

# Investigation into a Commercial Application to Reduce Online Distractions Amongst Students

By

Sarah P K Fitton

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## **Abstract**

Technology is an integral part of the modern learning process; its scope, speed and accessibility effectively make it the most efficient tool for learning. Moreover, with its continuous development and convenience of accessibility there has been a rapid integration of technology into the learning environment. However, as our phones and laptops have become daily tools of mass information, they have equivalently become tools for distractive behaviour, providing individuals with escapes from reality in the form of social networks and endless entertainment feeds. The necessity of this project was recognised upon observing the use of social media platforms in collaborative work for the purpose of academic achievement. The seemingly double edged sword that is social media provided networks for communicating and collaborating in both private and group settings, additionally it presented new avenues for learning and information searching in the form of visual and audible material.

Currently available products in the market aim at reducing social media usage without understanding the beneficial features and functionality that it provides for students. The purpose of this project was firstly to further research the gap in the market for a tool which aids students in their learning through reducing exposure to distractive material without restricting their behaviour. The second aim was to investigate how to appeal to this market. This led to the conceptualisation of the Prompt application, which allows for utilising social media applications while removing the distractive material and promoting academic sources. The plugin design of the application proposes working alongside current academic platforms to channel material to social media platforms, determined by their continuing popularity.

The initial investigation of this project was framed by literature reviews which revealed additional value in the proposed project. Additional benefits were found in social media platforms and their prominence in individual's daily lifestyles due to the emotional connection that people had with them. Furthermore, reasons for maintaining access to these platforms were identified through understanding the beneficial effects achieved from a state of arousal through task-switching behaviour. These points of interest provided further guidelines to proceed with the next stages of research.

The methodology approach implemented in this project was of both a qualitative and quantitative nature. A pilot survey was used to gain numerical data on student's usage of their academic and social media platforms, the information obtained from this was used to advise the one-on-one interview process. One-on-one interviews were then conducted with both students from a range of academic backgrounds and university staff members who worked alongside the academic platforms.

The analysis process revealed key findings surrounding how the platforms were used and to what extent. Furthermore, insight into students attitudes and behaviours surrounding the use of social media revealed a significant level of disconnect between the two. Overall, the key findings indicated a desired response in proposition of the Prompt application. Findings confirmed research assumptions and validated the direction for providing a model that embraces the use of social media for both students and educators.

With the educational system largely disregarding the role that social media platforms have evolved into for students, there is a subsequent failure in the market to adequately provide a solution which caters to both the functional and emotional needs of students. Acknowledging this failure provides the potential to develop an innovative solution that is human-centered in its design for the educational field. The opportunity for this project stemmed from identifying this gap in the market for a project which will develop alongside the constantly changing functionality of technology.

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## Glossary of Terms

**Blended learning model** A term used to describe the use of combining both electronic learning and traditional classroom methods of education to form a hybrid teaching method.

**Cognitive control** Refers to the ability to orchestrate thoughts and action in accordance with internal goals.

**Cognitive fatigue** Loss of focus and mental energy, a potential consequence of task juggling. Of course, lack of sleep, tiredness, and other causes can lead to such fatigue, too.

**E-learning** The use of digital technologies in various forms and techniques to relay information for the purpose of learning.

**Media multitasking** At least three types: (1) between medium and face-to-face interaction; (2) between two or more media; and (3) within a single medium.

**Medium** A modality of representing information, e.g., text, photos, music, diagrams, animations, and video. A picture is a single medium, whereas the computer is not a single medium, but a meta-medium in which previous media can be represented, connected, and integrated in new ways.

**Open-source software (OSS)** A type of computer system where material (source) can be released under a license.

**Plug-ins** Refers to computer plug-ins which are a software component which provides an additional feature or action to an already developed program.

**Switch costs** The costs in time and efficiency of transitioning between multiple tasks.

**Task switching** Often referred to as multitasking, task switching is the action of moving between two or more tasks.



## Chapter One: Introduction

## 1.1 Background Information

This project is presented in two parts. Part one covers chapters 1 through to 7 and provides an in depth research analysis and discussion of the identified issue concerning students' reduced attention levels in the E-learning environment due to increasing engagement with social media, as recognized by researchers Jacobsen & Forste (2011), Grace-Martin & Gay (2001), Patterson (2016) and more. The second part of this project presents a business case exploring the market opportunities for an innovative human centered solution as well as identified challenges.

The primary issue investigated in this paper are the implications of the use of social media within the learning environment; its increased presence has allowed for greater communication and collaborative opportunities, however this is challenged by the potential to hinder a student's attention and cognitive processing due to task switching behavior (Brooks, 2015). Furthermore; the current design of social media platforms is intended to entertain and maintain user engagement, discouraging students from engaging with their primary task.

Covered in chapter nine, the ensuing business case aims to provide a compelling business model for the implication of an innovative solution which effectively caters to the identified issue and the accompanying challenges. Through the literature review and intensive research, the identified issue revealed the niche in the market to cater a product to modern learning techniques and modes of communication. This project is aimed at the educational field, improving students' educative experience and online behaviors, additionally it works to benefit the educators' experience in how they deliver their material and develop their methods to cater to current trends. However, there is also the potential to develop this product for use by individuals outside of the educational environment to cater to their experience their interests more successfully.

This is a global issue, however for the purpose of this thesis, the issue will be investigated within a national context focusing heavily on the Wellington population and Victoria University students. However, the proposed business plan provides an opportunity to implicate a solution worldwide with the ability to expand into the tertiary education environment.

## **1.2 Details on Technology**

### **1.2.1 Academic Platforms**

Within the New Zealand university system, a range of academic platforms are supplied to provide students with their required academic material and course information; this system is referred to as 'E-learning' and provides students with flexibility in time and place of learning with a higher level of accessibility (Gogan, Sirbu & Draghici, 2015). For some universities a singular platform is provided with the use of complimentary platforms depending on the course requirements, however other universities choose to employ the use of multiple academic platforms with no correlation. Both of these systems provide significant advantages and flaws for the learning environment; failure to meet all needs in a singular platforms or over saturation of academic platforms. Within New Zealand there are three prevalent platforms that will be further discussed in this paper; Blackboard, Canvas and Moodle.

#### **1.2.1.1 Blackboard**

Blackboard (Bb) is a distinguished Learning Management System (LMS) within the educational environment, providing an education tool catered to three levels of education; k-12 (kindergarten through to high school), Higher-Ed (undergraduate +) and finally professional learning (Blackboard, 2019). As of 2014 the platform was available in over 17,000 organisations worldwide, with the academic platform catered to higher education being available in approximately 3,000 schools (Corcoran, 2014).

The original platform of Blackboard – known as Blackboard Learn, - was expanded upon in late 2015 with a new application 'Blackboard Ultra'. The two platforms provided key differences in focus as Blackboard Learn supports the use of Wikis and Journals on the platform as well as having a large degree of flexibility in its design. In contrast, Blackboard Ultra is highly focused on accessibility with an updated and modern interface, stripped back functions and efficient mobile application. Being a highly integrated application; Blackboard Learn remains the most used application of the two, though some universities have commenced the task of switching to the new system.

Blackboard Learn's primary functions for students are supplying course work, course information, notifications and grades. The platform provides a range of plug-ins that are maintained through Blackboard, with only 10 of these plug-ins allowing for open-source software (OSS). Its design additionally provides a great level of flexibility in its layout, allowing educators to cater the courses' design for efficiency and functionality. However, the application is decidedly limited due to this level of flexibility provided to the educator; creating a task for the student to adapt to multiple layouts, with no ability to use a search engine. Additionally, the Blackboard Learn application is limited in its discussion mediums, making students and educators reliant on other channels for connecting. Blackboard is currently used at the following universities around New Zealand: Victoria University of Wellington, Auckland University of Technology and the University of Otago and will be the primary focus of this report for the use of a solution.

#### **1.2.1.2 Moodle**

The Moodle (Modular Object Oriented Dynamic Learning Environment) platform was launched in 2002. However, for a brief period between 2012 and 2018 Blackboard and Moodle worked in partnership with each other providing alternative software for the required task. This ended due to differing business models as Moodle operated as a free open sourced alternative to Blackboard's costly proprietary systems (Lieberman, 2018). As of 2018 Moodle records state that they have over 90 million individual users across both the academic and enterprise level of learning systems worldwide (Moodle, 2018).

Within New Zealand there are currently four major universities that employ the use of the academic platform; the University of Waikato, University of Otago, Massey University and the University of Canterbury. Moodle allows for a large range of flexibility in its design and layout, with an open-source software system: plug-ins can be sourced from a variety of suppliers. Such as with the other academic platforms, the flexibility in design provides a high level of control to each educator and thus the layout and features between courses can range accordingly.

#### **1.2.1.2 Canvas**

Founded in 2008 and launched in 2010, the Canvas LMS software is relatively new in the E-learning environment. Since its launch it has accumulated over 20 million users over their K-

12 and Higher Education platforms, allowing for an ease in transition for those familiar with the software from secondary school to university education (Canvas, 2019). Within New Zealand it is currently in use at the University of Auckland; though the less prominent of the three learning management systems, its rapid integration and accumulation of users is significant for its projected future success and development.

### **1.2.2 Social Media**

Social media is continually expanding, allowing connectivity at any time in any form. Though many platforms are popular for short trending periods, some more prominent platforms are under continuous development to remain relevant and highly functional within the daily lives of individuals. Worldwide, those between the ages of 16 and 24 remain the largest audience demographic, with between a 25% to 57% hold on each of the platforms and around a 33% overall audience hold (Chaffey, 2019). Within this report there are nine platforms that have been discussed due to their continued relevancy and popularity as well as their ability to expand into the educational environment for academic purposes, these being; Facebook, Messenger, YouTube, Instagram, Snapchat, Flickr, WhatsApp, Pinterest and Twitter.

#### ***Facebook***

Facebook has been a leading platform in social media since its conception and introduction in 2004. The mission statement for the platform states that it intends to ‘give people the power to build community and bring the world closer together’ (Facebook Newsroom, 2019). Due to its continuous development it remains the most popular social media platform, boasting over 2.23 billion users as of January 2019 (Buffer, 2019). The platform allows for users to connect and communicate effortlessly and works in partnership with the Messenger platform.

#### ***Messenger***

Once a feature in Facebook, the Messenger platform became its own standalone application in 2011 allowing the company to greatly expand on the features available to users while working in conjunction with Facebook. The application currently holds 1.3 billion users making it the fourth most popular social media platform (Buffer, 2019). The messenger feature allows users to create singular private conversations as well as group discussions.

### ***YouTube***

Owned by Google and founded in 2005, YouTube is the second most popular social media platform with over 1.9 billion users (Buffer, 2019). As of January 2019 around 31% of active users are between the age group of 16 to 24 (Chaffey, 2019). YouTube acts as a video sharing platform, allowing a range of entertaining and educational material to be shared world-wide, and providing a search engine with filtering abilities for ease of access. YouTube employs algorithms to cater recommended material to the user.

### ***Instagram***

Founded in 2010 and later acquired by the Facebook corporation, Instagram currently holds over 1 billion users making it the 6<sup>th</sup> most popular social media platform (Buffer, 2019). The application acts as a video and photo sharing platform with messenger capabilities and live 'story' features where video feeds can be updated to the minute. Currently those between the ages of 16 and 24 are the largest audience with a 37% hold (Chaffey, 2019).

### ***Snapchat***

Though less popular than some of the larger platforms, Snapchat holds approximately 255 million users (Buffer, 2019). Similar to Instagram, Snapchat is also a short video and photo sharing platform, however these are only hosted for short periods of time before they disappear. The application provides a more conversational form to how users interact with each other allowing for both individual and group chats. The main users of this platform are those between the ages of 16 and 24 with a 57% audience engagement (Chaffey, 2019).

### ***Flickr***

Launched in 2004, Flickr – owned by Yahoo- is a photo hosting platform that provides a blog style in which users can interact with others; providing emphasis on creative photography styles and methods. It also provides a collaborative feature where users can open their blog for select others to provide input and organisation (Flickr, 2019). The exact number of users is unclear, however as of 2015 those between the ages of 18 and 24 make up approximately 12% of the user audience (Verto, 2015).

### ***WhatsApp***

WhatsApp is basic in its function, with the aim to connect its users worldwide in a simpler singular platform as an alternative to SMS (short message services), it has proven beneficial for hosting group conversations and has developed its use into the business world. The application was launched in 2009 and since then has gained over 1.5 billion users (Buffer, 2019) making it the third most popular social media platform. Currently 31% of its users are aged between 16 to 24 years old (Smart Insights, 2019).

### ***Pinterest***

Founded in 2010 Pinterest differs from other social media platforms with its shift in focus with more intent on discovery and inspirational material shared by others and less on engagement and communicating amongst individual. The platform currently holds over 250 million users (Buffer, 2019), providing them with a space to collect and organise ideas and inspirations into 'boards' of relevant themes. As of January 2019; 29% of the audience engagement is attributed to the 16-24 age demographic (Chaffey, 2019).

### ***Twitter***

Twitter is a posting site aimed at discussions on varying topics of politics, daily personal updates and individual opinions. Twitter holds a strong emphasis on what is happening now, with a news feed that is updated with minute by minute news world-wide. It currently holds over 335 million users (Buffer, 2019) with 28% of these users aged between 16 and 24 (Smart Insights, 2019).

### **1.2.3 Advertisement Schemes**

A prominent feature across the internet and in particular social media platforms are the presence of advertisements which are tailored to the individual users' interests. In the advertisement industry this is referred to as personalized remarketing or retargeting (New York Times, 2010). Often, this process presents previously viewed products or similar items to encourage individuals to review or resume browsing. For some users this is seen as an invasive technique, however for others this is a compelling method to increase interest in the product and effectively change an individual's focus for an undetermined amount of time.

Social media platforms have rapidly adopted this scheme into their systems in paid partnership with third-party corporations, providing them with a user profile demographic to more effectively target advertisements. As stated in the Patent Application Publication for Remarketing Products to Social Networking Systems Users; ‘the user profile can identify a specific product or type of product in which the user has expressed an interest based on activity within the social networking system, activity with third-party content, or both. In some embodiments, the systems and methods can use the user profile and/ or the identified product to provide improved remarketing to the user while the user is interacting within the Social networking system’ (United States Patent No. US 20160117740, 2016). The process of remarketing and retargeting is important to acknowledge due its prominence on social media platforms and its tailored appeal to users as well as the potential for this to be developed into a potential solution.

### **1.3 Project Report Structure**

This chapter has introduced the focus of this research, looking at technology in the classroom with a particular focus on the use of social media, as well as highlighting the environment in which the project hopes to develop.

The second chapter is a detailed literature review which encompasses the advantages as well as disadvantages of technology in the classroom. In addition to this, the chapter expands on the effects of task switching otherwise known as media-multitasking; analysing the argument surrounding arousal and performance.

Chapter three presents the project proposal, detailing the opportunities identified and the project description. Also covered are assumptions and key research questions that will be addressed and further investigation that is required.

Chapter four describes the research methodology, covering the research approach including the participant selection and location decisions, data collection and analysis process and limitations that were posed.



Chapter five details the research findings of this project, providing visual graphs from the survey and coding the interview results into relative headings. This chapter summarizes the results statistically to provide a clear outline for analysis in the following chapter.

Chapter six provides a detailed analysis of the findings, bringing a conclusion to the initial data research. This chapter provides answers to the initial assumptions and key research questions, as well as reflecting on the remaining unknowns.

Chapter seven discusses the major findings of this research and reflects on how this reflects on the project, drawing final conclusions in how this may affect the development of a commercially viable product.

Chapter eight presents the business case, in which the research findings are reflected upon and developed into a concise report aimed at investors.

Chapter nine concludes the entirety of this project. Providing a summary of the research and the directions that were taken throughout the report as well as final recommendations for further development.

## **Chapter Two: Literature Review**

### **2.1 Increase in Technology**

Electronic technology has rapidly become an integral part of the modern day educational process, with both educators and students quickly adopting the use of laptops and phones for the use of the internet and social media platforms as a tool for learning.

Classrooms are becoming increasingly technologically saturated (Bellur, Nowak & Hull, 2015), as is evident within universities as approximately 62% of surveyed students (N= 1026) admitted to engaging with nonacademic electronic media within their academic environment (Jacobsen & Forste, 2011). This figure is representative of the large presence and impact that electronic mediums have within students' lifestyles.

#### **2.1.1 Advantages**

Within the digital age the internet has become a highly precise and interactive mass medium (Klapdor, 2013) that is continually developing and expanding, and now, due to the scope and speed that the internet allows; it is the most effective form of learning and obtaining information. The student learning experience has therefore been enhanced through the incorporation of technology into the academic environment. Bradley, Weiss, Davies and Holley (2010) stated that students respond positively to the use of different modern tools in the learning environment. In a study by Bradley et al. (2010), it was found that using a blended learning model which incorporated texting in the classroom, received positive responses from students and improved student engagement in lectures.

As Bellur, Nowak and Hull (2015) stated, incorporating digital services with high speed internet into the classroom allows for ubiquitous connectivity and facilitates easy search of and access to information of any topic ultimately increasing learning capabilities and decreasing information search time.

An additional key advantage of technology is that it facilitates collaboration. Both in and outside of the classroom students are more often using their laptops and phones to information search and communicate with their peers as well as educators; as a result, collaboration has become progressively easier. Social media has been an especially effective

tool in connecting students and expanding the boundaries for collaborative projects. Social media platforms allow for the ability to connect, communicate and collaborate amongst both peers and educational providers alike (Fewkes & McCabe, 2012); it has bridged the gap in communication and allows for discussion and learning.

Moreover, this connectivity has provided an increase in accessibility. The use of virtual networks provides students with access to multimedia presentations and the ability to interact and collaborate outside of the classroom through instructional material (Fewkes & McCabe, 2012) making it an invaluable tool of accessibility.

### **2.1.2 Disadvantages**

The educational process for many university students largely consists of informative classroom time followed by independent homework consisting of reading and studying (Bellur, Nowak & Hull, 2015). As previously stated, technology is having an increasing presence within this process, however, its presence borders on problematic as the double edged sword of technology also acts as a medium for distraction. Previous research has found many issues concerning the use of technology within the learning environment and its effects on academic progress and mental health.

#### **2.1.2.1 Effect on Academic Results**

As technological development continues, accessibility and affordability of products have made them a mainstream commodity. With this, there is now an expectation for student engagement through technologies to achieve academic results. However, the presence of these technologies can prove problematic when students are left to their own devices, and their use is left unrestricted and unregulated. This freedom of accessibility allows the student to divide their attention between the main subject and an unrelated task such as texting (Glass & Kang, 2018).

As increase in devices within the classroom has been previously linked to a drop in academic results. In a study conducted by Grace-Martin and Gay (2001) in which students were monitored over a period of 15 weeks for their browsing times and habits, it was found that 'longer browsing sessions led to decreased academic performance' (102) this was attributed to prolonged inattention during in class time.

A secondary study further elaborates on this correlation. In this study by Carter, Greenberg and Walker (2017) students were divided into three groups; one was a control group which remained technology free. The second group were allowed unrestricted access to laptops and/or tablets, and the third group were permitted only monitored tablet usage. The results of this study revealed that the exam scores were negatively impacted when students were permitted the use of computers in the classroom. Those within the classrooms that allowed the unrestricted use of laptops scored 0.21 standard deviations below the exam scores of those that were prohibited the use. Those that were allowed a monitored usage showed -0.17 in exam results, thus showing that even the monitored usage can have an effect on academic results.

However, the results of this study still fail to address some key questions on student behavior; whether the loss in learning is due to being able to task switch *or* due to the access and exposure to unrelated content. Though this area of research remains ineffectively researched, previous research has linked media multitasking to negative consequences such as poorer academic performance (Patterson, 2016). The fact that technology allows or encourages media multitasking, could account for some of the detrimental effects of technology on academic performance.

Previous research surrounding education has highlighted the importance of attentive listening and active note-taking as important classroom skills for their contribution to higher grades/scores in exams (Titsworth & Kiewra, 2004). As Schuur, Baumgartner, Sumter and Valkenburg (2015) stated: the constant availability of media in its various forms has led to an increase in media multitasking, and the incorporation of technology into the classroom interrupts the students' engagement with the subject.

The process and implications of media multitasking will be further discussed in the following chapter *Task Switching*

#### **2.1.2.2 Social Media - Disconnection and anxiety**

Another issue that must be taken into consideration when looking at the increase of technology is the culture around social media and the implications this has. Previously there

has been a large focus on the distractions that social media applications can have, not only through the ability to 'push' notifications but through the mentality and culture surrounding them. When disconnected from the online community an individual may experience an "internal, anxiety-laden need to check in with their electronic worlds" (Rosen, Carrier & Cheever, 2013, p. 956). Due to this, an individual may also experience "a strong emotional pull for them to check in with their virtual social network of friends and acquaintances more often than every 15 minutes" (Rosen et al., 2013, p.956).

Currently there are a variety of applications available as a solution for helping an individual focus on their primary task, and although they take a variety of approaches to this, the objective remains the same; to discourage excess social media usage. These applications use a range of strategies such as blocking access to social media platforms, providing rewards for time spent off of social media (Forestapp 2018) or pushing warnings at excess time spent on social media (Moment, n.d). Unfortunately, these approaches fail to acknowledge the functional as well as emotional benefits of social media and thus fail to target the problem effectively.

## **2.2 Task switching**

### **2.2.1 Introduction to task switching**

The main issues identified with online information searching are the distractions that students can be exposed to, resulting in a loss of valuable time and information processing.

The exposure to both online advertisements and other elements on these multimedia platforms encourages split attention and task switching behaviour. Task switching - as it is most accurately characterized- is generally referred to as multitasking due to the misconception that people have the ability to simultaneously effectively perform two or more tasks at once. Task switching is also commonly referred to as 'media multitasking' when in reference to technology, within the grounds of this paper the reference of task switching may alternate depending on the context of discussion.

According to Wallis (2010) there are three distinguishable forms of media multitasking that students may experience; the first being the use of multiple forms of media simultaneously e.g. individuals are continuously active on both laptop, phone and other devices, second is

engaging with multiple tasks through the one device e.g. checking emails while simultaneously listening to music on a singular laptop device and third is using media while engaging in a non-media activity. The latter being the most significant in affecting a student's focus period. This third form of media multitasking is important to distinguish due to the effect on the 'non-media activity' being affected e.g. homework or attentiveness in a lecture.

In research conducted by Williams et al. (2011) 79% of students acknowledged their texting habits in class, with 73% of this segment viewing the habit as unprofessional. This research reveals an awareness amongst students of their task-switching behavior, as well as a significant disconnect between their attitude and behavior as they acknowledge the use of technology for non-academic reasons within the classroom is unprofessional, disrespectful and counter-productive to learning (Williams et al. 2011). Additionally, in a study produced by Ophir, Wass and Wagner (2009) it was found that 'chronic media-multitaskers' had a higher susceptibility to distractions and had the most trouble focusing their attention – even if the stimulus was irrelevant. From this it can be concluded that repeated behaviour of media multi-tasking can result in longer periods of off task behaviour and current awareness of this behaviour is not significant enough to change behaviour.

### **2.2.3 Facilitation through technology**

At a basic level, technology facilitates the ability to media-multitask through tabbing capabilities, allowing for “simultaneous web-based activities” (Adler & Benbunan-Fich, 2012, 156). This basic capability has enhanced the learning structure, allowing students to move through multiple tasks without physically losing time setting up new tasks.

However, referred to as 'multitasking facilitators' (Pea et al., 2012), items such as mobile phones and laptops are prevalent in everyday settings and allow for media multitasking; including in the classroom (Hayashi & Blessington, 2018), which they state is “particularly ubiquitous among the younger generations” (2018, p 245). Adolescents typically engage with multiple forms of media, and multiple mediums within this while simultaneously partaking in other activities such as homework (Pea et al., 2012). Often referred to as digital natives, students of today are revealed to task switch more than any other generation (Carrier, Cheever, Rosen, Benitez, & Chang, 2009), this is largely attributed to a lifetime immersed in rapidly developing technology (Olmsted & Terry, 2014).

A further facilitator of task switching is the presence of targeted advertisements which individuals are exposed to throughout their online browsing period. These advertisements are particularly prominent amongst social media platforms, as while engaging in virtual networks, students are consistently exposed to material catered to the individual's interests. This is done so through the behavioural advertising process (Neilpatel, n.d.) to prompt them to review or resume browsing; ultimately encouraging a longer state of distraction and removing them from their key focus for increased periods of time.

#### **2.2.4 Decreased cognitive processing**

As Miller and Cohen (2001) define it: cognitive control refers to the ability to “orchestrate thoughts and action in accordance with internal goals” (p. 167) and the means to achieve these goals. The process of media multitasking in the learning environment is concerning according to Wallis (2010), as it results in a deficiency in performance as well as a cognitive fatigue factor (loss in cognitive control) .

This disruptive process that students encounter while information searching through online platforms can cause a loss in memory for the information needed when processing the primary task; some cues are lost to the individual or never enter working memory (Brooks, 2015). In a study by Mayr (2007), findings revealed that rapid task switching has significant costs in speed and Mayr further identified the ‘global switch costs’ that come from the knowledge that there is potentially something that needs their attention even though they may not have reacted e.g. a student being aware of a notification that needs a response but not reacting immediately.

The different configurations required to achieve mental tasks creates a mental strain on an individual; evident in the deficits in cognitive control. As Brooks states “the higher the rate of multitasking [*task switching*], the higher the cognitive switching costs – as a result; cognitive load increases, tasks pile up, and efficiency drops” (Brooks, 2015, 28 - 29). The experienced loss in cognitive control may further explain why media multitasking can interfere with academic performance (Ophir et al, 2009). In a study performed by Wei, Wang and Klaussner (2012), it was found that frequent texting in class had two significant effects; it

decreased students' ability to sustain attention as well as decreased their perceived cognitive learning.

### **2.2.5 Task Switching counter argument**

In contrast to previous arguments on the negative aspects of task switching, many researchers have highlighted a level of efficiency-gains achieved through a state of arousal and stimulation; which is generated through the ability of [media] multitasking.

The first argument in favor of this begins with Megino (1977) who hypothesized that a challenge does not exist in tasks of a low-stress level, and consequently the performance is poor. Megino proposed that there is a linear relation between stress and performance; higher levels of stress present more challenge and thus produce a better performance due to the stimulation that is required.

Expanding on these two opposing views of "stress is good" and "stress is bad", forms the Inverted-U theory. This theory proposes that there is a curvilinear relationship between arousal and performance. Arousal, as stated by Woolfolk (1998, p588) refers to the "psychological reactions causing a person to be alert, attentive and wide awake". The Inverted-U theory is largely attributed to the Yerkes and Dodson (1908), their pioneer study found that at low levels of arousal performance increased in a linear relation. However, in their study in which they focused on responses from mice; they found that their performance was impaired at higher levels of arousal. Providing an Inverted-U graph.

As Adler and Benbunan-Fich (2012) discussed, work load can create different levels of arousal, they therefore argued that the addition of a second or multiple tasks could induce an increase in arousal. From the Inverted-U theory, it can be seen that the highest level of performance is found within the midpoint of arousal, balancing a level of underwhelming work and overwhelming workload. With the addition of tasks, a balance may be accomplished to effectively stimulate an individual and thus achieve the greatest level of performance.



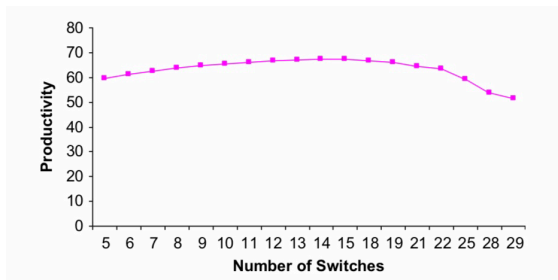


Figure 2.1 – Graph of Quadratic Model for Productivity (Model 2). Retrieved from Juggling on a high wire: Multitasking effects on performance by R. F. Adler and R. Benbunan-Fitch, 2012, *International Journal of Human - Computer Studies*, 70(2), p163

### 2.3 Literature summary

It can be seen through the literature covered in this chapter that technology in the classroom has significantly increased, resulting in both positive and negative effects on the student learning process. As it stands, it is the most effective tool for research and learning, with its abilities to connect students both in and outside of the classroom, opening up the ability to converse and continue the learning process. However, it can be argued that the presence of laptops, tablets and cell phones provide both internal and external forces to distract students; text messages, targeted advertisements and other task-switching facilitators included in the design of the technology itself. With the addition of social media, there is now a mentality around remaining up to date and connected to the virtual networks, and a level of anxiety which may be created when removed from them. This mentality is arguably a heavy contributor to the disconnect between the current attitudes and behaviours of students when being required to remain on task. For these reasons, it should be considered that social media has become a necessary tool for both the emotional and functional needs of students, as it provides both a level of comfort at its availability as well as powerful tool for collaborative work.

Additionally; although it was seen that non task switching (media-multitasking) behaviour resulted in higher results than those who repeatedly engaged in task switching, this conclusion was primarily drawn from controlled studies in which the individual's behaviour

could be regulated to produce higher performance levels. Due to this, it cannot be assured that the behaviour would carry on in external environments, nor can it be expected that an individual would show the same restraints and control considering the high level of distractions present in the online environment.

It can therefore be expected that some level of task-switching [media multitasking] behaviour will take place. For this reason, it can be argued that catering towards this task-switching behaviour would be beneficial in providing a learning environment in which the balance between arousal and performance can be met to achieve the best results.

## Chapter Three: Project proposal

### 3.1 Project Proposal

This chapter will cover two main sections. The first will provide an outline of the product opportunities at an individual, market and national level, with the proposed product concept aimed at meeting these opportunities to create a differentiation in the market. This will be further outlined in the proposed business model which outlines the products value proposition.

The second section of this chapter outlines the research assumptions and research questions made upon commencing this report which will be addressed throughout the following chapters. The research in this report will be centered around the outlined research questions. Summarizing this chapter is a discussion of the further investigation that will be necessary from the conclusion of this report.

#### 3.1.1 Opportunities

##### 3.1.1.1 Micro - *Specific needs*

For individual students there are many opportunities present in providing a platform in which the student will be presented with new ideas and information relevant to their course of study, encouraging a higher level of engagement with their studies, potentially improving their academic results.

##### 3.1.1.2 MESO - *Market environment*

The market opportunity that has been identified caters towards the current disregard for social media platforms in the learning environment. Therefore, there is an opportunity to develop a new application aimed at the student demographic which embraces the use of social media for its connectivity abilities as a learning tool amongst peers; catering to both the functional as well as emotional needs of the student.

Additionally; there is an opportunity to cater the advertising environment currently viewed on social media platforms, opening up the market to more academically relevant advertisements.

Current applications in the market are aimed at reducing the usage of social media and other distractive websites, such as shopping sites. This is done through the following strategies:

### **1. Focus orientation**

Many applications provide a game like solution for reducing social media solution, Additionally, some applications provide a moral motivation such as the application *Forest*; users of the application will grow an animated forest which will only grow through the time spent away from social media. For each tree that the user obtains, the creators of the site invest in planting a real tree on earth (Forestapp, 2018)

### **2. Social media monitors**

A more aggressive approach by app creators are social media blockers such as *Off-Time*, this application provides automatic responses for anyone trying to reach the user, and allows the user to set the time for however long they need a social media platform blocked (Off Time, 2018). *Moment* takes a slightly alternative approach and provides a limit on the amount of time allowed on any social media platform, once the limit is reached, *Moment* provides push notifications to remind the user to resume their primary task and remove themselves from social media (Moment, n.d.).

Through providing an alternative solution which understands the emotional needs of students and is human- centered in its design, there is an opportunity to create a commercially viable solution.

#### **3.1.1.3 Macro – National trends**

With the rapid advancements of technology have come an increase in digital learning in the education system. There is an opportunity to produce a product which adapts alongside developing technologies and trends in the education system, moving away from traditional teaching methods for a digitally enhanced learning experience.

The digital age has led to a need for digital competence and expectations on the coming generations to “use and produce multimedia content productively to learn, communicate and collaborate and present their work to various audiences” (Langseth, Jacobsen & Haugsbakken, 2018, p25). The development of a product which caters to these expectations allows for an innovative and creative approach to teaching and learning, providing an opportunity to increase student engagement and subject interest.

### **3.1.2 Prompt: Social media for academic use**

The current proposed design is to provide students with a product which works alongside their respective academic platform (e.g. Blackboard, Moodle, Stream) in the form of an application. This will be used to channel their academic work into the social media platforms of the individuals' choice. This connectivity will change the current perception that social media is distractive, while allowing the freedom to communicate and explore.

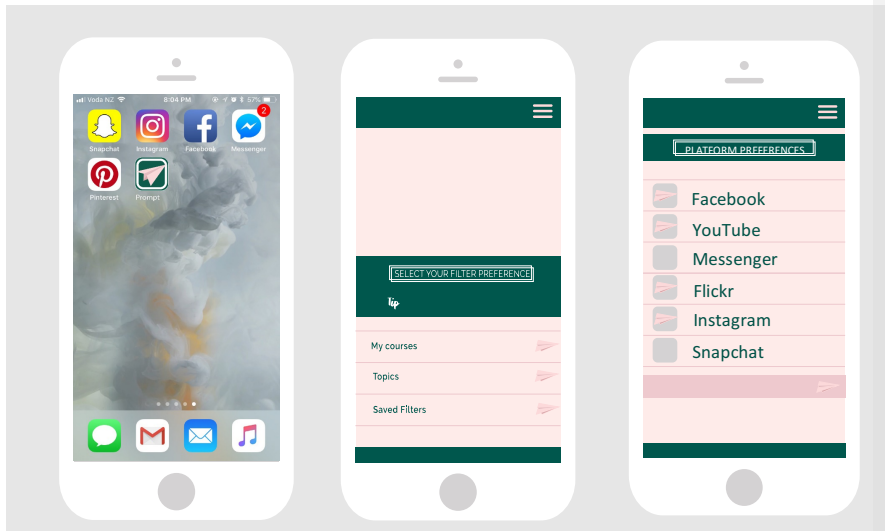
Currently on these platforms, students are exposed to targeted advertisements to encourage increased browsing time. However, through the application students will find advertisements replaced with their recommended readings as well as articles relevant to their course of study.

Users of the application will be connected through their academic platform, and they may cater their subjects down to a specific topic, or multiple topics within their course of study. For these choices the user will be guided through the applications to make these selections.

The second main function of the application will be connectivity, creating automatic class pages and the ability to find peers through the application to hold class discussions or smaller group discussions, ideally creating virtual classes.

#### ***Proposed product concept***

Figure 3.1 displays the proposed product concept, providing an example of the Prompt icon on the home screen. The general approach that will be taken by this service is providing a visual change on social media platforms which can be catered to the student's needs. Below is an example of the steps taken where a student would first select the topics they are studying before selecting the social media platforms they would like to view this change on.



*Figure 3.1 Product Concept*

### 3.1.3 Proposed Business Model

The Lean Canvas Model (LCM) was developed by Ash Maurya as an adapted form of the Business Model Canvas developed by Alexander Osterwalder. The LCM format format is structured for entrepreneurial business plans, with a focus on problems, solutions and the value proposition which maintains a competitive advantage for the product (Canvanizer, n.d.).

Due to its structure the Lean Canvas Model was selected over the original Business Model Canvas, so as to account for the current unknowns as well as for the customer problem approach the LCM model takes. Table 3.1 presents the proposed business model with notes on areas where further investigation would be needed.

PROBLEM	SOLUTION	UNIQUE VALUE PROPOSITION	UNFAIR ADVANTAGE	CUSTOMER SEGMENTS
1. Current educational systems do not account for communicative needs amongst students 2. Online platforms encourage increased browsing times and distractive behaviours, causing students to lose focus on academic tasks.	To be designed and effectively outlined. Current solution entails a product which transforms interactions and presentation of social media networks to increase educational material and decrease distractive material which encourages disengagement from primary task.	Product embraces the use of social media into educational systems through understanding the functional and emotional benefits social media provides individuals.	Human centered design approach which understands the fundamental student needs both in and outside of the academic environment.	Primarily student demographic with a focus on university segment Possibility to expand to tertiary education students Potential to expand to outside of the educational system and develop product to suit business demographic.
	KEY METRICS		CHANNELS	
	Number of student accounts Number of social platforms that adopt application design		Play store (Android) App Store (iPhone) Online downloads Provided by academic organizations	
COST STRUCTURE			REVENUE STREAMS	
Product development and maintenance costs – to be determined Marketing strategy costs – to be determined			To be determined. Potential options include: 1. Freemium model with in application purchases 2. Subscription model – monthly to annual options 3. Channel as free product to end consumers through academic organizations	

Table 3.1 Lean Business Model Canvas

## **3.2 Proposal Report Scope**

### **3.2.1 Proposal Assumptions**

#### **3.2.1.1 Research assumptions**

1. Students are actively engaged with one or more social media platforms.
2. Social media platforms remain active and/ or in range while student is engaging in academic studies.
3. Most or all of the material students are exposed to via their social media platforms is not relevant to their study.
4. Advertisement material acts as a largely distractive feature on social media platforms.
5. Current applications in the market orientated around learning and focus do not cater to the emotional and functional needs of students while they are engaging in study.

#### **3.2.1.1 Business assumptions**

1. Students will utilize the application for study.
2. Media relevant to academic sources will want to advertise through this application.  
For example; design media such as *Core 77* and *Designboom* could be directed towards design students.
3. There are available resources and technologies to create, develop and maintain the application.
4. Universities will welcome the application and support its usage for students.

### **3.2.2 Research Questions**

1. why do students choose to incorporate social media into their study practices?
2. What are students' current attitudes towards their respective academic platforms, what value do they see in them and where are the primary areas they need improvement?
3. To what extent do students encounter the need for communication and collaboration within their work, how is this currently supported by their university?
4. What does social media mean to students?
5. What are student's current attitudes towards their behaviour surrounding social media, how does their behaviour impact their study?
6. Do students want to change their habits?



### **3.2.3 Further investigation**

The research within this report should be considered as foundational work towards the development of the Prompt application. While the research conducted and literature reviewed indicated an opportunity for the development of an educational resource, supported by the expressed desire amongst the targeted audience, further investigation is required to address remaining assumptions and unknowns.

Future investigations will require prototype development to assess the product in a controlled environment. The process of the prototype development would more effectively address assumptions surrounding the level of success of the product and provide insight and direction for future development requirements. Research using a larger sampling size would provide validation regarding assumptions that students would utilize the product and universities would support the service.

Upon determining the success of the product, remaining unknowns will need to be investigated. These surround the costs for both the development and continued maintenance of the product including the cost of the required labor. Determination of these unknowns is required before the feasibility of funding and/or commercialising the service can be confirmed.

## Chapter Four: Methodology

### 4.1 Research Approach

This chapter presents the methodological approaches for research data collection relating to the primary research question '*why do students choose to incorporate social media into their study practices?*'. The findings from this research will be presented in chapter five.

This research was undertaken using an exploratory approach, employing qualitative research methods based on previously collected quantitative research achieved through the use of surveys in the initial phase of research

#### 4.1.1 Quantitative approach

Quantitative research builds statistical (quantifying) relationships between variables (Hopkins, 2000) using a descriptive approach. At this stage in the research, the focus was on determining whether previously untested assumptions about student behavior and attitudes around social media and studying were accurate. Through generating a survey, a larger sample size was obtained, providing measureable data and the ability to form patterns and relations from this. However, despite the larger sampling size, this primarily numerical view of data still lacks the fundamental human attachment required to find a human-centered solution, therefore it was decided to expand on this information through qualitative research methods.

#### 4.1.2 Qualitative approach

Qualitative research is typically a flexible approach to data collection, making use of a broad range of methods, thus allowing for more versatile and creative responses. This form of research is typically formed with open-ended questions, providing typically more complex answers. This provides the researcher with information on the 'human' side of the issue; that being the beliefs and attitudes an individual forms based on their experiences (Mack, Woodsong, MacQueen, Guest & Namey, 2005).

Within the research conducted in this project, the initial survey (survey text outline provided in Appendix A) looked at if students employed the use of social media platforms while studying and which ones. Most students reported that they primarily used social media to

communicate. This was expanded on through qualitative research, in which the interviewer asked students why this was a chosen use of communication, convenience or comfort?

*'In essence it is research that helps us to understand the nature, strengths, and interactions of variables' ... qualitative methods take a holistic perspective which preserves the complexities of human behavior.' (Black, 1994, 425).*

The data gathered through qualitative research can often be difficult to define, and largely comes under criticism due to the interpretative ability attributed to the researcher:

*"The same sorts of data (e.g., field notes) will be interpreted differently by researchers using different methods, and similar data analysis techniques (e.g., coding) employed by researchers using different methods will have quite different analytic results, because each researcher is thinking a different way" (Atieno, 2009, 15).*

While the complexity of obtaining a range of answers incited by individual experience can be difficult to define numerically, the use of constant comparative analysis can draw relations between participants and their experiences. These relations can be built into a pattern and thus an understanding of a narrative can be obtained.

In spite of the possibility of different interpretations providing different conclusions, the ability to draw from personal experiences and build a narrative on human behaviour was important for the research of this project, as the eventual development of a solution will be human-centered in its design.

## **4.2 Research settings**

The following section discusses the participant selection process and locations at which they participated. Research was divided between the two primary stakeholders, with one-on-one interviews held with both students and university representatives from Victoria University of Wellington. Survey results were obtained from students at a variety of universities around New Zealand.

#### **4.2.1 Location**

Research locations were primarily dictated by the participants due to their needs and limitations such as travel (cost and time) as well as their overall availability. The initial step in the research process was a survey, this was available online and was advertised through social media. Students were able to complete this in their own time and space. The second step of the research process was the one-on-one interviews. This took place with both university students as well as university representatives. Interviews largely took place at one of the university campuses – depending on which was the most convenient for the participant - and occasionally at cafes just off of campus. This ensured a comfortable and relaxed experience for the participants.

#### **4.2.2 Participant selection**

##### ***4.2.2.1 Survey Participants***

As this project is focused on the use of social media, students were asked to participate in the survey through an advertisement on Facebook, this was available to students situated all around New Zealand who were currently in attendance at a university. The survey participants remained anonymous; however, they were asked to list their age (between 17 and 24), the university they attended as well as their major. This was to ensure a wide range of answers were obtained and any similarities in experiences could be compared. A total of 102 participants began the survey, after review this was then reduced to 93 responses as incomplete surveys were removed.

##### ***4.2.2.2 One-on one interviews***

The sampling technique was purposeful sampling. The primary criteria were students' age and location; this selective method was again achieved through the use of advertisements displayed on Facebook groups popular amongst university students. However, for one-on-one interviews with representatives from the university a linear-snowball sampling method was adopted, in which participants recommended the next suitable participant as participants were able to recommend the next person most knowledgeable or whose role at the university was most relevant to the topic of discussion.

For the purpose of this research, interviews began with the Head of Digital Learning and Research team, who was able to recommend experts on the Blackboard platform. From here,

information regarding academics who employed the use of Blackboard and/ or social media was obtained.

*“[Snowball] sampling method involves primary data sources nominating another potential primary data sources to be used in the research. In other words, snowball sampling method is based on referrals from initial subjects to generate additional subjects. Therefore, when applying this sampling method members of the sample group are recruited via chain referral.” (Research Methodology, para 2, n.d.).*

### **University Students**

Student participants were asked to express interest in the project via the Facebook social media platform by emailing a brief summary of what it is they studied and for how long. Around 20 students took interest in the project, and from this a total of 10 students were interviewed with selections being based on the wide range of academic backgrounds: Theatre – 1 trimester, Psychology – 1 year, Business – 1 trimester & Music - 3 years, Sociology – 3 Years, Law – 5 years and more. All students were in current attendance of Victoria University of Wellington, however some had previously attended other universities around New Zealand. All interviews took between 15 to 30 minutes to conclude. The student interview questions can be found in Appendix B.

Participants were restricted by their age, with those within the age bracket of 17 to 24 being selected as this was the primary age group which is a user of social media platforms as well as in attendance at university. In addition to this, the selected participants were chosen due to their range of degrees and various years of study. This decision was to ensure a broad range of feedback and experiences with a variety of platforms that they may have encountered in their individual departments. Upon ending the interview participants were provided with a grocery gift card to thank them for their time.

### **University Representatives**

The initial research plan was to interview staff from 3 to 4 central service units within the university, however, some limitations were encountered due to the initial process of ethics approval requiring detailed knowledge of whom would be interviewed and approval from heads of departments, additionally this was further restricted due to participation availability. To rectify this issue, interviewing was aimed at the Digital Learning Department; staff

members whose job entails training academics on the most effective use of Blackboard and other platforms. Over the course of the interview, the participant was able to draw from a range of experiences of the academics they had encountered and the problems they had encountered with the ineffective use of the platform and possible strategies implemented to rectify this. The university staff question schedule can be found in Appendix C.

Additionally, interviews were scheduled for half-way through student interviews so all questions could clearly address issues that were widely identified from amongst student participants. Through this strategic schedule, it was then possible to bring across new points back to the second half of students to further discuss points from the perspective of the university representatives.

### **4.3 Data collection**

Upon ethics approval, data collection began through the aforementioned methods; a survey aimed at university students as well as semi-structured one-one-one interviews with both university students as well as university representatives. All interviews were audio recorded and later transcribed, from this the transcripts were later used in the analysis process. The research tools were developed from the 6 primary research questions, aiming at discovering *how* students interact with their platforms, *why* they do so, *which* platforms they interact with and *what* are their overall attitudes towards their behaviour. The research questionnaires were developed over the course of a few weeks, and tested on a small group to discuss how students interpreted questions before the final survey and interviews took place.

#### **4.3.1 Survey**

Survey text is provided in Appendix A. Upon ethics approval and prior to interviews, a pilot survey was released online through social media with four key objectives. The first of these objectives was to explore the depth and prevalence of social media in the target markets daily lifestyle. Secondly, was to understand where current academic platforms fail to meet students' needs. The third objective was to recruit participants for the interview process who would have an understanding of the focus of the topic. The final objective was to use the information gained from the survey as a basis for constructing future interview questions.

The survey primarily looked at how active students were on a range of social media platforms and which ones they incorporated into academic use. They were also asked how often they used social media for academic purposes, and if they have ever found need to reduce their social media usage, and using a scaled response from *strongly disagree* to *strongly agree*; their attitudes towards social media within their study habits and in general. Questions were structured in a variety of ways, including but not limited to: matrix response, open ended, multiple choice and rank order.

The pilot survey was reviewed upon constructing interview question to help direct key points. Once complete with approximately 100 responses, the survey was reviewed for incomplete responses; participants may have chosen to end the survey before completion and thereby removed themselves from participating in the survey.

#### **4.3.2 Interviews**

Upon completion of the survey, the research process then moved forward into one-on-one interviews. Interviews were scheduled with both university students and valuable representatives from the university who worked closely with the university provided academic platform.

Semi-structured interviews allow for topical trajectories, that is, conversations which stray from the outlined questions but can provide relevant information to the discussion (Robert Woods Johnson Foundation, 2008).

Bergs (2001) outlined a structured guide for effectively moving through the interview process and question structure, defining the *why* question as first most important for establishing a general focus, followed by *what* and *how* for outlining issues and finally the *when* and *where* to provide further history and material to the context. This structure was then used to build on the reviewed survey, outlining key points for discussion which could be further built on from individual perspectives and experiences.

The first round of interviews was scheduled with five voluntary students from varying university backgrounds e.g. different courses and years of study. These conversations were further used to confirm previous assumptions as well as to discuss initial findings from the

survey. From this, a second round was undertaken with a further five voluntary students with additional questions to address remaining unknowns.

University staff were interviewed intermittently in the second round of student interviews. A total of 3 university staff were interviewed, chosen for their knowledge on the academic platforms.

#### **4.4 Data Analysis**

Responses to survey results were graphed accordingly to the questions posed; binary questions were converted to percentage figures and displayed using pie charts and bar graphs. Questions posed using the Net Promoter Score (NPS) scale were then translated into the Likert scale and displayed using the 100% stacked bar chart to effectively present the proportion of responses.

Interview responses for both students and university staff were transcribed, redacting all names and personal information, a method was then employed to identify common themes and organise data. The analytic process entailed identifying main themes which were established from the interview schedules, from this each main theme was assigned relevant codes in which sentences could be categorised from. More complex responses were broken down to singular sentences. Each sentence that was assigned a main theme was then further organised into sub categories of the parental theme. Once this process was complete each theme was revised to reduce unnecessary information while maintaining context. Different themes were assigned to the two sets of interviews (students and university staff). A summary of each main theme was then constructed, which outlines the total of participants discussed in each finding so as to adequately present the findings to the reader.

For the final analysis process, a second round of coding was applied in which both the survey results and both sets of interviews were combined under main themes, for this a discussion of how the results aligned was presented. This second round of coding presented new categories which most effectively framed all themes and results.



#### **4.5 Ethical Considerations**

This research was approved by Victoria University of Wellington Human Ethics Committee, approval number: 0000026368.

Information was provided to all participants and all gave consent for use of their responses within this thesis, an example of the information sheet provided to participants can be found in Appendix D and an example of the consent form can be found in Appendix E. The names of all interview participants will remain confidential to myself and my supervisor.

#### **4.6 Limitations**

The immediate limitation posed, was the time frame in which data collection was possible. The process of ethics approval prolonged the initial release of the survey, and due to the structure of the exploratory process, in which analysis of the survey would direct further question, this in turn delayed the interview process.

The proposed research structure for this project was to revisit participants to further discuss developments and revisit previously discussed points which had been analysed. However, the ability to obtain long term research was also limited due to availability of the participants as the immediate university year ended, this limitation is in part contributed to the short-term run of this paper.

Furthermore, the research sample is limited to the perspectives of university students from Victoria University of Wellington, and this cannot be representative of the experiences of university students nationwide or worldwide.

Limitations are also apparent in the research methods employed. Quantitative research is limited to its primarily numerical form, and thus cannot be wholly representative of personal feelings or may potentially be misconstrued to the interpretation of the participant and how they considered the question. Similarly, the data collected from the qualitative research allow for ambiguities in language, and a range of interpretations, therefore coding of this information is limited (Atieno, 2009).

So as to limit the concern of subjectivity, the questions throughout the qualitative research process were designed to reduce demand characteristics. This term is discussed by

McCambridge, Bruin and Witton (2012), whereby participants may answer according to what they believe the interviewer expects or wants. Questions were posed as open ended, allowing the participant to converse freely, for example instead of asking '*how do you think Facebooks immediate communication capabilities helps you while studying?*' instead participants were asked '*which methods do you choose to communicate with your peers outside the classroom and why?*' thereby allowing for a range of answers and opportunities of new discussions to be explored.

## Chapter Five: Findings

### 5.1 Findings: Survey

The initial step within the research for this project was the release of a pilot survey, shown in Appendix A. As previously stated in section 4.3.1 the aim of this survey was to explore the levels of engagement students has with their academic and social platforms, with a focus on how the platforms were engaged with.

The survey was presented in two parts; part one gathered participant background information, looking at their age and academic background while keeping their name anonymous. Part two was the main survey questionnaire, which is sectioned into two main themes; firstly, focusing on student interactions with social media platforms and how this may extend into the academic environment. The second theme questions the students' perceptions of their respective university platforms and how this may or may not meet their needs.

Responses were examined to identify existing constants, patterns or relationships in the following areas;

1. General usage of social media and academic usage of social media.
2. Perceptions and overall usage of social media.
3. Participant background and study habits.

#### 5.1.1 Comparison of personal and academic usage of social media

The first question in the survey was divided into two parts; part one enquired on how many of the participants engaged with the individual social media platforms. As seen in Figure 5.1 below; both the Messenger and Facebook platform were of the most general use followed closely by YouTube, Instagram and Snapchat. The less prominent apps, which under 40% of participants engaged with were Pinterest, Twitter and WhatsApp, with Flickr having under 10% of participants active on. This question affirms the assumption that students were actively engaged with one or more social media platforms.

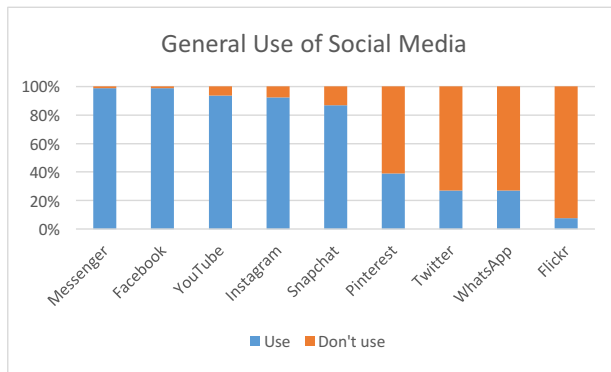


Figure 5.1 - General Use of Social Media

The second part of the question asked participants if they ever engaged with the listed platforms for academic reasons, providing a direct comparison between academic and general usage. The following results occurred as seen below in Figure 5.2. Almost all of the social media platforms showed a decline in usage for academic purposes, except for Flickr which showed a slight increase. Facebook, Messenger and YouTube remained the most engaged with platforms. Figure 5.3 provides a direct comparison between the general use and academic use of each of the platforms, with Facebook remaining to have the most participants engage with both for general and academic use.

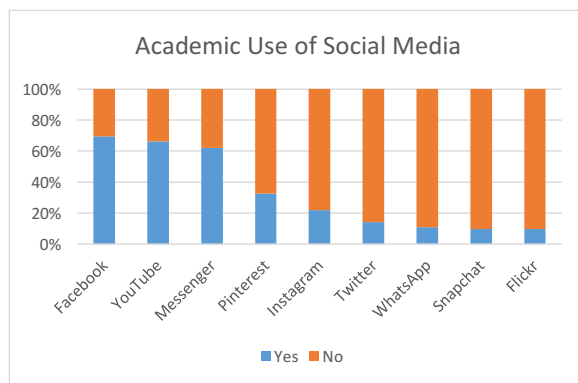
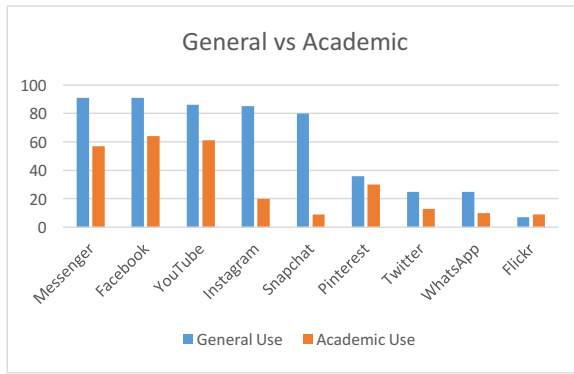
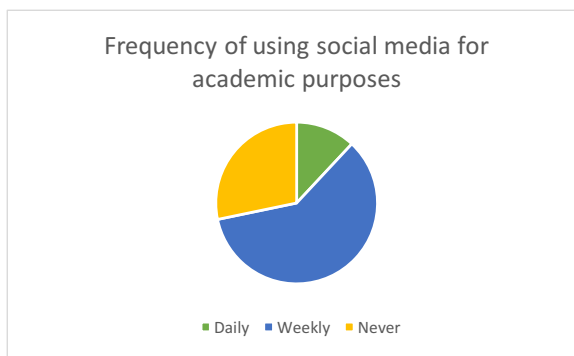


Figure 5.2 - Academic Use of Social Media Platforms.



*Figure 5.3 - Comparative results between general and academic use of social media platforms.*

Question 3 further explored the participants' usage of social media platforms for academic purposes, asking how often they used the platforms being daily, weekly or never. As seen in Figure 5.4 an overwhelming majority engaged on a daily or weekly basis.



*Figure 5.4 - Frequency of social media usage for academic purposes.*

### 5.1.2 Behaviours and attitudes towards social media

Question 4 of the survey provided 10 statements in which participants could rate the statements on a scale of 1 being strongly disagree to 10 being strongly agree. Each of these statements have been categorized under attitudes or behaviours and are displayed in stacked graphs of 'disagree', 'slightly disagree', 'slightly agree' or 'mostly agree'.

#### 5.1.2.1 Attitudes

Figure 5.5 displays students' responses to the statement *'I would like to be able to remain on task while studying'*. 94.5% of respondents agreed with the statement (both slightly agree and agree), with a majority of responses being agree with 75%.

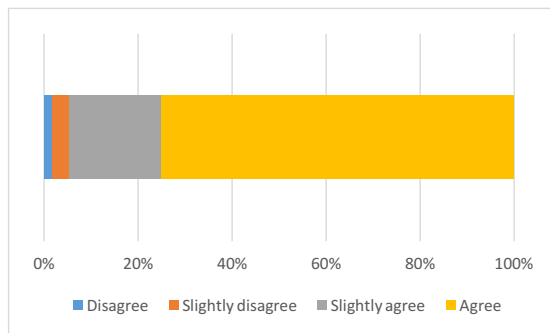


Figure 5.5 - *I would like to be able to remain on task while studying.*

Figure 5.6 displays student's responses to the statement *'I feel an anxiety when removed from my social networks'*, with 39% of students agreeing with this statement.

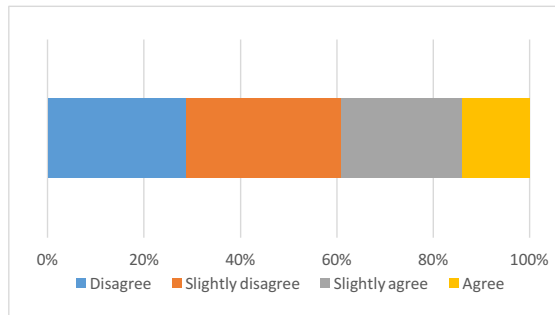


Figure 5.6 - *I feel an anxiety when removed from my social networks.*

Around 57% of students agreed with the statement ‘*When disconnected from my online networks I am curious about what is happening and what I am missing*’. A 31.5% majority selected slightly agree as displayed in Figure 5.7 (below).

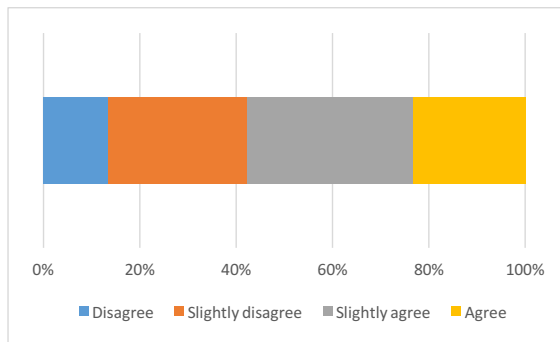
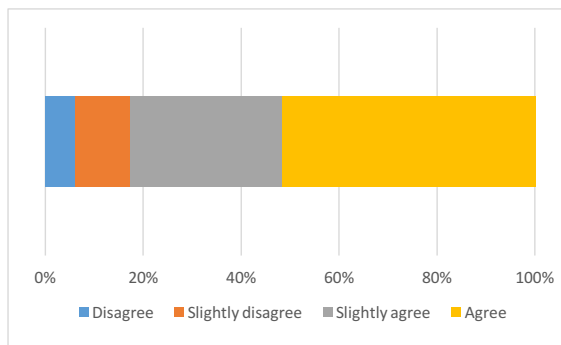


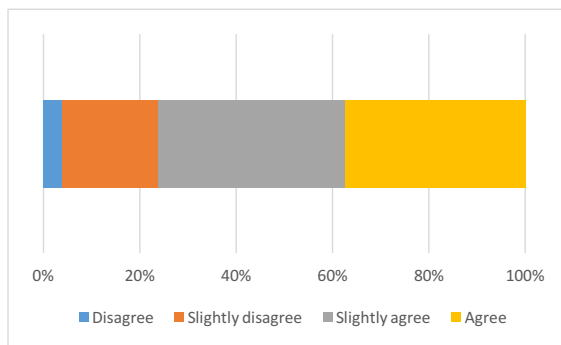
Figure 5.7 - *When disconnected from my online networks I am curious about what is happening and what I am missing.*

82% of respondents agreed with the statement ‘*I feel guilty for spending too much time on social media when I have academic work to complete*’. With the majority of respondents choosing agree (51%) as seen in Figure 5.8 below.



*Figure 5.8 - I feel guilty for spending too much time on social media when I have academic work to complete.*

Figure 5.9 displays students' responses to the statement 'I would like to spend less time on social media', 76% of students agreed with this statement with 35.5% of students selecting slightly agree and 34.5% selecting agree.



*Figure 5.9 - I would like to spend less time on social media.*



70.6% of respondents agreed with the statement '*I feel I need to respond to notifications on my phone/laptop as soon as I can*'. A 38.5% majority of respondents selected Agree as displayed in Figure 5.10 below.

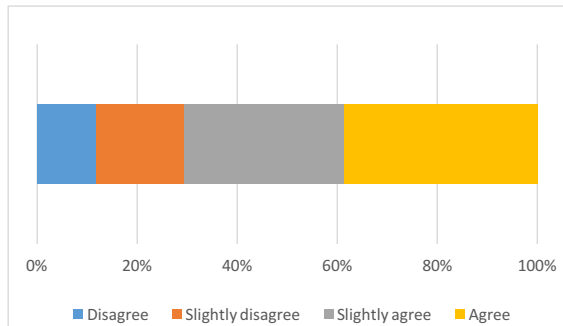


Figure 5.10 - *I feel I need to respond to notifications on my phone/ laptop as soon as I can.*

#### 5.1.2.2 Behaviours

Figure 5.11 displays students' responses to the statement '*I often become distracted by my phone/ laptop providing notifications/ updates while studying*'. Overall 84% of respondents agreed with this statement, with a 52.7% majority choosing agree. This affirms assumption 2; that social media platforms remain active and/ or in range while a student is engaging in academic studies.

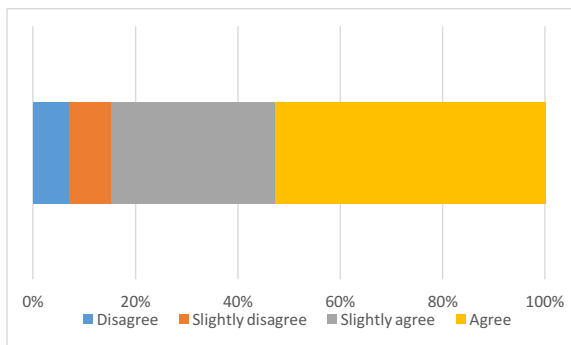


Figure 5.11 – I often become distracted by my phone/ laptop providing notifications/ updates while studying.

Figure 5.12 displayed students' responses to the statement 'My phone/ laptop often provides notifications from social media platforms'. Overall 88% of respondents agreed with this statement, a 62.5% majority selecting agree.

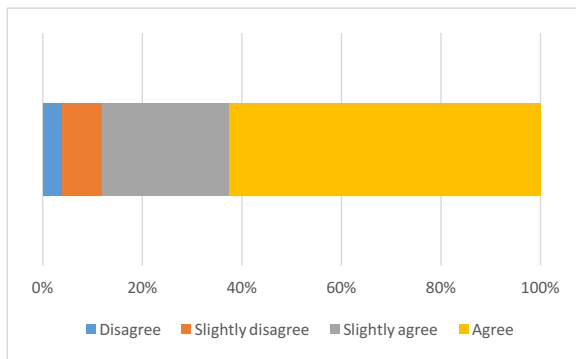


Figure 5.12 – My phone/ laptop often provides notifications from social media platforms.

Overall 90.2% of students agreed with the statement 'My phone/ laptop is required when studying'. As seen in Figure 5.13 below the most selected answer was 'Agree' with 69.5% of responses.

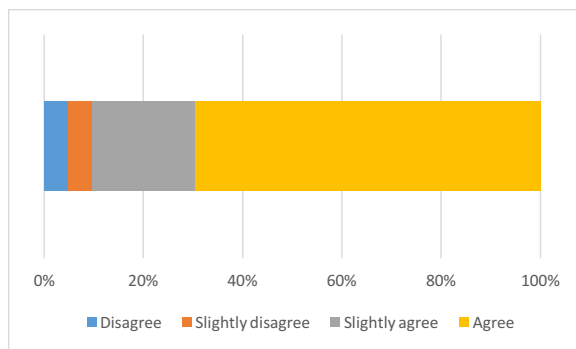


Figure 5.13 - My phone/ laptop is required when studying.

63% of respondents agreed with the statement 'I actively participate in online networks and conversations'. As seen in Figure 5.14 below most selected answer was 'Agree' with 32.6% of respondents choosing this.

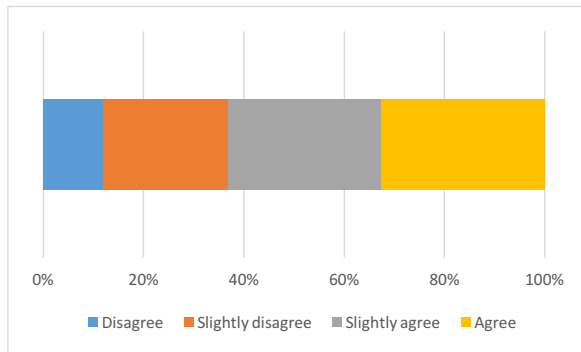


Figure 5.14 – I actively participate in online networks and conversations.

Question 5 of the survey explores the habits surrounding social media usage further, asking participants to select how they feel they respond to social media in a scenario in which they are studying. Over 66% of students admitted to finding reasons to be on social media regardless of push notifications, a further 24.7% stated that they are only ever distracted when they receive notifications.

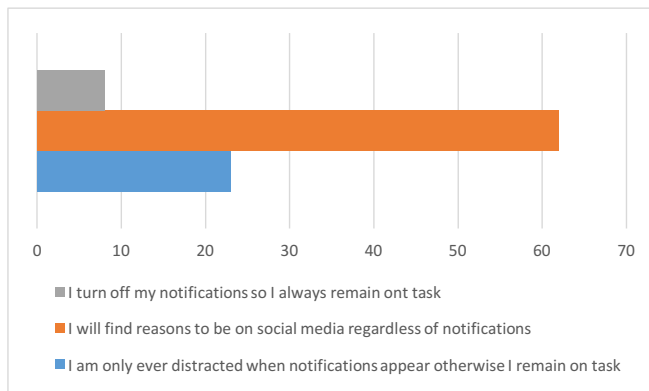


Figure 5.15 Interactions with social media while studying.

Question 6 explored participants' interactions with applications designed to reduce social media usage, showing that 33% of participants had used or currently use an application for this purpose. This statistic provides insight into the expected initial market penetration, affirming the business assumption that student will be interested in utilizing an application to help them focus. Following from this, question 7 asked if students had found these applications effective. Finding that of this 33% over 60% of those participants did not feel the application worked at reducing their social media usage as seen in Figure 5.16 below. The reasons for this were discussed in question 8 which provided open ended responses. Common responses were;

***Participants admitted to wanting to be on social media.***

"I just deleted them because I couldn't go on social media."

***The applications were ineffective at blocking access through all mediums.***

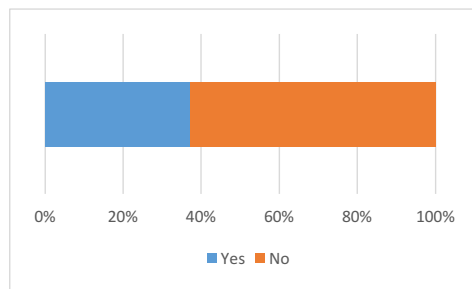
"I'd find other ways to access them, or I'd find myself waiting for the block to run out."

***The applications were not a compelling solution.***

"I used that growing tree application, I just forgot to use it and it slowly slipped away."

***The applications removed access to information engines, thus becoming ineffective for study.***

“I needed an app for research but a timer put a lock on going online so wasn’t able to research and couldn’t carry on study effectively.”



*Figure 5.16 Did the application that was employed to reduce social media usage achieve the desired effect?*

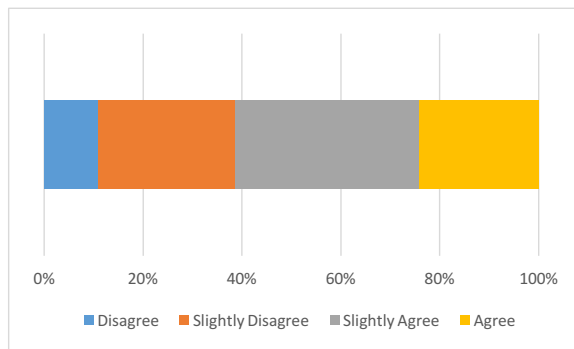
Question 9 of the survey asked students to list the application(s) they had used for helping reduce or control their social media usage. This helped identify the main applications in the market so features could be identified and discussed in future conversations and one-on-one interviews. Furthermore, a competitor analysis can be developed from identifying the most prominent apps in the market. The applications most used by students to reduce/ control social media usage are as follows;

- Forest App
- Self-Control
- Cold Turkey
- Flipd
- Study Time

### **5.1.3 Attitudes towards academic platform**

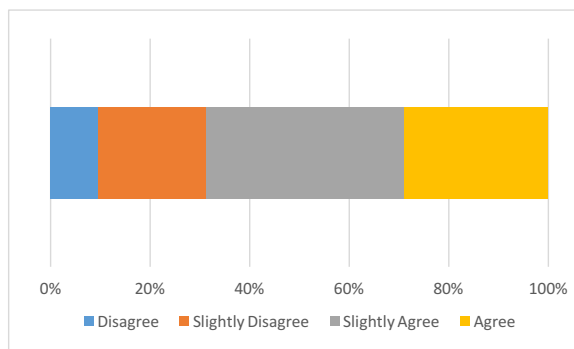
Question 13 of the survey also provided statements for which participants were asked to rate on a scale of 1 being strongly agree to 10 being strongly disagree. The 9 statements focused on participants’ attitudes towards their primary academic platform and are displayed below.

Figure 5.17 displays students' perceived user friendliness of their academic platform. The highest percentage of responses was 38.5% of participants who slightly agreed with the statement. A total of 37.3% of students disagreed either slightly or strongly.



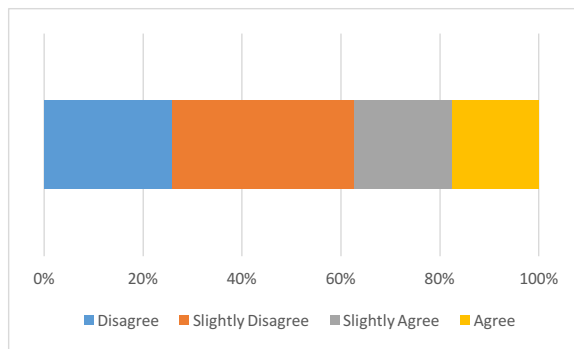
*Figure 5.17 I find this platform user friendly.*

Figure 5.18 displays student's response when asked if they feel their platform currently provides all the necessary tools they require to achieve the set academic task. The most selected answer with 39.7% of participants was 'slightly agree'. This answer requires further exploration; however, it provides some basic insight into the attitudes towards the academic platforms for research question 2.



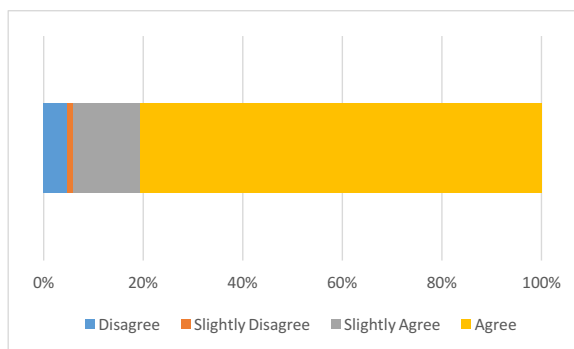
*Figure 5.18 The university platform provides all necessary tools that I need.*

Students were also asked if they employ external use of their platform to gain reading material for their course work, displayed below in Figure 5.19 it can be seen that most students find their academic platforms a sufficient channel to retrieve reading material from.



*Figure 5.19 I prefer to use other methods to read material relevant to my course work.*

Students were then asked how they feel their platform performs as a communication tool, Figure 5.20 displays their response to the statement 'I prefer to use other platforms to talk with my classmates'. Most students selected 'strongly agree' with a percentile of 80.7%. This provides a basic insight into why students choose to incorporate social media into their study practices, with academic platforms failing to meet the communitive needs.



*Figure 5.20 I prefer to use other platforms to talk with my classmates.*

The final statement asked if students ever participate in conversations with their classmates through their academic platform, 78.9% of participants strongly disagreed with this statement as seen in Figure 5.21.

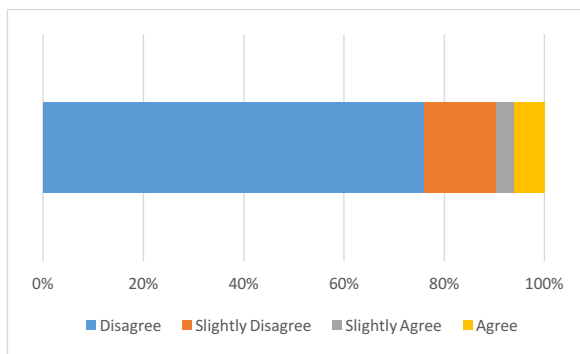


Figure 5.21 I participate in conversations with my classmates via this platform.

## 5.2 Findings: Student Interviews

### 5.2.1 Academic Platforms

This section addresses research question 2; *What are students' current attitudes towards their respective academic platforms, what value do they see in them and where are the primary areas they need improvement?* This will be summarised in the following chapter.

#### 5.2.1.1 First experience with the platforms

Seven out of the 10 participants mentioned they initially had issues when first using the Blackboard platform. The participants noted it as being a daunting experience when first approaching the platform due to it not being user friendly in its design or intuitive in its layout. Furthermore, students were left confused due to the lack of explanation provided by their respective educators.

*“When I first went on it I was super confused, but then I kind of figured it out and got the gist of it... it just takes a lot of exploring. When I first started using it I didn't know what things meant*



*or where I should go and where to find them, I just kind of found out for myself through trial and error.”*

*– Interview 5, Theatre & Art History*

*“Little bit daunted cause I didn’t really know where to go”*

*– Interview 3, Psychology & Criminology*

*“When I first started using it in first year I don’t think it was explained very well and it came across as a scary place that I didn’t know how to use... I didn’t find it intuitive, not to begin with, I guess with time and being shown how to use it becomes more intuitive”*

*– Interview 4, Theatre & Media*

#### **5.2.1.2 Inconsistencies with the platforms**

Other issues that were discussed were the range in set ups the platform provided to the educator and how this led to confusion in accessing material for different courses for the students. Five of the 10 students interviewed mentioned this as a continuing issue throughout their time at university.

*“The lecturers well, some of them don’t put up their slides, which is a little bit frustrating because I like to look at my slides for notes in the lecture”*

*– Interview 3, Psychology & Criminology*

*“I had to ask a couple of my tutors because I didn’t know how to access things, different courses had them in different places”*

*– Interview 5, Theatre & Media*

*“The courses were all different and things were hard to find”*

*– Interview 6, Communication Design & History*

*“Even just in different law courses the layouts can be completely different, and you have to adapt to a new structure each time.”*

*– Interview 10, Law*

#### 5.2.1.3 Multiple platforms

One student who previously studied at the University of Otago before attending Victoria University discussed the difficulties of working with multiple academic platforms, stating that it was easier to work with a singular parent academic platform.

*“It can be a lot to keep track off when you’re trying to think where did this get sent from I need to find out and cross between that and email and it can be a bit annoying”*

– Interview 2, Business & Music

#### 5.2.1.4 Discussion boards

##### Does not use

Seven of the 10 students stated that they do not use the discussion board feature provided by Blackboard, with one student being unaware of the feature as this was not provided by their educator. This provided insight into research question 3, which asks how is the need for communication supported by their university? For the Design, Theatre, and Architecture students, they used a blog feature that was made available to them. However, they stated that this was not used interactively amongst students and was instead a required record of their work progress.

*“No you can’t use it really – not that I know of”*

– Interview 2, Business & Music

*“I don’t use them at all, there was a discussion board for marketing last semester but I’ve never posted anything myself, I’ve never looked at anything anyone’s said except at exam time”*

– Interview 3, Psychology & Criminology

*“We had blogs that we access through Blackboard but I didn’t really us them because it was supposed to be a discussion platform but I think because it was quite a new thing not many people used it. The tutors were quite active on it to encourage us to use it, but it wasn’t a course requirement so people weren’t motivated to use it”*

– Interview 5, Theatre & Media

*“Don’t have class discussion boards, but instead have blogs that is part of the marking criteria to show the stages of your work so they know you’ve been working on it. You can look at other people’s work but you can’t interact with them.”*

*– Interview 6, Communication Design & History*

*“Some of my classes provide class discussion pages but no one uses it, we mostly use a Facebook page set up by the class rep. It’s better because on Blackboard you don’t really check it religiously whereas Facebook is so accessible”*

*– Interview 8, Commerce*

### **Use is a requirement for course**

Research question 3 also asks to what extent do students encounter the need for communication and collaboration within their work; three of the 10 students said that their use of the discussion feature was included in their course curriculum. However, they also stated that this had its drawbacks as not all students felt motivated to use it therefore it was the same opinions featured on the board.

*“It’s more just everyone uploading to have uploaded something to get something for a course mark.... With something like psychology, if it’s something like you have got to engage in 6 out of 9 conversations for a 30% mark then some people just wouldn’t bother... and some people would do all 9 and so you would be talking to the same people.”*

*– Interview 1, Sociology & Sciences*

*“In my online science papers you had to participate, you’d get 5% overall if you participated in discussions, it was definitely helpful but everyone was only on there to get the 5%.”*

*- Interview 7 – Law & science*

### **Slow conversations**

Three students further elaborated on their opinions on their experience with discussion boards. One student mentioned that if any discussion interested them that they would then move the conversation through to Facebook as it was a quicker platform to work through and allowed for a private discussion to be held. Two other students confirmed this; expressing how the discussion boards failed to meet their social needs for instant discussions.

*"I would only ever see people like individuals in my classes' names on things like the discussions... it's not like I could just type [name redacted] Psych 321 and their name would pop up with a message button like it does on Facebook."*

*– Interview 1, Sociology & Sciences*

*"I've never checked it [the discussion board] to see really, apart from exam time because it was pushed by my marketing lecturer saying it would have FAQ'S up there and they said it would be helpful. Though it wasn't really helpful at all... The questions that were asked I already knew, and the questions I wanted to ask I had to wait 4 days for any answer. By the time I got an answer I had already moved on or figured it out myself."*

*– Interview 3, Psychology & Criminology*

*"I think Blackboard is viewed as like – you go to get the information you need and that's that. There's no social activity there."*

*– Interview 5, Theatre & Media*

## **5.2.2 Social Media**

### **5.2.2.1 Familiarity**

Four of the students expressed that their use of Facebook and other platforms is due to its familiarity and intuitiveness. Additionally, students require the use of these platforms to maintain their relationship with family and friends.

*"We're a lot more familiar with it [Facebook group chats] whereas we're constantly having to relearn everything for Blackboard; we know how Facebook works, we know how to find people and connect and it's really designed for us to do just that."*

*– Interview 3, Psychology & Criminology*

*"Most of my family is overseas, social media is the only way we stay in touch so it's important to maintain it."*

*– Interview 5, Theatre and & Media*

*"Facebook was the primary source of communication outside of the classroom. It's pretty universal, everybody has one, it's really familiar and it's really easy."*

*– Interview 6, Communication Design & History*

#### 5.2.2.2 Class groups

All 10 students mentioned that they use Facebook for class pages, providing insight into the extent that students rely on communicative channels to achieve their academic work (Research Question 3). Though there was variety in how these pages were set up and regulated; 6 of the students said for their courses they were created and lead by the students representative in that class, 5 of the students said that the lecturer was involved in the class page, providing updates and answering questions, and 1 of the students mentioned that the page was led by a student representative but had the class tutors as members to regulate and answer immediate questions. Some of the students preferred it remaining student lead as it the page was a comfortable and informal environment, whereas others like being able to communicate with their lecturer and tutors in an informal environment.

*“All of my classes - psychology pages especially-, would have a psych Facebook page that, someone, the class rep usually, would run it and they would essentially link updates that were already put on Blackboard onto Facebook as well... it's not always easier to check but obviously it's more instant”*

*– Interview 1, Sociology & Sciences*

*“If I ever need anything they [the group chats] will help me out. And then there's Facebook groups that the Management lecturer is always communicating through with what we need to know. It's easy, and you know who's helping you out, where the information is from and everyone is there to help each other out”*

*– Interview 3, Psychology & Criminology*

*We would create a Facebook group and the link would be posted to Blackboard for everyone to join. It's kind of the secondary Blackboard where we post all the information and ask all the questions. It's more accessible on Facebook and less formal”*

*– Interview 5, Theatre & Media*

*“The benefits, I think it's the communication factor. It's so much easier knowing you've got people who might be feeling the same way or who might understand things better than you, so you can reach out a lot easier rather than having to approach them in class. It's more of an informal approach to it. And it's kind of comfortable”*

– Interview 4, Theatre & Art history

*“It’s more of an open discussion free from the lecturer”*

– Interview 8, Commerce

### **5.2.2.3 Feelings towards advertisements**

A research assumption was that advertisement material acts as a largely distractive feature on social media. Interview answers provided a range of responses and attitudes towards advertising which will be discussed in the following chapter.

#### ***Avoids advertisements***

Five of the students expressed their dislike for advertisements with tendencies to avoid them as they felt they were ‘invasive’ and ‘annoying’.

*“I’m mostly aware of it that I feel like I try not to fall for it.”*

– Interview 1, Sociology & Sciences

*“I find advertising really creepy a lot of the time, so I get annoyed by it a lot of the time... it’s quite imposing... I never click on the adverts. If I see an advert, my tendency is just to get annoyed at it and want it not to be there. The point is, I would pay \$100 up front to never have ads again in my life online ever.”*

– Interview 2, Business & Music

*“I’ve noticed them; I think they’re annoying more than anything.”*

– Interview 6, Communication Design & History

*“I don’t like them, they’re kind of invasive so I’ve tried different ad blocking apps but they seem to always pop up through all the social media sites like Facebook and Instagram.”*

– Interview 9, Architecture

#### ***Acknowledges Advertisements***

One student stated they typically scroll past advertisements, however, sometimes the advertisement will be similar to what they have previously searched for and will grab their attention.

*“Most of the time they’re annoying but occasionally it will be an advert for something I’ve been looking at or similar and in that case it could be a good deal.”*

*– Interview 10, Law*

#### **Works around advertisements**

One student said that the advertisements annoyed them and they preferred not to provide the site with the ‘click’, so would search for the item themselves.

*“Sometimes it does remind me of something I’ve looked at or liked, but I’d rather search it myself than click on the ad.”*

*– Interview 7 Law & Science*

#### **5.2.2.4 Feelings towards social media platforms**

Four of the students recognised social media as an ‘escape’ providing a distraction, which at times could impact their academic purpose on the platform. However, students also noted the value in the platforms and what each of them provided. Snapchat, Instagram, Pinterest and YouTube were valued amongst art students for the visual inspiration and ability to visually communicate with others. Students in other academic courses found YouTube particularly helpful for research and Ted Talks as well the ability to recommend new material.

*“I think it’s for this whole idea of connectedness to your friends and just socially being up to date with what everyone’s doing you know, just the fear of missing out... it’s a big one for our generation”*

*– Interview 1, Sociology & Science*

*“I think the notifications really do distract you because you get that initial message or notification and then you can kind of see that something is updated and think ‘oh I haven’t seen this’. So it’s so easy to just get lost in it.”*

*- Interview 4, Theatre & Art history*

*“It’s distracting... it’s a downfall of being on Facebook for group projects; there’s a lot of distractions and notifications that pop up. The only issue I see is that it’s a distraction in itself– Pinterest is a hole in itself; you can go deep and get lost. It’s a useful tool if you need to collate*

*images especially for design students, I used it for Theatre a little bit. And YouTube is also useful but then there's all these recommendations for my social interest"*

*– Interview 5, Theatre & Media*

*"Social media has a lot of negative impacts and it's a bit of an escape"*

*– Interview 6, Communication Design & History*

*"I like to use social media for inspiration and understand the industry better. Particularly Instagram and Pinterest. I like to see what's happening in the real world areas of design and inspiration. It's a personal interest but it works into my study too. Messenger and Snapchat I use for visual communication, to see what other people are working on, then Instagram, Reddit and Pinterest for inspiration and information"*

*– Interview 6, Design Communication & History*

*"It's a social norm; humans are designed to be connected and social media facilitates it."*

*– Interview 8, commerce*

### **5.2.3 Personal Habits**

This section provides some key insight into Research Question five *'What are student's current attitudes towards their behaviour surrounding social media, how does their behaviour impact their study?'* as well as Research Question 6 *'Do students want to change their habits?'*. Showing a range of behaviors and awareness from the students into their own personal social media habits.

#### **5.2.3.1 Habits in the academic environment**

The second research assumption of this report is that students' social media platforms remain active and/ or in range while engaging in their academic studies. Eight out of 10 students interviewed acknowledged their habits of using social media in their educational environments. With some of the students saying they go to efforts to ensure their lecturer can't see their behaviour, and others saying their habits get worse in their own personal time as they struggle to manage it with notifications distracting them. One student put in place a 'reward' system in which they balanced their work and entertainment time allowance.

*"I would say if I was in an hour's lecture, I would probably glance at my phone at least 3 or 4 times... I think maybe 70% of the time it's unconscious behavior, just habit. And then the other*



*time it's just boredom, just like looking for a distraction. Yeah it's just for a distraction, almost like I'm wanting the distraction"*

*– Interview 1, BA Sociology & Science*

*"The crux is maybe say the night before a lab report was due, everyone would post on Facebook rather than on Blackboard"*

*– Interview 1, BA Sociology & Science*

*"We have long lectures like 2 ½ hour lectures, well you're on your laptop anyway and I usually have email tabs open so that if something comes through I can see if there's a notification in the tab and there's usually a Facebook tab open as well in case something comes through on that"*

*– Interview 2, Business & Music*

*[responding to messages straight away] "Yes, especially if it's a message because I feel my phone go off and I'm going to check it on my computer so that way I'm not pulling my phone out in front of the lecturer and it looks like I'm typing notes"* – Interview 2, Business & Music

*"In my own time I get distracted way too often... I always find that whenever I'm studying I think of all the people who I haven't talked to in a while that I should message. So procrastination techniques, I think it's almost second nature to procrastinate."*

*– Interview 4, Theatre & Art History*

*"I'll go 5 to 10 minutes studying then get distracted and go do something else for another 5 to 10 minutes and it just ruins the flow."*

*– Interview 5, Theatre & Media.*

*"I 100% get distracted. All the time. I know that I'm doing it but I'd say sometimes I look at it as sort of reward system. If I do 15 minutes of work a, I'll jump on my phone for 45 minutes."*

*– Interview 6, Communication Design & History*

*"If the lecture is boring I'll likely be on Facebook so yeah I get distracted a lot of the time with social media to the point I've downloaded an app 'self-control' 80% of the time I'm in class I'd say I'm scrolling."*

*– Interview 8, commerce*

*“It’s definitely worse when I’m on my own. I try not to go on my phone during a lecture because I feel bad if the lecturer sees me. Sometimes I’ll have Facebook on my laptop but I don’t pick up my phone cause then they really can see that I’m not paying attention.”*

*– Interview 7, Law and Science*

*“Sometimes, for background noise, I think YouTube can be pretty helpful for helping me focus, you know for Podcasts and music.”*

*– Interview 10, Law*

#### **5.2.3.2 Infinity scroll capabilities (constant flow of entertainment)**

A topic that was repeatedly mentioned in response to the question ‘*what keeps you on your social media platform/ what do you feel is the reason you spend so much time on the platform(s)?*’ – was the topic of infinity scrolling capabilities which allows for a never ending source of entertainment. Four students mentioned this, with 2 acknowledging this feature as a means for procrastinating their primary task.

*[Why do you stay on?] “Because it’s endless”*

*– Interview 1, Sociology & Sciences*

*“Usually when I have an assignment due is when I end up scrolling and just procrastinating”*

*– Interview 2, Business & Music*

*“I kind of love to procrastinate, so I’ll go on Facebook and think yeah there’s other stuff I should be doing but I’d rather not think about it and I’ll continue to scroll.”*

*– Interview 3, Psychology & Criminology*

*“I sometimes find myself on it for hours and don’t even realise where the time has gone”*

*– Interview 9, Architecture*

#### **5.2.3.3 Feelings towards habits**

The general response from interviewees concerning their study habits was regret at the time ‘wasted’ on social media, which students recognised as time they could have used focused on their primary task. However, there were some other responses which included acceptance of current behaviour such as in Interview 3 who felt comfortable they would still achieve their task in less time. Additionally, in interview 6 the student was aware of their distractive habits

and so put in place a reward system as a result – typically after they had noticed their focus already wavering,

*“It’s wasting time so much of the time. I’m so guilty of that. I don’t know, you just find yourself on Facebook or Instagram or whatever and it’s like, why am I even here? I’ve got 4000 words that are due on Thursday and I’ve given them every opportunity to write themselves and they’ve not.”*

*– Interview 2, Business & Music*

*“You know, diamonds made from pressure right!”*

*– Interview 3, Psychology & Criminology*

*“I kind of usually kick myself a little bit, because I think if I hadn’t spent that time checking my phone or doing this, I could’ve gotten this done so much earlier.”*

*– Interview 4, Theatre & Art History*

*“I set targets to get back into study, I look back and think I wasted so much time and made that so much harder on myself.”*

*– Interview 6, Communication Design & History*

#### **5.2.3.4 Applications to reduce social media usage**

Four of the 10 students mentioned the use of applications they had previously downloaded to either (1) control their social media usage, (2) block the use of social media platforms or (3) create extra steps in accessing social media platforms. Each of these students had a negative result from the applications, finding it ineffective in helping them focus on the primary task through gamification strategies.

*Self-control. – [works?]- “Mostly no, if I block it on my laptop I’ve still got my phone, I just go on it out of habit”.*

*– Interview 8, Commerce*

*Forest App – “Thought it was stupid, a timer schedule worked better”*

*– Interview 6, Communication Design & History*

*“Apps that add an extra step in accessing social media and puts a time limit on how much time on there, can override it using a code but it’s just an extra step”*

### 5.3 Findings: University Interviews

#### 5.3.1 Misuse of academic platforms

An issue highlighted by the interviewed university staff was the incorrect or insufficient use of academic platforms by educators which resulted in a poor or confusing experience for the student. One staff member who works alongside the Blackboard platform, providing lessons for educators to use it correctly, noted how educators preferred attempting to resolve their problem on their own before seeking help, which at times could delay the solution or result in further issues. To conclude, the misuse of the platform by the educator can result in a lack of use or incorrect use by the student.

*“By far the biggest obstacles we come across is people not using it effectively and its big things like using the wrong settings and not putting anything in there...but it’s also little things like not structuring your information nicely or not actually providing instructions.”*

*“I had a staff member come to me and was like ‘my students don’t know that they need to click on the title of the assignment to submit it, they keep asking me questions, how do I do this?’ I just asked them, well did you tell them? Or did you communicate it in any way? And yes it is a flaw in Blackboard in that it’s not necessarily intuitive that you had to click the title but it’s also a flaw in how it’s used.”*

#### 5.3.2 Flexibility of academic platforms

##### 5.3.2.1 Capabilities of academic platform

The flexibility provided by the academic platform is beneficial in allowing for a range of approaches and mediums for teaching and learning, Blackboard was noted as being extremely ‘feature rich’. However, it was restricting in how customizable the delivery was, ultimately affecting how intuitive the platform is.

*“Blackboard is really feature rich, there are so many things it can do and it’s got so much variation, but it’s not very streamlined and it’s not very intuitive to use.”*

#### 5.3.2.2 Restrictions of academic platform

Educators are limited by the framework that is provided by the Blackboard platform, and as mentioned in point 5.3.2.1 this reduces the intuitive capabilities.

*“We’re limited to basically the software architecture that blackboard provides us with... often times they make a change and it takes months for them to acknowledge a problem.”*

*“Blackboard itself is about 10 years behind in its design ... it’s the old product... they’re putting all their resources into their new product Ultra.”*

*“The exercise of transitioning to a different LMS is going to be a huge, multiple years long process. There’s 2000 staff, there’s 20,000 thousand students and there’s 1000’s of courses each trimester.”*

#### 5.3.3 Catering the platform to the academics

Ultimately the platform is catered towards the educator and their needs for providing an effective curriculum plan. Although this ensures the educator maintains control of their course this results in confusion for the student as they adapt to multiple layouts and features, or lack of features depending on educator.

*“Very little is mandated in terms of Blackboard usage. In terms of what you have to have; you have to have a Course in Blackboard, so it has to exist, and you have to have your course outline which comes through semi-automatically for the outline system... beyond that everything is up to the lecturers and course coordinators to decide what they want to do.”*

#### 5.3.4 Communication methods

Though communication is recognised as fundamental to the learning environment, there is no requirement for educators to provide a feature which endorses communication on the academic platform. This has been attributed to the extra work this requires of the educator as well as the difficulty of maintaining it due to the lack in functional design provided by the Blackboard platform.

*“There is a requirement more generally for a communication channel somewhere, but that can be just an email or a note to visit their office or something”.*

*“Very few people use discussion boards in blackboard... partly because it’s extra work for the academic [university staff member] to monitor and partly it’s because they don’t know how to use them”.*

*“There is a tool called Yammer which is basically like Microsoft’s version of Facebook. It’s a separate third party social media platform that does let you have the Facebook type experience with the chatting and posting, but people don’t really know it’s there, and you have to set it up properly”.*

*“I do think there’s a benefit for the students to have a space for themselves because one of the things that can be really challenging to foster for students is that self-direction, particularly amongst first years – ‘I have a question, I need to figure out how to solve the answer’. The opportunity to have that peer community and self-directed stuff is really valuable”.*

## **Chapter Six: Analysis of Findings**

### **6.1 Introduction to Analysis**

The current chapter provides a comprehensive analysis of the findings presented in the previous chapter in relation to initial assumptions and research questions. The main themes that were provided as headings in Chapter Five within both the survey and interviews sections have been restructured and grouped to better analyse the findings for more conclusive results. The two primary topics in which subtopics may be discussed are (1) Social Media Platforms, and (2) Academic Platforms. Once the findings have been interpreted and summarised they will then be discussed in relation to the assumptions and research questions outlined in Chapter Three.

The primary assumptions to be discussed are; (1) students are engaging with multiple social media platforms, (2) social media platforms remain active in learning environments, (3) a large quantity of the material students see on these platforms is irrelevant to their academic material and finally, (4) most or all of the material students are exposed to via their social media platforms is not relevant to their study and finally (5) current applications marketed to increase focus and help study practices do not cater to the emotional and functional needs of students. There are six key research questions being addressed (1) why do students choose to incorporate social media into their study practices? (2) What are students' current attitudes towards their respective academic platforms, what value do they see in them and where are the primary areas they need improvement? (3) To what extent do students encounter the need for communication and collaboration within their work, how is this currently supported by their university?, (4) What does social media mean to students?, (5) What are student's current attitudes towards their behaviour surrounding social media, how does their behaviour impact their study? And finally (6) Do students want to change their habits?

### **6.2 Social Platforms Usability**

The first of the key topics to be analysed are the range of social media platforms and how they work both in and out of the scope of learning, looking at what features aid students in communicating and researching as well entertain. For this, this analysis has been separated

into three key subtopics; first is an analysis of students' general usage of social media platforms, the second subtopic is an analysis of students' interactions with social media for academic purposes followed by a summary of the features that are provided by each individual platform. The final subtopic is a discussion of the students' frequency of usage for three platforms, looking at possible behaviour patterns and the management tools students have employed.

#### **6.2.1 Students General Use of Social Platforms**

The top ranking platforms for general usage were the Facebook Messenger application followed by Facebook, YouTube, Instagram and Snapchat. Each of these platforms provides various levels and approaches to communicating as well forms of entertainment; Messenger and Facebook provide direct communication methods in the forms of private group conversations or public commenting threads. Research Question Four asks '*What does social media mean to students?*'; it was found that for many students these platforms act as important channels of communication for staying in contact with friends and family "Most of my family is overseas, social media is the only way we stay in touch" (Interview 5). Providing value in its simple ability to connect students to important contacts for levels of support and engagement. Facebook additionally has an entertainment feed with infinite scrolling capabilities which, as discussed in the one-on-one interviews, can become a distracting feature with engaging students "it's endless" (Interview 1). Snapchat provides a more 'casual' channel of communication which students stressed was primarily between friends. Students' engagement with the platforms YouTube and Instagram is primarily motivated by their intensive entertainment feeds, which provide individuals with material that they are currently interested in as well as recommendations based off of this information.

From the survey results it was evident that each student relied on multiple platforms to cater to their required levels of engagement, as found in the one on one discussions this was due to the features present and how this catered to their needs or the level of formality they deemed appropriate, e.g. Snapchat provided a quick and casual conversation capabilities whereas Facebook provided features for group organized discussions.



### 6.2.2 Students Academic Use of Social Media

In response to research question 1 '*why do students choose to incorporate social media into their study practices?*' many practical reasons were revealed as students found new ways to use platforms for their academic benefit. From the survey it was concluded that the most prominent social platforms used for academic purposes were Facebook, Messenger and YouTube with over 50% of survey participants using these. Within the one-on-one interviews this answer was expanded upon, with the reason being attributed to the practical features these platforms provide the general population of students: immediate communication channels, effective notification systems, visual capabilities and finally the material recommendations these platforms can provide. They were also noted as being universally friendly platforms, with no new skills needed to be acquired for effective use.

However, other platforms that had significant use for academic purposes were the more visual platforms which allowed students that specialize in the arts to source inspiration or communicate with their peers visually; such as Pinterest, Instagram, Snapchat and Flickr. YouTube was particularly prominent for a range of uses; students found video classes for learning new skills, discussions such as Ted Talks on a range of topics for research and finally some students discussed using YouTube for music or podcasts as 'background noise' while studying which they claimed helped them focus.

### 6.2.3 Summary of Uses and Features

The table below displays a summary of the features which students employ on their chosen social media platforms for their academic work as well as additional features which should be noted about its operation.

PLATFORM	ACADEMIC FUNCTIONS	ADDITIONAL FEATURES
Facebook	<ul style="list-style-type: none"><li>• Class pages</li><li>• Group pages relevant to course interest e.g. theatre pages,</li><li>• Recommendation of upcoming events e.g. art events/ exhibits</li></ul>	<ul style="list-style-type: none"><li>• Infinite entertainment scrolling feed</li><li>• Search individuals by name</li><li>• Works in connection with messenger application</li></ul>

<i>YouTube</i>	<ul style="list-style-type: none"> <li>• Visual learning material e.g. ted talks</li> <li>• Catered recommended material</li> </ul>	<ul style="list-style-type: none"> <li>• Subscription to informative/ relevant channels</li> </ul>
<i>Messenger</i>	<ul style="list-style-type: none"> <li>• Group conversations</li> </ul>	
<i>Instagram</i>	<ul style="list-style-type: none"> <li>• Inspiration source</li> </ul>	<ul style="list-style-type: none"> <li>• Search individuals by name</li> <li>• Easily send relevant material to others</li> </ul>
<i>Twitter</i>	<ul style="list-style-type: none"> <li>• Information source</li> </ul>	
<i>WhatsApp</i>	<ul style="list-style-type: none"> <li>• Group conversations</li> </ul>	
<i>Snapchat</i>	<ul style="list-style-type: none"> <li>• Visual communication amongst peers</li> </ul>	<ul style="list-style-type: none"> <li>• News articles/ pop culture news feed</li> </ul>
<i>Flickr</i>	<ul style="list-style-type: none"> <li>• Blog pages for arts students</li> </ul>	

*Table 6.1 Social media platform feature analysis*

## 6.2.4 Frequency of Use

### 6.2.4.1 Overall Frequency

Through the one on one interviews it was determined that the general usage of social media was daily through both smartphone or other device, this usage was not dependent on times of study as students acknowledged its presence in the learning environments such as in lectures or independent study time. In scenarios where the educator may be aware of the distracted behavior students admitted to concealing their actions as it was recognized as rude and unprofessional.

For academic purposes 72% of students used a social platform either on a daily or weekly basis, frequency of use for each application was largely dependent on the student's course of

study; with students within the arts focused on a range of communication and inspiration channels that allowed for visuals and other students relying largely on just discussion platforms.

#### **6.2.4.2 Factors effecting Frequency/time**

Overall students did not need encouragement to access their social media accounts; remaining up to date was both a need and a habit regardless of receiving notifications, this was confirmed by the survey results which showed that over 66% of participants acknowledged that they would check their social media without the encouragement of a notification. When expanding on this in the interview stage some students noted social media was an 'escape' and a way to procrastinate from more challenging tasks such as their academic work. Other students attributed their habits to the desire of remaining informed and the fear of missing out on activities. This 'fear of missing out' could also be attributed to the anxiety that 39% students admitted to feeling when removed from their social media platforms.

However, students *were* further distracted by notifications when they occurred; with 84% becoming distracted by notifications constantly and 70% of students feeling a need to respond to these notifications immediately. Through further discussions it was noted that students did view notifications as having a negative impact on their focus as the initial notification could disrupt workflow. This affirms the second assumption of his research; that students did not deactivate or log out of their platforms when studying, therefore allowing their platforms to actively provide notifications and distractions.

Another point of distraction that was discussed were the presence of advertisements on their social media. The overall response from students was that the advertisements were noticed for being invasive and an annoying feature, however their purpose was mostly ignored. Though for the most part students did not click on the link that the advertisement provided, some did see the advertisement as a reminder to search for this product themselves.

The largest contributor to continued activity on a platform was the ability to continue scrolling through the entertainment feed uninterrupted. Typically, the material an individual is exposed to is unrelated to their education, instead it is catered to their event interests, liked

pages and similar material to their previous searches. Only through actively searching for academic material or joining class pages are they able to receive relevant notifications for that interest.

#### **6.2.4.3 User Management**

Within both the survey and the one on one interviews the most popular applications that were mentioned were *Self-control* and the *Forest App – Stay Focused*. *Self-control* takes an aggressive approach by blocking access to a range of social media platforms. When discussing its effectiveness with students, they disliked it due to its inability to achieve the desired effect. Students were able to access their platforms through other sources, or were distracted by the task of working around the block. As found through the survey; many students found a need to remain connected as going offline created an anxiety for 39% of students or at the least a curiosity in 57% of students to remain in the know. *Forest* takes an aggressive approach to encouraging individuals to remain on task by growing an animated forest whereby leaving the application will ‘kill’ the tree. Additionally, for each animated tree an individual achieves, a real tree will be planted; providing morally charged motivation for remaining on task. Students noted this application as silly and ineffective as once they left the application they weren’t influenced to re-access it again. Other applications mentioned by participants such as *Cold Turkey* are similar variations of the aforementioned applications.

From further exploring these products and seeing their popularity in use amongst the participants, the unsuccessful experiences of students conclude that the products in the market do not cater to students emotional or functional needs. These products have been designed to reduce or block social media usage which is contrary to what students require.

#### **6.2.5 Feelings Towards Usage**

Research question 5 asks ‘*What are student’s current attitudes towards their behaviour surrounding social media, how does their behaviour impact their study?*’. It was found that the overall consensus expressed by the interview participants was a guilt towards the over indulgence in use of their social media platforms. Additionally, over 82% of surveyed students admitted to feeling guilty due to the amount of time spent on their social platforms. Many students acknowledged their perceived ‘bad’ habits as well as their struggle or

reluctance to break them, although 76% of surveyed students would like to reduce their social media usage, indicating a desire to change their social media habits (Research Question 6).

Many of the students recognised their social media platforms as an 'escape', using their platforms as a tool for procrastinating more overwhelming and strenuous tasks such as their academic course work. Students were asked to reflect on their time spent on social media during heavy academic periods. This received a range of responses predominantly encompassing regret, as students admitted to wasting their time on entertainment feeds, ultimately prolonging the mandatory task. When engaging in academic activities, students employed tactics to reduce off-task behavior, mainly focused on social media platforms, this was inclusive of blocking or removing the applications. However, for 39% of surveyed students these methods only contributed to anxiety from being disconnected with the potential to miss valuable information or activities.

The concluding feelings students emote towards their social media usage suggest an overall negative perception, which is seemingly discordant with their behavior.

## **6.3 Academic Platform**

### **6.3.1 Attitudes and Behaviors Towards Platform**

The initial survey responses encouraged further exploration as they contrasted previous assumptions gained from exploratory discussions. Survey responses suggested that most students found their academic platforms user friendly, however one-on-one interviews provided an alternative and more in depth perspective. Students' initial experience with engaging with their academic platform was found to be daunting and confusing, as the platform was not user friendly in design and did not provide an intuitive experience. Due to this, students required explanations and exploration of the platform to improve the experience. This was expressed as a repetitive process for some as the platform layout changed between courses. However, once students became familiar with the features; the intuitiveness of interacting with the platform increased therefore students could claim they now found the platform user friendly contrary to initial experiences.

Similarly, students claimed that their academic platform provided all the tools and features they required for course work, as the majority of students agreed that their academic platform

provided the reading material they needed to aid them in their work. However, an overwhelming percentage of surveyed students also agreed that they chose alternative channels to communicate with their peers and approach collaborative work, further agreeing that they did not engage with each other via their academic platform. The interview process effectively conveyed the level of need and reasons for requiring communication channels for academic purposes, indicating that communicative tools are undeniably a necessary tool for academic work although this need was previously unrecognized by the surveyed students.

It is therefore difficult to reach a conclusion about students' overall feelings towards their academic platform in response to research question 2 '*What are students' current attitudes towards their respective academic platforms, what value do they see in them and where are the primary areas they need improvement?*'. It is recognised that the platform provides significant beneficial features while considerably lacking in other areas, notably is the area of communication and collaboration which would prove beneficial in developing.

### **6.3.2 Cause and Effect of Primary Issues**

Three primary problems were identified through discussions with both student and university staff participants; firstly, the lack of intuitiveness that the platform provided, secondly, the inconsistencies between courses in the presentation of class material and thirdly, the lack of communication channels. These three issues ultimately encourage students to rely on alternative channels to communicate and source material. However, the cause of these issues stems back to the operation of the academic platform by educators as well as the foundational design that blackboard supplies and the restrictions this permits.

As stated by university staff members who work alongside the Blackboard platform for Victoria University of Wellington, little is mandated for what educators must provide on their individual course platforms, therefore not all tools are utilized for students, in particular the discussion board feature. This is due to the platform being catered to the functional needs of the educator; through not enforcing features the educator can cater their teaching technique to work most effectively for them. Additionally, the maintenance that some features such as the discussion board require entails additional work for the educator which is not a desirable outcome. Conversely, the lack of mandatory features provides a level of freedom for the educator which can lead to human error for both educator and student alike. As discussed with students the freedom of design granted to the educator provides a range of layouts and

features, requiring a student to adapt and relearn for each course, for the educator the lack of knowledge about the platform can result in incorrect formatting or unintentional inaccessible material for the student.

Ultimately it remains ineffective to enforce a set structure on the educator which may in turn disrupt their teaching method. However, some level of creative control would be beneficial to the student in which they can mandate how they receive information without exposure to distractive material.

## **Chapter seven: Discussion of a Development and Direction**

### **7.1 Review of Research Purpose**

The overall aim of this project is to explore the commercial potential and market opportunities for a minimum viable product which caters a solution to the identified problem. The research within this project investigates the relationship students have with their social media platforms, the extent of these relationships, how this relationship may affect their study practices in the educational environment, and finally how students respond to the Prompt product concept. The overall intent of this research was to determine if the proposed application would provide a beneficial service for students for overcoming the challenges previously identified, and whether the service provided had a feasible opportunity to be commercialized. The initial challenges that were identified were gained through the process of literature review, which were further focused on in the research process as well as addressing the research assumptions and research questions.

The initial direction intended for this project was to provide the platform for students as a personal subscription purchase available through the App Store. However, this intention was altered as the research progressed into one-on-one interviews. Firstly, it was observed that students who had previously used study focus orientated platforms had only used free services, making this initial plan unappealing to the primary targeted audience. Secondly, through the exploratory discussions and interviews that were held with those who work alongside and maintain the academic platform it was apparent that academics also experience issues with the platform, though transitioning to a new platform would be an extensive multiple yearlong task which still may not reduce the human error which occurs. Therefore, academics were looking for an external solution which may advance learning into the social media era to incorporate new techniques for teaching. It was therefore decided to provide the service to universities which they would be able to then provide as a free service for their enrolled students. The exploratory discussions with university staff members confirmed their desire for this product. This new channel strategy benefits the student consumer as it is now a risk free purchase that is free for enrolled students, additionally it would provide a consistent flow of new consumers to try the product. Further exploration of this strategy may be found in the following chapter which discusses the business case for the Prompt product which identifies the potential target investors which would be required for this strategy.



## **7.2 Development of Research Findings**

### **7.2.1 Issue Development Throughout Research**

The immediate issue identified at the beginning of this project surrounded students' relationships to their social media platforms and the impact this had on their academic performance. Through the literature review process this developed to identify specific issues and benefits that argued for and against the use of social media in the learning environment. The core issue to this was the process of task switching that the use of technology - in particular social media - encourages. This process was proven to impact the cognitive processing of an individual, thus being harmful for the learning environment, however, conversely it was found that a certain level of task switching or 'arousal' could be beneficial in increasing awareness and productivity. Additionally, though the literature review it was also noted that removing an individual's access to their social networks would contribute to increased anxiety and thus provide further distraction. The focus of task switching and anxiety levels were then focused on through the quantitative and qualitative research portion of this project as effectively as possible. Limitations prevented the ability to undergo sufficient studies in task switching or explore the effect of split attention through anxiety levels, however the use of discussions provided insight into 10 students' perceptions of their behaviours.

Findings from the quantitative stage of research identified students' significant use of social media platforms for academic purposes, a range of platforms were highlighted which all provided different features, however their reasons for use were not disclosed through a quantitative process. Findings also showed a marginal disconnect between behaviour and perceived cause of behaviour. Most students admitted to wanting to spend less time on social media platforms, with less than 40% of participants feeling that they did not experience anxiety when separated from their social media platforms and yet over 60% of participants felt a curiosity and need to check in with these platforms regularly. Further discussion was thus required on these points of interest throughout the one on one interviews in addition to the primary research questions and initial assumptions.

The interview stage conducted with students expanded on the underlying reasons students choose to incorporate social media into their academic practice, highlighting issues with their

academic platforms that had initially gone undisclosed. The key feature that was of importance was the ability to communicate efficiently with peers, this had been briefly touched on throughout the literature review and quantitative research, though through discussions it was discovered that each platform provided unique features that were beneficial amongst separate faculties of study e.g. Arts, Commerce.

Interviews with university staff members corroborated the lack of communication channels available through the academic platform as well as the inability to fix this issue internally. Other solutions such as switching to an alternative platform provided a new set of challenges for academics.

Regarding the issues identified with levels of anxiety, some student participants strongly admitted to feelings of fear should they miss notifications or miss out on current affairs, though most students contributed their reasons for consistently checking their social media as a habit and were reassured by observing their peers experience similar habits. Furthermore, students explained this behavior as a factor of boredom, within the learning environment they were under stimulated and thus their attention moved to entertainment feeds, ultimately reducing their information intake.

Expanding on this issue, students were then asked what maintained their attention on these platforms, unlike previously assumed, advertisements did not have a role in this. Instead the largest contributing factor was the uninterrupted entertainment feed which provided catered content. Advertisements did not go unnoticed however, they did prompt some students to begin browsing activities though predominant responses showed that students found these adverts invasive and therefore tried to actively ignore them.

The core issue remains that students will habitually access their social media which ultimately interrupts workflow through the effects of task switching and the resulting loss in cognitive control. However, further reasons for embracing the use of social media have been identified; there is a significant level of gain to be had from the features available on social media and the comforts that this provides students.

### **7.2.2 Feasibility of Project**

Findings from the literature review process provided sufficient evidence for the need of a solution which targets the rising issue of increased technology and social media usage affecting academic performance. However, discussions on the feasibility for the proposed product are largely covered in the research process beginning with the numerical data and further explored in the one on one interviews.

Both students and university staff indicated a desire for a solution that adapts to the behaviors surrounding social media and technology use in the learning environment. The need for the proposed solution was outlined from the students' perspective through the survey process. The need and preference for the use of multiple social platforms to achieve an academic task was evident in the research findings from the survey as it was seen that a large number of students employed two or more platforms for their course work, and employed this method on a weekly basis at minimum. The interview process further defined the need for the product from a student's perspective in the market, however additional features that had not been initially planned were then brought into consideration due to the points that were discussed and challenges students identified. Key features which focused on organizational systems and search engine capabilities for class pages were noted as valuable in streamlining the communication process. Additionally, though timer and gamification strategies were noted as ineffective, the use of reminders and analytical results provided insight and allowed students to manage their behavior accordingly.

University staff members also expressed their desire to develop teaching methods to incorporate modern technologies such as social media, as they recognized earlier studies which proved a positive response from students for modern learning techniques. Furthermore, university staff members recognized the extensive benefits and thus likely permanent status social media has in their students' daily lifestyles, it was therefore an appealing proposal to embrace the use of social media in the classroom. As with the interview process with students, additional features were brought into consideration which increased the appeal of the application for an academic, which would help increase the level of engagement with the end product. Developing strategies for interactive use within the classroom such as polls would ensure class participation and provide interesting new approaches to learning.

University staff who worked alongside and maintained the academic platforms for Victoria University of Wellington expressed a high level of interest in the proposed product, making it a viable option to supply the product to the end students (end consumers) through a channel approach with the academic organization covering the costs.

### **7.3 Review of Initial Assumptions**

The research process successfully covered the research assumptions which were outlined upon commencing this project. Results from the research process both confirmed the assumptions and provided further questions that required addressing.

Findings from the numerical data corroborated assumptions regarding students' behaviours and activities in using multiple social media platforms and having these remain active during periods where they are either not required or could provide unwanted distraction through push notifications.

However, assumptions surrounding the effect of advertisements and their presence on social media platforms required further investigation as initial statements indicated an indifference to them. From the one on one interview process there were three key reactions that students recognized them displaying, these being; (1) deliberate avoidance where students actively ignored advertisements and their intended effect, (2) taking encouragement from the advertisements, using a separate search browser to further explore the product/ service, or (3) behaving according to the intended advertisement, such as following the provided link, browsing the suggested product/ service. The predominantly negative reaction to the presence of advertisements indicates a significant level of awareness of them, students acknowledged these advertisements as being extremely effective due to the material being catered to the individuals' interests, though this further increases student dislike as they view them as invasive material.

### **7.4 Implications of Research and Future Recommendations**

#### **7.4.1 Implications of Research**

##### ***7.4.1.1 Implications on product development***

The general implications of the research findings indicate potential viability in continuing in the exploration and development of this project. However, limitations should be acknowledged in the continuation of the project as the decision to commercialize this product may reveal new restrictions in resources and information.

Research findings provided direction for features which would be paramount in differentiating the end product from others in the market. The three key features are the ability to customize and organize material, enhancing the usability of the platform, and finally the search engine abilities that the platform provides. It will be important to focus on these features in the design of the final product to ensure they enhance the user experience overall.

#### ***7.4.1.2 Implications Outside of Current Research Confines***

There are three implications which have been recognized as having impact beyond this level of research surrounding the usability of social media platforms.

The first of these implications refers to the levels and modes of engagement that students have with each of these platforms. Though each social media platform provides alternative features and modes of engagement, they largely shared similar features such as the ability to hold private conversations. However, users expressed their preference for engaging each platform with different focuses and levels of formality, for example, they would hold two separate conversations with a singular person across two platforms. This could provide a new avenue for exploring these levels of engagement to effectively enhance the feature accordingly.

The second implication of research findings provided were the usability features that the student participants expressed a need or appreciation for. The predominant feature that was brought into discussion was the ability to organise, file and search for information across the platform. Some platforms such as Pinterest are built around this feature, others such as Instagram have developed this feature, whereas large platforms such as Facebook still lack the ability to customise organisation capabilities. Similarly, the inclusion of a search engine was a focus for students who noted this as a restriction or impaired their ability to navigate class pages as effectively as possible.

The third implication that was highlighted during this research was the realisation that none of these platforms provided educational features to enhance their platform. Instead, users had adapted their use of the present features to enhance the usability for their needs. These findings may be of interest to social media developers to further enhance their services to cater to a demographic that is highly engaged with their platform.

#### **7.4.2 Recommendations for Future Research**

Limitations such as time constraints and access to field resources prevented the development of information and testing, there therefore remain unknowns about the impact of the Prompt service. To optimise and most effectively streamline the development and design of the proposed application and its vital features, further research is crucial to ensure ideal market appeal and product success.

As the impact of advertisement material on social platforms received a range of feedback, the full impact of their presence would benefit from additional research which focuses heavily on their impact on student behaviour with the resulting research informing future design decisions. It may reveal the lack of impact that advertisements created in the user audience and as such a ‘transform and remove’ design approach would be deemed unnecessary, thereby reducing the design process and technology required.

Research conducted thus far was provided from students’ perspective and therefore does not accurately reflect true behaviours as it is limited to the individuals’ perspective and ability of self-awareness. Due to this, further research to identify students’ habits to uncover possible triggers which encourage off task behaviour may prove beneficial.

In the case of successful development and implementation of the Prompt service, long-term research endeavors should be conducted to allow for continued improvement and enrichment of features in the product.

Finally, as will be discussed in the following business case outlined in Chapter 8, Research will be required which explores the cost and benefits of production and maintaining such a service on a national scale.

To conclude, due to the remaining unknowns, further research in the outlined areas would be a crucial priority to explore before the commencing of prototype development. Findings from further research would benefit in providing design direction and minimizing the potential exploration of unnecessary features which would increase costs of both money and time value.





# Strategic Case

Business case to support the development  
of an innovative solution

**Prompt: A human centred solution to reduce online  
distractions amongst students in the E-learning  
environment. May 2019**

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## **Executive Summary**

The following report discusses the Prompt application, a learning tool intended to remove distractive material in the online learning environment, providing multiple level of benefits for both student and educator to advance current academic practices. The purpose of this report is to present a comprehensive analysis of the target market and the recommended strategy for successful development and implementation of the product to the intended investment audience.

Current educational systems embrace the use of technology for expanding the scope of learning and student methods of engagement have evolved to include social media as a functional tool. Despite this, attitudes towards social media platforms in the learning environment remain unresolved with many incorporating social media into learning practices while viewing the products as distractive, showing a significant level of discordance between behaviour and attitudes. To ensure continued improvement in the delivery and reception of education, it is necessary to adapt the education model to encompass new technologies.

The encompassing business report proposes the continuation of the development for the Prompt product, providing a detailed rationale as to the future recommendations for success in the field of technology designed for educational purpose.

## **Financial Case**

- *Financial case will be developed through joint venture partnerships with software developer with available resources.*

The development and production of the Prompt application will be dependent on potential joint venture partnerships. Investments and/or possible sponsorships will be sought from some of the identified key stakeholders, providing the product the ability for ongoing development opportunities. In return the Prompt entity will provide benefits of brand/name promotion.

### Key Stakeholders

- *Academic organisations should act as suppliers, providing the product to the students as a free service to ensure students view the service as a low /no risk investment.*

There are three key stakeholder segments which are discussed at length within this strategic business case; the end consumers, suppliers and the investors/ partners. The primary stakeholders are the student population who are the end consumers, students will be the targeted consumer for the application as they strive to maintain their social media habits while seeking to improve their academic practices. The second of the key stakeholders are the academic organizations who will act as suppliers of the product to the targeted consumer audience, this stakeholder audience is inclusive of the educators and academic board who will influence the use of the product. Further key stakeholders include the social media and academic platforms that will adopt the application plugin model, such as Facebook and Blackboard. There is also potential for further stakeholders to be identified outside of the educational learning scope through further research.

### End Product

- *The resulting end product should only be launched once an extensive development process has been conducted consisting of further research, design, software development, customer service and market engagement and marketing promotions.*

The end product produced from the development process with ensure the service launch is representative of the core values of Prompt brand; understanding and human-centered.

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## **1.0 Introduction**

This business case outlines the background information which inspired and justified the conception of the Prompt application, from this information direction is provided for the recommended steps for development and future implementation of the Prompt service.

To ensure the successful implementation of the final product a vital understanding must be created of the market and therefore the needs and wants of potential consumers within the targeted market. The six chapters of this report aim to effectively discuss the context in which the Prompt product exists with continuous justification against the research previously conducted with the target market.

The first topic of discussion in the following business case will encompass the background information of the Prompt product, with a summary of the problem development and an outline of the key stakeholders central to moving forward in this case.

Section two provides the proposed business model, exploring the options for commercialization through an analysis weighing the benefits and challenges of each approach. The validated strategy is then further discussed through recommendations structured around the Business Model Canvas.

Section three outlines the market validation for the continuous development and implementation of the Prompt service. A thorough analysis is supplied which determines the Prompts position in the competitive landscape in terms of target market, Competitor analysis and the unique value proposition that the delivers.

Section four of the business case provides an overview of the proposed product. This section highlights the features that the service delivers with rationale of their importance in relation to the research findings. The intention of section four is to provide insight and rationale for the required resources outlined in section five. This section discusses the required resources for the future development of the Prompt service in terms of skills and industry partners and the opportunities for return on investment should the development go unchallenged.

Finally, the concluding chapter presents the steps recommended for moving forward in the development of the Prompt application.

## **1.2 Issue Development**

The development of new technologies has seen rapid advancements in the educational system, and the use of multiple technologies have been implemented into the learning environment to the effect of positive response from students. With the continuous development that is seen within technology and the trends of today it has now become systematic to incorporate the use of social media into learning practices, incorporating social media into class discussions, group pages and providing further recommendations for relevant material. However, despite the pivotal role that social media provides in advancing practices in the academic environment; presenting new methods for communicating with peers, collaborating on projects and researching information, there are still significant features that contribute to encouraging unproductive behaviour and prolonged browsing of often unnecessary material.

### **1.2.1 National Context – Adopting Technology into the Classroom.**

It has become increasingly common for the use of technology in the learning environment, as students are educated using blended learning models which embraces various approaches to communicating educational material. As education moves away from the traditional teaching methods it is now expected for the current students and coming generations to be prolific in technological skills, with the ability to produce media, communicate ideas, learn, collaborate and present their work through this medium. Evidently, the use of technology in the classroom in its various forms provides a significant level of beneficial features, allowing for a larger scope of information to be reached without the limitation of location. Ultimately its presence has enhanced the educational system and continues to do so as it develops.

However, through literature research it is evident that the design of technology has been developed to facilitate task switching behaviour which ultimately hinders the cognitive learning process. Devices such as mobile phone and laptops act as multitasking facilitators, with functions such as multiple tab capabilities an individual can address multiple tasks at a single time, though whether each of these tasks is performed at the highest level of work is largely debatable.

### **1.2.2 Discordance Between User Behaviour and User Attitude**

Research has displayed a significant level of discordance between student's behaviour and attitudes. Literature research revealed students' awareness of bad habits in the learning environment such as repeated off task behaviour due to checking their social media platforms and engaging in material that is irrelevant to their primary task. Students expressed their guilt at this behaviour and acknowledged it as rude towards their educator as well as unproductive in performing their primary task. However, further research revealed that many students did not make attempts at changing these habits. Students were accepting of these habits as long as they completed the primary task in the timespan allowed, additionally they were also comforted knowing their peers held the same habits.

Some students had previously employed the use of applications as an attempt to reduce or stop their social media usage, however they found steps to work around this and continued to behave accordingly. Ultimately the awareness students have over their habits is evident, and the general feeling of guilt that students express towards these habits are not a compelling motivation to alter current behaviours.

### **1.2.3 Current Market Failure**

A significant gap can be found in the market which directly connects the concept of 'socialising' with 'learning'. Current solutions available in the application market cater towards reducing social media usage with potentially damaging results on the emotional and functional needs of a student; the complete removal of online networks can result in further distraction and at extremes contribute to feelings of anxiety. There are four common approaches taken by current products aimed at reducing social media usage or conversely improving focus, these are; gamification, blocking access, allocating on/off time schedules and providing analytics to encourage time management. Each of these approaches provide beneficial features to engage a user, however there are flaws in these methods which ultimately do not effect a change in habits of the user.

The gamification approach is common in the market, where users are encouraged to take time off of their social media platforms. This time is recorded through the 'growing' of a virtual being such as an egg or a tree, from this a user is encouraged to grow their own virtual

societies or forests. This strategy holds the appeal of providing a challenge and a fun reward, however it does not account for times when a student relies on their social medias to obtain important information relating to their academic work. Applications that take the blocking method also fail to account for this need, and thus students are challenged to find ways in which they can work around the placed block further resulting in distractive behaviour.

The continued presence of social media undeniably encourages continued levels of disengagement for the primary academic task. Social media platforms provide unlimited entertainment feeds as well as catered material to encourage further browsing. Therefore, these contrasting issues provide an opportunity to develop a solution which minimizes online distractions without obstructing the ability to maintain connected and continue online relations.

### **1.3 Key Stakeholders**

There are three primary groups of key stakeholders involved in this project; end consumers, suppliers and partners/ investors. Each of these stakeholders has a level of needs and wants to influence each stage of the development and production of the Prompt application which will be further expanded on within this report.

The first of the key stakeholders are the designated end consumers; firstly, are the students who will download and interact with the final product for their own academic benefit, and second are the teachers who may also use the product to push their material towards their students through the application.

The supplier stakeholders are the academic organisations who will provide the product to the end consumers. The academic organisations will equally act as influencers for the product and thus are valuable in encouraging more consumers to engage with the product.

The third of the identified key stakeholders are the necessary partners required to successfully develop the final product. As Prompt's primary aim is to effect changes on social media through the use of academic material, it is necessary for a production partnership to be built between the relevant social platforms such as Facebook, YouTube and Instagram and the academic platforms such as Blackboard which is being focussed on for initial development



strategies. These partnerships may also act as investors, with the possibility of additional stakeholders being approached for further funding such as educational orientated businesses who may recognise benefits from supporting development in the online learning environment.

Through these investments social media platforms may find incentive in developing their brand perception to encompass an educational orientation, thereby increasing their own future growth and usability of their product. Academic platforms are also provided the benefit of developing their educational approach as well as also owing for one-fit approach to developing new platforms which may accept the service.

## **2.0 Business Model**

### **2.1 Problem Statement**

Developments in technology have provided new strategies for learning and engaging with educational material. This ongoing development has seen an increase in the use of social media platforms for academic purposes. It has therefore become increasingly challenging for students to create, deliver and receive academic material without exposure to distractive material which disengages them with their primary academic task, thereby having negative effect on work flow.

### **2.2 Product Purpose**

The purpose of this project is to transform the online learning environment ultimately challenging current perceptions and behaviours surrounding the use of social media. The proposed outcome of this is to improve current educational experiences for the student, developing a service which improves student engagement and focus in their academic work by adopting and developing alongside new technologies.

The overall aim of this research is to explore the commercial potential and market opportunities for a minimum viable product which caters a solution to the identified problem.

## 2.3 Exploration of Commercialisation Options

<b>OPTION</b>	<b>OPPORTUNITIES</b>	<b>RESTRICTIONS / CHALLENGES</b>
1. <i>Independently develop the prompt application. Sell the license to larger organisation.</i>	<ul style="list-style-type: none"> <li>• Ability to retain design control and make development decisions accordingly.</li> <li>• Opportunity to receive funding for development.</li> <li>• Potential to sell product for profit.</li> </ul>	<ul style="list-style-type: none"> <li>• May be restricted by lack of funding.</li> <li>• Potential investors or funding partners may place restrictions on design or time constraints for expected development thus reducing development opportunities.</li> <li>• Possible conflicts with funder.</li> <li>• IP ownership difficult to obtain</li> <li>• Restricted by available technologies, may require access to new technology.</li> </ul>
2. <i>Work alongside companies with available resources to develop and commercialise.</i>	<ul style="list-style-type: none"> <li>• No significant start up business cost.</li> <li>• Can build on existing technology.</li> <li>• Reduces need for funding and required pitch development.</li> <li>• Ongoing ability to influence design decisions and the subsequent development of the technology</li> <li>• Opportunities to expand product in the market at faster rate than other strategies due to business connections and team efficiency.</li> <li>• Larger team with more opportunities for expert development strategies, potential for faster production of final product.</li> <li>• Timeline may be expected to adhered to by partner to speed development process</li> </ul>	<ul style="list-style-type: none"> <li>• Official IP would be shared or owned by partner company</li> <li>• Ongoing engagement and communication requirements</li> <li>• Design decisions and development strategies may require agreements to proceed.</li> <li>• Possible conflicts in decisions and ideas may arise.</li> <li>• Working on partner time line, which may encounter delays.</li> </ul>

## 2.4 Proposed Business Strategy

Based on the commercialisation options outlined in the previous table, the most viable option would be Option 2: partnering with current businesses with available resources and experience in the field of software development. This pathway maintains a level of input and control over design decisions and the development process, although to do so it will require an increased level of communication to form agreeable decisions. This option also reduces risk of product failure as there is increased exposure to available resources and equal a shared investment approach.

In addition to the reduced risk and increased resource availability, the appeal of this strategy is in the experience and market knowledge that can be built on from partners pre-existing ventures which may be of value in guiding the steps of building this service.

To assure a strategic partnership is built clear considerations of *why* the partnership is beneficial in the course of this project should be understood. Conversely, understanding the *how* and *why* the partner should choose to be involved is also important so as to outline the end goals of each partner, making sure these do not conflict and their alignment is beneficial for the commencement and completion of the project.

### Business Model Recommendations

The following recommendations are structured according to the Business Model Canvas developed by Alexander Osterwalder.

- **Key partners** should be approached to assess potential interest and involvement in the project. Additionally, this opportunity will be used to gauge possible investors. This is inclusive of social and academic platform developers as well as academic organisations who may participate in the prototyping, testing and launch of the product.
- **Key activities** for the development and commercialisation of the Prompt application are as follows; develop research to address current unknowns, produce product pitch

for investment and funding, outline business structure, prototype development and testing, further development and finally outline review periods to assess progress.

- **Key resources** should include funding, and appropriate legal and accounting teams for management purposes. Crucial resources include software developers and people experienced in design and marketing it's a focus on human centered design and customer service relations.
- **Customer segments** that should be of primary target are the academic organisations who will adopt the service in to their annual budget and act as influences of the end consumer's engagement with the service. Substantial marketing strategies should be employed to increase market awareness and display the value of the service.
- **Customer relationships:** upon the prototyping and development of the product customer relationships should be built and maintained. Feedback on the product is important for its continued success and any issues should be dealt with immediately. An online interactive assistant and direct help channels should be made available.
- **Unique value proposition** of Prompt is the human centered approach the service takes and the understanding it provides to the student demographic and educational field. This value should be sufficiently communicated through the marketing mix strategies,
- **Cost structure** for the development and maintenance of the Prompt service should take into consideration each of the required steps for business start-ups including marketing strategies, product development and possible delays which may extend development times.
- **Revenue streams** should be further researched according to the budget allowances for each university which allow for new technologies into their educational system. Product should be priced at an annual fee and communicate quality at low student appropriate cost.

### **3.0 Market Development and Validation**

The market was developed and validated as a result of extensive literature review process which was then further expanded on through a survey which provided numerical data sets to affirm strategy developments. This was then thoroughly explored through interviews with the two key target markets.

This section outlines the two key target markets and identifies an appropriate marketing mix strategy to target them accordingly. Following this, an analysis of current competitors in the market is covered, detailing Prompts proposed market positioning based on competitor's strategies and appeals.

### **3.1 Target Market**

Two key target markets are central to the immediate success of the final product in the market; students and academic organisations. Within these target markets, several segments can be further defined, including current vital markets and potential future markets to be explored.

#### **3.1.1 Students**

The student demographic are the primary end consumer for the product as its services aim at benefiting students by functioning according to the needs and wants they have outlined.

##### **3.1.1.1 University Students**

###### Justification

Across New Zealand there are eight universities and as of 2018 there were a total of 173,880 enrolled students nationwide, with 30% of these students studying at a post-graduate level (Universities New Zealand, 2018). In 2016 it was recorded that those between the ages of 18-24 made up 37% of the student population studying between level 4 Certificates and a level 7 bachelor's degree (Ministry of Education, 2016) making them the largest age group at a university level of education.

Similarly, with social media users, the largest age group to consume social media are those between the ages of 18 to 29, as 88% of this age group engage with some form of social media platforms. Furthermore, this age group engages with the largest range of platforms over any other demographic, typically being active on four platforms. Larger platforms such as Facebook and YouTube hold an appeal across the masses, however other platforms such as Instagram and Snapchat are recorded to appeal to the younger audience (Tran, 2018).

The overlap between these two demographics provides a specific age group to focus on as the primary target market for the final product, with a key focus on those aged between 18-24, though those who fall out of this age margin may also possess the key attributes of being a currently enrolled student and highly active on social media platforms.

#### Target Market Profile

- Aged between 18-24
- Extremely active on social media
- Active on 2+ social media platforms
- Currently enrolled at New Zealand university
- Has issue with their current social media habits, feels guilty for spending too much time on their platforms.
- Would like to create more positive behaviours surrounding their social media usage, ideally looking at reducing the time they spend on these platforms.

#### Market Potential

There are approximately 173,380 students across New Zealand universities. Those between the ages of 18 to 24 years old make up approximately 37% of the student demographic, with enrolments of this age group in a bachelor's degree or higher qualification showing a gradual increase. While there is potential for those outside of this age margin to fit the consumer profile it can be assumed that the market potential for this project is around 37% (Ministry of Education, 2016)

#### **3.1.1.2 Secondary School Students**

##### Justification

The second audience which are essential to acknowledge are students within secondary school education, as these are future university students and thus are potential upcoming users of the final product. The research of this project was limited and thus students from this age group were not included, however it remains important to view the statistical opportunities that this may provide as the educational environment advances and the use of technology in the classroom increases.

Currently in New Zealand there are 2,531 schools across New Zealand. Students enrolled in secondary school are typically between the ages of 13 to 17, as of 2018 there are over 280,000 students enrolled in secondary school. An important age group to focus on are those aged 16 and over as they are eligible to leave their secondary studies, moving on to tertiary education or employment opportunities, there are approximately 119,359 students aged 16+ (Education Counts, 2018), with the potential for attending a New Zealand university in the following 2 years.

#### Target Market Profile

- Currently attending secondary school.
- Between the ages of 16-18.
- Future intentions to attend university within New Zealand.
- Active on 2+ social media platforms.
- Struggle to remain on task.
- Experiences guilt from spending too much time on social media platforms.

#### Market Potential

Across New Zealand there are approximately nearing 300,000 secondary students, with 119,359 of these being eligible to leave school (Education Counts, 2019). Annually there are approximately 60,000+ school leavers, of this, 61.5% of them enrol in tertiary education (Education Counts, 2018) It can therefore be assumed that 60% of the secondary school market will find purpose for the product in their future academic endeavours. There is additional potential to cater the service to secondary education level of needs, opening the market potential to the approximate 119,359 students.

### **3.1.2 Academic Organisations**

#### Justification

The academic organisations are integral to the success of the product as they channel the product through to the end consumer. Academic organisations and the staff of these organisations will hold influence in communicating the product to the end consumers, it is therefore important to provide a level of beneficiary outcomes for the organisations such as contributing to the improved academic results of their students or increased engagement.

Within New Zealand there are eight universities, 7 of these universities offer a range of subjects with the remaining university offering specialised education (Universities New Zealand, 2018). Due to the strong reputation that the New Zealand university rankings provide, there is a large demographic of international students across the country, providing potential to expand the service to an international level.

#### Target Market Profile

- Interested in developing education system
- Recognises issue with current social media habits amongst students
- Would like to improve overall education standard.
- Would like to improve the academic results amongst their students.

#### Market Potential

There are 8 universities across New Zealand which would work act as a secure beginning point to launch the Prompt service. However, the market potential for the Prompt service spans across New Zealand with the addition of the 16 Polytechs and Institutes of Technology, as well as over 500 tertiary organisations.

The Prompt service has the potential to expand across the educational services of Blackboard, Moodle and others that have not been explored in this report, providing a large international reach.

### **3.2 Marketing Strategy**

The following table displays the recommended marketing strategies based off of the proposed business model.



## STRATEGY

MARKETING MIX	STUDENT (End Consumer)		ACADEMIC ORGANISATION (Supplier)	
PRODUCT	<ul style="list-style-type: none"> <li>Reduces distractive material on social platforms</li> <li>Provides catered material relevant to interest and educational needs</li> <li>Recommends informative material</li> <li>Provides ability to connect to peers</li> <li>Unobstructed access to social platforms</li> </ul>		<ul style="list-style-type: none"> <li>Increases educational channels for enrolled students.</li> <li>Encourages increased focus periods thereby effecting positive change in academic results</li> </ul>	
PRICE	<ul style="list-style-type: none"> <li>Free use with no additional cost = zero/ low risk investment</li> </ul>		<ul style="list-style-type: none"> <li>Competition pricing strategy – taking into account annual cost of academic platforms for academic organisations as well as competitor pricing of applications aimed at controlling social media usage.</li> </ul>	
PLACE	<ul style="list-style-type: none"> <li>Available through App Store to work in connectivity with current applications</li> <li>Available through smartphone and laptop/ tablet devices</li> <li>Provided through channel partners (suppliers); academic organisations who adopt the product into their supply channel.</li> </ul>		<ul style="list-style-type: none"> <li>Available in conjunction with academic platforms</li> <li>Academic control account set up through online systems.</li> </ul>	
PROMOTION	<ul style="list-style-type: none"> <li>Advertising through channel partners (academic organisations)</li> <li>Word of mouth</li> <li>Public relations</li> </ul>		<ul style="list-style-type: none"> <li>Advertising through investor partners, primarily the academic platforms.</li> <li>Public relations, media coverage.</li> </ul>	

### 3.3 Competitor Analysis

The following section highlights the key identified competitors within the market aimed at affecting change in social media usage and/or academic focus periods.

Though the following chart does not cover all available applications in the market, it does affectively represent the range of approaches that are available. The following applications have been selected due to being discussed within the research process or for their position as the most used application for its approach strategy.

The following chart discusses the approach each application takes, through this chart it is evident that there are three main approaches designed to target the issue surrounding low focus ability and/or excessive social media usage. These are gamification, blocking/removal of distraction and allocated study/break allowance. Following the approach style, each competitor is analysed for its available features and apparent limitations, the price point it is made available as well as additional consumer feedback which may have been gained throughout the research process.

COMPETITOR	APPROACH	FEATURES	LIMITATIONS	CONSUMER FEEDBACK	PRICING
<b>ADBLOCK</b>	Blocks advertisement typically seen when online browsing	<ul style="list-style-type: none"> <li>Removes 'junk' advertisements commonly seen on social media platforms and general webpages.</li> </ul>	<ul style="list-style-type: none"> <li>Does not affect social media applications main news feeds and sponsored material features.</li> <li>Only effective for general browsing behaviour to remove excess advertisement material.</li> <li>No support options if ineffective.</li> <li>Is not 100% effective.</li> </ul>	<ul style="list-style-type: none"> <li>Appealing due to its free availability.</li> <li>Low to zero level of involvement once product is installed.</li> </ul>	Free
<b>FOREST – STAY FOCUSED</b>	Grows virtual forest equal to time an individual remains on application – aimed at keeping individuals off of social platforms	<ul style="list-style-type: none"> <li>Families approach allows user to earn rewards for long focus periods.</li> <li>Compete with others</li> <li>Moral motivation through environmental cause – users are made aware that growing virtual tree equates to the organisation planting a real tree.</li> </ul>	<ul style="list-style-type: none"> <li>Requires user to remain off of social platforms, so does not recognise benefits social media platforms provide or the needs it adhere to.</li> <li>Exiting the application will halt/remove progress allowing no freedom for other uses on device.</li> </ul>	<ul style="list-style-type: none"> <li>Found the approach childish and ineffective – discussed in one on one interviews.</li> </ul>	\$3.49 plus additional in app purchases
<b>COLD TURKEY</b>	Block chosen websites.	<ul style="list-style-type: none"> <li>Allows user to block their chosen websites.</li> <li>Not limited to singular applications, can work on entire browser.</li> </ul>	<ul style="list-style-type: none"> <li>Is only effective on devices the application is loaded on. User can easily work around by accessing their desired websites through an alternative device.</li> </ul>	<ul style="list-style-type: none"> <li>Students found methods to work around the blocks put in place and found this wasted more of their time.</li> <li>Students were further distracted by the idea of missing important</li> </ul>	Free download

COMPETITOR	APPROACH	FEATURES	LIMITATIONS	CONSUMER FEEDBACK	PRICING
				information via their social networks.	
SELF-CONTROL	Block chosen websites.	<ul style="list-style-type: none"> <li>Removes ability to be distracted by notifications.</li> <li>Produces an immediate change in user experience and their accessibility.</li> </ul>	<ul style="list-style-type: none"> <li>Is an aggressive approach to the problem.</li> <li>Does not recognise possible needs for social media platforms.</li> <li>Potentially cause further distraction for user as they work around blocks that have been put in place.</li> </ul>	<ul style="list-style-type: none"> <li>Students found methods to work around the blocks put in place and found this wasted more of their time.</li> </ul> <p>Students were further distracted by the idea of missing important information via their social networks.</p>	Free
STUDY TIME	Allocated study breaks through timer.	<ul style="list-style-type: none"> <li>Encourages healthier habits over a period of time.</li> <li>Provides analysis=tics to help track user's habits.</li> <li>Provides push notifications to encourage a user to resume their primary task.</li> </ul>	<ul style="list-style-type: none"> <li>Does not affect any visible change for a user's experience.</li> </ul>	<ul style="list-style-type: none"> <li>Was effective for some students to gradually develop healthier habits as discussed in one on one interviews.</li> </ul>	\$2.99
FLIPD	<p>Sets personal goals and provides analytics and reminders to encourage user to maintain focus.</p> <p>Lock mode hides social media platforms and game applications</p>	<ul style="list-style-type: none"> <li>Encourages user to set daily goals to achieve set tasks</li> <li>Provides daily reminders to encourage 'mindful habits'</li> <li>Provides meditation material for deeper concentration</li> <li>Leader board feature</li> </ul>	<ul style="list-style-type: none"> <li>Exiting the application will end session.</li> <li>Costly application, high risk investment for low income students.</li> <li>Works at reducing social media usage and communication channels</li> <li>Does not affect advertisement material</li> </ul>	<ul style="list-style-type: none"> <li>Expensive application, students were aware of it but found price point discouraging.-+</li> </ul>	Free download however premium option for full access if \$40.99 annually. Additional class features cost \$7.99 per every four months.
EGGZY	Gamification strategy of 'hatching' eggs at a speed equivalent to the	<ul style="list-style-type: none"> <li>Gamification focus timer</li> </ul>	<ul style="list-style-type: none"> <li>Aimed at reducing overall phone usage, therefore is</li> </ul>		\$67.99 annually

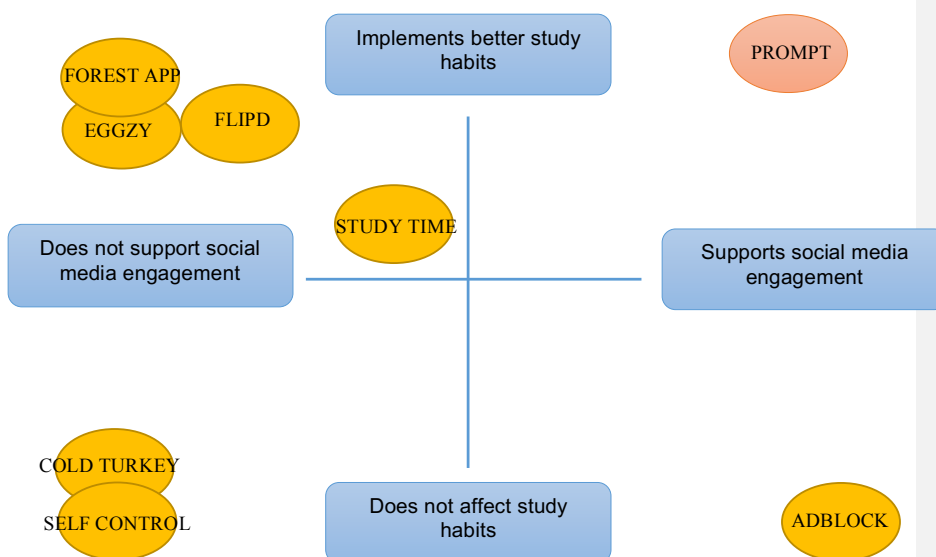
COMPETITOR	APPROACH	FEATURES	LIMITATIONS	CONSUMER FEEDBACK	PRICING
	amount of time spent on focussed task.	<ul style="list-style-type: none"> <li>Provides analytics on focus time for tracking purposes.</li> </ul>	<ul style="list-style-type: none"> <li>not effective for general use of other devices.</li> <li>Does not enforce any permanent or semi-permanent effect for immediate results.</li> </ul>		

### 3.4 Unique Value Proposition

Due to the Prompt application having two necessary target markets, being both the end-consumers and the suppliers, the value proposition for each segment is also different. For the student market, the value lies in the understanding approach that the Prompt application takes, allowing students to maintain their connected daily lifestyles while improving their study practices and providing helpful information. For the academic organisations, the value lies in the development of their education systems and the ability to adapt to current and future technologies, providing the organisations with new opportunities for educating. The overall value for both market segments is the promise to create a positive change with minimal effort on their part, through an easily accessible and user friendly service.

#### 3.4.1 Positioning

The Prompt marketplace position has been displayed on a positioning map in relation to the previously stated competitors. Figure 3.1 illustrates where Prompt fits in the competitive field in terms of the level of engagement it allows intends for its users cross sectioned against the effectiveness of its strategy creating better habits amongst the user.



From the positioning map it can be seen that there is a clear gap in the competitive landscape for a product which effectively works at improving social media habits without disconnecting its users from their virtual networks. Most of the competitor's approaches require users to disengage with their social media platforms to some degree, through either blocking the platforms or gamifying the challenge of staying disconnected with the threat of losing. The Study Time application holds less enforcement on its approach, provide optional time allocations to follow at the user's desire, providing a large degree of control to the user in its level of effectiveness.

### 3.5 Risk Assessment and Mitigation Strategies

<b>IDENTIFIED RISKS/ ISSUES</b>	<b>MITIGATION STRATEGIES</b>
1. <i>Low awareness of issue. Only a small market segment was surveyed, therefore the full extent of the issue cannot be assumed.</i>	<ul style="list-style-type: none"> <li>• Further research should be conducted to gauge the extent of which students are aware of their own habits.</li> <li>• Raise awareness of the issue through media sources such as the ones they are distracted through, provide small promotional tests of what the product aims to offer</li> <li>• Engage in promotional strategies around university campuses.</li> </ul>
2. <i>User perception of problem and attitude towards solving problem does not align with target market profile</i>	<ul style="list-style-type: none"> <li>• Work at developing consumer profiles and strategies to target smaller segments accordingly</li> <li>• Build customer relations</li> <li>• Communicate zero investment risk and benefits</li> <li>• Heavy promotional material on problem</li> <li>• Promotional material may include successful experiences from prototyping and test stages</li> </ul>
3. <i>Cost and value perception</i>	<ul style="list-style-type: none"> <li>• Offer a trial basis to lower investment risk.</li> <li>• Extensive prototyping and testing to provide answers for any concerns as well as to show proven results.</li> </ul>

#### 4. *Return on investment*

- Work at continuously developing product to constantly adhere to the needs of market
- Provide additional benefits
- Request routine feedback on product.
- Maintain strong customer relations with target market.

## **4.0 Product Design**

### **4.1 Service Design and Justification**

#### **4.1.1 Minimum Viable Product**

The success of the end product is reliant on the features which are present and the benefits this provides the end consumers. To assure a viable product which maintains success in the smoker the end solution must ultimately provide consumers with a noticeable change in habits towards their academic studies and social media platforms. Furthermore, this change should be communicated through to the academic organisations through a positive increase in engagement with academic studies. To attain this success level, the following features have been outlined with justifications.

#### **4.1.2 Features and Details**

##### User Accounts

User accounts are a basic feature which will allow for a catered experience. The ability to connect accounts across multiple devices will encourage increased engagement with the product with ease.

- User accounts allow users to log in through an email and password so as to maintain their settings.
- Through creating accounts, the app can sync across multiple devices where the application is active.
- Users can save multiple setting options depending on their course of study and what they require to see.



- Material found through the prompt channel on social media platforms can be saved to collections to review later. This will also help develop the recommendation algorithm for Prompt to cater the product most effectively to the user.

### Analytics

Analytical tools are vital in continuous growth of the product, analytics from engagement will be communicated to both the user and the software developers to ensure the product is achieving the desired result. Through discussions with students it was found that analytics were an important feature which provided the user with an understanding and control over their behaviour.

- Analytic tools to show the users social media habits and track their behaviors will be incorporated for both user and developer benefit.
- Analytics will cover how long a user is on social media platforms, which platforms they are most active on and how often they are active on them.
- Through the use of analytics, a goal system can be put in place and monitored accordingly.

### Customization

The ability to customize an experience was found to be important as students found experiences with platforms too aggressive or too soft, through providing this, students can further cater their experience to their preference.

- Users can customize the settings to be most applicable to what they require.
- Customizable options would include:
  - The social media platforms that changes are made on, student could select the most necessary or just a singular one they need.
  - The material that is recommended to the student: students can select the topics they are interested in that they would like to be shown, these may be relevant to their course of study or other.
  - The strength of approach: students may like gentle reminders or subtle changes to their platforms, or they may choose an aggressive approach of continual reminders.
  - The type of reminders: students may want time reminders of how long they are on their social media platform, material reminders to encourage study or other.

### Organisation

Organisations was also a valuable feature which allowed users to control their own experience with the service.

- Users can organise their preferred settings as well as save any material they discovered using the Prompt application

### Feedback/ Support Channels

To ensure positive user engagement a communication channel must be provided which will help maintain positive customer relations.

- Feedback and support channels available through the application so users can address any questions or concerns.

### Recommendation Algorithm

The user experience is reliant on receiving engaging material provided through the capabilities of a recommendation algorithm which caters material to the preferences of the user. This vital feature is the point of difference and primary unique value of the service.

- System that uses artificial intelligence to recommend new material for students to explore relevant to their selected interests.
- The AI will effectively monitor the student's interests and adjust accordingly.
- Recommendations will be inclusive of new material to explore as well as reminders which displays the time spent on any allocated platform. Figure 4.1 displays an example of the changes made to Facebook using the Prompt application.

### Academic Channel

The ability to provide material based on the user's academic studies creates a level of involvement from the academic organization making this a valuable feature to incorporate in the service,

- Users will be able to receive the material their educator posts via their academic platform. This material will appear as reminders throughout the user's social media newsfeeds, and will be displayed as quotes or images to attract attention to the topic. This material will also be used to further recommend related material.

Displayed below in Figure 4.1 is an example of the changes a user would see in their social media experience; providing material catered to the user's education to Prompt them to resume their academic task.

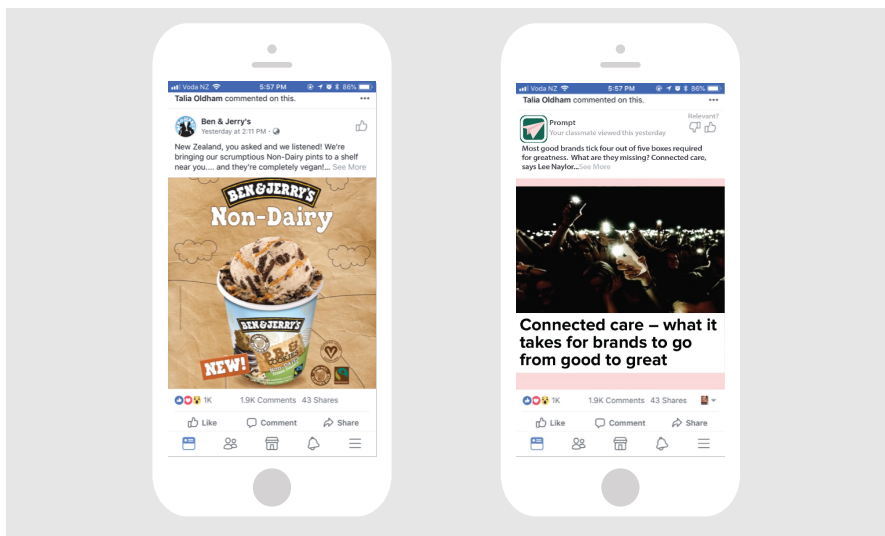


Figure 4.1 Example of changed display on social platform

## 5.0 Resources

### 5.1 Required Resources

Provided below is an outline of the resource requirements which will be instrumental in the development of the proposed solution. The decided set of skills and resource teams have been developed from the discussed points provided by Ascendle (2019). The required skills have been summarised by what the general skill is, what this entails and when these skills should be implemented in the development and commercialisation of the Prompt product. Partners required for the success of the Prompt application have been listed according to the parental company with a summary of what this is inclusive of and why they have been stated. Further information on the technologies listed can be found in *Chapter 1.2 Details on Technology*,

### 5.1.1 Required Skills

<b>SKILL</b>	<b>STAGE OF DEVELOPMENT</b>	<b>JUSTIFICATION</b>
<i>Research Development</i>	Required for prototyping and testing of product before launch.	<ul style="list-style-type: none"> <li>• Data expertise skills will be required so the results of the application can be monitored.</li> <li>• Results will provide insight on required development as well as opportunities for development.</li> </ul>
	Research conducted in future development processes.	
<i>Software Development</i>	Integral in the development of Prompt application.	<ul style="list-style-type: none"> <li>• Cross platform development skills will ensure application works consistently across all devices.</li> <li>• Modern coding language required to ensure an ease in future development stages.</li> </ul>
	Will be a continuous skill in the maintenance and further development of platform.	
<i>Design</i>	Required for initial design of Prompt interface.	<ul style="list-style-type: none"> <li>• Design should provide a smooth delivery experience for the end user.</li> <li>• Design will provide a user friendly experience with though intuitive design.</li> <li>• The end design will engage the user and encourage continued use.</li> </ul>
	Design will be rediscussed upon possible development.	
<i>Marketing</i>	Required in the lead up and launch of application	<ul style="list-style-type: none"> <li>• Marketing will be required for approaching target market and creating brand product awareness</li> <li>• Marketing to engage with market.</li> </ul>
<i>Sales</i>	Needed on regular basis throughout the expansion of client base.	<ul style="list-style-type: none"> <li>• Sales team will be in communication with clients and accounts.</li> <li>• Will create new accounts.</li> </ul>
<i>Customer Service</i>	Required after launch of product.	<ul style="list-style-type: none"> <li>• To address concerns or questions.</li> <li>• Communicate these pints to main development team.</li> </ul>
<i>Accounting and Legal</i>	Required in setting up and maintaining business/ product sales	<ul style="list-style-type: none"> <li>• Assures compliance and correct management for continuation of service.</li> </ul>

### 5.1.2 Required Partners

<b>PARTNER/ BUSINESS</b>	<b>WHO THEY ARE</b>	<b>WHY</b>
<i>Facebook</i>	The Facebook brand is inclusive of Facebook, Messenger, Instagram and WhatsApp making it a key project partner to work alongside.	Facebook holds ownership over the largest quantity of platforms and thus provide access to a range of platforms allowing for an expanse in development of the product.  Working alongside them as a key partner may provide experienced software development teams and the aforementioned skills.
<i>Providence Equity Partners</i>	Providence Equity Partners are the owners of the Blackboard academic platform.	The solution that has been conceptualised centres around channel academic material from. The academic platform to social platforms, Blackboard holds one of the largest academic audiences and thus provide access to both the platform algorithm as well as the supplier target market.
<i>Snap Inc.</i>	Snap Inc. are the developers of the Snapchat platform.	Snapchat was also a highly engaged with platform and thus the success of the end solution would require access to the Snapchat algorithm.
<i>Google</i>	Google are the owners of YouTube.	Working as partner will allow for easier development of algorithms which may alter the social media experience for users. YouTube is a highly used platform amongst end consumer and thus would be vital in including in service.
<i>Academic Organisations</i>	Academic Organisations is a broad term encompassing the universities around New Zealand, however the main partner for initial product development is Victoria University of Wellington.	Marketing of product to end consumers. Main influences outside of marketing mix.

## 5.2 Cost Assessment and Funding

### 5.2.1 Cost Assessment

Due to the preliminary stage of this report, detailed financial forecasting cannot be provided, however an estimated costs assessment has been provided.

Costs for the development and production of a new application ranges depending on the complexity involved, basic costs begging at \$25,000 whereas more complex applications range upwards of \$70,000 (Cleveroad, 2019). It can be assumed that the proposed product falls under the category of higher complexity due to its required involvement of larger platforms, and requirement for an algorithm which recommends material catered to an individual's academic needs.

To further determine the potential expenditures of the app development process, the costs can be assessed from an hourly perspective. Hourly rates for app development in Australia are estimated to start at a rate of \$35 per hour reaching upwards to \$110 an hour (Cleveroad, 2019), again it can be assumed the complexity required for this app development and the skills outlined in section 5.1.1 *Required Skills* would demand a large skill set and experience. Standard application development teams are comprised of 4 developers, equating to an expected monthly expenditure of \$35,000 which may be required for anywhere between a 4-6-month period depending on the challenges faced (Savvy, 2015). Using this information, the expected costs for initial development of the application can be assumed to fall between the range of \$140,000 and \$210,000.

In addition to this are the costs outside of the software development process which include legal fees, marketing costs and customer relations. The cost of marketing promotions can rapidly accumulate, however lower cost options focus on creating an online presence and using internet channels to reach the target market (Intuit Quickbooks, 2019). An effective and appropriate medium for the Prompt service would be channelling advertisements through social media platforms as it immediately targets the end consumers and is an opportunity to display the product through example material. Further marketing promotions that were previously outlined include displays at academic organisations and direct communications with the target market. This more extensive approach would require further investment into the marketing strategies to cover costs for the both the time required for face to face advertisements and the print material handed out. Estimated costs begin at \$1000 a month.

### 5.2.2 Investment Sources

As previously established through the review of stakeholders and key partners in section 1.3 *Key Stakeholder* and section 5.1.2 *Partners*, there is a large expanse of potential investor sources. Additionally, further investors should be considered from educational fields who may have interest in the topic of the effect of technology in the learning environment.

From the interviews conducted with university staff and representatives from Victoria University it is viable to consider the academic organisation as an interested investor. However, restrictions on the research conducted so far meant discussions with external organisations such as Facebook to gauge their level of interest were not possible. While collaboration with larger companies such as Facebook would be highly beneficial and potentially expand the possibilities of the design, their involvement cannot be assumed and thus must not be depended on. The strategy of joint venture partnership would be optimal in creating a central alliance with a shared goal of development and commercialisation.

Other sources of investment to consider are opportunities for obtaining sponsorship from companies whose values align with the Prompt brand.

### 5.3 Return on Investment

Two avenues have been determined as possible ventures for ensuring return on investment. The most immediate source for returns would derive from the annual costs charged to academic organisations for the use of the Prompt service, the second potential source of returns is from the costs accumulated from charging catered advertisements which benefit other businesses.

#### Academic Organisations

The annual fees charged towards academic organisations who choose to adopt the Prompt application into their education system will act as a significant contributor to the return of investment. The annual cost charged for hosting the service will need to be determined, pricing will be justified against the current services that the university supplies as free services to their students such as Blackboard, Lynda subscriptions and other educational programs.

#### Advertisement Material

Users of the Prompt application will be provided with material pushed through by their academic platform in addition to material sourced through a developed algorithm which caters material to the user's academic preferences. The material that is presented will not be restricted to purely reading material, aiming to provide a wide range of learning material such as videos, events, news and more. This provides an opportunity to source revenue from events and platforms who feel their material is beneficial to a student and relevant to their academic interests.

The current cost for advertisements to be displayed through the Facebook platform is determined on a cost per click (CPC) basis, as of 2018 the average CPC is \$1.86 although this ranges widely between industry and can vary in price depending on ad quality and competition (FitSmallBusiness, 2018). As advertisements will be displayed using social media sites this price range provides a sufficient ROI estimation figure across all platforms.

## **6.0 Future Recommendations and Steps for Development**

Future steps to be taken in the process of developing this product entail further research which will help determine the necessity and feasibility of each of the desired features. Furthermore, extensive research must be done for developing an algorithm which is capable of providing the recommended material through the Prompt channel conceptualised. This research will be used to understand the possibilities and the limitations of current technology. The findings from this will be central in developing prototypes and conducting field tests to assess the viability of the final solution.

From this the recommended path for commercialisation focuses on developing pitches for approaching possible partners which are vital for both the design of the end product and the funding's to produce it.

This report concludes the need for new strategies for embracing social media into the learning environment as current solutions aim at reducing overall social media usage without any proven success. The suggested design features for the Prompt application will work at providing a tool which challenges current attitudes towards social media usage, emphasizing the many beneficial features present and possible benefits to be gained in the educational environment. The Prompt application is designed to achieve the needs and wants of both students and educators alike, with the goal of maintaining the ability to appeal to new needs and wants as the landscape of technology develops further. This stance on development and providing a service focused on the understanding the user



and their experience is ultimately what differentiates the Prompt business structure from any other in its field.

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## Chapter Nine: Conclusions

The landscape of education is changing as technology continues to develop at a rapid state, its advancements are altering the way individuals deliver and receive education, encompassing new strategies and mediums. The effect of technology in the learning environment has and will continue to benefit and advance the capabilities of learning, expanding both the scope and speed of its reach. However, as technology continues to become more accessible and further implement its requirement into daily tasks, the escapism opportunity it provides and encourages through social media platforms must be acknowledged. Ultimately, it can be seen that the important role that technology and social media has in the learning environment and daily lives continues to grow and the consequences of this can be seen in the unfavorable habits it has created amongst students.

The purpose of this project report was to conduct an investigation into the relationship between students and their social media platforms to assess their levels of engagement and motivations behind their engagement. The research conducted produced the inspiration of the Prompt application product proposal, which is intended as a solution for balancing students' academic and social activities, ultimately aiming at producing positive habits and a greater sense of behavior awareness to improve academic engagement. Following the research and resulting product concept, a strategic business case was developed which discusses the recommended approach for development and implementation of the Prompt product.

### Implications of Research

The core findings gained from the research analysis indicated the proposal for the Prompt service is not without credibility. The readability of the Prompt service was measured against the assumptions and research questions outlined upon commencing this project. The varying levels of confirmation provided direction for further exploration in the continuation of product investigation.

The most substantial of findings in providing direction was understanding the degree to which students depended on their social media platforms for academic purposes. Often students engaged in the platforms for collaborative work, discussing progress with peers in the form of class pages, group chats and private conversations providing varying levels of

formality. Furthermore, it was found that a range of platforms were used which was highly dependent on the academic studies of an individual, with visual platforms being prominent in use amongst art students. However, the unique approach to using these platforms was of no encouragement from social media platforms, as the design of these platforms ultimately is not catered to the educational environment. Regardless of a need or want for the Prompt product by the intended target market, findings indicated a definitive space for developing social media platforms to more effectively cater to this use.

Conclusively, findings revealed both a need and want for the proposed product, as this desire was unanimous amongst both students and academics to develop the educational system and push the boundaries of the learning experience to function in today technology consumed environment.

#### Limitations and Future Research

The time frame and other limitations reduced the ability to conduct extensive research, preventing ability to reveal and assess challenges which may affect the commercialisation of the Prompt service.

Further research is necessary to accurately determine what features the Prompt application can feasibly provide. Essential steps must be taken in research and testing of the Prompt service, whereby the effects of small changes in the social media environment can be studied and analyzed. Prototyping of the product would further benefit research, through this step the required technology can be fully explored to maximise opportunities and understand limitations. This direction is required so as to effectively produce a product which targets the key issues. However, the true benefits of the proposed product will remain unknown without full implementation.

#### Growing Forward

Reflecting on the process taken, the previous steps consisting of literature review, qualitative research and quantitative research have effectively highlighted a key issue concerning the relationship between the academic and social behaviours of students. The resulting business analysis has validated a gap in the market for a product which embraces social media into the educational systems and upon proper development of this product, justifies market penetration through the unanimous desire expressed by the target markets.

As this research has developed new avenues for further exploration have been revealed, therefore moving forwards from this point a more extensive literature review should be conducted on these new ideas, findings from this will be used to help guide the future recommended research. Upon the finality of a more comprehensive research analysis key partners and investors should be contacted to commence the commercialisation of Prompt.

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## Appendices

### Appendix A – Survey

#### *Participant Information:*

Age: (between 17 and 24)

Gender:

University:

Major:

Years of study:

#### *Main Questionnaire:*

1. Please Indicate how active you are on the following platforms; how often do you use this platform? Have you ever used this platform for course work?
  - Platforms included: Pinterest, Snapchat, Instagram, Messenger, Facebook, Twitter, YouTube, WhatsApp, Flickr.
2. Please rank your reasoning for using social media:
  - To talk with friends/family
  - Media/ news updates
  - Staying up to date with trends
  - To see updates in friends'/ families lives
3. How often do you use social media for study purposes/ course work?
  - Daily
  - Weekly
  - Never
4. Please rate these statements from 1 being strongly agree to 10 being strongly disagree
  - I would like to be able to remain on task while studying
  - I feel an anxiety when removed from my social networks
  - When disconnected from my online networks I am curious about what is happening and what I am missing
  - I often become distracted by my phone / laptop providing notifications/ updates
  - My phone/ laptop often provides notifications from social media platforms
  - I feel guilty for spending too much time on social media when I have tasks to complete
  - My phone/ laptop is required when studying
  - I would like to spend less time on social media
  - I feel a need to respond to notifications on my phone/ laptop as soon as I can
  - I actively participate in online networks and conversations
5. In a scenario where you are studying please select the most applicable

- I am only ever distracted when notifications appear otherwise I remain on task
  - I will find reasons to be on social media regardless of notifications
  - I turn my notifications off so I stays remain on task
6. Have you ever used applications to try and reduce your social media use?
- Yes
  - No
7. Did you find these applications intended to reduce social media usage helpful?
- Yes
  - No
8. Why? Please elaborate:
9. What are some of the applications you have used for reducing your social media usage?
10. What university supplied academic platforms do you currently use? E.g Blackbaord, Moodle.
11. Do you prefer to use a mobile application or laptop when accessing the university platform?
- Mobile app
  - Laptop
  - Both
12. Please state the primary academic platform you use that is provided through your university
13. For the platform you primarily use for your university course work; please rate the following statements from 1 being strongly disagree to 10 being strongly agree.
- I find the platform user friendly
  - I participate in conversations with my classmates via this platform
  - This platform is helpful for my course of study
  - The university platform provides all necessary tools I need
  - This platform provides helpful material for my course work
  - It is easy to check updates for my course
  - I have no issue receiving updates
  - I prefer to use other methods to talk with my classmates
  - I prefer to use other methods to read material relevant to my course of study
14. Please rank the features of your university platform in order of importance
- Access to course material
  - Class discussions
  - Networking opportunities
  - Information and news for events outside of your course work
  - Aesthetically pleasing
  - Contact (between classmates and academics)

- Update notification system

15. Please rank the features of your university platforms in order of current performance

- Access to course material
- Class discussions
- Networking opportunities
- Information and news for events outside of your course work
- Aesthetically pleasing
- Contact (between classmates and academics)
- Update notification system

## **Appendix B: Question Schedule for Student Participants**

### ***Background information:***

- What do you study?
- And for how long have you studied this?

### ***Academic platforms:***

- What academic platform(s) do you use?
- Are there multiple?
- What are their uses?
- What was your initial experience with this (these) platforms?
- Was there a particular favorite?
- Did these ever work in partnership with each other?
- Could you further elaborate on the features present on these platforms?
- How user friendly did you find these platforms?

### ***Class discussions:***

- How helpful do you find these academic platforms for class discussions and communication purposes?
- Have you ever participated in the class discussion pages?
- Have you ever accessed the class discussion pages to see others questions/discussions?
- Have you found this feature to be helpful?

### ***Do you use any platforms outside of the ones supplied by the university?***

- What are these?
- What is their primary use?
- How helpful/ necessary have you found these?
- Why do you feel they have been helpful/necessary?

### ***Social media attitudes:***

- How would you describe your relationship with social media?
- Why do you think social media is such a prominent part of individuals daily lives?
- What impact do you feel social media has had in your life?
- What do you feel is the most distracting aspect of social media?
- How do you prompt yourself to go back to studying?
- Since becoming a student at university how else have you found social media to be valuable?

- Students indicated in a recent survey they would like to reduce their social media usage; why do you think this might be?
- Do you feel similar to this?

***Social media and academic use:***

- A large majority indicated they also use social media platforms for study purposes - How do you think social media has helped students for their study?
- Why do you think students choose to bring social media into their study processes?
- How often do you find yourself using social media for study purposes?
- How often do you feel yourself being distracted by social media during your academic environments/ study periods?
- Where do you feel you are the most distracted?
- What do you think is your main reason for being distracted?
- What do you feel is the most distracting aspect of social media?
- Do you view this as an issue?
- Have you made efforts to reduce this? What would these be?
- Are you aware of your habits as you encounter them?
- How do you prompt yourself to go back to studying?
- How would you feel if social media enabled a more academic control – through providing prompts of readings and other academic material in replace of current advertisements?

## **Appendix C: Question schedule for University Representatives**

### ***Background information:***

- Description of job title
- Explanation of involvement with university platform

### ***Overall usage of technology:***

- How do you feel it has effected the learning environment?
- What negative and positive effects have you seen?
- What troubles have you personally encountered/ noticed with its use in the academic environment?

### ***Blackboard platform:***

- To your understanding what are the best features provided by Blackboard?
- Do you think it's purpose is being achieved effectively?
- What features do you think are still required to make it more effective?
- Have you encountered any issues that have effected its performance?
- What are some of the solutions that have been implemented to solve these issues?
- What are some of the changes that have been made?
- Why were these changes made?
- How successful were these changes?
- Why is Blackboard inconsistent across the different academic courses?
- Are there strategies to change this or lessen this?

### ***Discussion and interaction:***

- A common response from my student interviews is that it fails to meet the interactive needs between students, could you explain what communication possibilities are currently available?
- Why are discussion boards not available on all pages?
- Have any developments been made to make discussion boards more super friendly?
- Some lecturers have incorporated the use of social media into the classroom, how do you think this has/ has not been effective?
- Do you think the use of discussion boards has any benefits over the sue of social media?

### ***Other platforms:***

- What are the other academic platforms commonly used?
- For what reason was Blackboard selected and remains in use?
- What benefits do these other platforms provide? ‘
- What is your experience with them?
- Have you found issues with these platforms? What are they?

## Appendix D: Example information sheet



### Investigation to Develop a Commercial Application to Reduce Online Distractions Amongst Students

#### INFORMATION SHEET FOR STUDENT INTERVIEW PARTICIPANTS

You are invited to take part in this research. Please read this information before deciding whether or not to take part. If you decide to participate, thank you. If you decide not to participate, thank you for considering this request.

#### **Who am I?**

My name is Sarah Fitton and I am a Masters student in Innovation and Commercialisation at Victoria University of Wellington. This research project is work towards my Master thesis.

#### **What is the aim of the project?**

The purpose of this research is to investigate the need for an application to reduce the online distractions students experience while maintaining their academic and social experience.

This research has been approved by the Victoria University of Wellington Human Ethics Committee - *Reference Number 0000026368*

#### **How can you help?**

You have been invited to participate because I believe your input, experience and view are valuable in the development of a potential commercial solution for current social media engagement while studying. You have been selected due to your age and student status and I believe your experience may help with the development of a commercially viable product and your view will help identify issues I may face. If you agree to take part, I will interview you at a convenient location. I will ask you questions concerning your involvement with social media networks and your feelings towards study. The interview will take approximately 30 minutes. I will audio record the interview with your permission and transcribe it later. You can choose to not answer any question or stop the interview at any time, without giving a reason. You can withdraw from the study by contacting me at any time within a week of receiving the final transcript. If you withdraw, the information you provided will be destroyed or returned to you.



**What will happen to the information you give?**

This research is confidential. This means that I will be aware of your identity but the research data will be combined and your identity will not be revealed in any reports, presentations, or public documentation. However, you should be aware that in small projects your identity might be obvious to others in your community. You will not be named in the final report but your organisation will be named (provided you have the authority to agree to this on behalf of the organisation).

Only my supervisors, class and I will read the notes or transcript of the interview with any identifying information redacted. The interview transcripts, summaries and any recordings will be kept securely and destroyed upon completion of the final thesis report, this will be within two years. Although your identity will remain confidential; direct quotes may be taken from the conversations that take place.

**What will the project produce?**

The information from my research will be used in my Masters report which may potentially produce a commercial product.

**If you accept this invitation, what are your rights as a research participant?**

You do not have to accept this invitation if you don't want to. If you do decide to participate, you have the right to:

- choose not to answer any question;
- ask for the recorder to be turned off at any time during the interview;
- withdraw from the study within a week of receiving the transcript;
- ask any questions about the study at any time;
- receive a copy of your interview recording;
- receive a copy of your interview transcript;
- be able to read any reports of this research by emailing the researcher to request a copy.

**If you have any questions or problems, who can you contact?**

If you have any questions, either now or in the future, please feel free to contact me:

**Student:**

Name: Sarah Fitton  
fittonsara@myvuw.ac.nz

**Supervisor:**

Name: Anne Macaskill  
Role: Researcher and Teacher  
School: School of Psychology  
Phone: 04 463 9464  
anne.macaskill@vuw.ac.nz

**Human Ethics Committee information**

If you have any concerns about the ethical conduct of the research you may contact the Victoria University HEC Convenor: Dr Judith Loveridge. Email [hec@vuw.ac.nz](mailto:hec@vuw.ac.nz) or telephone +64-4-463 6028.

## Appendix E: Example consent form



### Investigation to Develop a Commercial Application to Reduce Online Distractions Amongst Students

#### CONSENT TO INTERVIEW

This consent form will be held for two years.

Researcher: Sarah Fitton, Masters of Innovation and Commercialisation, Victoria University of Wellington.

- I have read the Information Sheet and the project has been explained to me. My questions have been answered to my satisfaction. I understand that I can ask further questions at any time.
- I agree to take part in an audio recorded interview.

I understand that:

- I may withdraw from this study at any point until within the week of receiving a transcript of the interview, and any information that I have provided will be returned to me or destroyed.
- The identifiable information will be transcribed to make my participation unidentifiable
- Any information I provide may be shared within a final report through direct quotes though my identify will remain confidential to the researcher and their supervisor.
- I understand that the results will be used for a Masters report
- My name will not be used in reports, nor will any information that would identify me.

- I would like a copy of the transcript of my interview: Yes ☐ No ☐
- I would like to receive a copy of the final report and have added my email address below. Yes ☐ No ☐

Signature of participant: \_\_\_\_\_

Name of participant: \_\_\_\_\_

Date: \_\_\_\_\_

Contact details: \_\_\_\_\_