was exacerbated by his laptop being broken: *"...my laptop stopped working... [so] I just use my [shared family] computer..."*. Wade provided a further illustration of the effects of having ageing digital infrastructure by commenting, *"I got...a little think pad, shitty kinda thing... at home... [it's] not the greatest"*. As a result of this outdated technology, Luke and Wade were both forced to preserve and adapt their digital usage as best they could. The lack of functioning digital devices, combined with no consistent

home and school-based ICT and internet access, no doubt also adversely affected the Creative Dreamers' digital usage and skill development.

Consistent with the Traditional Job Seekers, the Creative Dreamers' digital usage was also heavily focused on non-educational pursuits. Luke, for example, was a heavy gamer, "*...in a day...at least seven hours*". Ignatow and Robinson (2017) found similar usage patterns among students of a low SES, whom they found spend more time online engaged in social media and gaming and less time focused on educational activities. However, while the focus of Luke's digital usage was consistent with the entertainment-driven emphasis among the rest of the Creative Dreamers, his total usage time, while similar to the city-based low-SES students, was an outlier when compared to the rest of his group members at Bradford. Luke's daily usage also far exceeded that reported by the rest of his Year 11 cohort in the Student Online Practices Survey. For instance, only 3% of Bradford's Year 11 students reported daily usage similar to Luke, i.e. over five hours per day, Monday to Friday, with this increasing to 14% of students on the weekends. In contrast, 23% of students in the urban schools were on their devices more than five hours per day during the school week, increasing to 41% on weekends. Moreover, 35% of Bradford's students reported being online less than one hour per day, compared to 16% of the students at Pineridge, 12% at Peckham and Glencross and just 9% of respondents at Coventry. The considerable difference in reported daily usage time between the regional and urban-based student participants was one of the most substantial findings from the survey data. These significant differences reveal the profound relationship the city-based students have with their digital devices, and may also indicate that the lack of digital capital evident among the Creative Dreamers is representative of a broader trend among many of the students at Bradford.

Unsurprisingly, then, the Creative Dreamers discussed the most basic digital skills of all four of the OISPs groups. Their level of self-confidence online was also the lowest of all four OSIPs groups. Gemma, for example, said, "*I think I'm pretty bad with the internet and like technology*". Due to their lack of digital skills and confidence online, Amy and Alison did not find the internet useful for school work. Alison stated, "*I find the internet doesn't really help*", while Amy's usage was limited to Facebook and music, "*I use that a lot umm just music apps really, just music. I don't use it for a lot of other things*". If, as outlined in Robinson (2011;

2012; 2013), acquiring and mastering digital skills is a precondition for acquiring critical educational and career information, then these young people are at a considerable disadvantage.

Wade highlights how this disadvantage affects his daily digital usage. When asked whether he logged onto the school Wi-Fi, he remarked, *“I wish I could, but I don’t know how to”*. Given Wade’s lack of home internet connection, his inability to log onto the school’s Wi-Fi network reduced his opportunity to develop crucial digital skills such as OISPs and his access to beneficial educational and career information more generally. Wade’s inability to access the school’s Wi-Fi network is consistent with the findings in McConnell and Straubhaar (2015), who found that individuals who lack home access to the internet are the least likely to access free public or school-based Wi-Fi networks, even though they are the populations who would benefit the most from these access points. As McConnell and Straubhaar (2015) argue, merely offering free Wi-Fi to low-SES students is ineffective in expanding their internet use, particularly if they lack the digital know-how required to connect.

The narrow digital skills of the Creative Dreamers were further evident when inquiring directly about how they would search for information online for a school assignment. Gemma replied that she would *“probably...like, ask the internet...like Googling the answer [sic] straight away but then sort of finding relevant information from there”*, while Alison would *“do a lot of research online, like just Google...”*. Reflecting their classification as basic ‘operational’ internet users, the Creative Dreamers knew enough to, as Gemma put it, *“figure things out”*, but their basic digital skills meant that their online usage was piecemeal and limited to basic search operations. Additional evidence of this can be seen in Gemma’s description of how she gauges the trustworthiness of information sourced online: *“Umm if something, I dunno if it seems shitty, I won’t use it”*. Gemma’s approach of relying on visual cues and characteristics and Google to establish trust and credibility was nothing like the multifaceted methods used by the Social Networkers and Future Professionals, discussed in the previous chapter. As Robinson (2011; 2012; 2013) explains, young people such as those termed here the Creative Dreamers with a limited online focus are less likely to search the internet for information regarding their educational and career futures. Also reflective of Robinson’s (2011; 2012; 2013) finding was the fact that only Luke and Amy had visited a

university website looking for information. Although, as Luke explained, his visit was accidental:

*I think I visited the University of NSW...it was the University of NSW (UNSW) League of Legends SOC<sup>58</sup>...I don't know what that means...there was this guy out the front, and he's teaching like a hundred or so people on a game...I was a bit...like taken back.*

Although Luke had not used this visit to source any information regarding his potential future career options, Amy's visit, on the other hand, was much more directed toward educational and career information and seemed provoked by her father's recent enrolment at a regional university. Amy's interest in her university of choice had also been cultivated by a trip to visit her mother in Melbourne. During this visit, Amy and her mother had gone on a university tour, which, along with her father's recent experience and her own visits to the university website, had helped Amy conclude that "[university] seems like somewhere I'd really like to go". Amy's scenario highlights the importance of educational role models in the household and in nurturing a sense of 'fitting in' at university through practices such as campus tours (Reay et al., 2010). Broadly, though, digitally disadvantaged young people with only basic digital skills, such as the Creative Dreamers, face considerable barriers to career resources online that their more skilled peers, such as the Future Professionals and Social Networkers, do not. Due to their basic 'operational' skills, the Creative Dreamers, like the Traditional Job Seekers, remained reliant upon their personal networks, particularly their parents, for career information.

### **The Creative Dreamers' Career Information – Reliance on Personal Networks**

Like the students in the three other OISPs groups, the Creative Dreamers reported an offline source of information as being responsible for driving their initial impetus to look for future careers. However, unlike the other three groups, the Creative Dreamers, apart from Amy, did not use, nor had they visited, any online career information resources. Gamer, Luke, captured the dependence the Creative Dreamers had on their personal networks, particularly parents

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<sup>58</sup> League of Legends LOLSOC is a UNSW student community group.



and careers advisors, for all their career information needs in the comment, “...*they [my parents] ask me what I want to do...but they haven’t told me what I should do...like I don’t know what...and neither do my teachers*”. For most of the Creative Dreamers, their sole dependence on personal networks for career information may not have been a conscious choice. Rather, due to their lack of digital and economic capital, they were left with no other option.

Consequently, the Creative Dreamers, like the Traditional Job Seekers, were presented with far fewer career and educational options than the Future Professionals and Social Networkers who utilised multiple information channels, including those online. Robert, Bradford’s careers advisor, clarified just how limited the sources of career information were for these students: “...*perhaps two or three of the kids you spoke to this morning struggle to go on [afford] a local excursion...*”. As a result, Wade, Luke and Gemma had not attended any careers’ expos in neighbouring townships because the cost proved too prohibitive. Thus, the Creative Dreamers were left with only their family and teachers, including their careers advisor, as potential sources of career information. As discussed above in relation to Future Professional Kate, Bradford’s aspirational pilot, however, careers advisors and teachers can do little more than offer generalised advice to students who are unsure or non-committal about their future career choices.

Yet, the Creative Dreamers’ reliance on these personal networks was a highly rational one as, due to their limited digital access and skills, the internet is likely to yield no or low informational payoffs whereas face-to-face interaction produces immediate results. The Creative Dreamers’ reliance on such networks, however, did generally limit them to the personal experiences and narratives of their parents and other family members. As previously mentioned, only Amy had a family member with university experience. The recent shift in Amy’s family orientation towards education, and Amy’s resulting confidence regarding successful entry into tertiary study, confirms James’ (2002) finding that parental education levels are the most reliable indicator of realistic educational aspirations amongst young people. Indeed, comparing Amy’s support around tertiary education and that of Brendan and Kate with the rest of the Creative Dreamers highlights one of the ways in which the cycle of social reproduction is perpetuated through the education system (Bourdieu & Passeron,

1990). Indeed, Marks, Cresswell and Ainsley (2006) found that academic home environments, such as those discussed by the Future Professionals and Social Networkers, play a more significant role in maintaining socio-economic inequalities regarding young people's student achievements than material resources such as digital devices in the home environment.

A lack of educational guidance was also evident in discussions with the Creative Dreamers regarding the educational and career outcomes of their siblings. Wade's twin, for example, recently dropped out of Bradford:

*I've got a twin brother...he lives in Melbourne...he did go to this school...and then he left...I don't know why...he did this TAFE course, but he didn't like it...I don't know what he's really doing now...he doesn't do much.*

Alison's older brother also left school early, *"he dropped out in Year 10...he basically just went straight into the workforce...cafes and stuff"*. While Gemma's older brother left school before completing Year 10,

*...he had a TAFE course, and he had work, and he was offered an apprenticeship, but then he dropped out of both of those things as well...*

These early educational exits and lack of tertiary study among the parents and siblings of the Creative Dreamers was the norm and further suggested that reliance on these social networks for career advice would be similarly limited. The dependence on these personal networks included that for potential post-secondary employment, another unique aspect of the career information seeking of this group, as explained by Kris and Wade. Kris worked with his dad, *"yeah with my dad's little business...just a removalist"*, while Wade's father, as previously mentioned, was keen to get him into construction, *"dad can get me work...labouring"*.

A final unique aspect of the Creative Dreamers' career information seeking was how the phenomenon of habitus tug, previously discussed concerning the future of the Traditional Job Seekers, operated at Bradford. While the Traditional Job Seekers at Glencross and Coventry had felt pressure to remain close to home throughout their post-secondary studies and

careers, the Creative Dreamers felt compelled to do the opposite, i.e. in order to achieve academic and career success, they needed to leave home and Bradford. Robert, the school's careers advisor, explained that *"...a lot [of the students] will leave the area...one of the biggest issues for kids [finding employment] here is that they are isolated..."*. The result of this 'habitus push' was that several of the Creative Dreamers, despite not having access to economic capital, felt forced to leave town. Alison, for example, said, *"I'll probably end up going somewhere else to study cause I guess there aren't a lot of opportunities [here]...I don't really wanna get stuck in cafe work"*, like her older brother. Wade was hoping to move to Melbourne: *"[I'm] not staying in Bradford...if you want to work in hospitality [then stay] ...it's the only thing that goes..."*. Even Gemma mentioned moving away despite having no idea what she wanted to do: *"...I think most people move away...[I'm] thinking of going to Melbourne or something...everyone seems to go to Melbourne"*. Luke was also focused on leaving Bradford for any city with better employment opportunities:

*...it would be a lot easier doing things in Sydney, or the Gold Coast...you've got all these malls, all these shopping centres, there's all these jobs that you can do. [Bradford is] not a place to get a career in...*

Naturally, this habitus push expressed by the Creative Dreamers in the form of wanting to leave Bradford upon completion of high school, combined with their uncertainty regarding their futures and a lack of economic capital, was a source of substantial stress. This was evident in Gemma's poignant statement:

*...other people try to talk to me about it [leaving]...but usually, I just start crying or something...like teachers or parents, friends just anyone...I just don't want to talk about it [her future]...I avoid it...I don't know what I want to do...I have no clue.*

Unlike Kate, the Future Professional with her methodically mapped and supported educational and career pathway out of Bradford, Creative Dreamers such as Gemma were yet to make the connections between their career aspirations and the credentials required to make these aspirations a reality. Livingstone and Sefton-Green (2016, pp. 215–216) discuss the "troubling" and "self-knowing state of anxiety" students who are unsure about their

future selves feel. This anxiety was only exacerbated for the low-SES Creative Dreamers at Bradford when the expectation of their parents, classmates and educators was that they needed to move away to be successful.

## Conclusion

The inclusion of Bradford High School in this study added some important insights into the digital lives of young people living and learning outside major metropolitan areas. The experience of these students, particularly the Creative Dreamers, highlights that the daily digital realities of a sizable minority of young people are not adequately represented in education policy, particularly the BYOD, premised as it is on the assumption of universal digital connectivity. The comparison between the Creative Dreamers and the three other OSIPs groups, combined with the broader comparisons drawn along SES and geographic lines, outlines how traditional offline social inequities operate to maintain and exacerbate newer digital inequities. It also shows how varied these digital experiences can be even within local contexts, as explored here in the significant differences captured between Bradford's high-SES students, Kate and Brendan and the low-SES Creative Dreamers.

Yet, the Creative Dreamers did not *feel* disadvantaged. When Wade was asked if he felt worse off than other young people due to his lack of digital access at home and school, he countered, *"Not really...I go to the library a lot...like a lot of people...I borrow books...people still do that..."*. To Wade and the rest of the Creative Dreamers, their lack of digital capital *"seem[ed] to them to be the 'natural order of things'"* (Danaher, Schirato & Webb, 2002, p. 25). In fact, despite having minimal access to ICTs at home and school, these students were still performing comparatively well academically. This trait of the Creative Dreamers supports the findings of Finkel (2018, p. 9), who concluded that when it came to ICTs in education, *"technology for technology's sake is far worse than no technology at all"*. Further, it emphasises that traditional information sources, such as libraries, remain viable and essential for young people such as the Creative Dreamers, who continue to lack ICT access.

Of course, amid all this talk of digital capital, future student transitions and university aspirations there is a tendency to overlook the students' past and present and lose sight of

the substantial milestones many of these students have achieved on their journeys to Year 12. For many students, merely making it through another school day, despite the many obstacles they face at school and home, is already a considerable accomplishment. As Wade commented:

*...my dad...I don't think he even finished Year 10...my mum didn't finish Year 10...no-one in my family has finished Year 10...if I finish Year 12, I'm going to be the first person in my family to finish...*

For Wade, finishing Year 12 was all that mattered, and this achievement remains just as significant as the ones that will potentially come next.

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## Conclusions

*There is no simple picture of today's teens and ICT use, and no sound bite or slogan can provide a full picture of their attitudes toward mediated communication.*

Denise E. Agosto and June Abbas (2010, p. 8)

Six years on from Marc Scott's (2013) blog post 'Kids can't use computers', which in some respects served as the impetus for this thesis, many young people across NSW continue to lack the digital capital, to achieve optimal educational and online information seeking outcomes. As Agosto and Abbas (2010) indicate, the varied digital circumstances of young people are challenging to consider, with substantial variation across multiple measures of digital capital observed. Understanding the relationship between SES and digital capital is essential, as previous research shows that an inability to access prudent information online can affect a young person's educational and employment opportunities, which in turn can impact their long-term socioeconomic status (Jin & Cheong, 2008). Certainly, a significant minority of young people from a low socio-economic background continue to lack consistent and reliable digital access at home, in terms of internet connection and the necessary devices. This lack of home-based digital capital risks placing many young people, who may not have previously experienced social exclusion at risk of becoming members of a "new digital underclass" (Park, 2017a, p. 42). The more people, businesses and educational institutions digitalise their services and information, the greater the long-term costs to the individual and society of non or sub-standard connection particularly amongst young people. This situation is exacerbated by the often dire state of ICT infrastructure in many schools, as was the case in this study. Even so, in the broader Australian community, the digital natives proposition of the constantly connected and naturally tech-savvy young person endures. This view persists despite the concept consistently being discredited in academic literature over the past two decades (Bennett & Maton, 2010; Helsper & Eynon, 2010; Kirschner & De Bruyckere, 2017; Selwyn, 2009) and throughout this thesis.

Similar to the ongoing pervasiveness of the discourse of the digital native is the misguided belief amongst education policymakers that the first level digital divide has largely been

overcome (Harris et al., 2017). As indicated here, by pursuing school-based initiatives such as Bring Your Own Device (BYOD), governments are contributing to the continuance of this access divide. The replacement of the Digital Education Revolution (DER) program with the BYOD initiative has also contributed to a worsening of digital inequalities amongst young people given that their digital access, and digital skill development, are now dependent on their family's economic capital. As examined in Chapters 3, 4 and 5, policies such as these have the potential to further entrench social class differences in educational outcomes and broader digital and social inequalities. Hence, the broader context of this thesis is the continued underrepresentation of students of a low SES in the Australian tertiary education sector. Studies such as this are important because they highlight the inherent tensions between government policies, popular discourses and the everyday digital realities of young people.

### **Reconceptualising Digital Divides through Students' Digital Capital**

The exploration of students' digital capital conducted here contributes to the relatively new field of digital sociology, arguing that digital inequality should not be the preserve of digital specialists alone but rather that sociologists of education should be concerned with the broad range of societal outcomes connecting education and SES to critical life transitions. By delving into young peoples' digital capital in this manner, their digital access, usage, skills and sources of career information have been explored, combined with stakeholder perceptions of these digital practices and then linked to their potential post-secondary outcomes. One of the main contributions of this thesis is the identification of four unique student online information seeking practices (OISPs) groups: the Traditional Job Seekers, the Creative Dreamers, the Future Professionals and the Social Networkers. Of key significance is the extent to which the division of students into these four groups, regarding their OSIPs, digital capital and career aspirations, aligned with differences in their SES. These four groups also serve to highlight how divergent digital capital can occur amongst students attending the same school, as was evident at Bradford High School with its unique mix of three different OISPs groups, including a Future Professional and Social Networker and the Creative Dreamers.

The Creative Dreamers, only found at the regionally based Bradford High School, all from a low socio-economic background, had the lowest digital capital of all four OISPs groups. This group demonstrated that there remains a small but significant proportion of young people in NSW still lacking basic and consistent internet access at home. Hence, they remained stuck on the first level digital divide of access. Lacking quality internet and ICT access, they did not invest much of their time online in educational pursuits. Similar to the Traditional Job Seekers, their usage was heavily oriented toward social media, entertainment and gaming. As a result, they also lacked digital capital in the form of digital skills that could potentially provide payoffs in terms of their OSIPs. When these students did use online sources, they distrusted much of the content found, preferring more traditional sources of information such as teachers and books.

The lack of digital capital amongst these young people puts them at risk of being at an even greater disadvantage than previous generations, given the rapid and widespread adoption of digital means and methods throughout all facets of life, including education. As there is little commercial imperative to supply internet infrastructure into sparsely populated regional areas such as Bradford, it is unlikely that the market will *naturally* rectify these connection issues anytime soon. Exacerbating the lack of digital capital amongst the Creative Dreamers was the decision amongst some of these students to digitally *opt-out*, deliberately limiting their usage of ICTs, or expressing little interest in digital and online pursuits. Limited ICT use as outlined here comes at considerable cost in an increasingly digital world, particularly with many tertiary education providers making their services and information available exclusively online.

The Traditional Job Seekers also consisted entirely of students of a low SES from Glencross and Coventry High Schools. They reported consistent internet connection at home as well as access to an abundant supply of cheap digital devices. However, while several of the low-SES students were in fact very 'digital', their usage was heavily skewed toward gaming, entertainment and social media. Arguably, entertainment focused usage patterns are typical of all young people and reflected in the overall Australian population (ABS, 2018a). Yet, while the Traditional Job Seekers were confident users of their smartphones, critical educationally focused digital skills such as OSIPs were limited. The Traditional Job Seekers, therefore,



lacked the digital capital to link their devices to educationally beneficial activities online. When it came to sourcing information regarding their future educational and career goals, they eschewed the internet almost completely in favour of personal contacts, particularly teachers, parents and siblings. Evidently, access to and the provision of physical ICT devices does not guarantee that young people will possess the necessary skills to use them effectively and thus enjoy the benefits brought about by ICT ownership and internet availability. Knowing how to use these different devices meaningfully to achieve their career and educational ambitions requires a great deal more skill development. Lacking these skills, the Traditional Job Seekers had yet to bridge the second level digital divide, i.e. the divide based on digital skills.

At the other end of the spectrum of digital capital were the two remaining OISPs groups, the Future Professionals and the Social Networkers. These two groups consisted entirely of students of a high SES, drawn mostly from Peckham and Pineridge High Schools, but also included two students from Bradford High School, Brendan and Kate. The students in these two groups had abundant digital capital, including access to the latest digital devices, with regular upgrades and a reliable home internet connection. Many of these high-SES students discussed types of digital usage that were educationally beneficial and clearly cultivated by their parents, which led them to embody the skills needed to ensure better educational outcomes both online and offline. This cultivation, combined with substantial school-based ICT facilities, was so successful that most of these students had successfully bridged the first and second level digital divides. Indeed, these students displayed evidence in their digital usage of what could be called, following Bourdieu (1984), 'distinction', not only in terms of its educational focus but also in how they conducted their online social networking, and in their generation of original online content. The online networks these students had connected to also enhanced their social capital, which itself can potentially expand and improve educational and career options and outcomes. Marion, a Social Networker from Peckham, for example, had built a substantial online following on Twitter, which she strategically leveraged to promote herself professionally, linking to her YouTube channel. Paul, another Social Networker from Peckham interested in a career in the music industry but bereft of locally based contacts in his chosen field, sourced expert contacts overseas online. In establishing these beneficial career links online, Paul's advanced digital skills had not only allowed him to

compensate for a lack of career information sources in his immediate environment but also helped him to build crucial social capital. In this manner, the Social Networkers, regarded the internet as a natural extension of their offline activities and through these advanced strategic digital skills had also overcome the third level digital divide. The advanced digital skills of the Social Networkers have also been observed amongst people of a low SES (Park, 2017a), however, the general trends from my research was that only students of a high SES, regardless of their school's SES, were able to achieve these critical digital skills.

Drawing on Ignatow and Robinson's (2017) notion of digital capital, it is evident that the embodied and objectified forms of digital capital achieved by these students of a high SES is yet another example of the ways their families can maintain their social and educational advantage. As Bourdieu (1984, p. 161) explained, high-SES families will always find ways to remain one step ahead:

Whenever the attempts of the initially most disadvantaged groups to come into possession of the assets previously possessed by groups immediately above them in the social hierarchy or immediately ahead of them in the race are more or less counterbalanced, at all levels, by the efforts of better-placed groups to maintain the scarcity and distinctiveness of their assets.

The analysis of these four groups, performed throughout Chapters 3, 4 and 5, brings to light the multiple digital divides and varied digital capital these young people possess, thus reinforcing the belief that as the internet matures it will continue to reflect traditional divisions already prevalent in society and potentially create more stark class divisions online (van Deursen & Helsper, 2018; Wei & Hindman, 2011). Together with this, while a difference in the digital capital – including digital access and skills – of young people of diverse SES was expected, the magnitude of these differences, as captured here, was not.

Access divides, in terms of ICT facilities, also existed between the five participant schools, with a pronounced first level digital divide evident between the two schools of a low SES, Coventry and Glencross, the regionally based Bradford, and the two schools of a high SES, Pineridge and Peckham. The previous Digital Education Revolution (DER) Program attempted

to bridge this divide. In countries such as Australia where home access to ICTs and a high-quality internet connection remains strongly related to socio-economic status, schools continue to play an essential role in ensuring that all young people gain access to ICTs. Schools are also critical sites where students develop their digital skills, particularly when household access is unreliable and family members possess little digital capital. The state of the ICT infrastructure at Coventry, Glencross and Bradford suggests that ICT investment is currently viewed as a 'one-off expense', rather than as part of a continuous upgrading, support and renewal program.

Due to what seemed like a lack of ongoing government funding of NSW high schools (Crawford, 2017), it could be concluded that the superior quality of the ICT infrastructure at Peckham and Pineridge is likely the result of local school-based fundraising efforts and parental contributions. Of course, the increasing speed of the digital product lifecycle makes constant ICT hardware upgrades expensive for schools and for public education more broadly. However, the development of beneficial digital skills is more dependent on maintaining access to educational software programs such as the Microsoft Office Suite, which can be achieved at a fraction of the cost. As the cycle of technological change accelerates, low-SES schools struggle less with *not having* and more with *maintaining* access. Thus, offline inequalities were not only influencing the online educational opportunities of these students at school but also limiting the number of viable post-school options presented to these students, further reproducing traditional social inequalities.

Related to the school-based ICT divide was the significant divide in the devices students used, with a clear distinction again along SES lines, a matter not adequately addressed in the digital divide literature. In this study, it was evident that the type of device young people used mostly at school mattered. Even though many of the low-SES students owned multiple digital devices, the age and regularity of replacement and upgrades of these devices differed significantly compared to their high-SES peers. Not all devices are created equally in terms of supporting young people's educational needs. Overall, the low-SES students at Glencross, Coventry and Bradford expressed a strong preference for smartphone use, even in the classroom. Due to the struggles with ICT infrastructure at these schools and the recent government policy shift at the time from the DER to the BYOD, these schools allowed

smartphones in classrooms as the student device of choice, seemingly with the view that any screen is better than no screen. Given the limited educationally focused functionality of these devices, combined with a small screen and their propensity to distract students and teachers alike, smartphones represent a form of second-class digital access in schools, a view not only shared by Dunaway et al., (2018) but also acknowledged in the 2018 NSW DoE Report (Carr-Greg et al., 2018), into the non-educational use of mobile devices in schools, which recommended a complete ban in all NSW primary schools.<sup>59</sup>

Recognising the limitations of smartphones, both Peckham and Pineridge High Schools had banned them from their classrooms. This ban targeted smartphones and mobile phones only, while other devices such as laptops, tablets and iPads, which are arguably more educationally appropriate, were still permissible and seen as essential to the development of digital skills. At Peckham, these devices were fully integrated into the classroom and broader curriculum. For instance, the class roll was marked online, all educational resources were uploaded to Moodle weekly, and both the school and careers advisor newsletters were available exclusively in a digital format. The bans in these schools had been put in place with the agreement of students, parents and teachers and had not affected either the students' academic outcomes or digital skill development. Perhaps because of this ban, the preferred digital device of the high-SES students differed significantly from those of the low-SES students at school and at home, with those of a high SES showing a much stronger preference for higher functioning digital devices, such as laptops and home PCs. While these students spoke of using their smartphones for social and entertainment purposes, they also recognised their limitations, and therefore most of their screen time was focused on their laptops and PCs, especially when engaged in educational pursuits. The mobile phone ban in these two schools, along with their seamless integration into classroom practices, further reinforced the educational potential of ICTs to students.

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<sup>59</sup> A significant shift in the Victorian state government's education IT policy occurred only weeks prior to the submission of this thesis. The Victorian Education Minister, James Merlino, announced that all mobile phones (including smartphones) would be banned from "first to last bell" across all Victorian state primary and secondary schools, effective January 2020 (Merlino in Australian Broadcasting Corporation [ABC News], 2019, para 1).

## Student Online Career Information Seeking Practices – It’s *Getting Complicated*<sup>60</sup>

All young people, no matter what their socio-economic background, preferred humans, books and pamphlets in the initial stages of their career exploration, demonstrating that little has changed since early international studies explored young people’s use of online sources when forming career aspirations (Julien, 1997; Reay et al., 2005). Initial sources of information included people they knew: parents, educators and older siblings, as well as strangers already employed in their occupational field of interest. None of the students interviewed spontaneously searched for career information out of curiosity; instead, they all reported being prompted in some manner, not only by these university and human sources but also by *The Jobs Guide*. The federal government’s decision to stop supplying *The Jobs Guide* free to every senior-year student in 2012 impacted greatly on this initial connection. This decision also disproportionately affected students of a low SES, as their lack of school-based ICT infrastructure meant up until this time they had a greater reliance on offline resources such as this guidebook. The case of Hamilton, the Traditional Job Seeker from Coventry, who was interested in joining the police force, highlights the ongoing relevance of these offline sources to students lacking the digital skills to search for career information online. Hamilton, was the student who approached a police officer in his local shopping centre for career information after both he and his father were unsuccessful in finding the required information online. However, once students had decided on a potential career or educational course, then it was in the pursuit of further information where the practices of the students of different SES varied considerably.

Both the high-SES Social Networkers and Future Professionals availed themselves of all sources of career information, including extensive use of online sources. For the Social Networkers, once their initial interest had been ignited, their information searches were conducted almost exclusively online. Through their advanced digital skills, they were able to move beyond their need for human sources of information. The Future Professionals, while comfortable with online sources, nevertheless relegated them a secondary role in their

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<sup>60</sup> This is a play on words, referring to the title of danah boyd’s (2014) popular book, *It’s Complicated*, which explored the digital lives of young Americans.

career information seeking. This preference was due to the traditional nature of their career aspirations, such as with Andrea, Pauline, Peter and Tracey from Peckham aspiring to medicine and dentistry, which have well-established educational pathways. Accordingly, the Future Professionals' preference for information gleaned from careers advisors, parents and older siblings, who had followed similar trajectories themselves, proved more than enough.

The influence of these family members who had successfully navigated tertiary pathways, and thereby acted as role models, is a further advantage that these students of a high SES had over their low-SES peers (Lareau, 2011; Vincent & Maxwell, 2015). Thus, these students discussed their transitions into university as *natural* and expected, as captured in the experience of Andrew, a Future Professional from Pineridge, whose parents were both university graduates and his three older siblings “...all went onto university as well”. Consequently, when asked where he saw himself in five years, Andrew, despite not knowing what he wanted to study, answered, “...certainly university...probably a double degree”. The only source of stress Andrew discussed around his future was whether to study locally or “...in an urban environment in another country...like places in America...”. Therefore, Future Professionals such as Andrew relied on their careers advisors for guidance more than any other OISPs group because they required assistance with scholarships, extra-curricular activities and formulating university preferences.

For the Traditional Job Seekers and Creative Dreamers, the formation of career aspirations was still primarily a family-based process. These students eschewed online sources of information altogether. While parents and older siblings remained valuable information sources for those oriented toward traditional blue-collar occupations, such as those expressed by the Traditional Job Seekers, by relying on only one information source they did not obtain the same range of career information available to those who exploited multiple sources. This information preference was likely made due to their lack of digital skills, as most of the Traditional Job Seekers and the Creative Dreamers described university websites as challenging to navigate. The *scattered* nature of the information on these sites was the main issue, as indicated by Lucas, a Traditional Job Seeker from Coventry:

*...it's unclear...it's harder than what I thought it would be to find the basics, like what you do afterwards or what's included in the course...[and] to just find general information.*

The Creative Dreamers, interested in pursuing jobs in the creative and expressive arts, struggled with formulating search inquiries online because they were unsure what questions to ask and where to focus their searches. They were also more likely to express feeling overwhelmed by the thought of their future. This was, no doubt, the result of their regional location, limited economic capital and the fact that they, like many students of a low SES, had never visited the institutions they dreamed of attending (Fleming & Grace, 2015). They also lacked the role models of the Social Networkers and Future Professionals.

For many young people, deciding which career or course of study to pursue is likely the first significant life decision they will make *by themselves*. Therefore, it is unsurprising that many of the young people reported feeling a tremendous amount of pressure to get it right. This pressure was most poignantly captured in Chapter 5, when Gemma, a low-SES Creative Dreamer from Bradford stated,

*...other people try to talk to me about it [the future] ...but I just usually start crying...I just don't want to talk about it...I avoid it...I don't know what I want to do...I have no clue...*

In general, the way students responded to this pressure also differed in terms of their SES. For instance, the sentiment captured in Gemma's response was reflective of most of the Creative Dreamers, who had a much weaker sense of the pathways linking school to their aspirational career goals. The Traditional Job Seekers, on the other hand, discussed a much more pragmatic approach to the pressure of future career aspirations. They mostly discussed a single career goal, which seemed to have been in place for several years; they also favoured more traditional linear pathways from school into training and then employment. These pathways were chosen based on an economic imperative to enter the labour force as quickly as possible to start earning money. This imperative was reinforced in the five-year goals

unique to the Traditional Job Seekers, including to *own their own home* (Zoe and Ghassan), *get married* (Aisha) and to *care for parents* (Zoe).

For the high-SES Future Professionals and Social Networkers, despite discussing substantial familial pressure, their transitions seemed less rushed with several students expressing a desire for a gap year. These students conveyed an optimistic sense of confidence when discussing their plans, even when they were undecided on a career or education option. The confidence displayed by these students was no doubt a result of the substantial family capital available to them to ride out periods of uncertainty and which afforded them the time to accumulate additional cultural capital, through experiences such as international travel. These practices, free from the “vital stakes” of the necessities of living, such as the need to work, was only evident amongst the young people of a high SES in this study (Bourdieu, 1984, p. 476). Peter, a Future Professional from Peckham, torn between becoming a doctor or a physiotherapist, captures this confident optimism: “...*at the rate I’m going at school I reckon it’s going to be good in the future...even after university finding a job that will...be pretty successful, I reckon*”. Overall, young people, no matter what their SES, who had chosen a career path (or at least a field of interest), achievable or not, seemed far less stressed about their futures than those students who remained uncertain.

### **Perceptions of Tertiary Study – The More Things Change, the More They Stay the Same**

Over a decade after the release of The Bradley Review,<sup>61</sup> and despite the efforts of the previous Rudd/Gillard Labor government, the number of low-SES students transitioning into tertiary study remains below expectations,<sup>62</sup> hovering between 16 and 17% (Gale & Parker, 2017). The fact that so many students in this study from schools of a low SES did aspire to university study supports a growing body of research (Gale & Parker, 2015a; 2015b; Galliot & Graham, 2014) demonstrating that students from low-SES backgrounds do aspire, but the lack of institutional support and limited access to digital, social, cultural and economic

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<sup>61</sup> See pages 42-43.

<sup>62</sup> A key objective outlined in the Bradley Review (2008) was to have low-SES students constituting 20% of total university enrolments by 2020 (Bradley et al., 2008).



resources influence what they perceive to be both desirable and realistically achievable. This low number of enrolments of low-SES students is certainly not assisted by much of the careers advice and university practices discussed throughout this thesis.

The Traditional Job Seekers at Glencross, for instance, had to contend with the well-intended yet obstructionist practices of their school's careers advisor, Sharon, who was more focused on young people at risk than on those aspiring to university study. It is worth revisiting Aisha's comments, an aspirational university student at Glencross, addressing how she understood Sharon's role at the school: "*...my careers teacher...she's more focused on people who want to drop out. I think that's better because then they know what to do, and where to go...*". As discussed in Chapter 3, such comments reveal how some teachers continue to perceive low-SES students as having fewer promising futures than do high-SES students. Therefore, the gatekeeping practices of these careers advisors, combined with the students' limited digital capital, meant their future educational and career options, while legitimate, were limited in scope. Also, students who did have university aspirations, such as Aisha, were yet to establish any concrete links between school and university and their future career ambitions.

Institutional impediments to higher education indirectly or directly affecting students of a low SES were also present at Novus University. This is captured in Colin's extraordinary admissions in Chapter 3, that Novus University, long a preferred choice for 'first-in-family' low-SES students, was quietly and unofficially changing its marketing and admissions focus to attract more high-achieving, primarily high-SES students. While this decision was justified in terms such as *to increase productivity* and *cost-cutting*, Colin's justification also contained a thinly veiled elitism. So, while Novus University may remain an appealing destination for low-SES students, such as the Traditional Job Seekers, and in some respects still focuses on this demographic in their marketing, its *unofficial* policy shift, or at least that expressed by Colin, would no doubt translate into fewer students of a low SES securing places. Further, with the earmarked reduction in student support services, the attrition rate amongst this group is also likely to increase if policies such as this are replicated across other university campuses, as low-SES students tend to use these services more frequently (Edwards, Radloff & McMillan, 2016). Even with the current level of student support services, the attrition rates amongst these students is significantly higher than the rest of the university population, with only 69%

of students from a low-SES background completing a degree, compared with 78% of students from high-SES backgrounds (Edwards & McMillan, 2015). Therefore, it is critical to maintain student services and a focus on low-SES transitions and enrolments so as not to further undermine broader social inclusion objectives. Discrete university policy shifts such as these, combined with many students' lack of digital capital and the gatekeeping practices of their careers advisors, only serve to perpetuate the socio-economic and cultural conditions that maintain the historical inequalities within the Australian education system.

### **Prospective Avenues of Research**

Many avenues of further research have emerged from this study. For instance, while the differences between students of varied SES and geographical location were so profound that these factors took precedence over others, drawing attention to students' LBOTE, gender identification and AATSI backgrounds can only advance the understanding of young people's OSIPs. Another promising avenue of inquiry would be to investigate the deliberate decision of three of the Creative Dreamers at Bradford to "*opt -out*" or abstain from using their digital devices at all. The category of 'non-use' of ICTs and the internet, either by choice or due to broader structural constraints, long a feature of early research addressing young people's ICT use (Bilal & Kirby, 2002; Livingstone, 2003; Zhang, Callegaro & Thomas, 2008), seems to receive little attention today.

An exploration of the third level digital divide, specifically addressing how different digital skills and internet use can aid in the acquisition of economic, cultural and social capital, could also be further explored. As indicated here, the benefits derived from embodied digital capital and online contacts can translate into measurable offline social and employment outcomes. It is therefore critical to understand how varied digital practices contribute to these outcomes across a range of significant life transitions such as into university and the workforce. Students' outcomes explored through the third level digital divide would also draw attention to the impact of ICTs on the linearity of young people's educational and career transitions. Linking 'real world' tangible outcomes such as gains in employment to secondary students' digital capital and practices at home and school could prove informative when planning school-based digital skills training.

Also, of interest when exploring young people's digital skills should be a refocus on offline, or traditional literacy, and how this relates to digital literacies. A large amount of contemporary academic writing, including this thesis, focuses on ICT-based digital literacies alone, while the challenges of traditional literacy remain. It may seem counterintuitive for a thesis on digital capital to call for a refocus on traditional literacy; however, even basic digital skills are dependent on offline literacy (van Deursen & van Dijk, 2016). Literacy is the foundation of digital literacy and a precondition of the development of critical digital skills such as OISPs. This was brought into sharp relief at Coventry High School when the school principal recommended changes to the Student Online Practices Survey because up to 60% of his senior-year students were 'functionally illiterate'. Given this, future research into online information seeking would be well served by commencing with an assessment of participants' traditional literacy skills. In so doing, the understanding of young people's digital capital maybe better contextualised. Such an inquiry would be useful to generate further insights into the ongoing digital inequalities evident within the education system and student transitions into tertiary study and the workforce.

### **Looking to the (Digital) Futures?**

The last three decades have seen sweeping social, economic and political changes globally. Entire industries and occupations have disappeared as new digital technologies have started to transform labour markets and economies. During this same period income inequity has risen in Australia, and so, for many, life is becoming more precarious especially for those at the lower end of the labour market, with research continually demonstrating that Australians who are less educated are more likely to be in part-time, casual or precarious employment (Campbell, 2013; Chauvel, 2010; Furlong & Kelly, 2005; White & Wyn, 2013). These factors, combined with the rapid decline of low-skilled roles traditionally filled by the ranks of people of a low SES, have seen higher education become a prerequisite for those young people hoping to acquire some form of secure full-time employment.

In response to these factors and various government and university initiatives, participation in higher education continues to rise. However, in this era of "diploma inflation" (Bourdieu 1984, p. 139), merely gaining a degree is no longer a guarantee of secure full-time

employment. Indeed, Bourdieu (1986, p. 47) cautions that institutionalised forms of cultural capital, such as a bachelor's degree, have only ever been converted into economic capital under "certain conditions". As outlined previously, these conditions, while rapidly changing, nevertheless continue to favour those of a high SES. Brown (2003, p. 141) captures this paradox of the massification of university study in his concept of the "opportunity trap"; that is, the more who participate in higher education, the less and more hard-won the rewards become, although not to participate is even worse. Low-SES young people with fewer resources of digital, social and cultural capital are the most disadvantaged in this competition for the declining number of high-paid, secure, full-time positions.

Technology alone cannot be tasked with redressing these entrenched educational and social inequalities. ICTs are 'a tool' of communication, education and information seeking not 'the tool'. These devices seem continually burdened with the responsibility of solving so many of life's 'big problems', particularly those involving young people and education. No doubt schools have a greater role to play. School-based interventions could carefully look at which digital skills individual students require and provide training in these to counter the amplification of existing inequalities highlighted throughout this thesis. On the other hand, the ongoing difficulty in establishing traditional educational benefits of ICTs in the classroom means all claims made about technology in schools demand sceptical analysis (Livingstone, 2012; Thomson et al., 2017a; 2017b), especially when they concern the role of these digital devices in young people's OISPs.

By maintaining young people's perspectives at the forefront of this analysis, it is hoped that education providers and government can potentially deliver their digital services in a more effective and targeted manner. However, as captured in the opening quote by Agosto and Abbas, and in the four OISPs groups in this thesis, there remains no simple picture of young people's digital capital and OISPs. In fact, as shown here, when it comes to informing their career aspirations, i.e. their first major life decision, young people still overwhelmingly turn to people for information. As Henry, a Social Networker from Peckham, and the most digitally skilled young person interviewed, concluded:

*I feel like a [web] site won't cut it, I feel like you need either another human...or maybe an expert [in the field] ... to get something back [online] specifically regarding your future is very sketchy...it's not an assignment, you know...it's our future...*

And so, for now, the answers to this critical life decision remain more than just a click away!

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# Appendices

## Appendix 1. Copy of the Student Online Practices Survey

### Online Information Seeking Survey

#### 1. Welcome to Our Survey

Thank you for participating in our survey. Your feedback is important.

The aim of this survey is to investigate how you use the Internet, how you search for information online and what digital devices you use. The results of this survey will remain anonymous and will be used to inform a PhD project being conducted through the University of Western Sydney's Institute for Culture and Society.

This survey will take approximately 15 to 20 minutes to complete.

Please attempt all questions

**1. Name of your school?**

## Online Information Seeking Survey

### 2. Measures of Technology Use

**2. How do you rate your ability to successfully find information online?**

- Excellent
- Very Good
- Good
- OK
- Poor

**3. How confident are you using digital devices such as smart phones, i-pads, laptops, and desktop computers?**

- Very Confident
- Confident
- OK
- Not Very Confident
- Not Confident

**4. How often do you use the Internet or spend time online?**

- Daily
- Almost Every Day
- 2-3 Times Per Week
- Once a Week
- A Few Times Per Month
- Never

**5. Approximately how much time would you spend online or using the Internet on a normal SCHOOL day? (Calculate the total time at school and at home).**

- None
- Less Than 1 Hour
- 1 - 3 Hours
- 3 - 5 Hours
- 5+ Hours

## Online Information Seeking Survey

### 6. Approximately how much time would you spend online or using the Internet on a normal WEEKEND day?

- None
- Less Than 1 Hour
- 1 - 3 Hours
- 3 - 5 Hours
- 5+ Hours

### 7. Where do you MOST COMMONLY go online? (Select ONE response only)

- Anywhere via your smart-phone or tablet
- At a friend's home
- At a relative's home
- In the family study or other shared room at home
- In your bedroom
- At school or TAFE
- At a public space such as library or cafe
- Other (please specify)

### 8. Which of the following devices do you use on a daily basis? (Please select ALL relevant options)

- Smart phone (phone with internet connectivity)
- Mobile Phone (any other phone without internet connection)
- Tablet (e.g., i-Pad)
- Laptop
- Desktop Computer
- Game console or portable gaming device (eg., Playstation, Xbox, Wii, PSP, DS, Gameboy etc.)
- Other handheld portable device (eg., MP3 player, iPod Touch, Kindle etc.)
- Television
- None of the above
- Other (please specify)

## Online Information Seeking Survey

### 3. Online Search Behaviours

For each of the following statements please select your level of agreement or disagreement by selecting the appropriate circle, based on what you MOST COMMONLY experience when searching for information online.

**9. I carefully plan my information searches before going online.**

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**10. When conducting searches online I am willing to spend as much time as necessary to find the information I need.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**11. When searching for information online it often takes longer than I first thought.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**12. I often give up looking for information online if it is taking too long.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**13. When logging onto a website if the information I'm looking for is not easily available I close the site immediately.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**14. When searching for information online I often seek help from friends.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**15. When searching for information online I often seek help from family or other household members.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**16. When searching for information online I often seek help from teachers, library staff or other school staff members.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**17. I have no time restrictions on my Internet use.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## Online Information Seeking Survey

**18. In general I wish I had more time to access the Internet when searching for information at home and at school.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**19. I have regular and reliable access to the Internet at home.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**20. Outside of school I have to share my Internet access with others and this sometimes affects my ability to successfully complete tasks online.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**21. My parent(s)/caregiver(s) or other household members monitor my Internet access.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**22. When looking for information for school assignments I always search online first.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**23. In general I prefer using online resources to books or magazines.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**24. The reputation of the author of the information I am reading online is important to me.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**25. I always think carefully about whether I can trust the information I find online.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**26. No matter what information I am looking for I always go to my favourite websites first.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**27. I am (or my parent(s)/caregiver(s) are) willing to pay website subscription fees in order to gain greater access to the information or educational services I require online.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



4. Demographic Details

**28. Are you?**

- Male
- Female
- Other (please specify)

**29. What is your suburb/postcode?**

**30. In which country were you born?**

- Australia
- New Zealand
- Other (please specify)

**31. In which country was your mother (caregiver) born?**

- Australia
- New Zealand
- Other (please specify)

**32. In which country was your father (caregiver) born?**

- Australia
- New Zealand
- Other (please specify)

**33. Do you speak a language other than English at home?**

- Yes
- No (Please go to Question 35)

**34. Which language(s)?**

## Online Information Seeking Survey

**35. Do one or both of your parent(s)/caregiver(s) speak a language other than English at home?**

- Yes
- No (Please go to Question 37).

**36. Which language(s)?**

**37. Do you identify as Aboriginal or Torres Strait Islander?**

- No
- Yes, Aboriginal
- Yes, Torres Strait Islander
- Yes, BOTH Aboriginal and Torres Strait Islander
- Unsure

**38. What are your parent(s)/caregiver(s) job(s)?**

**39. Which of the following best describes where you currently live?**

- Flat/Apartment
- Townhouse
- House
- Boarding House
- Share House
- Caravan (Mobile Home)
- Other (please specify)

## Online Information Seeking Survey

### 40. Which situation best describes who you currently live with?

- With Immediate Family Members (e.g., parents/brothers and sisters)
- With Extended Family Members (e.g., grandparents, aunts or uncles, cousins)
- With Friend/s or Housemate/s (not related to you)
- With a Foster Family or Other Non-Relative Caregiver
- Homeless
- Other (please specify)

### 41. Thinking of all the people in your home, what is the highest level of education they have achieved?

- Completed or partially completed Primary School
- Completed or partially completed Year 10
- Completed or partially completed Year 12
- A Certificate or Diploma at College or TAFE
- A Bachelor Degree (Undergraduate)
- A Masters Degree or PhD
- Unsure

## Online Information Seeking Survey

### 5. Further Interest

**42. Would you be interested in participating further in this study? This will involve a one hour digital workshop and a thirty minute interview.**

- Yes
- No (Thank you, your survey is now finished)
- Unsure

**43. If Yes/Unsure please supply your name and contact details below**

Name

Email Address

Phone Number

Thank you for your participation

Appendix 2. Table 7. Summary Demographics of the Student Survey Respondents

		Bradford	Coventry	Glencross	Peckham	Pineridge	Totals
<b>Total Year 11 Enrolments</b>		<i>(n = 118)</i>	<i>(n = 154)</i>	<i>(n = 69)</i>	<i>(n = 150)</i>	<i>(n = 117)</i>	<i>N=608</i>
<b>Respondents</b>		<b>65</b>	<b>34</b>	<b>60</b>	<b>111</b>	<b>98</b>	<b>368</b>
<b>Response Rate</b>		55%	22%	87%	74%	84%	61%
<b>% Total Responses</b>		18%	9%	16%	30%	27%	100%
<b>Gender</b>							
	<b>Male</b>	<b>29</b> <i>(45%)</i>	<b>11</b> <i>(32%)</i>	<b>35</b> <i>(58%)</i>	<b>60</b> <i>(54%)</i>	<b>44</b> <i>(46%)</i>	<b>179</b> <i>(50%)</i>
	<b>Female</b>	<b>34</b> <i>(52%)</i>	<b>16</b> <i>(47%)</i>	<b>24</b> <i>(40%)</i>	<b>45</b> <i>(41%)</i>	<b>48</b> <i>(48%)</i>	<b>167</b> <i>(47%)</i>
	<b>Other</b>	<b>2</b> <i>(3%)</i>	<b>7</b> <i>(21%)</i>	<b>1</b> <i>(2%)</i>	<b>6</b> <i>(5%)</i>	<b>6</b> <i>(6%)</i>	<b>22</b> <i>(3%)</i>
<b>LBOTE</b>							
	<b>Yes</b>	<b>8</b> <i>(12%)</i>	<b>2</b> <i>(6%)</i>	<b>46</b> <i>(77%)</i>	<b>65</b> <i>(59%)</i>	<b>19</b> <i>(19%)</i>	<b>140</b> <i>(38%)</i>
	<b>No</b>	<b>56</b> <i>(87%)</i>	<b>26</b> <i>(76%)</i>	<b>13</b> <i>(21%)</i>	<b>45</b> <i>(40%)</i>	<b>74</b> <i>(76%)</i>	<b>214</b> <i>(58%)</i>
	<b>No response</b>	<b>1</b> <i>(1%)</i>	<b>6</b> <i>(18%)</i>	<b>1</b> <i>(2%)</i>	<b>1</b> <i>(1%)</i>	<b>5</b> <i>(5%)</i>	<b>14</b> <i>(4%)</i>
<b>Country of Birth</b>							
	<b>Aust.</b>	<b>57</b> <i>(88%)</i>	<b>27</b> <i>(79%)</i>	<b>49</b> <i>(81%)</i>	<b>75</b> <i>(68%)</i>	<b>77</b> <i>(80%)</i>	<b>285</b> <i>(77%)</i>
	<b>Overseas</b>	<b>7</b> <i>(11%)</i>	<b>2</b> <i>(6%)</i>	<b>10</b> <i>(17%)</i>	<b>34</b> <i>(31%)</i>	<b>19</b> <i>(19%)</i>	<b>72</b> <i>(20%)</i>
	<b>No Response</b>	<b>1</b> <i>(1%)</i>	<b>5</b> <i>(15%)</i>	<b>1</b> <i>(2%)</i>	<b>2</b> <i>(1%)</i>	<b>2</b> <i>(1%)</i>	<b>11</b> <i>(3%)</i>

Appendix 3. Table 8. Summary Demographics of the Careers Advisors and Other Interviewees

Pseudonym	Institution	Role in Institution	Institutional SES	Cultural Background
<b>High Schools</b>				
<b>Susan</b>	Peckham Selective High School	Careers Advisor	High	Anglo-Australian
<b>Estelle</b>	Coventry High School	Careers Advisor	Low	Anglo-Australian
<b>Sharon</b>	Glencross High School	Careers Advisor	Low	Anglo-Australian
<b>June</b>	Pineridge High School	Careers Advisor	High	Anglo-Australian
<b>Robert</b>	Bradford High School	Careers Advisor	Mixed	Anglo-Australian
<b>Universities</b>				
<b>Colin</b>	Novus University	Marketing and Admissions Director	Low	Anglo-Australian
<b>Adam</b>	Novus University	Marketing and Admissions Director	Low	Anglo-Australian
<b>Lynn</b>	Veteris University	Marketing and Admissions Executive	High	Anglo-Australian
<b>George</b>	Veteris University	Marketing and Admissions Director	High	Arab-Australian
<b>Department of Education</b>				
<b>Annie</b>	New South Wales Department of Education	Former IT Director	N/A	Anglo-Australian