Senior secondary school students' engagement within a blended learning course: An exploratory case study

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Declaration

To the best of my knowledge and beliefs this thesis contains no material previously published by any other person except where due acknowledgement has been made.

This thesis contains no material that has been accepted for the award of any other degree or diploma in any university.

Signature: _____

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Abstract

This research presents an exploration of student engagement within a blended learning course at a New Zealand secondary school. Growing numbers of secondary school students are participating in blended learning courses with both face-to-face and online teaching and learning experiences. However, the uptake and use of blended learning is not matched by an understanding of the nature of senior secondary students' behavioural, emotional and cognitive engagement. There are also gaps in understanding about approaches to learning that aid student engagement in a blended learning context.

To address this gap in the research, case study methodology was used over four weeks with seven Year 12 students and the teacher of their blended learning course. A qualitative analysis of observations, online usage, document analysis and interviews was undertaken to determine the nature of engagement within the blended learning activities available in one unit of learning.

The findings suggest that engaging senior secondary students in a blended learning environment involves a carefully considered and complex mix of cognitively and emotionally engaging activities. Three mechanisms that aided engagement with learning in this blended learning context were the fostering of a learning purpose, the use of scaffolds and providing the opportunity for the learner to personalise their activities. This study contributes to the field of secondary school blended learning by supporting and deepening the literature base about how senior secondary students engage with blended learning activities.

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Chapter One: Introduction

1.1 Introduction and rationale for study

The growth in the use of the internet and the ease of access to digital devices has increased the educational use of digital technologies throughout society, including in New Zealand classrooms (Bolstad et al., 2012; Wright, 2010) and it is now quite common to see digital technologies being integrated into the day-to-day activities of classrooms (Barbour, 2014). A thoughtful mix of offline and online learning experiences is known as blended learning (Bernard, Borokhovski, Schmid, Tamim, & Abrami, 2014; Bonk & Khoo, 2014; Jinyuan, Fore, & Forbes, 2011; Vaughan, Cleveland-Innes, & Garrison, 2013) and growing numbers of school students worldwide are participating in blended learning courses (Barbour, 2014; Jinyuan et al., 2011; Vaughan et al., 2013). Blended learning for students who are currently completing their senior secondary schooling has the potential to alter how they engage as learners (Bolstad et al., 2012; Johnson, Becker, Estrada, & Freeman, 2015; Wright, 2010). An issue for senior secondary blended learning contexts is that not enough is known about the nature of students' engagement or how to aid engagement with blended learning.

A range of complex and interacting factors including students' prior experiences and capabilities, technological advancements and school and ministry policies influences engagement in blended learning contexts. New Zealand students who completed their

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Level 2 NCEA [1] qualifications in 2015, are likely to have prior educational experiences with digital technologies through their primary education. For example, when these students were seven years old (i.e. 2005) the video sharing site YouTube was launched. When they were twelve years old (i.e. 2010) touchpad technology was introduced when the first iPad was released. Currently, improved access and affordability of wireless internet, internet-capable devices, as well digital technologies such as apps can give today's students increasingly personalised learning experiences and foster the development of personal learning environments (PLE's) (Cherner, Dix, & Lee, 2014; Drexler, 2014; Garrison, Anderson, & Archer, 2001; Johnson, Becker, et al., 2015; Mott, 2010). Many schools in New Zealand, are now developing future-focused learning frameworks (O'Reilly, 2014). Many schools in New Zealand encourage students to bring their own devices (BYOD) to school as a tool for learning (Johnson, Becker, et al., 2015). Today's students participate in teaching and learning activities created by teachers many of whom are also on their own learning path with digital pedagogies (Johnson, Becker, et al., 2015; Timperley, Wilson, Barrar, & Fung, 2007; Wright, 2010).

A great deal of technological change has occurred over the last decade, yet little is known about the nature of blended learning activities for secondary students. While there is research into teaching using blended learning activities in the secondary school context, there is not a great deal that explores the specific behavioural, emotional and cognitive nature of secondary student engagement with blended learning activities (Barbour et al., 2011; Gerbic, 2011). Furthermore, relatively little research exists in New Zealand that explores how students engage with blended

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[1] NCEA is an educational qualification for New Zealand students in the final three years of their secondary schooling. Students are required to gain 80 credits across their subjects. During the academic year, they complete a range of internal and external assessments each worth between 4-6 credits.

[2] MOOC is an acronym for massive online open course. A form of web-based instruction that is free

learning as they enter the high stakes senior secondary assessment context (Bolstad et al., 2012; Wright, 2010).

1.2 Purpose of the research project

This research project set out to explore student engagement with blended learning activities and to understand how to foster engagement with blended learning activities. Specifically, this case study seeks to understand how senior secondary students in a Year 12 class engage behaviourally, emotionally and cognitively with the blended learning activities provided. Understanding engagement with blended learning activities is important because this is the first cohort of senior secondary students to have these types of blended learning activities. An investigation of students' experiences will assist in understanding how blended learning activities engage students within the senior secondary context and how senior secondary school teachers might plan to support effective blended learning.

1.3 Research setting

This research was carried out at a New Zealand co-educational state secondary school. The specific class that formed the boundary for the case study research was a Year 12 blended learning class of 27 students. Seven students and their teacher volunteered to participate in a case study over a four-week unit of work about the theories of personality. This school was approached because of its future-focussed curriculum and its regular and recent experience of participating in educational research. This unit of work was chosen as the context because it had a number of established blended learning activities embedded within it. The unit of work was also

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at a mid-point in the course so the teacher and students were settled into their learning routines.

1.4 Research aim and questions

With respect to the purpose outlined above, the central aim was to explore students' engagement in terms of their behavioural, emotional and cognitive interactions in one component of a blended learning course.

The following research questions were developed to fulfil this aim:

1) How do students engage with the learning activities available in a senior secondary blended learning course?

2) What approaches can aid engagement in a blended learning context within a senior secondary course?

1.5 Structure of the thesis

This thesis is organised into six chapters. Chapter One has provided an introduction to this research project, outlining the background, purpose, aims and research questions. In Chapter Two, the blended learning and engagement research from higher education and secondary blended learning contexts and the limits of what is known about engagement within these contexts are reviewed and discussed. Chapter Three explains the methodology underpinning this study. The details of the case are described, including the setting, participants and ethical considerations. In Chapter Four, the findings relating to each research question are presented. Chapter Five discusses these findings in response to the research questions with reference to the current research literature. Chapter Six articulates conclusions that can be drawn from

this research, outlines implications for those involved in or interested in senior

secondary blended learning contexts, and makes suggestions for future research.

Chapter Two: Literature review

2.1 Introduction

This chapter reviews the literature associated with blended learning and student engagement. Blended learning approaches are discussed to provide an understanding of what blended learning is and the extent of its use in higher education and secondary settings. Research drawn from blended learning in secondary settings and higher education settings will highlight the limited research available that explores how blended learning and student engagement relate within secondary school contexts. Finally, the literature on approaches that aid student engagement in blended learning contexts is discussed.

The term 'blended learning' describes a range of processes and practices of teaching with technology. Blended learning has both pedagogical and practical differences from other forms of teaching with digital technologies because of its genesis in the face-to-face classroom setting (Watson & Murin, 2014). The design and use of blended learning activities has enabled teachers to foster behavioural, emotional and cognitive engagement (Barbour et al., 2011; Smith, 2014). There has been a regular and continued uptake of blended learning teaching practices within secondary schools across the western world (Barbour et al., 2011). Despite students stating that they find these blended learning activities effective, the implementation of blended learning within New Zealand secondary schools is not yet embedded across the sector (Wright, 2010). Possible reasons for the uneven uptake of online learning in schools in American K-12 and higher education settings were proposed by Picciano, Seaman,

and Allen (2010) in their review of the impact of blended learning. One important consideration is the need for a level of expertise in course design before schools can be confident in offering blended learning courses (Picciano et al., 2010). The next two sections consider the features of blended learning in more detail.

2.2 Blended learning

This section outlines the place of blended learning within the wider field of e-learning. A definition of blended learning and a description of the approaches and technologies that make up blended learning are also identified.

2.2.1 e-learning

The term e-learning is a generic term that encompasses how digital technologies are used within education (Barbour et al., 2011; Jinyuan et al., 2011). Terms used to describe approaches to e-learning include hybrid learning (Horn, 2010), online learning (Angelino, Williams, & Natvig, 2007; Dabner & Davis, 2009; Picciano et al., 2010), flipped classrooms (Wright, 2010) and MOOC's[2] (Haber, 2014), as well as blended learning. Blended learning is a subset of practice within this wider field of e-learning (Tucker, 2012; Wright, 2010) and originated within higher education (Picciano et al., 2010). As a term, e-learning has evolved from the integration of digital technologies into educational experiences and is increasingly focused on the learning processes and outcomes that the infusion of technologies into education creates (Wright, 2010).

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[2] MOOC is an acronym for massive online open course. A form of web-based instruction that is free and open to anyone.

2.2.2 What is blended learning?

Definitions of blended learning vary considerably and reflect the development of this area of e-learning. Most commonly, blended learning is an overarching term used to describe teaching and learning programmes where students are enrolled in an on-site, timetabled course where the students are co-located, and the teacher uses online direct instruction or computer activities (Bernard et al., 2014; Tucker, 2012; Vaughan et al., 2013). Several definitions of blended learning that capture its distinctiveness in relation to other types of e-learning have emerged in the literature. Bernard et al. (2014) state that while blended learning classrooms can be designed and constructed in different ways, these classrooms will always address two elements in their creation, namely a type of computer support and a type of learning interaction. Similarly, Vaughan et al. (2013) state that blended learning is an approach to learning that is an "organic integration of thoughtfully selected and complementary face-to-face and online approaches and technologies" (p. 8). Vaughan's definition of blended learning teaching practices is used throughout this study to discuss the pedagogies and technologies used within secondary school blended learning contexts.

2.2.3 Blended learning pedagogy

Blended learning is generally considered to be a combination of two traditionally distinct models of teaching and learning (Bernard et al., 2014; Christenson, Horn, & Staker, 2013). In a meta-analysis of blended learning and technology use in higher education, Bernard et al. (2014) defined the traditional face-to-face offline classroom setting as a process where teachers design tasks where students complete co-located and synchronous teaching and learning activities. Bernard et al. (2014) goes on to define the online setting as the use of a learning management system (LMS) used to deliver instruction to students, who may be at a distance or not, and who may

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sometimes be completing the activities in an asynchronous manner. The definitions for offline and online settings given above are used throughout this study to describe the offline and online learning settings within this blended learning course.

Blended learning has pedagogical and practical differences from other forms of e-learning where students may be learning at a distance, using synchronous and asynchronous technologies (Bonk & Khoo, 2014). Definitions of blended learning that focus on the time spent in a particular offline or online setting are not well supported in the blended learning literature (Henrie, Bodily, Manwaring, & Graham, 2015; Jeffrey, Milne, & Suddaby, 2014; Staker & Horn, 2012; Vaughan et al., 2013). The emergence of differences between blended learning definitions highlights the emergent nature of this field of e learning, with a number of researchers arguing it is most useful to consider the role that a teacher plays in the design and delivery of blended learning (Bernard et al., 2014; Stacey & Gerbic, 2008; Tucker, 2012; Vaughan et al., 2013).

Models of blended learning employed within the K-12 setting fall along a continuum (Staker & Horn, 2012). At one end of the continuum, the teacher delivers the majority of the curriculum with little or no technology integration. At the opposite end of the blended learning continuum most of the curriculum is delivered remotely via an online component (Bonk & Khoo, 2014; Staker & Horn, 2012; Tucker, 2012). Other models use 'rotational flexible online labs' where the online components are scheduled in various ways throughout the course. Blended learning can also use an 'anytime learning' model where students choose their own process for how and when they will blend their learning.

Blended learning allows educators to redefine activities to create a thoughtful blend of online and offline learning activities that becomes a distinctive educational experience for students (Ministry of Education, 2015b). Digital technologies afford opportunities for educators to offer personalisation ,support student agency (Bolstad et al., 2012; Fullan & Langworthy, 2014; O'Reilly, 2014) and create innovative learning environments (O'Reilly, 2014). In blended learning environments, traditional offline activities such as the class watching a dvd, writing paragraphs or answering quizzes are redefined as personalised online activities such as students creating individual playlists, individual blogs, collaborative projects and real-life scenarios (O'Reilly, 2014; Wright, 2010).

Tucker (2012) contends that 'teacher-designed' blended learning, where the teacher is the 'face-to-face driver' of the blended learning process, enables the integration of technology experiences in the curriculum in a logical and flexible way that combines the best of in-class instruction and online activities. Within school settings, the 'teacher-designed' model has emerged as a common blended leaning model (Tucker, 2012). It is this blended learning model that is referred to in this research project.

2.2.4 Blended learning technologies

There are multiple digital technologies available in the field of e-learning that can also be used within blended learning contexts to deliver learning activities and manage learning processes. The purpose of online learning activities can be the learning of new curriculum, revision of concepts and/or skills and/or the creation of learning artefacts. The learning activities can range from visiting static web pages to the use of web 2.0 tools where students create and share content (Bonk & Khoo, 2014).

Commonly redefined activities include technologies such as Google docs, blogging and Skype, that allow students to live chat, publish ideas and discuss their learning with their peers, their teachers or other experts (Bonk & Khoo, 2014; Jinyuan et al., 2011; Tucker, 2012). The range and the collaborative nature of many of the activities used in blended learning contexts is a distinctive difference compared to online settings (Bonk & Khoo, 2014).

Digital technologies also encompass how students gain access to the online environment. Learners can be directed to complete tasks by either a teacher's own website or a school-wide LMS. A teacher's website or an LMS are considered as structured learning environments for students (Mott, 2010; Sclater, 2008). Another less teacher-structured way increasingly used to facilitate access to online learning is via a personal learning environment (PLE) (Drexler, 2014; Mott, 2010). A PLE can include the choice of internet browsers, apps such as Pear Deck [3] (www.pear.deck.com) and software such as Skype or Google (Bonk & Khoo, 2014; Jinyuan et al., 2011). Drexler (2014) argues that a PLE allows learners greater choice in what technologies they use to directly access and curate their online learning, which aligns with the increasing trend across education settings of collaborative learning approaches (Johnson, Adams Becker, Estrada, & Freeman, 2015; Johnson, Becker, et al., 2015). The emergence of websites, LMS and PLE systems to scaffold and structure the learning processes indicate educators within blended learning contexts apply digital technologies in ways that provide more choice and collaboration than fully online courses or face-to-face settings (Barbour et al., 2011).

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[3] Pear Deck is an app that allows phones to be used in conjunction with interactive, engaging slide presentations in the classroom. It allows real-time formative assessments and discussions to enhance understanding.

2.3 Blended learning research

This section outlines research from within higher education and secondary schooling blended learning contexts to show the extent and direction of the research literature in this area.

2.3.1 Blended learning in higher education

There is substantial research investigating the effectiveness of blended learning practices in higher education and the complexities of how people interact with digital technologies and the general effectiveness of blended learning is well established (Bernard et al., 2014; Gerbic, 2011; Means, Toyama, Murphy, & Baki, 2013). Bernard et al. (2014) identified that it was "the kind of computer support used (i.e. cognitive support vs. content/presentational support) and the presence of one or more interaction treatments (e.g. student-student/-teacher/-content interactions)" (p. 88) that made blended learning more effective than traditional classroom instruction.

Bernard et al. (2014) also stated that it was important to understand how to foster student interaction with the technology, their peers and teachers in order to create the ideal mix of online learning and classroom instruction. Fostering optimal blended learning interactions to find the ideal learning mix was stated as a challenge in the 12th annual Horizon Report (Johnson, Adams Becker, et al., 2015). These authors identified that improving the digital literacy of educators is a challenge facing the sector with the development of innovative teaching pedagogies is regarded as a 'wicked' challenge (Murgatroyd, 2010). Learning how to develop effective blended learning approaches is part of the wider issue of educators gaining digital literacy. Research into curriculum development and teacher professional development can be found elsewhere in the literature (Ertmer & Ottenbreit-Leftwich, 2010; Facer &

Sandford, 2010; Johnson, Adams Becker, et al., 2015).

Within New Zealand, research focused on developing blended learning leaders and best practice blended learning (Dabner & Davis, 2009; Jeffrey et al., 2014; Stein, Shephard, & Harris, 2011) has included analysing professional development opportunities for blended learning educators (Dabner & Davis, 2009) and the development of effective strategies for blended learning tasks in higher education settings (Jeffrey et al., 2014).

2.3.2 Blended learning in secondary education

Blended learning activities are present and increasing in number within the K-12 sector (Barbour, 2014). However, what is known about how students are engaging with the blended learning activities available is limited (Barbour, 2014; Barbour et al., 2011; Johnson, Becker, et al., 2015; Picciano et al., 2010). The understanding about blended learning experiences within secondary settings has a more emergent literature base than the research findings from within higher education (Barbour, 2014).

In the United States, blended learning emerged independently within both online schools and face-to-face schools (Watson & Murin, 2014) during the mid 1990's and steadily increased throughout the 2000's. In some cases, the emergence of blended learning was a gradual, sustained integration of digital technologies while in other cases it was more disruptive and multiple components of blended learning were introduced simultaneously (Christenson et al., 2013; Watson & Murin, 2014). The extent of blended learning courses in New Zealand and around the world can only be estimated as there has not been any requirement to categorise courses by educational reporting agencies (Watson & Murin, 2014; Wright, 2010).

Research into the effectiveness of blended learning (Barbour et al., 2011; Means et al., 2013) indicates online learning is advantageous for traditional face-to-face instruction and that the subtleties of the types of blended learning course design and teacher practice require further study. Research on how students respond to blended learning activities has emerged recently in secondary schools (Barbour et al., 2011; O'Reilly, 2014; Picciano et al., 2010; Tucker, 2012). The design and implementation of blended learning highlights the challenging practicalities of the changing role of the teacher as a facilitator within the learning process (Shifflet & Weilbacher, 2015; Waldron, 2014).

Within secondary settings, research into the creation and use of an LMS and how to make coherent connections between online and offline experiences (Janicki, 2012; Louwrens & Hartnett, 2015; Smith, 2014) shows the role of the teacher changes in a blended learning context to one of facilitating and differentiating learning for students rather than delivering content. Tucker (2012) argues that blended learning can help teachers to use the online environment to "give every student a voice" (p xviii), yet the students' and the teacher's perspectives about what it is that aids engagement in a blended learning context are not readily seen in the secondary school blended learning literature. It is these gaps in the understanding about how the teacher fosters engagement within the blended learning context that this research aims to address.

2.4 Student engagement

Numerous researchers have defined the concept of student engagement (Christenson, 2009; Christenson, Reschly, & Wylie, 2012; Darr, 2009; Finn & Kasza, 2009; Finn &

Zimmer, 2012; Fredricks, Bleumenfeld, & Paris, 2004; Morton, 2009; Wylie, 2009). Wylie (2009) provides a useful entry point by framing the term 'engagement' as an umbrella term for "building motivation and helping students develop their learning identity" (p. 3) and that it is "an active image for both learners and teachers" (p.3). There is extensive research on student engagement (Christenson et al., 2012) which reflects the complexity of the construct and the existence of the "many factors that interact in multiple ways" (Zepke & Leach, 2010 p. 174) to enhance engagement or to trigger disengagement. According to Gibbs and Poskitt (2010) it is difficult to have a common understanding of what student engagement is when the features and dimensions of student engagement are defined in such different ways.

It is useful to draw on the engagement research in blended learning from higher education contexts because there is less research in secondary contexts. In higher education settings, engagement is often viewed as an overarching, unitary term and frequently not unpacked into different types of engagement (Christenson et al., 2012). A number of engagement models (Finn & Zimmer, 2012) detail components of engagement. In their review of school engagement, Fredricks et al. (2004) emphasised that student engagement is multidimensional and has three overlapping components, specifically behavioural, emotional and cognitive engagement. *Behavioural engagement* is defined as the positive participation in learning tasks and involves doing the work and following the rules (Fredricks et al., 2004) and is considered an essential part of succeeding in learning (Darr, 2009). *Emotional engagement* involves reactions such as enjoyment, a sense of belonging, interest and is about being connected to the learning and the learning environment (Darr, 2009; Fredricks et al., 2004). *Cognitive engagement* is where students are strategic, invested, challenged,

motivated and are able to self-regulate their learning (Darr, 2009; Fredricks et al., 2004). Christenson (2009) believes that behavioural engagement (i.e. participation) leads to emotional engagement (i.e. feelings of success and belonging) that in turn leads to cognitive engagement (i.e. on-going, thoughtful and systematic participation). Other research proposes a less linear progression, but still state that these three aspects of student engagement with learning are not fostered in isolation, rather they exist as a rich interrelated process (Darr, 2009; Finn & Kasza, 2009). The terms behavioural, emotional and cognitive engagement are used throughout this study to describe how students respond to the learning activities in their blended learning course.

2.5 Supporting student engagement

A number of researchers have investigated approaches for supporting student engagement that include pedagogies, curriculum policies and teaching practices (Christenson et al., 2012; Fullan & Langworthy, 2014; Garrison, Anderson, & Archer, 2010; Hattie & Yates, 2014; Vaughan et al., 2013; Wankel & Blessinger, 2013). The Community of Inquiry framework developed by Garrison et al. (2001) identified three interrelated components of social presence, teaching presence and cognitive presence (see Figure 2.1). This Community of Inquiry framework can provide a structure for understanding the engagement processes involved in blended learning educational experiences (Garrison et al., 2001).
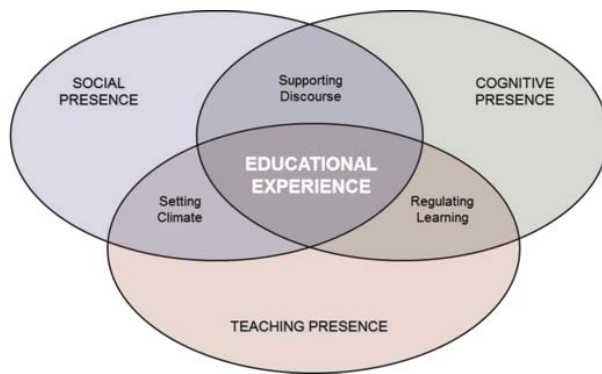
Figure 2.1: Community of Inquiry framework (Garrison et al., 2001)

While originally developed in higher education distance online contexts, the Community of Inquiry framework and practices have subsequently been adapted for use in online, distance and blended learning contexts (Garrison, Anderson, et al., 2010; Vaughan et al., 2013). Extensive research has been conducted into the relationships between teacher presence, social presence and cognitive presence across these educational settings demonstrating that if they are all present, then students are likely to be engaged (Garrison, Anderson, et al., 2010; Garrison & Arbaugh, 2007; Garrison, Cleveland-Innes, & Fung, 2010). The three components of the Community of Inquiry framework are reviewed here.

2.5.1 Teacher presence

'Teacher presence' refers to the role of the person, teacher or student, who fosters engagement with learning between and amongst students by designing, facilitating and directing the learning processes (Fullan & Langworthy, 2014; Garrison, Cleveland-Innes, et al., 2010; Henrie et al., 2015). Fullan and Langworthy (2014) advocate for teachers to facilitate learning that goes beyond learning for content and to guide students towards engaging with tasks that are challenging and personal which is more likely to develop cognitive engagement. Similarities exist between

elements of teacher presence and elements within the terms 'deep learning' (Bolstad et al., 2012) and 'active learning' (Hattie & Yates, 2014). These three terms share the idea that clarity of instruction and relevance of activities influence learning (Henrie et al., 2015). Bolstad et al. (2012) explained deep learning as a pedagogical approach to teaching where students can create knowledge and share it purposefully, a process that can be aided by the use of digital technologies. Hattie and Yates (2014) use the term active learning to explain the metacognitive processes of learning from the students' perspective. There are similarities in the terms that Hattie and Yates (2014) and Bolstad et al. (2012) use that suggest the concept of teacher presence also underpins active learning and deep learning which has implications for fostering engagement with blended learning (Vaughan et al., 2013).

2.5.2 Social presence

Social presence allows learners to "develop the personal relationships necessary to commit to, and pursue, intended academic goals and gain a sense of belonging to the community" (Vaughan & Garrison, 2008 p. 19). The New Zealand Curriculum (Ministry of Education, 2007) aligns with the concept of social presence by explicitly stating that one of the aims for all New Zealand learners is that they are 'confident, connected and capable life-long learners' (Wright, 2010). The development of web 2.0 tools within blended learning has led to growing use of social technologies which Wankel and Blessinger (2013) suggest shows a growing emphasis on active, meaningful and situated learning. These learning terms are also descriptors for emotional engagement which indicates they align with the concept of social presence (Garrison, Cleveland-Innes, et al., 2010).

Jeffrey et al. (2014) identified strategies for student engagement from research

undertaken at two New Zealand tertiary institutions. These strategies were developed into a blended learning toolkit to assist in capturing and retaining students' engagement with their learning (Jeffrey et al., 2014). Their findings stress the importance of educators creating social presence through learning that fosters belonging, timely feedback and creates a context for learning (Jeffrey et al., 2014). Other higher education research settings echo these findings, including online (Angelino et al., 2007) and blended learning contexts (Lim & Yoon, 2008; Picciano et al., 2010; Wankel & Blessinger, 2013).

2.5.3 Cognitive presence

Cognitive presence is referred to as "the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse" (Garrison et al., 2001 p. 11) and is shaped by social and teacher presence (Garrison, Cleveland-Innes, et al., 2010). Vaughan et al. (2013) proposed that cognitive presence is fostered through activities that allow puzzles to be solved, ideas connected, information to be exchanged and ideas applied. The concept of cognitive presence aligns with the concept of cognitive engagement in that students can be strategic, invested, challenged, motivated and are able to self-regulate their learning (Fredricks et al., 2004). With the addition of self-directed and self-paced learning activities, the concept of cognitive presence aligns with the idea of personalisation and choice where learners construct their own meaning about their learning experiences (Assor, 2012; Drexler, 2014).

2.6 Student engagement in blended learning contexts

Traditional face-to-face settings, online settings and blended learning contexts share

the goal of fostering student engagement, it is the approaches taken to encourage engagement that differ (Wankel & Blessinger, 2013). In traditional classroom settings teachers have long used seating plans, learning goals and bookwork to create systems that encourage behavioural and emotional engagement (Cowley, 2004; Nuthall, 2007). In online settings, the use of a LMS and/or a PLE can similarly assist behavioural and emotional engagement through the creation of conditions that foster social presence, teacher presence and cognitive presence (Drexler, 2014). In addition, there is evidence of the implementation of a range of digital technologies and an evolution in the use of pedagogies that support student engagement in higher education (Cochrane, 2014; Cole, 2009; Hughes, 2007).

Jeffrey et al. (2014) recommended ten engagement strategies for learners in higher education blended learning contexts. The specific strategies to foster engagement, maintain engagement and re-engage students throughout the learning process of a higher education course are outlined below (see Table 2.1 below).

Table 2.1 A framework for considering engagement in a blended learning environment. Jeffrey et al, 2014.

Start of the course	Get students engaged	• Primers for gaining attention • Social presence and belonging
During the course	Maintain engagement	• Clear content structure • Unambiguous instructions and guidelines • Challenging tasks • Authentic tasks • Timely feedback • Elaborated feedback
Re-engaging	Recapturing the disengaged	• Monitor for early identification • Personal contact with student and appropriate support

However, due to the limited research within the secondary school blended learning context the research into specific approaches that can aid student engagement is frequently drawn from understandings about effective teaching pedagogies and from engagement in online settings (Aitken & Sinnema, 2008; Barbour et al., 2011; Louwrens & Hartnett, 2015; Waldron, 2014).

Within New Zealand, interest in student engagement ranges from engagement with school (Darr, 2009) to more specific student engagement within learning environments. The *Me and My School* self-report survey is a standardised instrument that asks New Zealand students in years 7-10 to agree or disagree with a series of 36 statements about their school (Darr, 2009). Darr argues that this survey is an example of a systematic tool that helps to collect student voice about how they perceive their engagement in school and learning, but is also a starting point for "something stronger and more real" (p. 99). Darr (2009) goes on to emphasise that "a voice of course

requires a listener" (p. 99) and that it is the process of listening to students in any educational context that aids engagement. Designing experiences that are interesting helps students to engage emotionally and cognitively and this in turn leads to experiences that Darr (2009) calls a 'sense of flow' - an experience of being so deeply engaged with an intense focus, so much so that the person often loses track of time. This concept of a 'sense of flow' was originally developed by Shernoff, Csikszentmihalyi, Schneider, and Shernoff (2003) who proposed that flow is "the combination of concentration, interest and enjoyment" (p. 172). Being bored, along with other emotions such as anxiety, can be considered the opposite of being cognitively engaged. Although students may still complete tasks, they are not going to engage with the learning as well as students who are interested.

The measurement of engagement within secondary blended learning contexts, several researchers argue, requires a range of different technique including surveys, test results, focus groups, interviews and observations (Clark, 2015; Fredricks et al., 2011). Measuring student engagement within blended learning contexts requires data-gathering methods to capture behavioural, emotional and cognitive engagement (Christenson et al., 2012). The collection of evidence of emotional and behavioural engagement uses measures that include surveys, self-report scales and observations (Darr, 2009; Fredricks et al., 2004; Shea et al., 2011) while interviews are often used to gather evidence of cognitive engagement (Shea et al., 2011). Rourke and Kanuka (2009) proposed that despite significant research that used the Community of Inquiry framework there were very few studies that investigated student learning where there were multiple sources of evidence that could be used to demonstrate learning.

2.7 Summary

While blended learning and student engagement both have a research base, very little, if any, research explores the nature of engagement within the secondary school blended learning context. Studies of engagement in online and blended learning context have tended to be situated in higher education and these are limited because they tend to view engagement as an overarching concept. The Community of Inquiry framework could be an effective way to consider the elements of blended learning and engagement, as these concepts appear to have commonalities.

This study is important and necessary as little is known about the senior secondary school blended learning context and the nuances of engagement for senior secondary students. Accordingly, the focus of this project was on exploring how students engage with blended learning to build an understanding of their experiences and to explore what approaches aid engagement within a senior secondary course. The next chapter outlines the research paradigm, methodology and approaches that guided this exploration into student engagement with the learning activities within a senior secondary school blended learning course.

Chapter Three: Methodology

3.1 Introduction

This chapter outlines the approach that guides this research project and clarifies the reasons for selecting the chosen methodology. The purpose of the research project and the research questions driving the investigation are first described. Secondly, the theoretical basis for selecting case study as the research approach is outlined. Thirdly, the process of case selection is described, followed by discussion of the data collection methods. Lastly, ethical considerations associated with this research are discussed.

3.2 Focus of the investigation

The purpose of this research project is to explore how senior secondary school students engaged with the learning within a blended learning course. The focus for this research is situated within a constructivist worldview (Creswell, 2014). The research project seeks to gather student and teacher perspectives about what it means to be engaged in a blended learning context and to understand the experiences of senior secondary students in a blended learning context.

3.3 Research questions

This research is framed by two exploratory questions developed from the aims of the study:

1) How do students engage with the learning activities available within a senior secondary blended learning course?

2) What approaches can aid engagement in a blended learning context within a senior secondary course?

The following section explains the rationale for the theoretical approach taken in carrying out this investigation.

3.4 Research paradigm

A research framework considers theories about the nature of knowledge, the strategies underpinning an inquiry and the detailed procedures used to conduct an investigation (Creswell, 2003). In order to guide the research design and produce coherent, useful insights, the researcher carefully and purposefully selected an approach that aligned with the research problem (Punch, 2009). The constructivist approach taken here recognised that the inquiry was complex and open-ended (Creswell, 2003). A detailed explanation of the constructivist worldview and the research design is outlined in the following sections.

3.4.1 Constructivism

The constructivist approach (Creswell, 2014) acknowledges three underlying assumptions: that knowledge created comes from the perspectives of the participants themselves, that meaning is constructed from within the community being studied and that "the basic generation of meaning is always social, arising in and out of interaction with a human community" (Creswell, 2003, p. 9). He argues that the term 'worldview' is a useful way to represent the different philosophies involved in an approach to research and this term is used here. Constructivism is the most appropriate philosophical worldview to employ for research projects where individuals are "seeking understanding of the world in which they live and work"

(Creswell, 2014, p.8). More specifically, Crotty (1998) contends that the constructivist researcher has the curiosity and perseverance required to generate meaning. The research questions posed in this research project seek to understand the experiences of secondary school students, which indicates that constructivism is the most useful paradigm to adopt.

3.4.2 Qualitative research: Case study research design

Answering the research questions for this project required the use of multiple data sources in order to explore the complexities of how the teacher and students engaged with the learning activities in their blended learning course (Creswell, 2014). The research design required a process that would capture the perspectives of the participants within a natural setting and a real-life contemporary context from multiple sources of evidence associated with the learning activities (Creswell, 2014; Merriam, 1998; Stake, 1995; Yin, 2009). The use of qualitative research techniques focused on the perspectives that the participants themselves held about blended learning (Creswell, 2014). Furthermore, qualitative research techniques allowed for the use of credible and dependable instruments to gather data (Pickard, 2013). Consequently, using a case study method is the most useful way to develop an in-depth understanding about how secondary school students engage with blended learning experiences (Creswell, 2014; Punch, 2009; Yin, 2009). The case study method created a research focus while also preserving "the wholeness, unity and integrity" of the secondary school classroom context (Punch, 2009 p. 132).

Exploratory, descriptive and explanatory case study designs each have a specific purpose in understanding a phenomenon (Yin, 2009). Descriptive case study designs are useful where the aims of the research are to provide detailed information in an

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established area, while an explanatory case study seeks to link theory with established practice (Yin, 2009). An exploratory case study was the appropriate research design for this emergent area of blended learning research as it allowed the researcher to utilise in-depth methods that captured a detailed picture of the students' experience in an area with limited existing research (Creswell, 2014; Pickard, 2013; Punch, 2009; Yin, 2009). An exploratory case study design allowed for categories to emerge from the data (Punch, 2009) during the analysis of the data collected during interviews, observations, document analysis and online activity (Creswell, 2003; Merriam, 1998). Specific boundaries for the case were constructed in order to create a meaningful unit of study that focused on the distinctive aims and purpose of this research (Pickard, 2013; Yin, 2009). The boundaries of this case are detailed in the following section.

3.5 Description of the case

The boundary of this case study was a class of Year 12 students (aged 16-17 years) at one New Zealand state secondary school and the blended learning activities made available to them during one four-week unit of their course. A New Zealand school was purposefully selected (Creswell, 2014) for this research for two reasons. The first reason is that the New Zealand secondary education sector has established e-learning guidelines (Wright, 2010) and there is an established and growing body of teacher practice (Wright, 2010). This particular case study was chosen because it is representative of current practice in a real-life situation (Yin, 2009).

The participants included the teacher and the Year 12 students of the course. This boundary was set because the course was an established blended learning course within the school and these students' were experienced at learning within the senior

secondary arena. The learning activities in this course were a mixture of online and offline tasks, which included individual, small group and whole class tasks. The specific learning activities that made up this case study were a four-week unit of work studying psychological theories relating to personality that was completed in August of the 2015 school year.

3.5.1 The research site

This case study took place in 2015 at a decile six[4] co-educational state secondary school of approximately 1000 students in the Upper South Island of New Zealand.

3.5.2 The participants

This research focused on seven senior secondary school students aged 16-17 and their teacher. The six male and one female student participants were in their fourth year of secondary schooling (Year 12 in New Zealand schools). The female teacher (aged 41) participant was an experienced classroom teacher who had taught psychology, careers and health in schools in New Zealand and the United Kingdom.

3.5.3 Blended learning context

The course was at level seven[5] of the social sciences learning area of the New Zealand curriculum. Students sat assessments derived from the New Zealand Qualifications Framework (NZQF) that contributed towards the Level 2 New Zealand National Certificate in Educational Achievement (NCEA). The particular unit that was the focus of the case study was on understanding human personality, how individuals

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[4] A school's decile measures the extent to which the students live in low socio-economic or poorer communities. Decile ratings are based on census data for households with school-aged children in each school's catchment area. The data uses household measures such as income, parents on a benefit, occupation, education and household crowding. Schools each have a decile rating from 1 to 10, the lower the rating the more funding the school gets. (Ministry of Education, 2015a)

[5] The NZ school curriculum has eight levels that typically relate to years at school. Level 1 begins in Year 1 of school and Level 8 is Year 13, the final year of secondary schooling. Each level has eight learning areas with detailed achievement objectives for students.

differ and how individual differences can be measured.

This blended learning course was designed for students enrolled in a face-to-face classroom learning environment in which students participated in a broad range of co-located online and offline learning activities. Online learning activities included a web site where students accessed core resources, supplementary content, online activities and assessment support material. The teacher had a variety of activities on the website that included video playlists, interactive game-based activities, and collaborative Google Docs administered through Google Classroom. In addition to these resources, the teacher used a variety of web 2.0 mobile phone tools for collaborative group activities that include Kahoot[6] (https://getkahoot.com) and Pear-Deck (https://www.peardeck.com). Offline learning activities included the use of presentations, discussions, textbooks and worksheets.

3.6 Data collection methods

This exploratory case study used a variety of data collection methods that included direct observations, online usage analysis, interviews and document analysis. The use of multiple data gathering techniques to answer the research questions allowed for data convergence and ensured triangulation of data sources (Creswell, 2014; Stake, 1995; Yin, 2009). The purpose of these data collection methods along with the process and details of the data collection are outlined in the following sections.

3.6.1 Observations

The researcher used an open observation technique (Hopkins, 2008) where written field notes about key points in the lesson were made as well as video recording the

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[6] Kahoot is an interactive audience response app that enables users to take part in timed group quizzes controlled by a quizmaster (generally a teacher)

entire lesson. The open observation technique enabled each lesson to be as factually recorded as possible (Hopkins, 2008). Direct observations provided data about the natural setting of the case and the participants' behaviour (Yin, 2009). Observations are a valuable source of data because they reveal previously unknown information about participants and their context (Yin, 2009).

The researcher observed the student participants and the classroom teacher during six separate lessons over a four-week period as they completed their usual classroom activities in their regular classroom context. Observing the participants over six different occasions helped to reduce the Hawthorne effect (Khan, 2014) and enabled a variety of lesson activities to be observed and behaviours recorded. Each of the observations during the unit of work on personality theories was for the entire duration of the 55-minute lesson and these observations were scheduled once or twice a week on non-consecutive days. Observations included teacher instruction, teacher-student interaction, student actions and student-to-student interactions. The participants were aware the researcher was present and aware of the gopro video recording equipment used to gather data.

The use of video as a supplementary data capturing technique enabled the researcher to gather detailed information about individual students (Hopkins, 2008; Stake, 1995). This was needed because of the difficulty of simultaneously observing multiple participants and their interactions with each other, the teacher and their screens. The camera was placed at the opposite end of the room to the researcher so as to capture interactions from angles that may have otherwise gone unobserved. The video camera was placed in such a way that footage of non-participants was minimised. If footage of non-participants was inadvertently recorded, it was not included in the data

analysis.

The researcher also took written notes about each student participant. Provision was made by the researcher for observations to cease if any student in the classroom, whether a participant in the study or a non-participant, was finding the physical presence of the observer either upsetting or distracting. Students were reminded of this provision at the start of each observation, but no enactment of the requirement to cease observations was necessary.

The data gathered from video and written notes were reviewed and triangulated against online usage history to reveal how students engaged with the learning activities.

3.6.2 Online usage history

The web activity and the network history revealed specific information about which sites were visited by student participants and the time spent at these sites and was used in conjunction with observational data sources to provide data that could otherwise have gone unreported (Yin, 2009).

The network administrator for the school facilitated the installation of the program on the school network for the dates and times of the six observations. The software program DeskTime (http://desktime.com) was installed on the machines used by the seven student participants. Each student logged into DeskTime at the beginning of the observation, and his or her web activity and network activity was collected. The participants were aware that this data was being collected and were also able to view their own activity log at any time. The administrator section of the DeskTime program provided customisable and downloadable data reports for each participant.

3.6.3 Interviews

Interviews are a critical source of information for a case study because they allow for facts to be checked, opinions to be sought and lines of inquiry to be followed (Merriam, 1998; Yin, 2009). The purpose of the interviews was to gather data about the students' and the teacher's thoughts and feelings relating to the learning activities throughout the unit of work and, in particular, those undertaken during observed lessons. A semi-structured interview technique was used for the gathering of participant voice in this case study. Semi-structured interviews lie in the middle of a continuum between a researcher-led questionnaire and a participant-led informal conversation and allow meanings to be explored and constructed (Pickard, 2013). The researcher used set interview questions (Appendices 9 and 10) that included prompts to scaffold and focus the data collection (Yin, 2009).

3.6.4 Document analysis

The teacher provided the researcher with copies of the planning documents for the unit of work that formed the boundary of the case. The planning documents included a lesson-by-lesson unit planner and associated assessment activities. In addition, the researcher was able to access the LMS used for the course. Unit plans, lesson plans, assessments as well as other information on the course website were collected from the teacher to establish the types and proportions of online and offline activities used and for the purpose of analysing the aims of the unit and the learning outcomes for each lesson. Reviewing planning documents for this unit of work assisted the researcher in understanding the purpose and intent of the unit, which assisted analysis of the datasets (Hopkins, 2008).

3.6.5 Gaining access to the research site, data collection and analysis

This research project followed a detailed set of procedures to gain access to the research site, recruit participants, gather data and complete a data analysis. These procedures are described in this section.

Consent to undertake research was sought from the selected school. A letter was sent to the Board of Trustees (Appendix 1) requesting access to use the selected school as a research site. Once approval from the school was given, the specialist classroom teacher (SCT)[7] of the chosen school was approached and she presented the initial invitation to the teacher of the identified class to participate in the research.

One teacher and one class from an established blended learning course that had been running for the past two years were approached to volunteer to participate in this research. Once the teacher consented to be involved, the researcher met with the selected class and the teacher and explained the purpose of the study and the procedures involved. This method of recruitment helped ensure the aims of the research were well understood. Copies of the information sheets (Appendices 2 and 3) and consent forms (Appendices 4 and 5) were left for the teacher and students to view as part of this informal session.

The researcher for this project was on leave from her teaching position at this school so she was known by approximately two-thirds of the class. The recruitment approach described above allowed the focus to remain on the aims of the research, rather than on the identity of the researcher. At the conclusion of the information session the researcher asked students to email her within three days if they were willing to

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[7] The specialist classroom teacher position focuses on best practice teaching and learning and is a role that sits outside of the principal and senior management structure in the New Zealand secondary school setting. The purpose of the role is to provide classroom teachers with the opportunity to seek professional development that is independent from line management processes.

participate in the study. At this point in the recruitment phase, the researcher wrote a short email to the parents of this class advising them that research was taking place. The classroom teacher forwarded this email, along with a copy of the student information sheet, to parents.

Seven students out of the 27 in the class emailed the researcher and volunteered to participate in the research project. Pseudonyms (S1 – S7) that were only known to the researcher were given to the student participants, along with the pseudonym T for the teacher participant. Demographic and achievement information about the seven volunteer participants was collected from the student management system via the classroom teacher which indicated the student participants were a representative sample of the class (Creswell, 2014) in terms of gender, ethnicity, academic achievement and interest in technology. No specific gender, ethnicity, ability, engagement or interest in technology was targeted for this research project. Provision was made that if there were more than twelve potential participants, then participants were to be purposively selected to ensure as much diversity in engagement, gender, ethnicity, ability and interest in technology as possible. These seven student participants were sufficient for data saturation to occur (Creswell, 2014) so no further participant selection procedures were required.

A consent process was followed for the collection of online activity and the network history for each of the student participants for the dates and times of the six observations (Appendices five and six). The researcher collected the written consent forms from all eight participants during the first observation. A copy of the network administrator's confidentiality agreement is attached (Appendix seven).

Six observations were completed where the researcher gathered data using the data collection tools detailed earlier in this chapter. At the commencement of each observation, participants were reminded of the aims of the project and the teacher reassured that the focus was on exploring the student engagement with the activities, not evaluating the teacher. The data from each observation were given a unique identifier that incorporated its order (O), day and month (3-8), venue (class or lab) and data source (video or notes). For example, the identifier O1.3-8.class.v refers to data collected during observation one on the 3rd day of the 8th month in the classroom via a video recording.

All the participants took part in a 15-20 minute semi-structured interview at the conclusion of the four-week observation period. A copy of these interview questions is attached (Appendix nine and Appendix ten). The student interviews and the teacher interview were scheduled within the normal school day at a time that suited each participant. Break times and study periods were selected so that no disruptions to either the students' class time or the teacher's lesson time occurred. The venue was a comfortable, quiet place within the chosen school. The interviews were audio-recorded and professionally transcribed. A copy of the transcribers' confidentiality agreement is attached (Appendix eight). Each interview was given a unique identifier (i.e. Int.S1).

The teacher provided the researcher with a copy of the unit planner and associated documents for the unit of work investigated. Each document was given a unique identifier (i.e. D1).

3.7 Data analysis

The data generated from the interviews, observations and document analysis were imported into the software program Nvivo 10 (http://www.nvivo10.com) and this was used to undertake analysis of the data. The data from the network history was exported from DeskTime (http://desktime.com) into an Excel spreadsheet for analysis of the number of times sites were visited and the length of time specific students spent at these sites.

Each of the datasets were analysed using an emergent coding process (Creswell, 2014; Yin, 2009) that formed a rich description of the texts and transcripts. The subsequent analysis was a gradual process that reviewed the patterns and themes emerging from the data and constructed a meaningful analysis and focused response to the research questions (Stake, 1995; Yin, 2009). The nature of the exploratory research questions generated broad initial coding categories. As the analysis progressed, emergent coding was used within each category that created detailed and descriptive data sets. Codes were initially set for three categories: teaching and learning activities, the type of technology and engagement. Within the engagement category, there were three sub-categories: CE (cognitive engagement), BE (behavioural engagement), and EE (emotional engagement).

3.8 Ensuring quality

Trustworthiness in qualitative research is established from the credibility, transferability, dependability and confirmability of the processes involved in the research (Merriam, 1998; Pickard, 2013; Punch, 2009). Credibility comes from prolonged involvement with the research and triangulation of data (Pickard, 2013).

Data gathering was carried out over a four-week period and included six separate data gathering sessions and seven interviews. Data were collected from multiple sources (observation, interview, document analysis and online usage history) which helped to mitigate limitations of any individual research data collection approach (Merriam, 1998; Pickard, 2013; Stake, 1995).

The transferability of the knowledge refers to whether the findings generated from this case study can be applied to other contexts (Punch, 2009). Ultimately, the transferability of the knowledge gained from this research will depend on the richness of the case study description and the similarity of context to which these findings are being applied (Punch, 2009). The description of the boundaries of this case detailed within this chapter enable the reader to determine how similar the context described here is to another context of interest. Dependability refers to whether there is consistency between data sources (Punch, 2009). The data sources used for this research project were typical for a case study, were appropriate to a constructivist approach and the instruments provided dependable data (Yin, 2009).

Confirmability refers to the efforts of the researcher to follow good case study principles (Creswell, 2014). A coherent research plan was followed, multiple data sources were used, a database was used to organise and catalogue the data and a clear chain of evidence was used that maintained logic with links between every stage of the case study able to be traced (Yin, 2009). This present study had clear boundaries, convincing and relevant evidence gathering processes, and was generated in a real-life setting with few constraints on the data gathering process (time, place, etc). The use of multiple sources of evidence strengthened this case study because the data sources were triangulated and viewpoints corroborated (Yin, 2009). In short, the conditions

(Yin, 2009) under which this study was carried out meant sufficient evidence was gathered to undertake an informed critical analysis of the case study.

3.9 Ethical considerations

Ethical issues are always involved in research (Merriam, 1998; Punch, 2009). Ethical principles (Massey University, 2015) were followed for this research that considered the ethical risks for the participants. This research project was granted full ethics approval by the Massey University Human Ethics Committee (Appendix 11). The implementation of ethical processes ensured that informed consent was gained, the participants were protected from harm, anonymity and confidentiality were maintained, and potential conflicts of interest were addressed. Details of the specific procedures that ensured this research was ethical are described next. It should be noted that these ethical processes sit alongside the previously described research design processes and procedures.

3.9.1 Informed consent

Researchers must ensure potential participants understand the research and can give informed consent to be a part of the project (Punch, 2009). All potential participants were given an information sheet and consent form that outlined the aims and procedures of the research. The researcher also presented a verbal summary of the research procedures to the students and to the teacher and gave them an opportunity to ask questions.

3.9.2 Protection from harm

The research process should not cause stress or distress to participants (Punch, 2009). Procedures undertaken at the recruitment, observation and interview phases ensured

participants felt at ease and reduced any anxiety or distraction. During the recruitment stage, the Specialist Classroom Teacher (SCT), who sits outside the leadership structure of the school, introduced the research invitation to the teacher. The chosen school regularly used this approach to give classroom teachers space to reflect on whether they wished to take part in research prior to any direct involvement with the researcher or any involvement with potential student participants. Student participants were given an opportunity to hear about the research procedures and to read a research information sheet prior to deciding to take part in the research.

Throughout the recruitment and observation phase the participants' rights to withdraw from the research were observed. Participants were advised of the presence of the researcher in the classroom in advance of each of the observations and could withdraw permission for the observation to occur at any point up to, and including, the observation itself. In addition, the researcher briefly greeted the class at the beginning of each observation session.

There was possibility of harm for the morale and performance of staff and students at the school. Research results that were not complimentary for the school could damage the reputation of the school, the teacher and the students. Specifically, if students felt disengaged in the unit of learning being observed, the school could become concerned about student disengagement with learning. The Board of Trustees was advised of the aims of the research and provided with details of the research in the initial research approach to mitigate the possibility of harm to the school.

3.9.3 Anonymity and confidentiality

Researchers protect the privacy of case study participants by ensuring that their details remain confidential (Stake, 1995; Yin, 2009). In this case, all electronic

storage systems were password protected and stored securely (Merriam, 1998). All identifying information about the participants was removed from the research findings and the schools identity remains confidential to the researcher. The numbers of schools that learn about psychology in the South Island of New Zealand are small. There is still a possibility that the school, and therefore the participants, may be able to be recognised. All identifying information about the school was removed from the research findings to mitigate the possibility of the school being identified.

3.9.4 Potential conflict of interest

Conflicts of interest occur when researchers have a stake in the outcome or have dual roles in a research project (Hopkins, 2008; Yin, 2009). This research took place in the researcher's usual place of work. As such, the researcher was known to the teacher and to some of the students, which could have potentially created a situation where the teacher participant, the other teaching staff at the school or the student participants felt uncomfortable with having the researcher present in their class. They may have either chosen not to take part or felt unable to offer their true opinion and instead behave in ways that might affect the research.

To mitigate any possible conflict of interest, the aims of the research project were made clear to the Board of Trustees during the process for gaining access to the school. The researcher emphasised the focus on the research project and the clear difference in role between previous teaching experiences and this research project. The focus of the research project was reiterated to all potential participants during the recruitment, observation and interview phases of the research. The researcher was on leave from her teaching position and therefore she was not present on the campus and there had been a six-month absence from teaching by the time the data-gathering

phase of the research commenced. The researcher acknowledges there may be bias present from being known to staff and students at the school (Creswell, 2003; Pickard, 2013). The use of multiple data sources during the data gathering process and adherence to ethical principles were designed to minimise the effects of this potential bias.

3.10 Summary

This chapter has described the basis for this research project and included a detailed description of the steps involved in this qualitative research, including the ethical considerations that ensured the rights of the participants were protected. The focus of this investigation is an exploration of how senior secondary students engaged with the learning activities within a unit of their blended learning course. The constructivist approach employed recognises the inquiry is complex and open-ended and that the participants themselves have an understanding about the engagement with blended learning within this context.

An exploratory case study approach is used with multiple data sources that include direct observations, online usage history, interviews and document analysis. The data captured will form a detailed picture of the complexities of how seven senior secondary students engage with a unit of work in their blended learning course. A data analysis procedure that ensures quality trustworthy, credible data analysis has been explained. Ethical principles have been followed for this research project and a detailed explanation given of how the ethical risks to the participants have been mitigated. The next chapter describes the data collected and presents the findings of

the research investigation with the aim of contributing knowledge to this field of blending learning research.

Chapter Four: Findings

4.1 Introduction

This chapter describes the findings in relation to the two research questions investigated in this case study. The findings are grouped into two sets of responses. Firstly, an outline is provided of how the seven students involved themselves with the learning activities within their blended learning course. Secondly, consideration is given to what aided engagement in this blended learning senior secondary course from both the students' and the teacher's perspectives. The final section of this chapter presents patterns revealed in this study as themes about senior secondary school blended learning. Because one participant withdrew from the study prior to the conclusion of data gathering, in places there is only data from six students.

4.2 Research Question One: *How do students engage with the learning activities available in a senior secondary blended learning course?*

This first section describes the actual learning activities that the seven students participated in and identifies how they engaged with those learning tasks. Data collected show that the participants participated in both online and offline learning activities in different ways. The seven participants completed a variety of learning activities that can be categorised as being self-paced, collaborative, enjoyable, or analytical. These categories are used to analyse the learning activities and are not listed in any particular preferential order. The students showed variety in the way they engaged in the planned learning activities within their blended learning course. Overall, it was found that the students' engagement was determined more by the

design and purpose of the task than whether the task was online or offline. The findings are presented here under separate headings for the online and offline learning activities.

4.3 Online opportunities

The first type of learning activities analysed are the online learning activities some of which were accessed via the course website, while others were accessed using web 2.0 tools and were mediated through the teacher.

4.3.1 Activities were completed

All seven students completed the online tasks set by the teacher for the observed lessons. Evidence found in the web history and observational data confirmed that the students visited the sites and apps and that the tasks were completed as directed by the teacher. Observational data, web-logs and video recordings showed that six out of the seven students followed the teacher's instructions without any off-task behaviour. A summary of the activities completed is presented below in Table 4.1.

Table 4. 1 online activities completed during observations one-six

Observation 1 Computer room	Worked in a group on a Google Doc
Observation 2 Classroom	Participated in a Pear Deck quiz
Observation 3 Computer room	Completed a series of short Buzzfeed personality quizzes and recorded results
Observation 4 Computer room	Completed an MBTI online personality test
Observation 5 Classroom	Participated in a Pear Deck quiz
Observation 6 Computer room	Watched videos and completed a humanistic personality test

Only one student, Student Six, engaged in off-task behaviour and he still completed all the tasks set by the teacher. Observation notes indicate that he ate, talked, used Facebook, texted and also left the room throughout class time (see Appendix eleven).

4.3.2 Self-paced online tasks

During observations of lessons held in the computer lab, all students accessed tasks via a course website set up by their teacher. The teacher's planning notes consistently used the verb 'explore' to describe each of the self-paced tasks. She intended the students to work through the videos and quizzes at their own pace and this was reinforced in her verbal instructions. For example, she said, *"I'm going to give you a few minutes to do a bit of exploration at your own pace"(O3.13-8.v)* and this was a representative example of her instructional technique. Notes from the teacher's planner confirm that her intention was to have students *"explore ancient and modern tests - Chinese astrology, Buzz Feed quizzes, symbol test, palmistry..."* and *"keep a record of findings in the personality portfolio." (D1)*

Evidence that the students worked at their own pace during tasks was also found in the web-logs. For instance, in observation six the time-stamped activity for two

students indicated that they accessed different sites and spent different lengths of time at each site. Specifically, Student Four spent 11.34 minutes completing a self-assessment of congruence personality test, while Student Six spent 4.46 minutes completing the same personality test (Appendix eleven).

4.3.3 Collaborative online tasks

During observations of lessons held in the students' regular classroom (observation two and five), there were two examples of the online activity Pear Deck. The format for this online activity was a group question and answer session led by the teacher. The questions were open-ended and designed to elicit personal responses rather than closed questions commonly seen in quizzes. The teacher set up the Pear Deck task and showed a slideshow about the personality topic via a data projector. She then told the students that they were expected to contribute their answers via their phone or laptop using the web 2.0 app Pear Deck. The answers were viewable on a teacher dashboard and also displayed to the class via the data projector.

During the second observation, the teacher presented information that described workplace psychology and asked the question: *"Can you give me one example of a day-to-day task that a workplace psychologist might do?" (O2.11-8.v)* Over the subsequent minute students texted their answers and she viewed the response count on the Pear Deck teacher dashboard. After a final prompt to the class, *"Okay I can see 10 answers in now, anyone still going?" (O2.11.8.v),* she switched from the 'dashboard' view to the 'display the responses' view and went through these with the class.

The structure of this Pear Deck activity encouraged the students to engage in online collaborative interaction. Firstly, it directed the students to answer a set question in a particular way within a set timeframe controlled by the teacher. Secondly, the app displayed how many students participated along with their contributions so the teacher could measure online behaviour in real time. Thirdly, the activity gave multiple entry opportunities for students to get involved and to make a contribution at any time. It is this third element that was an effective way of eliciting collaboration from students as they could add their views to those of the entire class.

The use of Pear Deck was observed twice during the study, and all of the students entered responses. For instance, student one went beyond the basic requirements of the task to become deeply involved with this learning activity. He participated enthusiastically and contributed his answers promptly via his phone and also offered three verbal comments as part of the teacher-led class discussion. He gave responses that indicated he had positive thoughts and feelings about this task. For example, he reported Pear Deck to be his favourite online task and said it was "interesting". He described Pear Deck questions as neither hard nor easy: *Some of them [the answers] you think about like straight away, but if you want to expand on it a bit you could" (Int.S1)*. Pear Deck gave everyone the chance to answer the teacher's questions because *"everyone will get a chance to answer instead of just going round like, putting your hands up and only one person gets their input" (Int.S1).*

Student One gave reasons for his participation in this activity. For example, he said Pear Deck had two real practical advantages. Firstly, it helped being able to view the slideshow on his phone because *"my eyes aren't good enough... where from my phone*

I can just read everything really easily" (Int.S1). Student three thought differently and found Pear Deck frustrating because the information was in two places and it made her wonder *"what's the point of your phone having information if it's already up there [on the projector screen]?"* (Int.S3).

The teacher indicated the Pear Deck activity gave her the chance to *"switch them into participating (Int.T)".* The teacher confirmed she thought it was a good tool for *"getting feedback straight away on what they've understood and what they haven't …rather than just passively listening to something, they get a chance to answer questions as you go" (Int.T)*

The two examples of Pear Deck observed within this unit of work provided evidence of structured and collaborative online learning that the participants found behaviourally, emotionally and cognitively engaging.

4.3.4 Enjoyment with online tasks

The teacher planned two online tasks specifically for the students' enjoyment. Four out of the six students said they most enjoyed either the Buzz Feed online personality quizzes or the Myers Briggs personality inventory (MBTI) online personality. The Buzz Feed quizzes are now considered. The short online Buzz Feed personality quizzes elicited heightened emotional reactions from three of the students who stated these tasks as either their favourite or their least favourite online learning activity. Evidence for the presence or absence of enjoyment with these quizzes was seen in the length of time spent at these Buzz Feed sites and their comments during the activity and during interviews. The teachers' unit plan and course website confirmed the intention of the Buzz Feed activity was to have fun exploring ancient and modern

ways of testing personality and to record the results in a personality portfolio. The teacher's instruction on the course website stated: *"We will be taking a lot of tests to find out if they can accurately describe you, but always remember they are just for fun. No online test should be taken too seriously"(D2.)* The web history showed that all seven students completed the short online Buzz Feed quizzes and all participants spent most of their time on the Buzz Feed site. Observational data confirmed that the students displayed positive body language, including laughter. For instance, Student Two smiled at his quiz result *"adorable goofball" (O3.13-8.n)* and he used his phone to take a screen shot of this result.

An analysis of the engagement shown by Students Three, Four and Six provides details about the individual differences in behavioural and emotional engagement between these three students. Student Four stated that he enjoyed the Buzz Feed personality quizzes because it was *"more involved with ourselves, it's not being just talked directly to us …'Write this down, study that', it was like we actually get to answer things personally" (Int.S4)*. Student Four completed nine of these quizzes and spent between 1.56 minutes and 4.02 minutes at each of the nine quiz sites. He showed evidence of enjoyment during his interview and said he liked that the quizzes were personal to him. Time spent on the quiz sites appeared to be an indicator of enjoyment as students who enjoyed the Buzz Feed quizzes spent longer on the task.

In contrast, Student Three completed the task set by her teacher and said *"it was fun"* to do these quizzes, but she felt frustrated because these quizzes *"they didn't really teach you anything whereas in an actual personality test like with, a percentage or something, would tell you something whereas being a 'cheese'… it's a cheese, it*

doesn't tell you anything" (Int.S3). Student Three visited eight quiz sites and spent between 7- 49 seconds on six of the sites and 1.33 and 1.44 minutes on two other quiz sites. Student Six also felt frustrated by the Buzz Feed quizzes. He visited five quiz sites but only spent between 31-59 seconds at three of the sites and only 1.27 and 1.32 minutes at the other two sites and identified his lack of enjoyment and frustration " *... I'm frustrated by anything that isn't factual and kind of grounded, very grounded. In fact, it makes my skin crawl" (Int.S6).* The teacher designed the Buzz Feed quizzes as enjoyable tasks and she was successful in emotionally engaging the majority of the student participants.

4.3.5 Analytical online tasks

Students Two and Six reported the online Myers-Briggs Type Inventory (MBTI) personality test as their favourite task due to it being a chance to critique and analyse a personality theory in detail. Documentation within the teacher's planning confirmed the MBTI was intended to be an analytical activity designed to cognitively engage the students. The teacher's unit plan included an instruction that explicitly alerted the students of this learning outcome: *"You should use one of these [personality tests] in the test. You will be given a scenario about a person and need to analyse their behaviour using one of the trait theories"* (D1)

Student Two reported the MBTI personality test to be his favourite because *"we could just talk about it [the test results] at our own free will" (Int.S2).* Student Two could see that *"the reason we did it at different times and in different ways was to determine whether we would get the same result or not from some of the tests" (Int.S2).* He enjoyed comparing and contrasting his results from *"the paper one earlier in the year and the computer one later" (Int.S2).* Student Six critiqued *"both how the data is*

collected and like the product of the data" (Int.S6) and rated the MBTI personality tests as his favourite activity and stated he found "*it was interesting just disseminating them because... they had strengths and weaknesses where in my eyes a lot of psychology - or approaches have only really had weaknesses" (Int.S6)* The comments from these two students indicate that they went beyond the basic mechanics of taking a test and recording the outcome, to critiquing the results.

4.4 Offline learning activities

As well as the above online tasks, the teacher's planning notes indicated a number of offline activities, including pen and paper personality tests, worksheets on psychological theories, note-taking from a textbook, note-taking from a slideshow, scenario-based written questions, a sorting activity and a cloze procedure. Two examples of intentional offline learning tasks were observed, one in the classroom where students took notes and completed worksheets, and two in the computer room where students listened to instructions. All seven students participated in the offline sections of the blended learning course (see Table 4.2). Only Student Six showed off-task behaviour (see Appendix Ten). Furthermore, during the data collection phase it was noted that all the students also spontaneously created their own unplanned and offline learning task where they initiated tasks where they discussed, planned, processed and analysed their learning.

Observation 1 Computer room	Listened to teacher instructions and work with others to plan
Observation 2 Classroom	Viewed slideshow and took notes
Observation 3 Computer room	Completed a series of short Buzzfeed personality quizzes and record results **(This began as an online task which the students took offline in an unplanned manner)**
Observation 4 Computer room	Listened to teacher instructions
Observation 5 Classroom	Viewed a slideshow and took notes
Observation 6 Computer room	No offline tasks planned nor observed

Table 4.2 Offline tasks to promote self-paced learning

4.4.1 Offline tasks to promote self-paced learning

Unlike in the online setting, there was no evidence of students being given the opportunity to self-pace or determine the order of offline tasks. Student Two described offline activities negatively *as "just constant bookwork" (Int.S2).* Student Five said he was sometimes bored and daydreamed because *"you're just sort of following exactly what you have to be doing so that you can't research any further on your own" (Int.S5)* Student Five said he preferred *"finding my own way" (Int.S5).* The comments from these students appear to indicate that students were asked to complete the identical task, which were to read a set section from the textbook and make their own factual notes.

4.4.2 Offline tasks to promote collaboration

All seven students were observed interacting offline with peers or the teacher during several tasks designed as online tasks. The types of interactions observed included students peer-checking their understanding and/or sharing their enjoyment of the task.

Unplanned behaviours occurred spontaneously and were student-led rather than teacher-led. For instance Student Four interacted with another student by physically turning his monitor screen to show a peer the results of a personality test (O2.11-8.n). Student one and student two talked to other nearby students about the task:

9.25   Student 1 "this feels like a [movie] trailer!" to Student 2
9.26   Student 2: "do we have to draw a tree??" to Student 1. "No"
9.35   Student 2: "Am I funny? To neighbouring student. Answer: "You're pretty funny." (O6.27-8.n)

On one occasion, the teacher's instructions described the individual and online tasks as *"self-directed stuff...a bit of exploration..." followed* by *"an activity that I would particularly like you to do" (O6.27-8.v).* However, students were seen taking part in offline discussions with their peers, which effectively created their own informal and offline learning activities.

4.4.3 Offline tasks to promote enjoyment

The teacher planned several offline tasks specifically for the students' enjoyment. In one task the students were asked to complete a pen-and-paper personality test and analyse the results. Student Three and Student Five enjoyed this offline activity and both said the pen-and-paper personality test was their favourite within this unit of work. Student Three stated she preferred the offline setting of the classroom because *"we usually just write the stuff and we do like activities, like actual activities...like it's there whereas on the computers you look at it and it's like done" (Int.S3).* It would appear that the teacher-designed offline tasks that allowed students to be active and to have ownership of the task were effective at emotionally engaging some students.

4.4.4 Offline tasks to promote critical thinking

There was no evidence of offline analytical tasks to promote critical thinking. All seven students completed all offline tasks as directed by the teacher but they appeared to be bored. Being bored might have indicated a lack of analytical processing in the tasks. One offline task identified as boring by four students was making written notes. For instance, Student Five looked down and sat quietly during teacher-led presentations. Afterward he stated that if he was finding it boring, he would *" drift out a bit, I won't be taking it in as much because I'm not as interested with what we're doing….I'll come back in and I'll listen for a bit and then I'll daydream again"* *(Int.S5).* Student Five stated that taking notes out of the textbook was his least favourite activity to do, stating that tasks that were only interactive when he got to *"physically, actually do it, because I take it in better that way" (Int.S5).*

Student Six appeared not to enjoy offline learning activities. He frequently ate and chatted on Facebook and talked with his neighbour for almost an entire lesson. He justified his behaviour by saying that he was: *"…finding my feet with activism and you know, online people wanting to talk to me a lot more and getting used to kind of managing all that" (Int.S6).* A dislike for offline tasks was also mentioned by Student One who did not enjoy individual pen and paper activities, claiming that: *"It's like really draining just doing it from a text book and it's like boring, you know?" (Int.S1).*

4.5 Research Question Two: What approaches can aid engagement in a blended learning context within a senior secondary school course?

This section reports the findings about the approaches that can aid engagement within a blended learning course firstly from the perspectives of secondary school students

and secondly from the perspective of their teacher. The components of engagement are outlined under separate headings in descending order of importance.

4.6 Students' perspective of engagement

This section discusses the students' perspective of engagement. Engagement had a variety of components such as personalisation, getting into it, talking to people, being challenged to think and scaffolded learning.

4.6.1 Personalisation

Personalisation happened in two ways: the tasks were personally relevant to students and students had choice and independence in how they were completed. All seven students stated their learning activities gave them personal understandings of themselves. This sense of personalisation and relevance was confirmed in the teacher's planning documentation: *"[Students are to] keep a record of findings in personality portfolio" (D1)* and in the teacher's words: *"They are ...exploring it in their own time and in their own way." (Int.T).*

Making their own choices about learning was an important part of *"learning the same stuff but in my own way ... I pick up on what I'm doing better even though it's less structured because... I can do the same stuff " (Int.S5).* For other students, creating their own original work was an important part of how learning could be personalised, *"I get really into it if it's original. If I'm thinking it up myself" (Int.S2)* In contrast, *"it was boring" (Int.S2)* when completing questions and answers because *"it's just repetitive things over on a piece of paper. You know? Just describing the same thing in different boxes pretty much" (Int.S2).* It appears that the opportunity for students to

make choices and show independence within tasks was a deliberate feature of this blended learning course. Moreover, students found the teacher-designed tasks relevant, which furthered the personalisation of their learning.

4.6.2 "Getting into it"

During the participant interviews, students described their engagement with tasks in a number of ways. Student One preferred to use digital technologies, as they were quicker, more efficient and allowed for a greater range of activities - which meant he was less likely to get bored. He described boredom as when *"your mind just kind of flogs away and you're thinking about how bored you are" (Int.S1)* In contrast, student One described being "really into it" by saying, *"when you're thinking about what you're doing…you are not thinking about…thinking" (Int.S1).* Student Four explained that when he is engaged *"I'm really into it" (Int.S4)* and his main thoughts were, *"I don't want to just get it done, I want to carry on doing it … I find every bit of detail I can do, you know, to make it better sort of thing" (Int.S4).* Student Two also expressed the idea of *"getting into it"* when he said: *"I feel determined to just keep on going. You know, keep writing what I'm doing, I get really in the zone. Yeah.. and it's kind of enjoyable" (Int.S2).*

During the participant interviews, a number of the students referred to the use of Kahoot! as an activity where they got involved *"cos you know everyone gets really competitive, fired up, it's really fun" (Int.S2).* Kahoot! was an online learning activity listed in the teachers' plan, but which was not observed during this research, The planning for this activity indicated that the teacher intended students to complete a variety of competitive online learning activities in the regular classroom setting. The

use of Kahoot! was not able to be observed during the course of this research so no further analysis was able to be undertaken of this particular activity. The student participants were able to describe in detail how they engaged with teacher-designed activities when they could 'get into it'. Students used terms like '*fun*', '*competitive*' and '*determined*' that appear to indicate these tasks fostered the existence of emotional engagement.

4.6.3 Talking to people

Several students commented that they worked with, and alongside, others in a collaborative way during blended learning activities. For instance, Student Two informally talked in pairs and small groups: *"You know, with our other personality results from different tests…and yeah, and we could just talk about it at our own free will" (Int.S2).* Student Three enjoyed working with her peers because *"you could talk to your friend about what you've got and what they've got and how it's different …because they get a different perspective on us than we do" (Int.S3).* Communication was evident between the students and the teacher. The teacher was observed during lessons moving around the classroom and the computer room. She initiated discussion and responded to student queries.

4.6.4 Being challenged to think

Collectively, the students in this study reported a number of factors that made a difference in how they came to understand their learning. All the students could identify times when they participated in an activity that challenged their thinking as well as times when an activity did not. For instance, Student Three preferred the offline environment because she felt online work only required her to *"copy and paste, so you're actually not learning anything" (Int.S3).* All the students knew when

they were thinking because they were conscious of putting ideas together and creating meaning for themselves. Student Six felt that a lot of the time he was engaged in a *"really kind of sceptical, critical manner" (Int.S6)* because he saw a lot of *"baseless, intuitive ramblings [from psychological theories" (Int.S6)* Student Three illustrated aspects of thinking in her response to what engagement meant for her by saying, *"If I'm fully engaged I remember things better. Like it's easier to process the information and like understand it" (Int.S3).* This comment from Student Three was indicative of other students' comments. It appears that tasks where student participants were given a task that required them to analyse an idea and respond in some way were tasks that fostered cognitive engagement.

4.6.5 Scaffolding learning

The teacher provided a variety of online and offline tasks that ensured learning activities had relevance, supported thinking, built on the familiar and managed the distractions of the online and offline settings. Students Two, Five and Six all commented about the scaffolding the teacher facilitated for students during the learning activities. Student Six was specific on how the teacher helped them to *"make proper references and of course, relay them back to the actual topic and, rather than just kind of a free 'slurge' of incoherent info that might not go anywhere" (Int.S6).* Student Two stated that if they asked the teacher they would get an answer that *"would be a more definite answer, what I need to be knowing, instead of what Google might 'rattle on' about the same thing" (Int.S2).* The teacher directed their thinking so that the tasks made sense. Student Five appreciated watching relevant videos where he got to see and hear from the actual person who came up with the psychological theory being studied *as "it's more interesting...you're actually getting their perspective it's not just plain information from someone who's not really opinionated*

about it at all" (Int.S5). The teacher designed a variety of thoughtful and targeted scaffolds across the offline and online tasks. The diversity seen across these blended learning activities appears to indicate the teacher used deliberate design strategies to foster behavioural, emotional and cognitive engagement for the class.

There was a range of opinions from the seven students about what helped them to complete their assigned work. Student One stated that he felt using technology was easier [than pen and paper] because *"the most majority of us use technology all the time, so it's sort of a familiar place" (Int.S1).* Student Three was unfamiliar with working alongside other students in the computer room and found it easier to work in the classroom because *"in a class, if I sit up the front then I only see the board so it's kind of easy to tune them out" (Int.S3).* Student Three felt there were annoyances in the computer room environment that she found distracting and explained it by saying:

> *"It's quite easy to get distracted by computers and kind of - oh it's just - it's not distracting it's just annoying sometimes because they'll be talking and it's like I'm trying to get my work done" (Int.S3)*

Student Three said that some of the tasks were harder in the computer room because *" you're not actually using your hearing as much…whereas in a classroom you don't notice it as much because you kind of used to the noise, because it's background noise" (Int.S3).* The comments from Students One and Student Three appear to indicate that students have varying levels of experience and satisfaction in managing the requirements of learning in offline and online settings. It is possible that the teacher scaffolded an increase in their familiarity and skill level by alternating the conditions and duration of offline and online learning tasks, which would increase both behavioural, emotional and cognitive engagement.

4.7 Teacher's perspective on engagement

This section discusses the approaches that aided engagement from the teacher's perspective in order of most to least salient. From this teacher's perspective, to be engaged in a blended learning context within a senior secondary course was: *"an overall view rather than a minute by minute application" (Int.T)* and tasks needed to ensure enjoyment, understanding, responsiveness and be scaffolded. The teacher felt engagement *"can look different, depending on the task and depending on the student and depending on the thing that you're working on" (Int.T).* She thought students were engaged if *"they are focused on the activity".* The teacher made a conscious decision to incorporate technology into her blended learning course as she thought it was *"important to use technology" (Int.T).* She felt it was important for a teacher to use blended learning activities *"in the right way and to think about what you're using it for"* (Int.T). She was aware that *"they don't automatically love sitting in front of computer more than they love sitting in a normal classroom" (Int.T).*

4.7.1 Engagement through enjoyment

The teacher could identify activities that the students liked, and specifically named Kahoot! as one such activity she used because: *"I think it's just got the kind of excitement factor as well as them being involved individually and you know, it ticks quite a lot of boxes doesn't it" (Int.T).* The teacher was also able to identify an example of one particular offline task that students did not enjoy. The students *"just worked individually or in pairs" (Int.T)* and wrote some notes down. The teacher went through answers using pen and paper but she recognised *"there was quite a lot of chattering going on and they weren't particularly well engaged" (Int.T.)* She saw the positive effect that blended learning had on engagement, *"you know, they like it if*

the activity is right or interesting or fun or whatever" (Int.T*). The teacher is able to identify activities that students describe as liking are both interesting and fun. She appears to understand that fostering emotional engagement for students requires a thoughtful approach to task design.

4.7.2 Engagement through knowing and thinking

During the teacher interview, the teacher showed she was aware that engagement is *"being focused" (Int.T)* and that engagement is more than task completion. She recognised students needed to know how the learning *"slots into the unit" (Int.T)* in order to *"understand that they've learnt" (Int.T)*. She considered that engagement is *"getting into the task rather than just doing it" (Int.T).* This teacher considered giving explanations helped students get *"interested...and wanting to do it" (Int.T)* and that students then knew why they were doing a task. The teacher appeared to understand that engagement has behavioural, emotional and cognitive elements and she also appreciated that if students understand the process of learning, this meta-cognition can contribute towards cognitive engagement.

4.7.3 Engagement through scaffolding

This teacher was aware that learning is a complex process and the teacher provides the *"reassurance and safety net of having a human being in front of them... even in computer classes" (Int.T).* She was a reflective and thoughtful practitioner who provided direction and guidance through the use of a course website. She felt this scaffolding meant she was responsive and the course could *"develop and evolve quite effectively...as you go along" (Int.T)* and she could *"drop an extra video in to highlight a particular area or something and direct them to that the next day" (Int.T).*

She summed up the process of scaffolding learning in a blended learning course by saying *"I think you need those relationships and environment and they need to know what the course is all about and what they are trying to get towards in order for the technology to work properly" (Int.T).* The teacher's description of how she designed her blended learning course indicates she considered she was attentive to the learning needs and that she felt she was actively attempting to engage students behaviourally, emotionally and cognitively.

4.8 Summary

This chapter reported the findings from this case study based on data gathered over four weeks from observations, interviews, online usage history and document analysis. The findings from tasks completed by student participants were firstly categorised as either online or offline and were then analysed as self-paced, collaborative, enjoyable, or analytical learning activities. Evidence was collected about five different types of online learning activities during the data-gathering period. Some of these online tasks were in the classroom, while others were held in the computer lab. Evidence was also collected about five offline learning activities, one of which was a spontaneous student created task. The data from this case study outlined that whether students engaged with the learning activities available in their course depended more on whether the task was well designed (for its intended purpose) rather than if the task was online or offline.

Secondly, consideration was given to what aided engagement in this blended learning senior secondary course and data was categorised separately from both the students' and the teacher's perspectives. The students saw engagement as being about thinking,

relevance, collaboration and having scaffolds in place to foster their success. Tasks identified as engaging varied amongst the students. The teacher described engagement within a blended learning course as enjoyment, responsiveness and understanding. There were distinct areas of commonality across the students' and the teacher's perspectives, namely enjoyment, thinking/understanding and scaffolding. Approaches that aided engagement in this blended learning context were learning activities that were well explained, provided choice, and ensured personalisation, enjoyment and collaboration. These findings outlined how the seven students involved themselves with the learning activities. The findings from these two research questions about engagement within this senior secondary blended learning course are discussed in the following chapter with reference to current research literature.

Chapter Five: Discussion

5.1 Introduction

This chapter brings together the key findings reported in Chapter Four and discusses them with reference to the literature on blended learning and student engagement. The first part of this discussion explores students' behavioural, emotional and cognitive engagement with online and offline tasks. The second part discusses how purpose, scaffolding and personalisation are three approaches that aid engagement in a blended learning senior secondary school setting. The chapter is organised in response to the two research questions that have guided this investigation.

5.2. Students' engagement with the learning activities

Research Question 1: *How do students engage with the learning activities available within a blended learning senior secondary course?*

This study explored a type of blended learning where students undertook a variety of offline and online tasks within a co-located and face-to-face secondary school setting. There are a number of blended learning models in use within educational settings and this study identifies that a teacher-driven blended learning approach (Bernard et al., 2014) was being used in this secondary school setting. This blended learning approach has been identified in other similar settings (Stacey & Gerbic, 2008; Vaughan et al., 2013), so the finding of this study emphasises the importance of the teacher-driven model as a strategic design process to deliver blended learning activities.

An overview of the three major findings about how students engaged with the learning activities in a blended learning course is given in this section. The tasks completed by the students and the types of engagement these tasks targeted are outlined in the following sections. The students in this study engaged behaviourally, emotionally and cognitively with a variety of online and offline tasks. The findings from the data-gathering period of this course are aligned with the definition of blended learning as being the thoughtful selection and complementary use of approaches and technologies (Vaughan et al., 2013). Within this study, there was evidence blended learning occurred and that the use of blended learning fostered engagement.

The first major finding was that students engaged both emotionally and cognitively with tasks designed with a clear purpose. This finding is in line with other research that shows that behavioural, emotional and cognitive engagement (Darr, 2009; Fredricks et al., 2004) act as three overlapping components within this learning context. This first major finding also supports that the learning context itself appears to be an important element that fosters the intentional, purposeful design of learning activities. This finding is consistent with research (Henrie et al., 2015) that identifies that clarity of teacher instruction and relevance of learning activities influence student satisfaction more than the medium of instruction.

The second major finding was that emotional and cognitive engagement was more evident in online tasks than offline tasks. Online tasks provided students with the opportunity to vary the order in which they completed tasks and to individually

customise the tasks, whereas the offline tasks did not. These findings suggest there is a link between well-designed online tasks and student engagement in terms of both emotional and cognitive engagement. It appears that online tasks provide opportunities for students to act autonomously and it could be inferred that this autonomy is fostered via the elements of the teacher-designed blended learning course. This finding supports the research on engagement by Aitken and Sinnema (2008) Christenson (2009) and Nuthall (2007) who argue that emotional and cognitive engagement are fostered through student autonomy, peer influence and school culture.

The third major finding was that students completed a range of tasks that were self-paced and collaborative and it was found that these tasks encouraged enjoyment and analytical thinking. This finding supports research showing that emotional and cognitive engagement interrelate and co-exist (Garrison, Cleveland-Innes, et al., 2010). This finding also aligns with the components of the Community of Inquiry framework which suggests considering how social, teacher and cognitive presence are used to foster learning could be a useful way to consider how to maximise the effectiveness of educational experiences (Vaughan et al., 2013).

5.2.1 Behavioural engagement

In this study, online and offline tasks were set by the teacher and completed by all seven students. There were high levels of behavioural engagement present across all activities, even when emotional and cognitive engagement was low. This finding is not unexpected as these students were in Year 12 and have had time to understand how to operate successfully within the school environment. They were familiar with the secondary school system, with the NCEA qualification processes and with completing internal assessments. In short, these students wanted to succeed and were

able to follow the rules, participate and complete the work (Christenson, 2009; Fredricks et al., 2004).

Overall, there was only a small amount of behavioural disengagement which could point to continuous partial attention (Firat, 2013) which suggests students could be quite overwhelmed by the volume of information and fail to focus on the set task. There was evidence that students were off-task but still engaged emotionally and cognitively. These findings about behavioural engagement provide additional evidence that the components of engagement are inter-related (Christenson, 2009).

5.2.2 Emotional engagement

Students gave examples of tasks that they enjoyed and other examples where they were bored, confused or frustrated. The findings showed that the teacher fostered emotional engagement, but not always successfully for all students at all times. Observational and interview evidence indicated increased student enjoyment for online tasks rather than offline tasks. The range within the findings suggest that to get students emotionally engaged required the teacher to focus on the complex nature of engagement (Andersen, Evans, & Harvey, 2012) and design a range of engaging tasks with the goal of forming stronger emotionally engaging relationships between students and between students and their teacher (Meirovich, 2012; Shea et al., 2011).

Offline tasks were undertaken individually, but were not individualised and there was no opportunity to self-pace. The findings indicated that students found offline tasks such as reading from textbooks, viewing slideshows and making notes boring. It is possible that the lack of student choice and agency (Hattie & Yates, 2014) in the individual offline tasks contributed to students' boredom and frustration. The type of

learning seen in these offline tasks was not active and there is research supporting that active learning contributes to emotional engagement (Hattie & Yates, 2014). The types of offline activities outlined above were ineffective for deep learning because there was no social or emotional context for students (Fullan & Langworthy, 2014; Lim & Yoon, 2008; Shea et al., 2011; Wankel & Blessinger, 2013).

In comparison, some online tasks used either web 2.0 tools or the course website to stimulate discussions by structuring the initial social connections between students as well as between students and the teacher. Tasks that used web 2.0 tools to facilitate social spaces appeared to encourage enjoyment and connectedness. The Community of Inquiry framework (Garrison, Anderson, et al., 2010) outlines the use of social, teacher and cognitive presence as a model to foster engagement. The findings from this study support the use of social presence and teacher presence for encouraging emotional engagement (Vaughan et al., 2013).

5.2.3 Cognitive engagement

While analytical thinking was seen in some online tasks, it was not evident in offline tasks. Overall, the findings do not suggest the presence of all of the elements required for cognitive engagement. There was evidence that the students analysed data from personality tests based on different theoretical paradigms during the unit of work. As a class, these students discussed the validity of the personality theories studied using a Pear Deck activity. The findings show that recording and analysing test results from a pen-and-paper test did not particularly challenge students. In order to be cognitively engaged an activity needs to be optimally challenging and students need to be invested, strategic, challenged, motivated and self-regulatory (Fredricks et al., 2004; Sheninger, 2015).

In online tasks, there was evidence of the self-regulation aspect of cognitive engagement. Students stated they felt as learners they had independence and support and were able to choose to move through the majority of tasks at their own pace. These self-regulatory factors are characteristics that Hattie describes as the requirements for agency (Hattie & Yates, 2014). Thus, it is possible that students experienced agency. Teachers who design differentiated tasks with choice and independence can in turn foster cognitive engagement and the development of meta-cognition skills. Thus, the presence of student agency makes the higher order thinking processes become more visible to students (Christenson, 2009; Vaughan et al., 2013).

The offline tasks described as boring by some students were activities such as taking notes or copying information down. What appeared to be missing from the unit of work were an appropriate number and variety of cognitively challenging higher-order thinking activities for students (Aitken & Sinnema, 2008; Christenson, 2009). Fullan and Langworthy (2014) argue that deep learning occurs when there is personalisation and learner-centeredness. Online approaches and technologies can foster cognitive engagement via autonomy and choice that, in turn, fosters challenging, open-ended, inquiry-based and issue-based tasks (Assor, 2012; Zepke & Leach, 2010).

5.3 Approaches that aid engagement

Research Question 2: *What approaches can aid engagement in a blended learning context within a senior secondary course?*

The teacher of the blended learning course thoughtfully combined several approaches to learning with technology in order to foster engagement. Specifically, it was evident

that blended learning activities that were purposeful, scaffolded and allowed for personalisation served to aid behavioural, emotional and cognitive engagement in the senior secondary setting described here. This study aligns with findings from research conducted in higher education settings (Jeffrey et al., 2014) suggesting that strategies that engage learners in higher education also appear to apply to senior secondary school settings.

Within this unit of work, whether a task was designed to be online or offline was found to be less important than the design of the tasks themselves. Yet, the adoption of digital technologies (i.e. the infrastructure and software) has been the focus within many secondary schools, rather than on blended learning pedagogies (Wright, 2010). The focus on digital technologies may explain why both the uptake, and success, of blended learning has been variable in co-located face-to-face blended learning contexts (Picciano et al., 2010). These findings align with other research that suggests designers of effective blended learning activities should focus on teaching and learning pedagogies (Bolstad et al., 2012; Johnson, Becker, et al., 2015; Ministry of Education, 2015c; O'Reilly, 2014; Wright, 2010).

There was evidence that the teacher's blended learning activities engaged these students by creating the context for social presence, teacher presence and cognitive presence, which in turn fostered the components of engagement (Shea et al., 2011; Wankel & Blessinger, 2013). It would appear that the components of Community of Inquiry framework were present in this unit of work (Vaughan et al., 2013). The teacher designed tasks that encouraged social presence, her presence as the teacher facilitated learning and she drove a clear cognitive process. These findings align with

research about how engagement with technology-mediated learning changes the role of the teacher from one where they deliver the learning to one of helping students navigate learning environments (Smith, 2014; Waldron, 2014). These findings align with the Community of Inquiry framework for learning (Vaughan et al., 2013; Zepke & Leach, 2010) as there was evidence of the conditions that support social, cognitive and teacher presence. There appears to be a link between the teacher-led blended learning design (Vaughan et al., 2013) and learning that aids engagement (Wankel & Blessinger, 2013). The use of purposeful design, scaffolding and personalised learning as approaches that aid aspects of engagement in this blended learning context is discussed in the following sections.

5.3.1 Purpose aids engagement

The teacher of this course purposefully structured the use of digital technologies to design activities that encouraged both enjoyment and thinking in order to promote both emotional and cognitive engagement. A purposeful learning activity was where students in this study knew what they were supposed to do and how that linked to the rest of their learning for the unit of work. Students showed engagement both emotionally and cognitively with the set tasks and completed the activities, reported that they understood the work, enjoyed their learning, felt connected to their peers and felt connected to their teacher. Christenson (2009) identified purpose as a component of engagement. The evidence from this study appears to show that purpose aids engagement because it can address all three inter-related components of engagement.

The evidence also appears to support that an intentional teacher presence, through scaffolding, interest and facilitation, created a sense of purpose for students. Teachers who have a mind-set where they can promote concurrent enjoyment and thinking

(Ertmer & Ottenbreit-Leftwich, 2010) have both the confidence and the pedagogy to create effective blended learning activities. Most of the set tasks in this unit of work were intentionally designed with the purpose of being personally relevant to the students. The process of applying theories about personality to their own lives enabled students to create authentic learning activities for themselves. Authentic tasks are an effective way to engage learners in higher education and the same appears to be true in this secondary school setting (Jeffrey et al., 2014). There was evidence of active and deep learning as students created a portfolio that presented their critique about each personality test in relation to themselves. When the set task did not direct students to discuss the ideas or the outcomes of a task with their peers and/or their teacher, there was evidence that students created their own version of tasks by moving away from the designated online setting to their own offline setting.

5.3.2 Scaffolding aids engagement

The findings showed the teacher scaffolded thinking processes that aided students' cognitive engagement. For example, the teacher used the website to deliver instructions on the learning process which enabled students to move through the psychological tests in a planned and logical sequence. Additionally, the use of Pear Deck allowed the teacher to ask students a series of questions that began as closed recall questions (such as '*What was the name of the psychologist?*') and moved into open-ended comparative questions where students were asked to offer an opinion as to which theory offered the more convincing explanation of personality. This type of questioning assisted the teacher to create and use scaffolds that were effective in helping students join and re-join the learning process. These findings support research showing that digital technologies allow for the provision of clear instruction and

sequencing of content and tasks, and allow a greater degree of personalisation for students than offline activities (Bonk & Khoo, 2014; Tucker, 2012).

Emotional engagement was aided by collaborative processes that included peer-to-peer and whole class tasks using both the website and web 2.0 tools. These intentionally designed scaffolds supported the development and expression of social, cognitive and teacher presence and were evident in the familiarity and security shown amongst the students and with their teacher. These findings are in line with research that has shown engagement is fostered when a community of inquiry is created and sustained (Vaughan et al., 2013). The regular use of the course website and the regular timetabling of online tasks meant students knew how to do tasks. Similar findings in higher education contexts (Bernard et al., 2014; Jeffrey et al., 2014) support the use of clear content structure and organisational structures to aid engagement. It could be inferred that aspects of peer influence and school culture were fostered through these teacher-designed blended learning tasks (Nuthall, 2007).

5.3.3 Personalisation aids engagement

Aspects of personalisation seen in online activities in the website and web 2.0 settings included differentiation, independence, and collaboration. Specifically, tasks set within the website provided some choice in terms of order of completion, pace and duration, while tasks that used web 2.0 tools provided some choice of how and when students collaborated. It would appear that the extent of personalisation available to students within the website environment was their ability to select which personality test they took, make minor adjustments to how they captured their learning or to change the order in which they completed the set tasks. These findings suggest that the online environment supported emotional and cognitive engagement through

fostering some level of personalisation for students (Bolstad et al., 2012; Drexler, 2014; Jeffrey et al., 2014; Vaughan et al., 2013). These findings suggest that the intentional use of social, cognitive and teacher presence serve to create the outward evidence of personalisation (Drexler, 2014).

The teacher reported that she was responsive to the needs of students and amended the learning resources and tasks. However, there was no evidence gathered of any amendments made during the course of the observed lessons, nor that she altered the content, the tasks or the sequence of lessons. Furthermore, offline tasks did not appear to have any mechanisms for students to personalise any parts of their learning experience. This may explain why the students restructured parts of their learning experience themselves by adapting tasks to suit their needs. Bolstad et al. (2012) argue that personalised learning allows students to make more than minor customisations; they can have some responsibility for designing the entire learning experience.

The teacher's course website did not appear to provide the students with the opportunity to carry out discussions about the personality task with their peers and students demonstrated agency by going beyond the boundaries of the set task (Gibbs & Poskitt, 2010; Hattie & Yates, 2014). This finding aligns with research from online settings showing the students go outside the LMS if the learning is not engaging (Louwrens & Hartnett, 2015; Mott, 2010). When learners can genuinely shape what happens in their learning through student voice, the role a student plays in their own learning can be transformed into a personalised experience (Kane & Chimwayange, 2014). Online tasks that have been used to personalise learning effectively within

online settings include video-calling, games or cartoon-making (Bonk & Khoo, 2014; Tucker, 2012).

5.4 Summary

This research found that students engaged behaviourally, emotionally and cognitively with the learning activities within their blended learning course. In terms of the components of engagement, high levels of behavioural engagement were evidenced. There were individual differences seen in the types of tasks that produced emotional engagement, with greater emotional engagement seen for online tasks. There was evidence of both analytical and self-regulatory elements of cognitive engagement.

The findings identified a blended learning approach was used, which aligns with the blended learning approach taken in teacher-driven practice in similar co-located face-to-face higher education and secondary settings. There were three major findings about how students engaged with the blended learning activities within this course. Firstly, students engaged both emotionally and cognitively most often with tasks designed with a clear purpose. Secondly, engagement was more evident in the online setting that the offline setting. Lastly, self-paced and collaborative tasks encouraged emotional and cognitive engagement. Tasks that could provide the challenge required for extensive cognitive engagement were not seen.

The second part of this discussion analysed approaches that aided engagement for learning activities within this blended learning context. Tasks were engaging for students when they had a clear purpose, had learning scaffolds and were personalised. Purpose aided all three elements of engagement. Learning scaffolds aided cognitive

engagement by fostering personalisation and aided emotional engagement through creating familiarity. There was some evidence of limited personalisation of learning present in this case study and that this personalisation supported emotional and cognitive engagement. The analysis presented in this chapter supports the view that blended learning and student engagement are complex and interrelated constructs within the senior secondary setting and that the Community of Inquiry framework could be an effective tool for designing effective blended teaching and learning. The conclusions drawn from this research are presented in the next chapter alongside a discussion of the implications, limitations and suggestions for future research.

Chapter Six: Conclusion

6.1 Introduction

This study sought to explore the experiences of students within a senior secondary blended learning context and offers some explanations about the approaches that aid engagement within blended learning environments. This chapter highlights the major findings and final conclusions of this study and discusses the implications of the study for the design of blended learning in a senior secondary context. The limitations of the research project are also outlined and recommendations for future research are offered.

6.2 Question One: *How do students engage with the learning activities available within a blended learning senior secondary course?*

Students showed engagement with the teacher-driven blended learning approach (Bernard et al., 2014) being used in this secondary school. Engagement with blended learning activities was shown in three ways. Firstly, students engaged behaviourally, emotionally and cognitively with a variety of online and offline tasks. Secondly, emotional and cognitive engagement was more evident in online learning activities than offline learning activities. It was found that the online setting had the capability to vary both the type of tasks offered and to customise tasks for individual students, whereas the offline setting did not. Finally, these students completed a range of tasks that were self-paced, collaborative, encouraged enjoyment and required analytical thinking.

6.3 Question Two: *What approaches can aid engagement in a blended learning context within a senior secondary school course?*

The provision of purpose, scaffolds and personalisation are three mechanisms that were shown to aid behavioural, emotional and cognitive engagement with learning in this senior secondary blended learning context. Whether tasks were designed to be online or offline was found to be less important than the design of the tasks themselves. The provision of purposeful learning activities enabled the students to know what they were to do and how that linked to the rest of their learning. Students engaged both emotionally and cognitively with the set tasks and reported that they enjoyed their learning, felt connected to their peers and to their teacher. The use of blended learning digital technologies in this context assisted in the provision of learning conditions that fostered social, cognitive and teacher presence. Three mechanisms that aided engagement with learning in this blended learning context were the fostering of a learning purpose, the use of scaffolds and providing the opportunity for the learner to personalise their activities.

6.4 Implications of this research project

An implication from this study is its support for teachers in the design of their blended learning course. For instance, teachers might include more online tasks in their traditional courses or they might consider how to foster personalisation for their students. However, unless those tasks are both emotionally and cognitively engaging then it is possible that student engagement will decrease. Teachers will need to be vigilant and focus on designing an emotionally and cognitively engaging task since whether the task is online or offline was found to be less important.

The New Zealand Government is actively pursuing the introduction of digital technologies within schools (Wright, 2010). Therefore another implication of this study is that if teachers are not employing mechanisms that provide purpose, scaffolding and personalised learning activities that allow students to be independent then engagement with blended learning is less likely to occur. This research into blended learning supports that it is the combination of technology and modern learning pedagogy used together that creates engagement with learning. Therefore, anticipating the growing need from teachers and schools and planning for how to incorporate digital technologies and blended learning approaches into the senior secondary learning context is required (Christenson et al., 2013).

6.5 Limitations of this research

A limitation arising from the use of a case study method is that these research findings are specifically linked to the chosen context. This research focused on a single study, on one classroom, with eight participants from one New Zealand school. This means while the findings are applicable to the students within this one context, it can also be asserted that seven student participants provided a sufficient range of experiences, as well as enough depth within the data, to allow the findings to be applicable elsewhere. However, the small sample size is noted as a limitation of the dataset and any subsequent interpretation of the data.

6.6 Recommendations for future research

This study recognises several areas for additional research focused on senior secondary students and their teachers. Completing further similar studies with similar goals would gather specific knowledge about a broader range of secondary students in

other classrooms. Studies at a junior secondary level would provide further insights into engagement with blended learning at senior levels. Further research could investigate how to aid engagement within blended learning contexts by looking at how a purposeful and strategic use of the Community of Inquiry framework can foster student engagement. Blended learning courses in New Zealand secondary schools are in a time of rapid growth and educational politics (Bolstad et al., 2012; Wright, 2010). The Community of Inquiry framework has been used extensively within this field of research and provides a pragmatic, logical approach to understanding and applying solutions to e-learning practice, school and community interest and professional development goals around e-learning.

Further research could explore how to enhance the design of appropriate and effective blended learning experiences within the secondary school blended learning context. During the course of this study, students identified activities in which cognitive *and* emotional engagement co-existed and, conversely, activities where engagement was absent or missing the quantity and variety of cognitively challenging higher-order thinking activities. Without the thoughtful creation of activities, some of the potential of the blended learning approach goes unfulfilled (Sheninger, 2015). This study also found that while students cognitively engaged with online tasks, they also went offline in order to emotionally engage with their peers. There was the potential for social connections to have been sustained and developed, which would have allowed student-student connections and the student-teacher connections to aid emotional engagement *and* cognitive engagement (Christenson, 2009).

Further research could investigate how to undertake data-gathering that utilises the digital technologies seen in this blended learning course, such as the LMS and web 2.0 tools. Students in this study used a broad range of digital technologies within this blended learning course, which could support educators to investigate the engagement of their students. In support of this research direction, the study provided evidence that when given open-ended opportunities to voice their opinions about their learning students were articulate and insightful. Darr (2009) contends that the students' perspective of their engagement, as described by students themselves, can sometimes be quite different from the descriptions provided by their teachers or through surveys and scales.

6.7 Final thoughts

This paper adds to the growing literature base examining how senior secondary students actually engage with blended learning. The findings show that thoughtful teacher-directed blended learning design enhances student engagement. In order to implement effective engagement strategies and to continue to develop blended learning pedagogies, educators in secondary school contexts have opportunities to develop further findings about effective blended learning that can sit alongside those developed within higher education contexts. The Community of Inquiry framework can be an effective tool to consider and nurture the complex and interrelated blended learning and student engagements constructs within the senior secondary setting.

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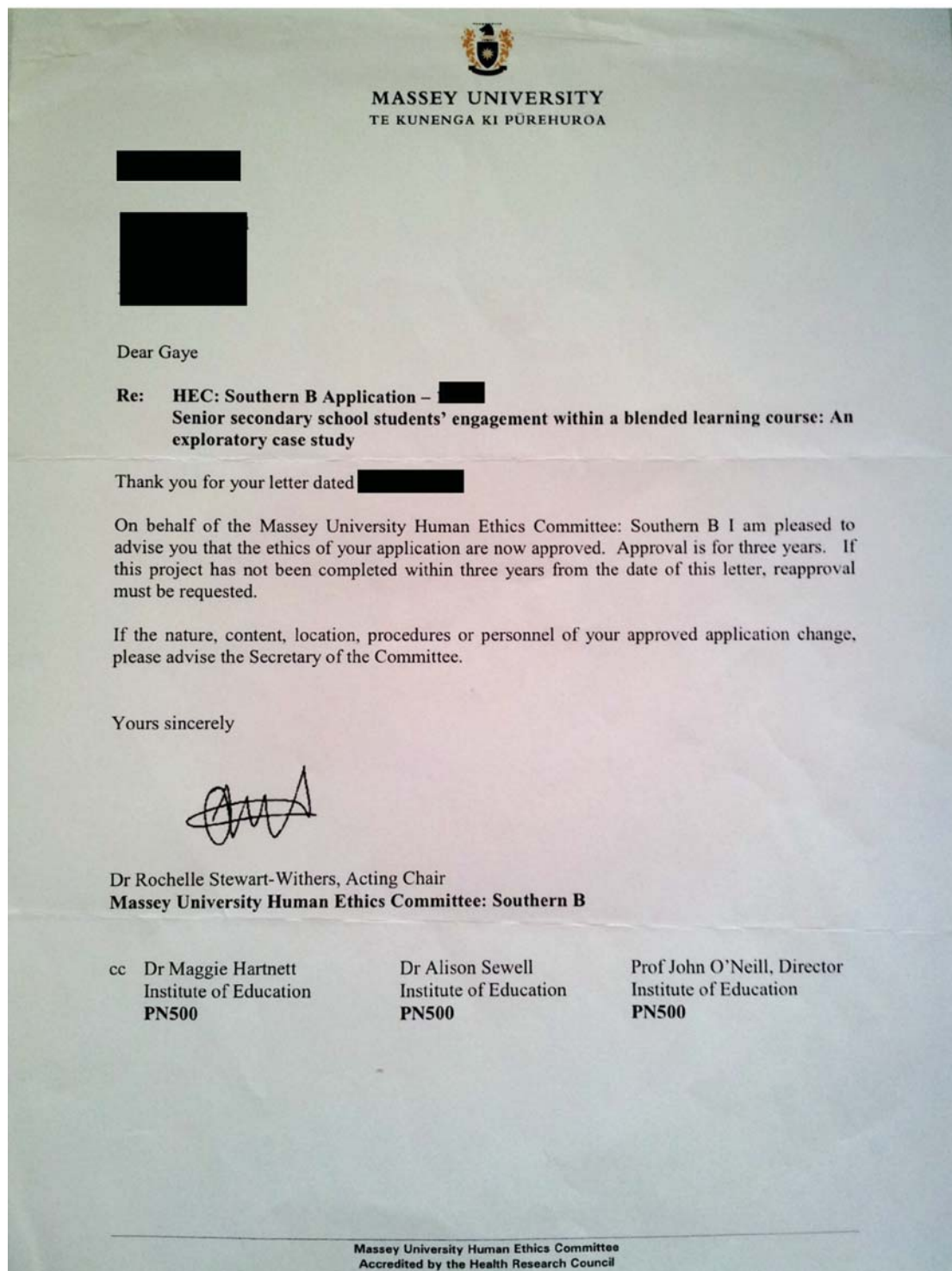
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Appendices

Appendix One: Ethical Approval

MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA

Dear Gaye

Re: HEC: Southern B Application – ▮
        Senior secondary school students' engagement within a blended learning course: An
        exploratory case study

Thank you for your letter dated ▮

On behalf of the Massey University Human Ethics Committee: Southern B I am pleased to
advise you that the ethics of your application are now approved. Approval is for three years. If
this project has not been completed within three years from the date of this letter, reapproval
must be requested.

If the nature, content, location, procedures or personnel of your approved application change,
please advise the Secretary of the Committee.

Yours sincerely

Dr Rochelle Stewart-Withers, Acting Chair
Massey University Human Ethics Committee: Southern B

cc   Dr Maggie Hartnett   Dr Alison Sewell   Prof John O'Neill, Director
     Institute of Education   Institute of Education   Institute of Education
     PN500   **PN500**   **PN500**

Massey University Human Ethics Committee
Accredited by the Health Research Council

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Appendix Two: Letter to Board of Trustees

MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MATĀURANGA

Institute of Education | Massey University Manawatū |
Private Bag 11-222 | Palmerston North 4442 | New Zealand

Request for access to your institution for research purposes

Dear ▮▮▮

I am writing this letter to ask your permission to conduct research at ▮▮▮▮▮▮▮▮

The title of my research is: Senior Secondary School Students' Engagement within a Blended Learning Course: An Exploratory Case Study. The purpose of my current project is to look at one unit/standard being studied by one senior NCEA class and explore what it means to be an engaged learner. The completed project will be submitted as a thesis and form part of my degree.

The specific aims of this project are to:
1) To explore how students are engaging with the online and face-to-face learning opportunities available in their blended learning course.
2) To explore, from the students' and the teacher's perspectives, what it means to be engaged in a blended learning setting within a senior secondary school course.

Further information about how this project will be carried out is detailed on the following pages.

Participant Identification and Recruitment
If you grant permission to undertake the research, the Specialist Classroom Teacher (SCT) will be approached to undertake the initial recruitment. The SCT will meet with the teacher of the potential class and explain the purpose of the study. This will give the teacher the opportunity to decide if

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he/she is willing to take part in the study. If the teacher has indicated an interest in being involved, I will meet with the teacher and the class to explain the purpose of the research. Potential student participants who wish to take part will be asked to email me at a later time. The participants will be drawn from an established blended learning course that has been running for at least two years. It is intended that the participants will be in Year 13 (aged 17-18). No specific gender, ethnicity, ability, engagement or interest in using technology is being targeted, as I want a diverse group of students. The intended participants are Psychology students as this is a course where students participate in learning activities and assessments throughout the year. If the teacher or students decide not to participate, the sample could be drawn from elsewhere for example within the Social Science learning area. These courses include a broad cross-section of blended learning activities and assessments.

All students within this class will be eligible to participate. However, only approximately 10-12 students will be selected. I will review the list of students who volunteer to identify those participants who will be working together during the group activities involved in the unit of work being observed. Complete groups of students will be chosen where possible, as this will make it easier to protect the privacy of those students who choose not to participate in the study. If there are more than 12 potential participants, then participants will be purposively selected to ensure as much diversity in gender, ethnicity, ability, engagement and interest in technology as possible.

Project Procedures

A table of the planned data gathering procedures is attached to this letter. I plan to observe the students and the teacher four to six times over a four-week period and record them going about their usual class work. In addition to these observations, other planned data collection includes a network administrator gathering browsing history and network activity for the periods where they are observed. I will be present to observe and record, not to interact with the students or the teacher. At the conclusion of the observations, each participant will take part in a short interview. Student interviews and the teacher interview (each lasting no longer than 30 minutes) would take place within the normal school day at a time that suits the participant. No disruptions to the students' class time or teacher class time will occur as all interviews would take place in study periods, non-contacts or break times. Any of the participants are able to contact my research supervisors if they have any concerns about their participation.

Data Management

Observational data will be collected via written notes, sound and video. A network administrator will provide the browsing history and network activity for the students involved in the specified periods. The information collected will be stored securely and disposed of in five years. I will protect the confidentiality and identity of all participants as much as possible. No real names, including the name of the school, will be used in the analysis or publication of this project. No images recorded during data gathering will be used in the thesis or in any publication arising from the research. However, it is possible that the description of the school ███████████████████████████████████████ may be enough for it to be identified.

Participant's Rights

The students and teacher are under no obligation to accept this invitation. If they do decide to participate, they have the right to:

- decline to answer any particular question;
- withdraw from the study at any stage of the project prior to the commencement of observations;
- ask any questions about the study at any time during participation;
- provide information on the understanding that their name will not be used;
- ask for the recorder to be turned off at any time during the interview.
- be given access to a summary of the project findings when it is concluded. This will be emailed to participants at the conclusion of the research period (March 2016).

If ▮▮▮▮▮▮ grants permission for this research to be carried out, I request the following in order to conduct the research:

- Permission to approach the SCT to make inquires with the psychology teacher about participating in the study and to negotiate a meeting date with the teacher
- Access to the unit plan, lesson plans, assessments, websites and classroom used for this course
- Access to demographic and achievement information about these participants will be collected from the student management system (KAMAR) via the chosen classroom teacher
- Permission to approach a network administrator to access reports on student online activity for the participants for the specific timeframes (days and times) of the study
- Permission to create written, video and sound recordings of the participants during the observations and interviews.

You are welcome to contact me and/or my supervisors if you have any questions about this project and their details are listed at the bottom of this page.

Thank you for considering this project.

Regards

Gloomfield

Gaye Bloomfield

Project Contacts
Researcher:
Gaye Bloomfield

▮▮▮▮▮▮▮▮▮▮▮

Supervisors:
Dr Maggie Hartnett and Dr Alison Sewell
Institute of Education, Massey University
Maggie Hartnett: 06 3569099 extn 84409   m.hartnett@massey.ac.nz
Alison Sewell: 06 3569099 extn 84456   a.m.sewell@massey.ac.nz

Ethics:
This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 15/31. If you have any concerns about the conduct of this research, please contact Prof Julie Boddy, Chair, Massey University Human Ethics Committee: Southern B, telephone 06 350 5799 x 86055, email humanethicsouthb@massey.ac.nz

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Senior secondary school students' engagement within a blended learning course: An exploratory case study.
Research Procedures Sheet

Stage of research	Timing	Researcher Activity	Massey University	Chosen School
Stage One: Ethics	April-May 2015	Ethics Approval sought from Ethics Committee		
	June 2015		Ethics Approval is granted	
	June 2015	The Board of Trustees of chosen school is approached (Appendix 4)		Informed consent is given by the school to undertake research. This includes permission to approach the teacher and the chosen class, conduct observations and interviews, to collect web and network activity logs, to review unit plan, lesson plans, assessment and class website
Stage Two: Recruitment	June 2015	• SCT is approached to make the initial contact with the teacher. • If this teacher declines, another teacher and class will be invited to participate. • Researcher approaches the teacher and students to discuss the aims and procedures. • Information sheets given out (Appendices 2 and 3)		Potential participants volunteer via email to the researcher at a later time The chosen teacher will forward an email from the researcher to parents of the selected class advising them that research is taking place at the school. The email will include a copy of the student information sheet. This will take

Research Procedures Sheet (2015)   1

				the teacher 10 minutes.
Selection of participants	June 2015	If oversubscribed, the researcher will review the list of volunteers and prioritise complete groups, then purposively select a diverse range of students.		Informed consent given and consent forms signed by participants and teacher. (Appendix 5) Information provided about participants and groupings for this unit of work. Demographic and achievement information about participants collected from the student management system (KAMAR) by the classroom teacher
Stage Three: 2015 What is happening in the classroom? Data Collection	June-July 2015	Four to six observations of the participants will take place over the four-week period where the unit of work is being carried out. The researcher will review the unit plan, lesson plans, assessments and record the number and type of online and face-to-face activities. Individual interviews, using classroom observations notes as prompts, with		Signed confidentiality agreement from a network administrator (Appendix 8) A network administrator collects data logs of web and network activity for the days and times of observed classes After the interview, each of the student participants and the teacher read and

		student participants and the teacher completed at the conclusion of the unit of work. These semi-structured interviews are 20-30 minutes long. (Appendices 6 and 7)		review their individual interview (15 minutes for each participant)
Stage Four: Analysis	July-March 2016	Analysis of data (observational notes, transcribed interviews and document analysis) for themes and patterns		
	March 2016	Summary of findings shared with the participants via email.		

Appendix Three: Student Information Sheet

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Senior secondary school students' engagement within a blended learning course: An exploratory case study.

INFORMATION SHEET FOR STUDENT PARTICIPANTS

Researcher Introduction

My name is Gaye Bloomfield ███████████████████████████ how students are engaging with online and face-to-face learning tasks. My completed project will form part of my Masters in Education degree at Massey University.

The aims are:

1) To explore how students are engaging with the online and face-to-face learning opportunities available in their blended learning course.
2) To explore, from the students' and the teacher's perspectives, what it means to be engaged in a blended learning setting within a senior secondary school course.

I invite you to participate in this research and further information about how this project will be carried out is detailed below for you to read and consider.

Participant Identification and Recruitment This project will take place at your school. Your class has been selected to take part as it is a course where students are familiar with using technology for learning and with tasks that are both face-to-face and online. If you agree to take part in this study, I will observe a group of 10-12 students between 4 and 6 times and record how you are engaging with your class work. This will include gathering data from a network administrator about your web browsing history and online activity. At the conclusion of this, each person in the project will take part in a short interview (no more than 30 minutes). Your teacher will also be interviewed.

All students within your class are eligible to participate. However, only 10-12 students will likely be involved. I will review the list of students who wish to take part to identify those students who will be working together during the planned group activities. Complete groups will be selected where possible, as this will make it easier to protect the privacy of those students who choose not to participate in the study. If there are more than 12 people that would like to take part, then I will select a wide range of students, as I am really interested in the full range of your experiences.

I will let you know well in advance of the observations and you can withdraw permission for the observation to occur at any point up to, and including, the observation itself.

Project Procedures

If you agree to take part in the study,

- You will be involved in 4-6 observations (4-6 periods) in your classroom. A video camera will record each lesson being observed. The use of video will enable me to review the observations.
- The observations will take place over four weeks (June - July).
- I am a researcher, not a teacher. I will be present to observe and record but not to interact with you or the teacher.
- Your browsing history and online activity will also be collected, with the help of a network administrator, for the periods where you are observed.

- You will be interviewed for between 20-30 minutes once all the observations have been completed. This is planned for some time during the period from August 17 – August 23rd. Your interview will be arranged at time that suits you and you will not need to miss class time.
- The transcript of your interview will be emailed to you to read and review. This will take you approximately 15 minutes.
- You are able to contact my project supervisors if you have any concerns about your participation.

Data Management
- Data will be recorded via written notes, sound and/or video.
- No images recorded during data gathering will be used in the thesis or in any publication arising from the research.
- The information collected will be stored securely and disposed of after five years.
- Your real name will not be used in any publications stemming from this project.

Participant's Rights
You don't have to accept this invitation. If you do decide to participate, you have the right to:
- decline to answer any particular question;
- withdraw from the study at any stage of the project prior to the end of the observations;
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used;
- ask for the recorder to be turned off at any time during the interview.
- be given access to a summary of the project findings when it is concluded. This will be emailed to you at the conclusion of the research period (March 2016).

You are welcome to contact myself and/or my supervisors if you have any questions about this project. These details are listed at the bottom of this page. Thank you for considering this request. If you would like to participate, please email me at ███████████ by the ██ ██████ I will ██████ ████████████████ ██ ███████.

Regards

Gaye Bloomfield

Project Contacts

Researcher:	Supervisors:
Gaye Bloomfield	Dr Maggie Hartnett and Dr Alison Sewell
████████	Institute of Education, Massey University
	Maggie Hartnett: 06 3569099 extn 84409
	m.hartnett@massey.ac.nz
	Alison Sewell: 06 3569099 extn 84456
	a.m.sewell@massey.ac.nz

Ethics:
This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 15/31. If you have any concerns about the conduct of this research, please contact Prof Julie Boddy, Chair, Massey University Human Ethics Committee: Southern B, telephone 06 350 5799 x 86055, email humanethicsouthb@massey.ac.nz

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Appendix Four: Teacher Information Sheet

MASSEY UNIVERSITY
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Senior secondary school students' engagement within a blended learning course: An exploratory case study.

INFORMATION SHEET FOR THE CLASSROOM TEACHER

Researcher Introduction

My name is Gaye Bloomfield ▮▮▮▮▮▮▮▮▮▮▮▮▮▮ how students engage with online and face-to-face learning tasks. My completed project will form part of my Masters in Education degree at Massey University.

The aims are:

1) To explore how students are engaging with the online and face-to-face learning opportunities available in their blended learning course.
2) To explore, from the students' and the teacher's perspectives, what it means to be engaged in a blended learning setting within a senior secondary school course.

I invite you to participate in this research and further information about how this project will be carried out is detailed below for you to read and consider.

Participant Identification and Recruitment

This project will take place at your school. Your class has been selected to take part, as it is a course where students are familiar with using technology for learning and with tasks that are both face-to-face and online. If you agree to take part in this study, I will observe you as the teacher and a group of students four to six times and record the engagement within the class. This will include gathering data from a network administrator about browsing history and online activity of the students. At the conclusion of the observation period, each student in the project will take part in a short interview. As the teacher, you will also be interviewed.

All students within this class will be eligible to participate. However, 10-12 students will likely provide enough data for this project. I will ask you to provide me with demographic and achievement information about the students, including a list of students who will be working together during the group activities in the unit of work being studied. Complete groups will be selected where possible, as this will make it easier to protect the privacy of those students who choose not to participate in the study. If there are more potential participants than 12, then as diverse a range of students as possible will be chosen.

You could possibly have some anxiety from my presence in your classroom. There is also the possibility that you could feel that your teaching methods are being evaluated. However, the key focus is on exploring student engagement within the blended learning environment. You will be advised well in advance of the observations.

Project Procedures

If you agree to take part in the study,

You will be asked to assist in the recruitment of student participants by providing me with demographic and achievement information about your class as well as forwarding an email from me to parents of the selected class advising them that research is taking place at the school. The email will include a copy of the student information sheet. This task will take you approximately 10 minutes.

- You will be involved in four to six observations (4-6 periods) in your classroom. A video camera will

record each lesson being observed. The use of video will enable the researcher to review and triangulate information about individual students that may otherwise go unobserved.

- The observations will take place over four weeks at times suitable to you.
- I am a researcher, not a teacher. I am present to observe and record, not to interact with students or you as the teacher.
- Your unit plan, lesson plans, assessments and class website will be reviewed so that I can establish the types and proportions of online and face-to-face activities that you use.
- You will be interviewed for between 20-30 minutes at the end of the observation period. This is planned for some time during the period from August 17 – August 23rd. Your interview will be arranged at time that suits you.
- The transcript of your interview will be emailed to you for review so you can ensure it is accurate. This will take you approximately 15 minutes.

Data Management
- The data will be recorded via written notes, sound and/or video.
- No images recorded during data gathering will be used in the thesis or in any publication arising from the research.
- The information collected will be stored securely and disposed of after five years.
- Your real name will not be used in any publications stemming from this project.

Participant's Rights
You are under no obligation to accept this invitation. If you decide to participate, you have the right to:
- decline to answer any particular question;
- withdraw from the study at any stage of the project prior to the end of the observations;
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used;
- ask for the recorder to be turned off at any time during the interview.
- be given access to a summary of the project findings when it is concluded. This will be emailed to you at the conclusion of the research period (March 2016).

You are welcome to contact myself and/or my supervisors if you have any questions about this project and their details are listed at the bottom of this page. Thank you for considering this request. If you would like to participate, please email me at ██████████████████ ██ █████. I will ████████████████████ ██

Regards

Gaye Bloomfield
Project Contacts

Researcher:	Supervisors:
Gaye Bloomfield	Dr Maggie Hartnett and Dr Alison Sewell
████████	Institute of Education, Massey University
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	m.hartnett@massey.ac.nz
	Alison Sewell: 06 3569099 extn 84456
	a.m.sewell@massey.ac.nz

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Teacher Information Sheet (2015)

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Appendix Five: Student Consent Form

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Senior secondary school students' engagement within a blended learning
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STUDENT PARTICIPANT CONSENT FORM

I have read the Information Sheet and have had the details of the study explained to
me. My questions have been answered to my satisfaction, and I understand that I may
ask further questions at any time.

Please circle Yes or No to each of the statements below.

I agree to my interview being sound recorded.   Yes No

I agree to be video recorded as part of a classroom observation.   Yes No

I agree to my web history and network activity being collected by a network
administrator for the specific periods that I am being observed.   Yes No

I wish to have my recordings returned to me.   Yes No

I agree to information about my gender, ethnicity and age being collected Yes No

I agree to participate in this study under the conditions set out in the Information
Sheet.   Yes No

Signature: _____ Date: _____

Full Name - printed _____

Appendix Six: Teacher Consent Form

MASSEY UNIVERSITY
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Senior secondary school students' engagement within a blended learning course:
An exploratory case study.

TEACHER PARTICIPANT CONSENT FORM

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

Please circle Yes or No to each of the statements below.

I agree to my interview being sound recorded.   Yes No

I agree to be video recorded as part of a classroom observation.   Yes No

I wish to have my recordings returned to me.   Yes No

I agree to participate in this study under the conditions set out in the Information
Sheet.   Yes No

Signature: _____ Date: _____

Full Name - printed _____

Appendix Seven: Network administrator confidentiality agreement

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Senior secondary school students' engagement within a blended learning course:
An exploratory case study.

NETWORK ADMINISTRATOR CONFIDENTIALITY AGREEMENT

I _____ (Full Name - printed)

agree to source the web history and online activity for participants, as requested by the project researcher,

for the dates and times (inclusive) specified by the researcher.

I _____ (Full Name - printed)

agree to keep confidential all information concerning the project.

I will not retain or copy any information involving the project.

Signature: _____   Date: _____

Appendix Eight: Transcriber confidentiality agreement

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Senior secondary school students' engagement within a blended learning course:
an exploratory case study.

TRANSCRIBER'S CONFIDENTIALITY AGREEMENT

I _____ (Full Name - printed)

agree to transcribe the recordings provided to me.

I agree to keep confidential all the information provided to me.

I will not make any copies of the transcripts or keep any record of them, other than those required for the project.

Signature: _____   Date: _____

Appendix Nine: Semi-structured interview questions for students

Senior secondary school students' engagement with a blended learning course: An exploratory case study.

STUDENT PARTICIPANT semi-structured INTERVIEW SCHEDULE
NOTE: This schedule is to be used flexibly.

"Thank you for taking the time to speak with me. This should take us around 20- 30 minutes. We will be focusing on the activities that you have recently completed in your psychology class."

Student participant questions

1) What do you know about blended learning and what does it mean to you?

2) Tell me about your favourite activity that you have been given in this unit. What was it about this activity that made you want to do it?

Prompts:
- scaffolding (breaking the activity up into parts)
- choices within the activity
- relevance of the activity
- interest in the activity
- interest in the content
- discussions
- challenging/easy
- group/individual
- resources
- active learning – putting learning into practice
- help/support
- sense of community and belonging
- feedback
- blended environment – the role that technology plays

3) What kinds of learning did you gain from doing that activity?
Prompts:
a. Teacher feedback/feed-forward (teacher support)
b. Scaffolding in activities
c. Encouraging interaction between students (peer support)
d. Developed a relationship / safe environment (student need for relatedness)
e. Understood the technology being used
f. Structure of activity (task characteristics)
g. Familiarity with the structure of the class
h. Autonomy support (choice, shared decision-making)
i. Developing competence / success through activities

4) How did you learn it?

Prompts:
- through help or discussion with others (students/teachers)
- through your own research
- through working together with other students
Reason for asking questions 1,2 3 and 4: To help to capture information about what type of engagement is present for their favourite activity and how was it created. Was it cognitive, behavioural or emotional engagement?

5) Tell me about the least favourite activity that you have been given in this unit of work.

A. Did you attempt or complete the activity?
B. What was it about this activity that made you not like it?
C. As a follow up question – Why?

Prompts:
- support
- resources
- time/lack of to do the activity
- prompt feedback
- scaffolding
- choices given within the activity
- lack of relevance of the activity
- lack of interest in the activity
- lack discussions
- challenging/easy
Reason for asking question 5: To help to capture information about activities where there is a lack of engagement present and to find out how was it created. Was it due to cognitive, behavioural or emotional engagement?

6) Tell me about what helps you to learn in a blended learning class.

Prompts:
- support from teachers/students
- relevance/interest
- scaffolding
- discussions with teachers/students
- quick response/feedback from the teacher
- anytime anywhere access
- can work at my own pace

7) How is this different to a normal class?

8) Tell me about the things that make learning more challenging in a blended leaning class.

Prompts:
- connection issues
- too much to read or do at once
- distractions
- takes longer
- not personalised to me

9) What sort of things do you think when you are fully engaged in your learning. How does this feel?

10) Is there anything else that you would like to tell me about your experiences of blended learning in this unit of work?

Reason for asking questions 5, 6, 7 , 8 and 9 : To help to capture information about how their engagement was created. Was it fostering cognitive, behavioural or emotional engagement?

End

Appendix Ten: Semi-structured interview questions for the teacher

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Senior secondary school students' engagement with a blended learning course: An exploratory case study.

TEACHER PARTICIPANT Semi-structured INTERVIEW SCHEDULE

NOTE: This schedule is to be used flexibly.

"Thank you for taking the time to speak with me. This should take us around 20- 30 minutes. We will be focusing on hearing about what you think about the activities you have used in your psychology class."

Teacher interview questions/starters

1. What do you know about blended learning and what does it mean to you?

2. Tell me about your blended learning course.
   a How do you set this unit up to get it running successfully?
   b What do you ask the students to do?
   c What do you, as the teacher, do?
   d How is this different to running a class where there is only face-to-face contact?

3. What does student engagement look to you in a classroom and does it look any different when you are teaching a blended learning course?

   a. How can you tell if a student is engaged? (Cognitive, affective, behavioural)
   b. How do you tell if a student is not engaged? (Cognitive, affective, behavioural)

4. Tell me about what have you done to foster student engagement in this unit?
   a. Have you got thoughts about how you can develop it further?
   b. Has it been successful in terms of student engagement?

5. Tell me about an activity that you have given your students that has produced a high level of engagement?
    a. What did you see/hear that helped you to decide this?
    b. What do you think were the influences on this high level of student engagement?

6. Tell me about an activity that you have given your students where there was a lower level of engagement.
    a. What did you see/hear that helped you to decide this?
    b. What do you think were the influences on this lower level of student engagement?

7. In your experience, what effect have the following things had on student engagement levels?
    a. Teacher feedback/feed-forward (teacher support)
    b. Scaffolding in activities
    c. Encouraging interaction between students (peer support)
    d. Developing relationships / safe environment (student need for relatedness)
    e. Technology being used
    f. Structure of activity (task characteristics)
    g. Structure of the class
    h. Autonomy support (choice, shared decision-making)
    i. Developing competence / success through activities

Prompts: How important do you think these things are? Why do you think this way?

8. Do you have any other comments about student engagement in blended learning activities within this unit that you would like to make or you think are important?

End

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Appendix Eleven: Examples of web log data from students six and student four

Observation two

Student six: data summary

Arrives with laptop	10.10
logging in. typing, Facebook chat, Instant messaging,	10.15
eating	10.20
eating, flicked into PowerPoint then back to Facebook	10.25
typing, Facebook chat, multiple tabs open	10.30
Flicks into slideshow only when teacher approaches and has a task to do. I.e. "what job?"	10.35
On Facebook, eating. Google doc up only when teacher goes by.	10.40
On Facebook	10.45
Offers verbal opinion, then back to Facebook. Scrolling through feed.	10.50
Looking at teacher, but scrolling.	10.55
Asks a question, but its actually a statement "I think" then back to FB	11.00
Typing, looking at screen, typing answer	11.05

Observation Six

Student four: data summary of observation six

Window	Time
ProjectWindow	00:00:27
DeskTime - My DeskTime	00:00:01
easel.ly - create Infographics online	00:00:06
Mozilla Firefox	00:00:01
Humanistic theories – Psychscool	00:14:01
Self-assessment of Congruence	00:11:34

Student six: data summary from Observation Six

Window	Time
Adobe Flash Player	00:02:34
	00:00:01
	00:00:01
Start menu	00:00:03
Chapter 10: Section 1: Humanistic Theory | AllPsych	00:02:28
Chapter 10: Section 2: Maslow's Hierarchy of Needs | AllPsych	00:06:16
Chapter 10: Section 3: Carl Rogers and the Client-Centered Approach | AllPsych	00:00:52
DeskTime - My DeskTime (student5)	00:00:17
Congruence Test - Google Docs	00:14:18
Untitled document - Google Docs	00:00:18
My Drive - Google Drive	00:00:02
Personality - Google Drive	00:00:09
Psychology - Google Drive	00:00:07
Redirecting...	00:00:02
School - Google Drive	00:00:03
(1) Facebook	00:00:09
(2) 'man it'll be funny when trump gets in	00:00:10
(2) Travis D###	00:00:05
(3) Travis D###	00:00:01
(37) Facebook	00:00:07
(38) Facebook	00:00:02
A Safe Space	00:00:03
Facebook	00:00:06
Mozilla Firefox	00:00:02
Travis D###	00:00:12
Mozilla Firefox	00:00:05
New Tab	00:00:12
6+8+9+3+5+10+8+9+3+4+6+10 - Google Search	00:00:15
81/1.1 - Google Search	00:00:45
Mozilla Firefox	00:01:42
Criticism of humanist psychology - Google Search	00:00:13
Inbox (4) - ######@#####.school.nz - #### College Mail	00:00:03
Humanistic theories - Psychscool	00:03:12
Psychscool - Welcome to Psychology	00:00:11
Mozilla Firefox	00:00:01
<mark>Self-assessment of Congruence</mark>	<mark>00:04:46</mark>
Criticisms of Humanistic Psychology | Study.com	00:02:07
Subscribe to Study.com	00:00:03
Mozilla Firefox	00:00:06