

**UNIVERSITY OF KWAZULU-NATAL**

**EXPLORING THE ATTITUDES AND BEHAVIOUR OF GENERATION Z STUDENTS  
TOWARDS BRANDED MOBILE APPLICATIONS**

**By**

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## **ABSTRACT**

With the increasing mobile activity of the Generation Z market (those born after 1994) in South Africa, marketers' interest in this social group is rising. This research attempts to uncover the relatively unknown attitudes and behaviour of the youth market in South Africa around branded mobile applications. The research problem focuses on the academic literature gap of the latest group of consumers: Generation Z. Previous studies on mobile marketing have focused on Generation X and Generation Y. Furthermore, only quantitative studies have been performed on the youth market and mobile applications in South Africa. This study is based on the theoretical framework of the Unified Theory of Acceptance and Use of Technology Model 2. The study employed a qualitative framework with focus groups as the data collection method. The focus groups were stratified on gender and the participants ranged from 18-21 years old. The study was conducted at a private tertiary institution in Durban, South Africa. The findings indicate that the participants had both positive and negative attitudes towards branded mobile applications, however there were more positive than negative attitudes. In terms of behaviour, on average, participants had between 7-10 apps on their phone but only used 4-6 apps every day. The findings revealed the most popular branded mobile application as Whatsapp. Furthermore, social influences, facilitating conditions, performance expectancy, effort expectancy, hedonic motivation, price value and habit are all influencers of branded mobile application behaviour. The results identify age, gender and experience as moderating factors related to the attitudes and behaviour of Generation Z students with mobile apps. As a recommendation, the issue of privacy and its effect on mobile app adoption is a factor to be researched in the future for academics. The research also provides recommendations for marketers and app developers such as incorporating permission marketing into mobile applications.

## DECLARATION

I, SHANA MARY AXCELL declare that:

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27 November 2017

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## **LIST OF ACRONYMS**

<b><u>ACRONYMS</u></b>	<b><u>STANDS FOR</u></b>
App	Application
M-marketing	Mobile Marketing
UTAUT	Unified Theory of Acceptance and Use of Technology Model
UTAUT2	Unified Theory of Acceptance and Use of Technology Model 2
TAM	Technology Acceptance Model
TV	Television

# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 INTRODUCTION**

The average Generation Z student multitasks between at least five technological devices in a day, whilst spending 41% of their time in front of a screen (Munchbach, 2015, p.1). Generation Z (those born after 1994) is the most recent target market that many South African organisations are starting to focus their marketing efforts on due to the fact that “this group of consumers spends the most average hours on their smartphone interacting on apps when compared to other age groups” (Potgieter, 2015, p.2). Furthermore, in South Africa the under-24 year old market make up approximately 49% of the population, (Statistics South Africa, 2016, pp. 18-19), thereby proving the importance of this research on the youth’s attitudes and behaviour towards mobile applications. With the increasing use of mobile marketing and specifically mobile applications (due to the popularity of smartphones), there is a need to explore the attitudes and behaviour of Generation Z towards this type of marketing.

### **1.2 STATEMENT OF THE PROBLEM**

The existing academic knowledge on mobile marketing is very much limited to previous generations such as Generation X and Millennials (Aksoy, Buoye, Aksoy, Larivière & Keiningham, 2013; Beneke, Cumming, Stevens & Versfeld, 2010; Bhave, Jain & Roy, 2013). The only existing research in South Africa on the Generation Z market and mobile applications is of a quantitative nature (e.g. Potgieter, 2015), and thus there was a need for a qualitative study to further explore the reasons behind the attitudes and behaviour of this market with branded mobile applications. Generation Z is the future consumer for current brands and thus there is an urgent need for research on this market, in particular their usage with mobile applications (apps) as a mobile marketing tool. Smartphones, which have been the reason for popularity of mobile applications, are the primary channel to reach the current consumer, (Persuad & Azhar, 2012, p. 437) and thus there is a compelling need to research the attitudes and behaviour of Generation Z towards branded mobile applications.

### 1.3 RESEARCH QUESTION AND OBJECTIVES

The research question asked: What are the attitudes and behaviour of Generation Z students towards branded mobile applications? The objectives of this study were:

1. To explore the attitudes of Generation Z students towards mobile applications in South Africa, and what factors affect these attitudes
2. To ascertain the behaviour of Generation Z students towards mobile applications and what factors affect these behaviours
3. To ascertain the reasons behind Generation Z students downloading mobile applications in South Africa
4. To explore the *social influences* impacting Generation Z's attitudes and behaviour towards mobile applications
5. To explore the *facilitating conditions* impacting on the attitudes of Generation Z students towards mobile applications
6. To ascertain the extent of *performance expectancy* as a determinant of intention or usage of mobile branded applications amongst Generation Z students
7. To ascertain the extent of *effort expectancy* as a determinant of intention or usage of mobile branded applications amongst Generation Z students
8. To explore the role of *moderating factors* such as gender, age, experience and voluntariness of use towards mobile branded applications
9. To ascertain the extent of *hedonic motivation, price value and habit* as important roles in the attitudes and behaviour of Generation Z students towards mobile applications.
10. To identify any other conditions that may affect the attitudes and behaviour of Generation Z students towards mobile branded applications.

## **1.4 RESEARCH METHODOLOGY**

This study focuses on exploring the relatively unknown Generation Z market in South Africa. Previous studies on this market in South Africa were of a quantitative nature, and thus this study focused on the qualitative aspect of gathering information on the reasons behind app behaviour amongst the Generation Z market. Focus groups were chosen as the most suitable data collection method and a sample of sixty-one students was selected. The target population was 18-21 year olds, chosen via a stratified random sampling method from a private tertiary institution in Durban. The sample was divided into gender strata with 50% of the sample being drawn randomly from each stratum. Thematic analysis was conducted. The quality control of the research was measured according to its credibility, dependability, confirmability and transferability. Ethical clearance was granted from the University of KwaZulu-Natal Research Office.

## **1.5 CONTRIBUTION**

This research contributes to the existing academic material on technology acceptance amongst users. In particular, this research extends the Unified Theory of Acceptance and Use of Technology Model 2, adding privacy as another determinant of technology acceptance amongst users. Furthermore, this study assists marketers, researchers and app developers with practical guidelines on targeting the Generation Z market through branded mobile applications.

## **1.6 OVERVIEW**

Chapter Two provides a background on the existing literature on mobile marketing, mobile applications and Generation Z. It also provides details on the theoretical framework used for this study – The Unified Theory of Acceptance and Use of Technology Model 2 (UTAUT2). It further shows how the determinants of the UTAUT2 model are aligned with the objectives of the study and previous research papers that have also used the UTAUT2 model in the mobile sector.

Chapter Three discusses the research methodology used for the study. It highlights the suitability of a qualitative study using focus groups as the chosen research design for this study. Chapter Three also looks at the research problem, in that there is a gap in current academic knowledge of the attitudes and behaviour of Generation Z students towards branded mobile applications in South Africa. The sample size is 61 students ranging from the ages of 18-21 years old. The study was conducted at a private tertiary institution in Durban, South Africa. Data analysis and quality control are also discussed in Chapter Three, with a special focus on using multiple sources of evidence including moderator's notes, a dictaphone app and a video recording.

Chapter Four discusses the findings of the focus groups sessions, based on the objectives of the study from Chapter Three and the UTAUT2 model discussed in Chapter Two. This chapter examines both the positive and negative attitudes towards branded mobile applications and the factors that affect these. It also looks at the behaviour of the participants towards apps, including the most popular apps downloaded and how many are used everyday. The chapter then focuses on the findings of the seven constructs of the UTAUT2 model: performance expectancy; effort expectancy; social influences; facilitating conditions; hedonic motivation; price value and habit. The resulting effects of age, gender and experience on mobile app attitudes and behaviour are also discussed in this chapter. Finally, Chapter Four reveals additional factors not listed in the UTAUT2 model that impact technology usage.

Chapter Five, the final chapter, discusses the conclusions and recommendations of the study based on the findings from Chapter Four. The discussion draws conclusions on each of the objectives of the study. The recommendations provided (based on the findings) are aimed at three groups: marketers of apps, app developers and academics researching apps and Generation Z. The study adds privacy as a new influence to the UTAUT2 model.

## **1.7 CONCLUSION**

This chapter introduces the study. The problem statement indicated a ‘gap’ in the research on qualitative feedback from the South African Generation Z student market towards branded mobile applications. The purpose of the research was explained as exploring the attitudes and behaviour of Generation Z students towards branded mobile applications, making use of focus groups as the data collection method for the study. The research contributions were highlighted as assisting marketers and app developers with their mobile app development, as well as recommending future academic research into the Generation Z market. The next chapter discusses the existing literature on mobile marketing, mobile applications and Generation Z, as well as the theoretical framework that will be used for the study.

## **CHAPTER 2**

# **MOBILE MARKETING, MOBILE APPLICATIONS, GENERATION Z AND A THEORETICAL FRAMEWORK**

### **2.1 INTRODUCTION**

This chapter explores the existing literature on mobile marketing, mobile applications and Generation Z. This chapter also covers the theoretical framework, the Unified Theory of Acceptance and Use of Technology Model 2. Beneke *et al.*, (2010, p. 79) describe the mobile environment as “a constantly evolving, dynamic, personal and highly effective channel offering an advantage over any other mediums by offering the right message at the right time to the right person via the right channel”.

### **2.2 MOBILE MARKETING**

Scharl, Dickinger and Murphy (2005, p. 165) describe mobile marketing as “using a wireless medium to provide consumers with time-and-location-sensitive, personalized information that promotes goods, services and ideas, thereby benefitting all stakeholders”. Mobile technological devices (including the cellphone, two-way radios, baby-crib monitors, global positioning system’s (GPS) and wireless networking systems) ensure that day-to-day activities are performed more effectively and efficiently (Balasubramanian, Peterson & Jarvenpaa, 2002, p. 348). Beneke *et al.*, (2010, p. 78) proposed that the mobile industry would succeed due to “the high reach of mobile phones, their low cost and high retention rates”. Bauer, Reichardt, Barnes and Neumann (2005, p. 181) further attributed the popularity of mobile marketing to two factors: the increasing market penetration of mobile phones and the development of high-speed wireless network technologies. As argued by Cant and van Heerden (2013, p. 399), mobile marketing differs from other types of marketing communication, “as it often originates with the consumer and it requires the express consent of the consumer to receive further communications”.



In 2016, an estimated 62,9% of the worldwide population was using a cellphone, with 4,61 billion people owning a mobile phone (Statista, 2017, para.2). , By 2019, the number of mobile phone users in the world is expected to pass the five billion mark and, of those users, 2.7 billion will own a smartphone (Statista, 2017, para. 2-3). In South Africa, 85% of the population make use of a mobile phone, with an average of 2,4 cellphones in each household (Mobile Marketing Association of South Africa, 2016). Of the South African population, 86% of Internet users access the Internet via mobile technology, 68% of emails are sent and received from a cellphone and 99% of mobile data users also use the Short Messaging Service (SMS) function (Mobile Marketing Association of South Africa, 2016). In 2009, mobile became the most pervasive mass media in South Africa (Mobile Marketing Association of South Africa, 2016).

The following sections highlight the two models of mobile marketing: push vs. pull, as well as the tools used by mobile marketers. A mobile application is one of the mobile marketing tools that are researched further in this study. Lastly, this section looks at the challenges and benefits of mobile marketing for marketers and consumers.

### **2.2.1 The Two Models of Mobile Marketing**

Beneke *et al.* (2010, p. 77) separate mobile marketing into two models: the push-model and the pull-model campaign. The push model can be explained as “unsolicited communication, initiated by the marketer, and which in turn raises the issue of consumer’s permission and privacy”, whereas the pull model is “information which is requested by and sent to consumers” (Beneke *et al.*, 2010, p. 77). Consumers most value mobile adverts that are helpful, creative, informative and entertaining (Beneke *et al.*, 2010, p. 93). An example of push mobile marketing is spam, explained as unwanted, mass marketing advertisements that disturb the consumer’s environment costing the consumer unnecessary time and money, while damaging the brand’s reputation due to the violation of the consumer’s privacy (Beneke *et al.*, 2010, p. 86). It was found by Beneke *et al.*, (2010, p. 92) that the consumer’s fear of spamming had a negative effect on the consumer’s attitude towards mobile marketing. SMS and

MMS are also regarded as a form of push marketing because the company/brand is forcing the consumer to receive their adverts (Sohn, Schulte & Seegebarth, 2014, p. 33).

Pull-based mobile marketing is where the consumer seeks content and more information from the company, by downloading the branded mobile applications on their smartphone or through adopting and sharing viral marketing (Persaud & Azhar, 2012, p. 438). Pull-based mobile marketing will only be effective if the consumer feels there is value being provided, such as the convenience, flexibility, efficiency and relevancy of the mobile marketing tool (Persaud & Azhar, 2012, p. 438).

The push/pull model of mobile marketing is also referred to as inbound/outbound marketing (Cant & van Heerden, 2013, p. 454). Inbound marketing has the focus of being found by the consumer, for example, by a consumer downloading a mobile branded application. In contrast, outbound marketing has the potential to annoy people by disturbing them at inconvenient times (Cant & van Heerden, 2013, p. 454). Cant and van Heerden (2013, pp. 454-455) suggested the following three components for a successful inbound marketing campaign: quality content, search engine optimization and the use of social media. In the case of mobile marketing, these guidelines could be applied to successful mobile branded applications by having quality content, virtual store optimization and the use of social media within the app and for the app to be found easier by the consumer. Each of these push and pull tools are discussed further in the next section of mobile marketing tools.

### **2.2.2 Mobile Marketing Tools**

One of the earliest mobile marketing (m-marketing) tools used by brands such as Nike, BMW and McDonald's was short message service (SMS) marketing on mobile devices (Bauer *et al.*, 2005, p. 181). As of 2008, 1,5 billion global users received SMS advertisements (Beneke *et al.*, 2010, p. 78). SMS marketing has been proposed as a favourable mobile marketing tool because it is immediate, customized, reliable, direct, automated, discreet, personal and leads to a direct call to action/purchase (Beneke *et al.*, 2010, p. 78). Bhave *et al.*, (2013, p. 63) also propose that SMS

marketing is effective in targeted promotional activities, as well as direct marketing. For the marketer, SMS marketing is a quick and easy tool to set up to target individual customers (Narang, Jain, and Roy, 2012, p. 52). However, Bhave *et al.*, (2013, p. 63) criticize the SMS service because it lacks effective interactivity with the consumer due to its limitation of 160 characters. Another downfall of SMS marketing is that consumers may find it irritating when bombarded with unwanted SMSs, especially from companies or brands that do not interest them (Narang *et al.*, 2012, p. 52). In order to avoid ‘spamming’ the consumer with SMSs, Switzerland enforced strict laws whereby companies are restricted to sending a maximum of two SMSs per month per user, and the messages may not be repeated (Chiem, Arriola, Browers, Gross, Limman, Nguyen, Sembodo, Song & Seal, 2010, p. 51). In South Africa, there is no limitation on the number of SMSs sent by companies to consumers; instead, the law states that the consumer must consent before receiving the SMS and that they can unsubscribe at any time (Protection of Personal Information Act, 2013, p.74).

Similar to SMS, but with the added features of sound and video, the Multimedia Messaging Service (MMS) is another popular mobile marketing tool used in South Africa, as it captures consumers’ attention and interest, which increases their willingness to accept the advertisement (Beneke *et al.*, 2010, p. 79). The MMS increases brand recall and improves purchase intention amongst potential consumers (Bhave *et al.*, 2013, p. 63).

A third mobile marketing tool popular amongst young adults (Generation Y) is QR (Quick Response) codes, which are integrated into traditional media such as magazine articles and online forums (Bhave *et al.*, 2013, p. 64). A QR code can be described as a two-dimensional barcode scanned via a smartphone’s camera with the ability to access a brand’s Uniform Resource Locator (URL) (Narang *et al.*, 2012, p. 53). QR codes are popular due to them hastening the purchase process and the possibility of discounts (Bhave *et al.*, 2013, p. 64). QR codes are more favourable amongst high involvement products such as designer wear and automobiles, where further information is deemed necessary about the purchase, as compared to low involvement products (Narang *et al.*, 2012, p. 60).

Bluetooth is a fourth mobile marketing tool utilized to track individual mobile users, who are then sent messages from advertisers within a certain vicinity, otherwise known as geo-location services (Narang *et al.*, 2012, p. 52). The benefit of Bluetooth advertising is that marketers are able to make their marketing more relevant and specific to the potential consumer (Narang *et al.*, 2012, p. 52). However, the limitations of Bluetooth as a mobile marketing tool for consumers are the lack of privacy and security and the increased usage of battery power (Bhave *et al.*, 2013, p. 64).

The most popular mobile marketing tool being used amongst smartphone users is the branded mobile application (Persaud & Azhar, 2012, p. 419), which is the focus of this study. Bhave *et al.* (2013, p. 64) suggest that mobile applications are downloaded for their usefulness, but also because they provide an emotional connection for the consumer towards the brand. Branded applications are a useful tool for established companies in building the brand and its reputation (Bhave *et al.*, 2013, pp. 64-65). Mobile applications, the focus of this research, are discussed further below in Section 3.2. All of these mobile marketing tools come with benefits and challenges, which is discussed further in the sections that follow.

### **2.2.3 The Benefits of Mobile Marketing**

The mobile channel of marketing offers consumers numerous benefits including, but not limited to, the following: immediacy, customization, automation, reliability, directness, discreetness and a sense of personal attachment (Beneke *et al.*, 2010, p. 78). Bauer *et al.*, (2005, p. 182) suggest additional mobile marketing benefits of ubiquity and location. For the marketing organisation, mobile marketing has many benefits such as interactivity, branding opportunities, timeliness, mass customization, mobility, reachability and direct marketing capabilities (Beneke *et al.*, 2010, p. 78). Mobile marketing is promoted as a ‘marketer’s dream’ by Beneke *et al.*, (2010, p. 78) due to the fact that most consumers keep their mobile phone on them at all times and check them regularly. “Mobile phone users typically have their device with them at all times and may leave it on standby for an average of 14 hours a day” (Bauer *et al.*, 2005, p. 182). Cellphones have no location or time barriers as companies can market

to their potential customers at any time and anywhere in the world, thus making mobile marketing an attractive medium. Another unique benefit of mobile marketing is its ability to personalise marketing messages, as Bauer *et al.*, (2005, p. 181-182) propose that one cellphone is normally only used and owned by one person, thus messages can be tailor-made to that individual. Beneke *et al.*, (2010, p. 93) state, “consumers value mobile messages that are tailored to their preferences and habits, time and location”.

In terms of interactivity, mobile marketing is an effective two-way communication marketing tool because potential consumers can reply to a company instantly (Bauer *et al.*, 2005, p. 182). Furthermore, interactivity is superior to mass communication of traditional media, which is very often ignored by potential consumers (Bauer *et al.*, 2005, p. 182). Therefore, the benefit of interactivity on a mobile phone leads to a powerful one-to-one relationship between the brand and the potential consumer, otherwise referred to as relationship marketing (Beneke *et al.*, 2010, p. 79). Cant and van Heerden (2013, p. 399) suggested “mobile marketing differs from most other forms of marketing communication as it often originates with the consumer and it requires the express consent of the consumer to receive further communications”.

Another benefit of mobile marketing is the invention of geo-location technologies such as Global Positioning System (GPS) and Cell-of-Origin (COO), which allows marketers to locate their consumer and update and personalise their marketing to their current position (Bauer *et al.*, 2005, p. 182). An example of the geo-location services is when a consumer is reminded at the point-of-sale of new product offers or promotions in the store, thereby inducing impulse purchases (Bauer *et al.*, 2005, p. 182). Persaud and Azhar, (2012, p. 437) describe location-based marketing as being “very personal, ubiquitous, highly interactive, and very context-specific”, such that product information and offers can be marketed in a fast manner, allowing consumers to share the content on social networks and make it go viral. The geo-location technologies are becoming a popular aspect of mobile marketing as most consumers carry their mobile phones on them at all times; 91% of the South African population keeps their cellphone within a one meter range 24 hours a day (including sleeping hours) (Beneke *et al.*, 2010, p. 81). The geo-location technology of mobile phones has offered marketers the opportunity of gathering instant marketing research and

developing location-based sales promotions (Bauer *et al.*, 2005, p. 182).

A recent development that has benefitted many mobile marketers is viral marketing. Viral marketing can be defined as an effect that “develops if recipients of advertising messages forward these to further recipients who do not belong to the initial target group of the campaign” (Bauer *et al.*, 2005, p. 182). A message that is received from a friend or from someone that one is familiar with, has been found to have a greater impact on purchases than a message directly from the advertiser (Bauer *et al.*, 2005, p. 182). Bauer *et al.*, (2005, p. 182) proposed that mobile marketing campaigns could enlarge their reach and effectiveness through viral effects.

The major benefit of mobile marketing for both the marketer and the consumer is that it is interactive, thereby providing a two-way relationship. In addition, the geo-location feature of mobile marketing has provided marketers with valuable information on consumers, and consumers more personalised content. Finally, viral marketing has allowed mobile marketing to become more effective. However, these benefits of mobile marketing also come with their challenges, which is discussed in the next section.

#### **2.2.4 The Challenges of Mobile Marketing**

Beneke *et al.*, (2010, p. 78) suggest that there are two major challenges of mobile marketing that frustrate many mobile consumers and that is unsolicited messages from advertisers (known as mobile spam), as well as the issue of invasion of privacy. Beneke *et al.*, (2010, p. 92) state that, “consumers want more control over the access to and use of their personal information and their participation in mobile advertising campaigns”. The less control a consumer has over their private information on their mobile phones, the more negative their attitude is towards mobile advertising (Beneke *et al.*, 2010, pp. 92-93). Invasion of privacy includes the fear of manipulation of data, unwanted tracking of usage patterns and online behaviour, as well as unauthorized data access which makes the mobile consumer feel as if they are being watched by an unknown third party (Beneke *et al.*, 2010, p. 85). Ktoridou, Epaminonda and Kaufmann (2008, p.37) agreed with privacy being a challenge of mobile marketing

and argued that the consumer may become frustrated, dissatisfied and more negative towards mobile marketing if they feel their privacy has been invaded. Varnali and Toker (2010, p. 148) further felt that gaining consumers' trust was a major obstacle to overcome for mobile marketers. Beneke *et al.*, (2010, p. 85) recommended permission marketing as a means of overcoming the mobile consumer's fear of invasion of privacy, which involves obtaining consent from the consumer to receive mobile advertisements.

From a tangible perspective, the mobile phone has the restrictions of a small size screen, and from an intangible perspective there are limitations such as the cost, privacy issues and user tolerance towards mobile marketing (Narang *et al.*, 2012, p. 54).

Mobile marketing is a rapidly growing marketing tool due to the increase in smartphone and mobile phone purchases. The two models available to mobile marketers is that of the push model and the pull-model. The pull-model uses the mobile application to draw customers towards their brand. The benefits of mobile marketing include interactivity, personalisation and geo-location. However, the challenges for mobile marketers involve spamming the customer with too much content and invading their privacy. The focus of this research is on the mobile application which is discussed further in the next section.

### **2.3 MOBILE APPLICATIONS**

Chiem *et al.*, (2010, p. 46) define mobile applications as “programs designed specifically to add functionality to mobile handsets and are able to interact directly with the technical features of the phone”. One of the most popular marketing tools used in mobile marketing is mobile branded applications. Bhave *et al.*, (2013, p. 64) define branded mobile applications as “those mobile applications that are developed by companies in order to build the brand”. Often these branded mobile applications display the name of the brand and the brand logo (Kim, Lin, & Sung, 2013, p.53). The aim of branded applications is to engage with the current and prospective consumer (Bhave *et al.*, 2013, p. 65). Beneke *et al.*, (2010, p. 80) argued that the level of

personalization of the mobile advertising (such as mobile applications) has a positive effect on the attitudes of consumers towards mobile advertising (branded applications). Furthermore, the level of interactivity of the mobile application can have a positive effect on the consumer's attitude towards branded mobile applications (Beneke *et al.*, 2010, p. 83). Bhave *et al.*, (2013, p. 78) suggest that branded applications provide a valuable utility to the consumer, while at the same time creating an emotional connection with the consumer. However, an issue raised is the negative effect of privacy issues on consumers' attitudes towards mobile applications (Beneke *et al.*, 2010, p. 84). Even with some of the challenges of mobile branded applications currently faced by marketers, branded apps have become a more popular tool than any other mobile marketing communication tool currently available (Bhave *et al.*, 2013, p. 78). The popularity of mobile branded applications has been due to the increase in smartphone purchases, which is discussed in the next section (Chiem *et al.*, 2010, p. 43). The sections that follow look at the life cycle of a mobile app, apps and branding, the benefits and challenges of branded mobile apps and the attitudes and behaviour towards mobile applications.

### **2.3.1 The Smartphone and Mobile Applications**

Just over a decade ago, individuals would have numerous devices such as a TV, a radio, a music player, a cellphone and a console that would perform their individual purposes such as watching shows, listening to music, communicating with friends and playing video games. This has since changed with all those individual devices being packaged into one technological device known as the smartphone (Turner, 2015, p. 106). The smartphone can be used in three aspects of a person's life: business, entertainment and social networking (Persaud & Azhar, 2012, p. 437). Persaud and Azhar (2012, p. 438) stated that "consumers are increasingly using their smartphones for many daily tasks and thus smartphones are emerging as the primary channel to reach and serve today's consumers".

The smartphone is regarded as a status symbol for many consumers who express their individuality through the choice of brand, colour, size, ring tones and application preferences (Bauer *et al.*, 2005, p. 182). Persaud and Azhar (2012, p. 437)



recommend that brands should capture the emotional connection of a consumer towards their smartphones by focusing on creating awareness, developing dialogue, and gaining the consumer's trust thereby influencing their loyalty and future purchase decisions. Persaud and Azhar (2012, p. 437) found that "consumers from across all age groups and education levels and from both genders seem to have strong positive attitudes towards innovative mobile marketing through their smartphones". Consumers' adoption of the smartphone is least reliant on the following variables: ease of use, observability, usefulness, trialability and complexity of the device, as most consumers find the smartphone quite user-friendly and easy to use (Persaud & Azhar, 2012, p. 439). The factors that were placed as most important when purchasing a smartphone were: entertainment, social networks, perceived value, shopping style, brand trust, permission, control and individual expression (Persaud & Azhar, 2012, p. 439).

The rate of adoption of the smartphone will determine the success of mobile application usage and innovation (Chiem *et al.*, 2010, p. 53). Furthermore, it was proposed by Chiem *et al.* (2010, p. 48) that the smartphone penetration rate of a country is usually reliant on the buying power of the consumers. For many consumers the smartphone is an unreachable purchase due to the high price tag and expensive data plans accompanying the product (Chiem *et al.*, 2010, p. 48). In Europe, the iPhone has been most popular in countries such as Italy and Switzerland, thereby increasing the rate of branded mobile application purchases (Chiem *et al.*, 2010, pp. 51-52).

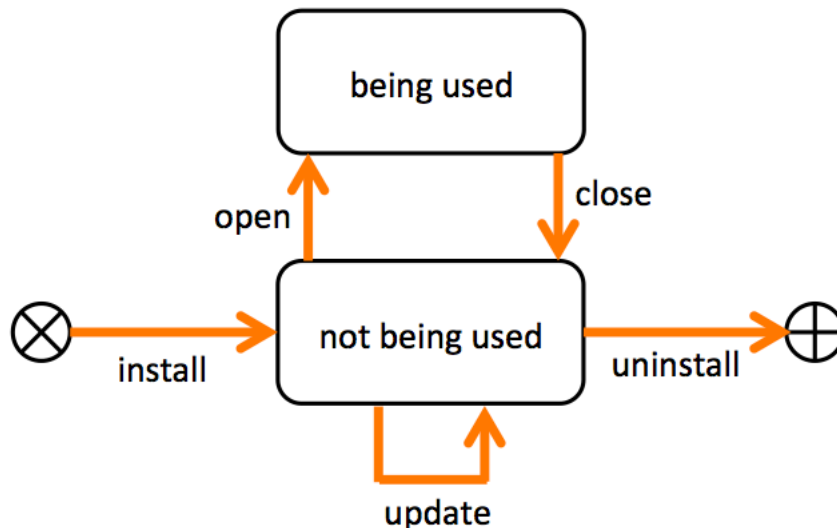
As suggested by Beneke *et al.* (2010, p. 78) mobile phones are more than a communication device for the youth market; they are also a means for individuality and self-expression. Teenagers view their cellphones as an expression of their individuality by customizing their phones by choosing the brand, colour, size, ring tone and applications (Bauer *et al.*, 2005, p. 182). The youth view the mobile phone as a status symbol and an essential part of their daily lives, thus it is permanently attached to them (Bauer *et al.*, 2005, p. 182).

The smartphone has been the driving force behind branded mobile applications. The popularity of the smartphone has been linked to the consumer buying power of a

country. The next section explores the life cycle of a mobile application on a smartphone.

### 2.3.2 The Life Cycle of a Mobile Application

The life cycle of a mobile application can be seen in Figure 2.1.



**Figure 2.1: The Life Cycle of a Mobile Application (Böhmer, Hecht, Schöning, Krüger & Bauer, 2011, p. 48)**

The first stage of a mobile application is known as ‘installation’, which involves the smartphone user downloading the app from a virtual store such as Google Play and Apple’s App Store. However, some apps are already pre-loaded onto the smartphone such as Facebook, which then dissolves the first stage of the mobile app’s life cycle. The second stage of the mobile application is the ‘updating’ of the app, however Böhmer *et al.* (2011, p. 48) argue that “since updates are sometimes done automatically by the system and the update frequency strongly depends on the release strategy of the developer, the insight into usage behavior that can be gained from update events is relatively low”. The final stage in the life cycle of a mobile application is the ‘uninstall’ stage, which involves the user deleting the app off their mobile phone, as they do not want it anymore. The other two events of the app being ‘open’ or ‘closed’ is the main focus of interest for marketers, as this determines the popularity of the app and provides a much more accurate understanding of the behaviour of users with the branded mobile application. Understanding the life cycle

of a mobile application will provide marketers insight when using an app for branding, which is discussed in the next section.

### **2.3.3 Mobile applications and Branding**

Sohn *et al.* (2014, p. 33) state that “branded mobile apps primarily represent a complimentary service that combines the potential of mobile technology with branding”. Rondeau (2005, p. 62) recommends that “the best way to establish a brand is to create a positive direct experience that can only be achieved through the design of the application”. Additionally, Gilman (2016, p. 55) recommends changing: content, interactive experiences and ease of use, with the aim of building a long-lasting relationship with the user downloading the mobile app.

The experience of a mobile application is dependent on three design considerations: the physical perception, the actual use and the value (Rondeau, 2005, p. 63). In terms of the physical perception of the application, the colour, shape, sounds and text all contribute to a positive attitude and increased usability of the branded mobile application (Rondeau, 2005, p. 63). “Visual design elements such as color, line, shape, and font can be used not only to increase aesthetic attractiveness, but also to enhance usability” (Rondeau, 2005, p. 63). The sounds incorporated into the app can also enhance the attractiveness of the app by using ring tones, alert sounds and vibration (Rondeau, 2005, p. 63). The ease of use of the mobile app also plays an important role in the designing of a successful mobile marketing tool (Rondeau, 2005, p. 63). Finally, the usefulness of the app is of greater importance than the usability of the app for potential consumers and has a greater impact on the direct experience and the perception of the brand (Rondeau, 2005, p. 63). The usefulness of the branded mobile application is so important that it was proposed by Rondeau (2005, p. 65) that mobile applications that are not perceived as being useful will be used minimally, which will lead to them being deleted by the user to make room for better apps.

Sohn *et al.*, (2014, p. 36) conducted an attitudinal study of gender assessments of hedonic versus utilitarian branded mobile apps, and recommended that marketers reuse and recommend mobile branded applications to others. For example, a QR code

could be placed on a promotional poster or magazine advert that would directly link potential consumers to the mobile app which will hasten the process of finding the app through the thousands of apps available on online stores (Sohn *et al.*, 2014, p. 36). Sohn *et al.*, (2014, p. 36) also suggested “to achieve long-term goals such as customer loyalty and to strengthen brand relationship, we rather suggest marketers develop utilitarian-oriented branded apps, particularly in view of the fact that the majority of existing branded apps are designed to be experiential”. This statement suggests that branded mobile apps need to be informative about their products and services, as well as provide a clear value to the consumer that will assist them in their daily activities and be goal-orientated (Sohn *et al.*, 2014, p. 34). Sohn *et al.*, (2014, p. 36) highlight the difficulty of developing utilitarian apps, as each customer is unique and values things differently, therefore they recommend the app being customizable by the individual consumer in its functionality. Finally, Sohn *et al.*, (2014, p. 36) argue that prior and current perception of a brand will impact the attitudes and behaviour of customers with regards to mobile branded applications, therefore they recommend that companies target those consumers who are favourable towards their brand, by analysing social media pages comments and then targeting those consumers to download the mobile application.

Social media is an integral part of the youth’s lives, therefore Taylor, Voelker, and Pentina, (2011, p. 67) recommended that branded mobile applications should incorporate social networks into the apps, which could lead to better utilization of the app. Making use of social networks such as Facebook, Twitter and Snapchat within the mobile app could differentiate and position a brand’s app amongst the thousands of apps available on the virtual stores (Taylor *et al.*, 2011, p. 67). This “suggests that mobile phone providers should use the inherent social networking functions to promote adoption of apps in general, while app developers should build networking functions into the apps themselves in order to promote the use of specific apps” (Taylor *et al.*, 2011, p. 67).

Mobile branded applications are viewed as an expression of a company’s brand identity as the app normally displays the brand’s name and logo throughout the user’s experience (Bellman, Treleaven-Hassard, Robinson, Varan & Potter, 2013, p. 25). Two mobile application examples that display their brand identity are Pampers and

BMW. These apps provide helpful information about the latest products and services the companies offer, as well as entertainment for their target markets, for example the BMW mobile app allows users to visualize their various models in a 3D format (Bellman *et al.*, 2013, p. 25).

Branded mobile applications are used as an additional tool to brands' marketing strategy. The consumer experience of the branded mobile application will be based upon its physical perception, the actual use and the value it provides. Social media can be utilized to promote the branded mobile application. Branded mobile applications provide both hedonic and utilitarian benefits for the user. Further benefits of branded mobile applications are discussed below.

### **2.3.4 The Benefits of Branded Mobile Applications**

Mobile branded applications are regarded as 'pull marketing' tools because the consumer is downloading and requesting more information from the brand. Therefore no opt-in permission is needed from the consumer, which is a major benefit for marketers when comparing this to other more traditional means of marketing (Bellman *et al.*, 2013, p. 25). Furthermore, Bellman *et al.* (2013, p. 25) proposed that mobile branded applications are more effective than television adverts for processing brand information for longer periods of time and in a more understandable way. Mobile apps have a high level of engagement with the potential consumer and thus mobile adverts are perceived in a more favourable way and are more persuasive when incorporated into the mobile application (Bellman *et al.*, 2013, p. 25). High levels of engagement or involvement in a mobile application have been found to have a stronger effect on the experience with the branded application (Junghyun and Eun Ah, 2016, p. 85).

Bellman *et al.*, (2013, p. 25) argued that there was a direct correlation between mobile branded applications and an improved brand attitude, purchase intention and participation in the respective product categories. The reason for the popularity of the mobile branded applications is that they are able to update the consumer at all times and it is an engaging tool in comparison to a website that is quite passive for the

consumer navigating the site (Gilman, 2016, p. 55).

Gilman (2016, p. 55) suggested three main benefits of mobile branded applications. Firstly, 85% of users' time spent on their smartphones is whilst making use of a branded mobile application, therefore it is a popular medium for targeting consumers. Secondly, push notifications such as in-app adverts have been shown to have a 50%-80% open rate within three minutes or less of being displayed on the screen, therefore mobile apps have a higher advert viewing rate than email. Thirdly, mobile applications allow users to share content from the app onto their social networks, therefore maximising the reach of a brand.

Junghyun and Eun Ah (2016, p. 85) conducted a study to explore the effects of mobile branded applications on the brand loyalty of consumers, specifically for each gender group. The results showed that "the effects of cognitive, behavioral, and relational experiences of branded apps on brand loyalty were significant for males, whereas, those of affective, cognitive, and behavioral experiences were significant for females" (Junghyun & Eun Ah, 2016, p. 85).

The benefits of branded mobile applications in existing literature was that they are more engaging for the consumer, in particular adverts within an app. Furthermore, updates within an app were seen as a benefit, as well as the ability to share content with social networks. Branded mobile applications also showed to have a positive effect on brand loyalty, brand attitude and purchase intention. The benefits of branded mobile applications are researched in this study amongst the sample of 18-21 year olds. The following section explores the challenges of mobile branded applications.

### **2.3.5 The Challenges of Branded Mobile Applications**

Bellman *et al.*, (2013, pp. 25-27) suggest there are three main challenges for mobile branded applications: firstly, ensuring a mobile app gets noticed on the application stores such as Apple App Store and Google Play; secondly, encouraging the mobile user to download the app; and thirdly, getting the consumer to actively engage with the application such that it is on the short-list of mobile apps that are utilized daily on

their smartphone because of its usefulness. Chiem *et al.*, (2010, p. 54) further highlight these challenges as ‘discoverability’, in other words, “consumers need to be able to sift through the clutter to find a brand’s app offering”. Germany, in particular, has an issue with discoverability, as many German consumers are hesitant to download mobile apps that are unknown to them (Chiem *et al.*, 2010, p. 50). Therefore, Chiem *et al.*, (2010, p. 50) recommended using guerilla marketing, cross-promotional campaigns, bloggers to reach users and leveraging social networking sites.

One of the biggest hurdles mobile marketers need to overcome is the consumer’s privacy concerns when it comes to branded mobile applications (Ruiz-Del-Olmo & Belmonte-Jimenez, 2014, p. 80). Providing the consumer with the ability to opt-in and/or opt-out of a mobile application assures the consumer of the brand’s commitment to protecting their right of privacy (Chiem *et al.*, 2010, p. 49). Mobile applications that utilize geo-location may have a further challenge of adoption due to the privacy laws and regulations of countries insisting on the consumer’s permission before an app can locate your position (Chiem *et al.*, 2010, p. 50).

Another challenge presented by Chiem *et al.*, (2010, pp. 48-49) was the fear or lack of credit card usage as a means of payment for mobile branded applications. In the Czech Republic, there is an average of one credit card per 3.5 adults, which is one of the lowest credit card penetration rates in the European Union, resulting in a significantly low adoption rate of downloadable mobile applications (Chiem *et al.*, 2010, p. 48). Furthermore, consumers that are on pre-paid options are more unlikely to adopt many mobile applications, as apps are especially draining on data and thus consumers do not want their pre-paid packages to be used up quickly (Chiem *et al.*, 2010, p. 50). By comparison, Switzerland has one of the highest mobile application penetration rates in Europe because more than 60% of their population are on cellphone contracts, therefore making them less price sensitive to paid mobile apps (Chiem *et al.*, 2010, p. 51).

Brands that appeal to a multitude of languages will find the development of a bilingual mobile application a complex and costly affair (Chiem *et al.*, 2010, pp. 51-52). In addition to the adaptation of different languages for the app, the fonts, colours,

resolution and quality of the app will need to differ for the various operating systems used by the different smartphone models, such as Android versus iOS (Rondeau, 2005, p. 63).

Rondeau (2005, p. 63) suggested that the small screen size of mobile phones is a limiting design factor for mobile marketers of mobile applications and that it “severely limits what can be accomplished on a mobile application interface”. However, with the recent technological developments of the bigger screen smartphones (known as phablets) such as the Samsung Galaxy Note 5, LG G4 and Apple iPhone 6 Plus, this study aims to investigate the changing smartphone screen as well as other challenges of branded mobile applications. Objective One of the study covers the attitudes of Generation Z students towards mobile applications in South Africa and what factors affect these attitudes.

### **2.3.6 Attitudes and Behaviour towards Mobile Applications**

In Italy and Switzerland, the most popular mobile branded applications were those that provided value to the consumer (Chiem *et al.*, 2010, pp. 51-53). An example of this was the SKY TV App in Italy that provided users with the latest programming schedules on television and the ability to set their digital video recorder directly from their smartphone, leading to a positive consumer experience (Chiem *et al.*, 2010, p. 53). In Switzerland, the most downloaded mobile applications were those that provided clear utility to the consumer, such as news, maps, directories and train schedules (Chiem *et al.*, 2010, p. 51).

Similarly in Germany, women expressed a preference for utilitarian apps, that is, those mobile apps that are information-drive, goal-oriented and functional, as opposed to hedonic apps that provide entertainment, pleasure and enjoyment (Sohn *et al.*, 2014, pp. 34,36). Surprisingly, in the study by Sohn *et al.* (2014, p. 36) men had a more favourable attitude towards hedonic apps as opposed to utilitarian apps, but their usage and behaviour were different to their attitudes as men still downloaded more utilitarian apps as opposed to hedonic apps. Therefore, the study found that attitudes and behaviour are not always parallel to each other and that a positive attitude



towards a branded mobile application does not always lead to reuse and word-of-mouth (Sohn *et al.*, 2014, pp. 34, 36). Sohn *et al.* (2014, p. 36) explained men's preference for hedonic apps as attributed to "the fact that they process information more impulsively and engage in detailed processing less readily than women". However, both genders were indifferent to advocating utilitarian apps over hedonic apps to their peers (Sohn *et al.*, 2014, p. 36). Sohn *et al.* (2014, pp. 34, 36) further found that the level of prior brand evaluations moderates both males and females immediate response towards mobile branded applications. Therefore, the development of a previous or existing strong relationship between the brand and the consumer will positively influence the attitudes and behaviour towards a branded mobile app (Sohn *et al.*, 2014, pp. 34,36).

In Spain, Ruiz-Del-Olmo and Belmonte-Jimenez, (2014, p. 79) established a positive correlation between university students and a favourable attitude towards downloading, installing and using branded mobile applications. These Spanish students were predominantly drawn to branded mobile apps that provided information about the products and services, but also those which incorporated a virtual social network into the app providing the students with the ability to share social and cultural experiences with their peers (Ruiz-Del-Olmo & Belmonte-Jimenez, 2014, p. 79). Other factors that were considered important to the Spanish students when choosing mobile apps were entertainment, curiosity, exclusive offers and discounts and finally, instant communication with the brand (Ruiz-Del-Olmo & Belmonte-Jimenez, 2014, p. 79). The study showed that the students who did not make use of mobile apps attributed it to the technical limitation of their mobile phone as they did not own a smartphone, the lack of data due to financial restrictions and they complained about the small size of the mobile phone screen (Ruiz-Del-Olmo & Belmonte-Jimenez, 2014, p. 79). The sample provided some recommendations for future mobile application developers targeting youth:

- The inclusion of new features, not offered on the website;
- The possibility of specific utilities (such as the creation of networks, communities or making contact with other users);
- Payment facilities through the application;
- Speed and immediacy in accessing content;

- Exclusive sales offers;
- The exclusive sale of products not found within the stores and
- Community and cultural connection with the values or philosophy of a brand

Ruiz-Del-Olmo & Belmonte-Jimenez (2014, p. 79)

In the United States of America, Taylor *et al.*, (2011, p. 66) performed a study involving 180 university students and found that the adoption of mobile apps such as gaming, finance, sports/culture, navigation, mobile search and travel services were higher when an influential contact (such as friends) recommended and used that particular app. The influential contact is more than likely to be a young person's friends at university (more so than their family) and this will impact their attitude and behaviour, particularly towards social mobile applications such as dating, gaming, photo sharing and networking (Taylor *et al.*, 2011, p. 67).

The study by Böhmer *et al.*, (2011) on mobile application usage highlighted the average time spent on and behaviour towards branded mobile apps amongst 4125 university students around the world (predominantly in America and Europe). Application usage was at its highest in the late afternoon and evening with 6pm being the time with the highest mobile app usage (Böhmer *et al.*, 2011, p. 51). The average application usage was less than a minute for university students in the study conducted by Böhmer *et al.*, (2011, p. 51), however the usage around 5a.m. was as high as 6,26 minutes for individual mobile apps. In terms of the categories and times of apps used during the day, news apps were most popular in the mornings, followed by financial apps around midday, sports apps in the afternoon, and gaming and social networks most prevalent in the evenings (Böhmer *et al.*, 2011, p. 51).

Adverts within branded mobile applications were also discussed as a factor in attitudes and behaviour of branded mobile applications. Bhave *et al.*, (2013, pp. 67-69) identified the following determinants of customer attitude towards in-app advertising: involvement with the app; hindrance caused by the advert; location of the advert; ad formats; screen size; contextualization; personalisation; relevance; credibility; Bluetooth or geo-targeted ads and incentive. Consumers become annoyed when an advert appears whilst they are actively involved with the mobile application,

particularly when they are communicating with friends or playing games (Bhave *et al.*, 2013, p. 68). Bhave *et al.*, (2013, p. 68) proposed that adverts were more acceptable amongst consumers who downloaded mobile applications in the categories of music, news and business. Furthermore, the format of the advert and the location of the advert within the mobile application are determinants of the level of hindrance created for the consumer, which negatively impacts a consumer's attitudes towards a branded mobile application (Bhave *et al.*, 2013, p. 68). In terms of the screen size, Bhave *et al.*, (2013, p. 68) stated, "that the small screen size of the phone had caused them to click on banner ads accidentally, which they found to be a nuisance". Adverts that are contextualized or suited to the category of mobile application are preferable to unrelated adverts that appear within the mobile branded application, for example, an advert for a new gym would be best suited to mobile applications in the fitness category (Bhave *et al.*, 2013, p. 68). Customizing and personalizing in-app adverts creates a more favourable attitude toward branded mobile applications amongst potential consumers (Bhave *et al.*, 2013, p. 68). Bhave *et al.*, (2013, p. 68) further discovered that consumers felt "that in order to trust a brand being advertised in an app, they should have seen the brand being advertised in at least one more media". Mobile applications that use geo-location are favourable amongst consumers when receiving discounts, however there is general consensus found by Bhave *et al.*, (2013, p. 69) that consumers prefer when companies request permission for their location as opposed to being geographically targeted without their consent. Consumers do not mind in-app advertisements if they are incentive based, for example a brand offering discounts, special offers and/or promotional codes (Bhave *et al.*, 2013, p. 69).

The advantages of in-app advertising are highlighted in the following statement made by Taylor *et al.*, (2011, p. 68): "Knowing which segment uses which type of apps at what times will optimize the reach and frequency of mobile campaigns and create new revenue streams that may subsequently subsidize consumer app usage". Therefore, in-app advertising has the benefit of reaching the 'on-the-go' consumer at all hours, and it has the advantage of not being annoying to the consumer as mobile apps are a pull-based tool for mobile marketers (Taylor *et al.*, 2011, pp. 67-68).

In South Africa, Potgieter (2015, pp. 4-5) conducted a study on mobile application preferences amongst university students and found that the most popular mobile apps

were Facebook and WhatsApp due to their usefulness. The motivation for downloading apps included the following factors: searching for information about a company's products and services, entertainment, curiosity, recommendations from peers and family, an extension of a website that is regularly visited, effective marketing of the app by the company and for purchases. Therefore there was a positive attitude amongst the youth of South Africa towards branded mobile applications that were entertaining and informative (Potgieter, 2015, p. 4). In terms of the most important considerations taken by the South African university students when downloading a mobile app, price was ranked the most prevalent factor, followed by the size, the features, the star rating, the description of the app and the number of consumers who had already purchased the app and rated it (Potgieter, 2015, p. 4). Furthermore, South African students found security of mobile applications as a deterrent for downloading apps, with 51% of the sample expressing security as a concern (Potgieter, 2015, p. 4). Generally, South African students have a negative attitude towards paid mobile apps and will generally only buy a mobile app if it is considered 'vital' or if it is superior to a free application (Potgieter, 2015, p. 5). This study differed to that of Potgieter's as her study was quantitative whereas this study was qualitative.

Attitudes and behaviour towards branded mobile applications have differed from country to country. Gender and age played a role in the preference of branded mobile applications, which is explored in this study in Objective Nine whereby we ascertain the role of moderating factors such as gender, age, experience and voluntariness of use towards mobile branded applications. Furthermore, hedonic motivation impacted the attitudes and behaviour of branded mobile applications, which is explored in Objective Eight of this study. The existing literature also revealed that utilitarian apps were also preferred in some countries, which is further explored in Objective Six of this study which aims to determine the extent of performance expectancy as a determinant of intention or usage of branded mobile applications. Social influences were another factor that influenced attitudes and behaviour of users; therefore Objective Four investigates the impact of social influences, social norms and image on attitudes and behaviour towards branded mobile applications. Objective One and Two of this study further investigate the attitudes and behaviour towards branded mobile applications and what factors affect these attitudes and behaviours. Adverts

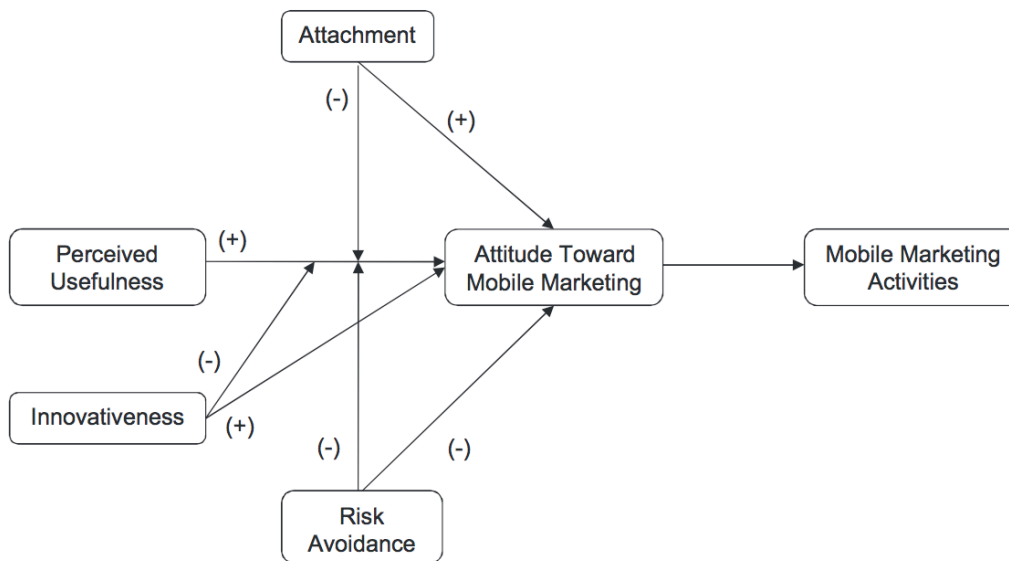
were also mentioned in the literature as a factor in attitudes and behaviour of branded mobile applications, and thus the last objective explores any additional conditions that impact the sample's attitudes and behaviour towards apps. Price was an important consideration for South African students downloading mobile apps, and thus this study conducted a qualitative focus exploring the extent of price (Objective Eight) as an important role in the attitudes and behaviour of the sample towards branded mobile applications. Objective Three ascertains the reasons behind the attitudes and behaviours of the sample towards branded mobile applications, thereby covering an in-depth analysis of all the factors that contribute to the attitudes and behaviour of branded mobile apps. The research sample is Generation Z, focusing particularly on university students in South Africa. The next section explores the theoretical framework of the study.

## **2.4 THEORETICAL FRAMEWORK**

The theoretical framework for this study will focus mainly on attitudes and behaviour towards technology, specifically mobile applications. Therefore, the most appropriate models to utilize include a conceptual model of Consumer's Mobile Marketing Acceptance, the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT and UTAUT2).

### **2.4.1 A Conceptual Model of Consumer's Mobile Marketing Acceptance**

Rohm, Gao, Sultan, and Pagani (2012) developed a conceptual framework for consumer's mobile marketing acceptance, in particular targeted towards the youth, which is seen in Figure 2.2 below.



Notes: The "+" and "-" signs indicate the directions of the influences

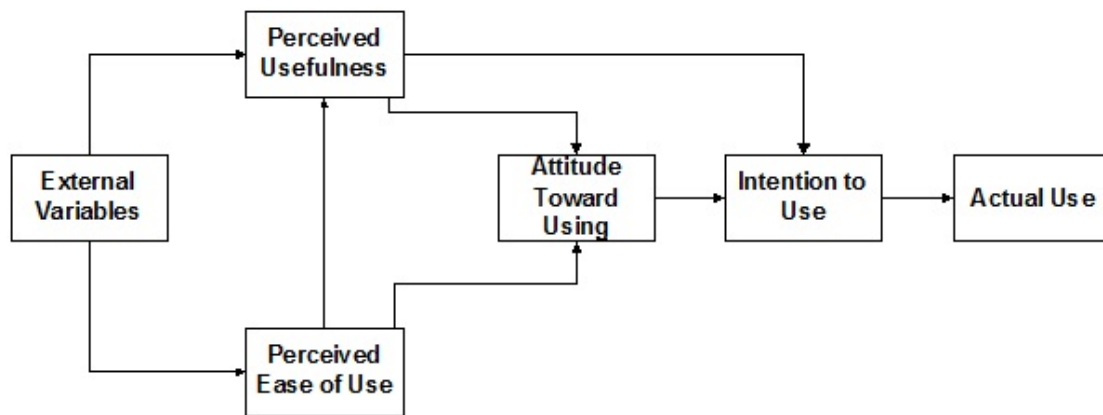
**Figure 2.2: A conceptual model of consumers' mobile marketing acceptance (Rohm *et al.*, 2012, p. 487)**

Rohm *et al.*, (2012, pp. 487-488) proposed “the three individual characteristics of innovativeness, personal attachment, and risk avoidance will moderate or influence the direct effect of perceived usefulness of mobile content and programs and consumers’ attitudes toward mobile marketing”. The study revealed an importance of added-value tools incorporated into mobile marketing for the youth users, for example, special deals, compelling content, entertainment and convenience (Rohm *et al.*, 2012, p. 489). The perceived usefulness of mobile marketing was regarded as the most important factor for the youth, for example, mobile applications and mobile content that were targeted and adapted to the lives of the youth (Rohm *et al.*, 2012, p. 489). “Highly innovative consumers form favorable attitudes toward mobile marketing simply by virtue of companies’ initiative to engage them in such an innovative platform whereby the medium itself is central to the message, and by providing activities on the mobile platform that tap into their interests and creativity” (Rohm *et al.*, 2012, p. 489). Due to mobile devices being very personal items, the youth regard mobile marketing as an invasion of privacy and a high-risk concern as many companies require personal information from the mobile user (Rohm *et al.*, 2012, p. 489). Furthermore, the youth are extremely attached to their mobile phones

and are therefore more demanding of companies to deliver meaningful mobile campaigns that provide value and relevance to them (Rohm *et al.*, 2012, p. 490). Another recommendation made by Rohm *et al.*, (2012, p. 490) was that mobile marketing campaigns need to be adjusted from country to country, as the youth market are similar in many aspects, but are also different in values and tastes amongst the different cultures. The four lessons for mobile marketers, as suggested by Rohm *et al.*, (2012, pp. 492-493) were: think about customers first; innovate creative and unique mobile campaigns; leverage personal attachment and earn the youth market's trust.

#### **2.4.2 The Technology Acceptance Model (TAM)**

The TAM model (as shown in Figure 2.3) proposed by Fishbein and Ajzen (1977) aimed to better explain a user's acceptance of an information technology. The TAM model has been used in numerous studies to predict the attitude and acceptance of technology such as e-mail, word processors, the Internet, e-commerce and mobile applications (Lu, Zhou & Wang, 2009; Sarker & Wells, 2003; Venkatesh, Morris, Davis & Davis, 2003; Yang, 2013). The two important concepts covered in the TAM model are the perceived usefulness and the perceived ease of use. Lu *et al.*, (2009, p. 31) refer to perceived usefulness as "users' feelings of improved performance when they use the technology" and perceived ease of use as "user's perceived exerted efforts when using the technology". The perceived usefulness and perceived ease of use of a new technology are positively related to a user's behaviour of the technology (Lu *et al.*, 2009, pp. 34-35). Once a positive attitude has been formed towards the new technology, the intention to use and actual usage is more likely to happen (Lu *et al.*, 2009, p. 35).



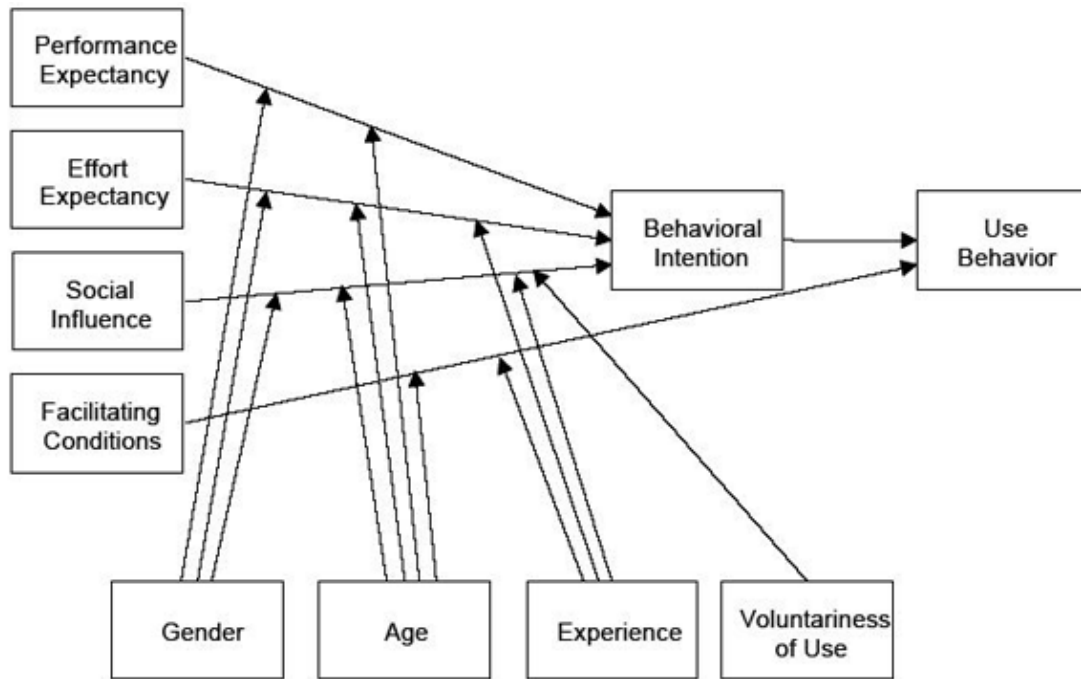
**Figure 2.3: The Technology Acceptance Model (Fishbein & Ajzen, 1977)**

The TAM model has since been updated and modified to include four core concepts that influence the intention and usage of technology.

### **2.4.3 The Unified Theory of Acceptance and Use of Technology Model**

The revised TAM model proposed by Venkatesh et al., (2003) is now referred to as the Unified Theory of Acceptance and Use of Technology (UTAUT), as seen in Figure 2.4. These four concepts include: performance expectancy (perceived usefulness of the TAM model), effort expectancy (perceived ease of use of the TAM model), social influence (subjective norm) and facilitating conditions (perceived behavioral control). Performance expectancy and effort expectancy have similar definitions to those given in the TAM model above.





**Figure 2.4: The Unified Theory of Acceptance and Use of Technology Model (UTAUT) (Venkatesh, Morris, Davis & Davis, 2003)**

*Performance expectancy* (the first direct determinant of the UTAUT model) is defined as, “the degree to which an individual believes that using the system will help him or her to attain gains in job performance” (Venkatesh *et al.*, 2003, p. 447). These gains in job performance are closely linked to constructs such as the perceived usefulness of the technology, extrinsic motivation resulting from the technology, the closeness of job-fit with the technology, the relative advantage of the innovative technology compared to its predecessors and finally, the outcome expectations or consequences of the behaviour resulting from usage of the new technology (Venkatesh *et al.*, 2003, pp. 447-449). With regards to the performance expectancy, this study aims to investigate the link between the benefits of mobile applications for Generation Z students and their rate of adoption of new mobile applications. Furthermore, Venkatesh *et al.*, (2003, p. 450) assumed that “the influence of performance expectancy on behavioural intention will be moderated by gender and age, such that the effect will be stronger for men and particularly for younger men”. This study aims to either prove this statement true or false by investigating the influence of performance expectancy of mobile branded applications on behavioural intentions and if it is indeed stronger for young male Generation Z students. Rondeau (2005, p. 65)

also looked at performance expectancy, in particular perceived usefulness of mobile applications and their impact on the user's behaviour towards the app.

The second direct determinant of user acceptance and usage behaviour of new technology in the UTAUT model is *effort expectancy*. Venkatesh *et al.* (2003, p. 450) define effort expectancy as “the degree of ease associated with the use of the system”. The concept of effort expectancy is centered around three main constructs: perceived ease of use of the new technology, the complexity or difficulty in understanding the new technology and lastly the ease of use in operating the new innovation (Venkatesh *et al.*, 2003, p. 450). Furthermore, Venkatesh *et al.*, (2003, p. 450) believed that gender, age and experience were all instrumental in determining effort expectancy of new technology and that specifically younger women at the early stages of experience placed more emphasis on effort expectancy of new technology than any other demographic group. This study aims to further investigate the effect of effort expectancy on Generation Z students' attitudes and behaviour with regards to mobile branded applications. Rondeau (2005, p.63) further emphasized effort expectancy, in particular ease of use of the mobile app, as playing an important role in the designing of a successful mobile marketing tool.

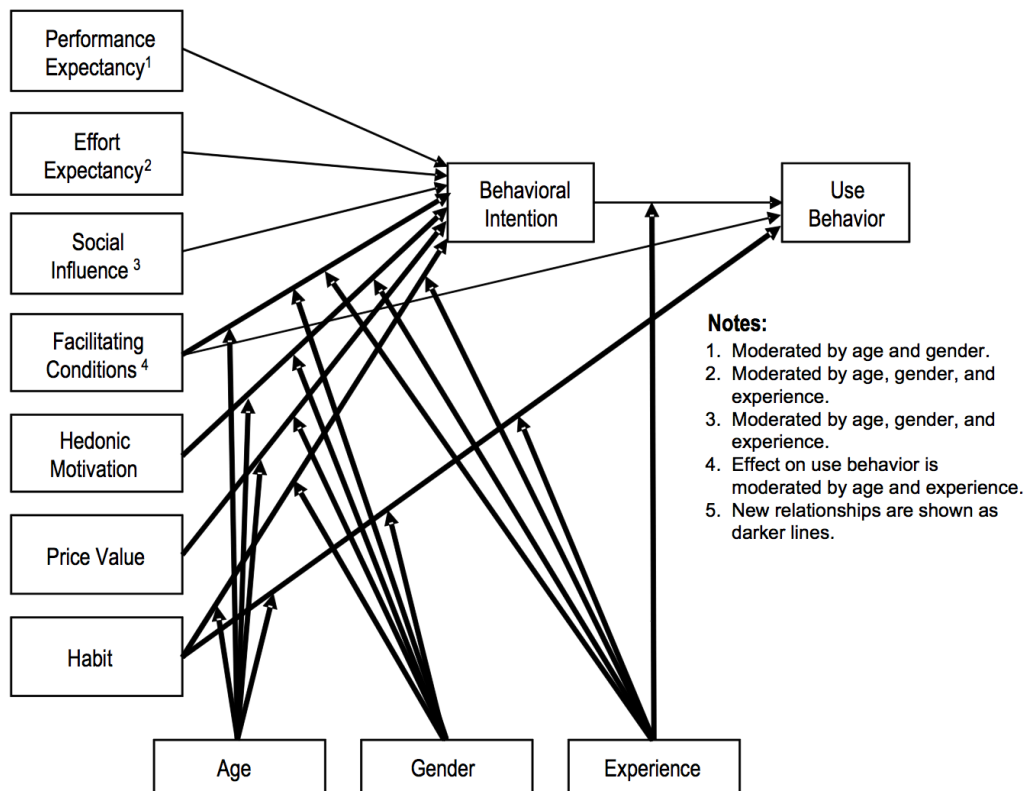
Venkatesh *et al.*, (2003, p. 451) define *social influence* (the third determinant of the UTAUT model) as “the degree to which an individual perceives that important others believe he or she should use the new system”. It was proposed that social influence of new technology is linked to subjective norms, social factors and image (Venkatesh *et al.*, 2003, p. 451). Furthermore, Venkatesh *et al.*, (2003, p. 453) stated “the influence of social influence on behavioural intention will be moderated by gender, age, voluntariness, and experience, such that the effect will be stronger for women, particularly older women, particularly in mandatory settings in the early stages of experience”. With regards to social influence, this study aims to determine the people and social factors that influence Generation Z's attitudes and behaviour towards mobile applications in South Africa. A study by Taylor *et al.*, (2011, p.67) also used social influences as a determinant of mobile app adoption, and showed that friends were the most important social influence.

Venkatesh *et al.*, (2003, p. 453) define *facilitating conditions* (the fourth determinant of the UTAUT model) as “the degree to which an individual believes that an organisational and technical infrastructure exists to support use of the system”. Facilitating conditions consider the perceived behavioural control of the potential adopter over the new technology, the provision of after-sales support for the new innovation and the compatibility of the new technology with the potential adopter’s values, needs, and experiences (Venkatesh *et al.*, 2003, p. 454). With regards to facilitating conditions, this study aims to investigate Generation Z’s opinions on the general perceived behavioral control, compatibility and support of the mobile application sector in South Africa and how this influences their rate of adoption of new mobile applications in the market. Furthermore, this study will analyse the hypothesis developed by Venkatesh *et al.*, (2003, p. 454) which states that “the influence of facilitating conditions on usage will be moderated by age and experience”. Facilitating conditions, in particular personalisation, were found to have a positive effect on consumer’s attitudes (Beneke *et al.*, 2010, p.80).

The UTAUT model has been used extensively in academic literature to determine the effect of new technology on attitudes and behaviour (Marchewka & Kostiwa, 2014; Qingfei, Shaobo, & Gang, 2008; Yu, 2012). Marchewka & Kostiwa, (2014) used the UTAUT model to investigate the success of the Blackboard online learning system at a university in the United States of America and its effect on behavioural intention and use behaviour amongst students. With regards to mobile marketing, the UTAUT model has also been tested in studies focused on the adoption of mobile banking (Yu, 2012) and mobile commerce (Qingfei *et al.*, 2008).

#### **2.4.4 The Unified Theory of Acceptance and Use of Technology Model 2**

However, in 2012 the UTAUT model was updated by Venkatesh, Thong & Xu to the UTAUT2 model, seen in Figure 2.5 below.



**Figure 2.5: The Unified Theory of Acceptance and Use of Technology Model 2 (Venkatesh, Thong & Xu, 2012)**

The UTAUT2 model takes into consideration three additional constructs that will ultimately affect the intention and usage of a new technology by a user: hedonic motivation, price value and habit. In addition, the UTAUT2 model discarded ‘voluntariness of use’ from the original UTAUT model as a moderating effect on the constructs as “voluntariness can be perceived as a continuum from absolutely mandatory to absolutely voluntary, consumers have no organizational mandate and thus, most consumer behaviors are completely voluntary, resulting in no variance in the voluntariness construct” (Venkatesh *et al.*, 2012, p. 159).

The fifth construct of the UTAUT2 model is *hedonic motivation* and can be described as “the fun or pleasure derived from using a technology, and it has been shown to play an important role in determining technology acceptance and use” (Venkatesh *et al.*, 2012, p. 161). Age, gender and experience have been found to impact hedonic motivation of new technology, particularly for young males in their early stages of experience with a new technology such as a mobile branded application (Venkatesh *et al.*, 2012, p. 163). This study aims to further investigate the effect of hedonic

motivation on Generation Z students' attitudes and behaviour with regards to mobile branded applications. Ruiz-Del-Olmo and Belmonte-Jimenez (2014, p. 79) found that entertainment was important to Spanish students when choosing mobile apps.

*Price value* (the sixth construct of the UTAUT2 model) can be defined as “consumers’ cognitive tradeoff between the perceived benefits of the applications and the monetary cost for using them” (Venkatesh *et al.*, 2012, p. 161). Price value is positive when the benefits outweigh the monetary costs of the new technology. Price value is negative when the monetary costs outweigh the benefits of the new technology. Venkatesh *et al.*, (2012, p. 161) proposed that positive price value will lead to a positive impact on intention of using the new technology and is thus a good predictor of behavioural intention to use a new technology. Furthermore, “age and gender will moderate the effect of price value on behavioural intention, such that the effect will be stronger among women, particularly older women” (Venkatesh *et al.*, 2012, p. 163). With regards to price value, this study aims to determine the influence a price tag has on Generation Z’s attitudes and behaviour towards mobile applications in South Africa. Potgieter (2015, p. 5) found a correlation between price value and user’s attitudes towards mobile apps.

The final construct of the UTAUT2 model is *experience and habit*, which “reflects an opportunity to use a target technology and is typically operationalized as the passage of time from the initial use of a technology by an individual” (Venkatesh *et al.*, 2012, p. 161). Habit can be defined as “the extent to which people tend to perform behaviors automatically because of learning” (Venkatesh *et al.*, 2012, p. 161). Venkatesh *et al.*, (2012, p. 161) highlighted two main differences between habit and experience: “experience is a necessary but not sufficient condition for the formation of habit” and, that “the passage of chronological time (i.e., experience) can result in the formation of differing levels of habit depending on the extent of interaction and familiarity that is developed with a target technology”. In other words, depending on the level of use of a new technology, habit can change over that course of time. Venkatesh *et al.*, (2012, p. 165) hypothesized and found that age, gender and experience will moderate the effect of habit and experience on behavioural intention and technology use, particularly for older men with high levels of experience with the technology. This study aims to further investigate the effect of experience and habit on Generation Z

students' attitudes and behaviour with regards to mobile branded applications. A study by Baysinger (2015, p. 19) suggested that Generation Z are more tech-savvy than previous generations, and are more likely to be involved with the social media apps as they grew up with them.

The UTAUT2 model has also been used by numerous academics in the field of Internet banking (Arenas-Gaitán, Peral-Peral & Ramon-Jeronimo, 2015), phablets (which are larger smartphones that are just a bit smaller than tablets) (Huang & Kao, 2015) and mobile applications (Kuan, Ann, Badri, Freida & Tang, 2014).

These seven constructs of the UTAUT2 model: performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value and habit and experience will be incorporated into this research study to determine the effect they have on the attitudes and behaviors of Generation Z towards downloading branded mobile applications in South Africa. Generation Z is further explored in the section that follows.

## **2.5 GENERATION Z**

This study focuses specifically on Generation Z. Generation Z is the latest generation of focus for organisations targeting the youth of their country. Generation Z, born after 1994, is often referred to as the 'digital natives', 'social authors', 'new realists' or 'iGeneration' (Baysinger, 2015, p. 19; Dupont, 2015, p. 19). Turner (2015, p. 104) describes Generation Z as those individuals who were born from the mid 1990's through to the late 2010s, and they are the only generation to have been born with the Internet. Hemsley (2016, p. 1) identifies the iGeneration as the first mobile native generation. They currently fall into the 3-21 year old age category (Birkner, 2013, p. 14). The exact starting point of Generation Z is debated in various papers between 1994 and 1995, however for the purpose of this study 1994-2016 is the timeframe for Generation Z (Baysinger, 2015, p. 19; Fister Gale, 2015, p. 40; Turner, 2015, p. 104; Wiedmer, 2015, p. 57). Globally, Generation Z makes up the largest living generation today with approximately 25,9% of the population, with an estimated \$44 billion in individual buying power (Hulyk, 2015, p. 32). Generation Z have a worldwide

population of 2 billion, which is rapidly growing each day (Caribbean Business Staff, 2014, p. 40). In 2016 in South Africa, there was a population of 55 653 654 and approximately 49% are under the age of 24 years old (Statistics South Africa, 2016, p.18-19). The iGeneration have considerable influence over purchasing decisions in their parent's households with a 94% impact on all household buys and thus an understanding of Generation Z is of paramount importance to marketers (Hulyk, 2015, p. 32). The following sections explore the characteristics of Generation Z, their relationship with technology, the importance of their social group to marketers and their relationship with mobile applications. The following sections highlight existing literature on Generation Z and the gaps that this research aims to close.

### **2.5.1 Generation Z characteristics**

One of the unique traits of Generation Z is that they are by far the smartest generation of consumers for marketers, with the highest level of exam scores in history (Nagler, 2015, p. 9). This high level of intelligence has been attributed to the explosion of technological advancements, which has allowed Generation Z to become comfortable and skilled on the Internet and social media, but has also lead to a lack of social skills (Nagler, 2015, p. 9). In addition to their intelligence, is their entrepreneurial spirit with 70% of Generation Z wanting to start their own businesses one day (Nagler, 2015, p. 10).

According to Baysinger (2015, p. 19), Generation Z is optimistic, passionate, independent and idealistic. Furthermore, Generation Z is less gender-stereotyped and race-issues are not as significant compared to generations before them (Baysinger, 2015, p. 19). Turner (2015, p. 104) states that Generation Z have the largest group of biracial and multiracial youth, who are not ashamed of their sexual orientation (as compared to previous generations embarrassment of sexual orientation) and that are mainly raised in urban areas where they are being exposed to a variety of different cultural influences.

Dupont (2015, p. 19) argues that Generation Z are known as the 'new realists' due to the many hardships they have encountered such as the Great Recession in 2008, the war on terrorism, climate change, mass school shootings, and revolutionary changes

in previous taboo topics such as the legalization of marijuana and gay marriage. This is further supported by the popularity of teen hero movies amongst Generation Z such as “The Hunger Games”, “The Maze Runner” and “Divergent” (Dupont, 2015, p. 19). Caribbean Business Staff (2014, p. 40) mention that the tough encounters experienced by Generation Z have lead them to develop coping mechanisms and resourcefulness. Furthermore, the impact of the worldwide Recession in 2008 placed a level of importance on saving and an awareness of the importance of money for Generation Z (Turner, 2015, p. 104). Turner (2015, p. 104) suggested that Generation Z have been most affected by a growing income gap between the social classes, as well as a shrinking middle class. Due to these financial hardships and major worldwide issues, Turner (2015, p. 104) describes Generation Z as “a generation that potentially values fiscal responsibility, tolerance of others, education, employment flexibility, and networking abilities”. Hulyk (2014, p. 32) felt that Generation Z should be labeled as “independent, hard working, driven, conscientious, socially conscious, socially connected and entrepreneurial”.

South African Generation Z's have also encountered hardships as they are the first post-apartheid generation and are thus having to deal with issues such as affirmative action and other issues that come with a new democracy (Duffett, 2017, p.22). However, Duffett (2017, p.22) argues that South African Generation Z is also the generation with more opportunities than previous generations due to the country becoming a democracy in 1994. “The South African youth of the present, across cultural groups, are highly independent and ambitious; confident and optimistic; critically conscious and can mobilize themselves robustly” (Duffett, 2017, p.22). Robbertse (2016, p.34) believed the South African Generation Z cohort are driven by innovation, collaboration and transparency. Robbertse (2016, p.34) further explained that the South African Generation Z jobseeker requires an individual to be comfortable with technology, as many future jobs in South Africa will involve automation, artificial intelligence and robots. The South African Generation Z students are critically conscious and have proven to be able to mobilise with movements such as #FeesMustFall and #StatuesMustFall (Tennant, 2016, para.29). Outside of education, the South African Generation Z are image-conscious when it comes to branding, but are not entirely self-obsessed as they still care for their communities and families (Tennant, 2016, para.31-32).



Due to the reality of many social problems and world injustices, it has been proposed by Dupont (2015, p. 19), that one in four Generation Z youth will volunteer. Nagler (2015, p. 9) states that “almost 50 percent of high school students have an internship or are volunteering in a potential career field”. Generation Z are different to previous generations in that they are inspired to explore career options earlier on in their lives, thus providing them with an early opportunity to make them more attractive employees (Nagler, 2015, p. 9). Furthermore, Fister Gale (2015, p. 40) indicated that Generation Z are more entrepreneurial and are more interested in meaningful work that gives back to society, than just the salary received for that job. Generation Z employees want to be heard by their employers and thus collaboration in a work setting is of paramount importance to them so that they feel valued (Fister Gale, 2015, p. 40). Nagler (2015, p. 10) suggests providing Generation Z with jobs that require fewer tasks but that allow them to focus more energy on individual tasks, as opposed to the traditional fast-paced workplace that has dissimilar responsibilities. The biggest motivating factor for productivity and company loyalty for Generation Z employees is the opportunity for advancement (Nagler, 2015, p. 9). Another trend at the workplace amongst Generation Z are the use of wearable biometrics that track their exercise, eating habits and lifestyle choices, thus the corporate environment needs to match their personal expectations for them to be satisfied in their employment (Nagler, 2015, p. 10).

Generation Z have the need for flexibility in their careers and seek fast results (for example, promotions) leading to them keeping their resumes handy and current (Wiedmer, 2015, p. 57). Generation Z feel that they have all the answers to their problems (due to technology such as the smartphone) and prefer clear goals, personal challenges and rewards (Wiedmer, 2015, p. 57). Generation Z’s close relationship with technology is discussed in the next section.

### **2.5.2 Generation Z and Technology**

Generation Z were born into an era of rapid technological developments and thus they were the first generation to accept multiplatform viewing (Baysinger, 2015, p. 19). Baysinger (2015, p. 19) suggested that Generation Z are not just more digitally in-tune than previous generations, but that they are also ‘social authors’ as they grew up

with social media tools such as Facebook and YouTube, and they spend almost as much time on their cellphones as they do watching television. Birkner (2013, p.14) found that “more than one-third of Gen Zers use a tablet regularly, 70% of 10- to 13-year-olds carry a mobile device and 65% use mobile apps”. They are known to be the most tech-savvy generation of consumers yet for marketers (Birkner, 2013, p. 14).

“With technological advances in multimedia, such as tablets, the smartphone (which combines cell phone, media player, cameras, and Internet capabilities into one device), social media, and flat-screen televisions, Generation Z youth have become accustomed to interacting and communicating in a world that is connected at all times” (Turner, 2015, p. 104)

Beneke *et al.*, (2010, p. 78) noted that Generation Z is the only generation that was born with technology and are significant users of mobile services. It is noted by Fister Gale (2015, p. 41) that Generation Z prefer to surround themselves in environments that are high-tech, fast-paced and provide immediate feedback. Technology is not as innovative and exciting for the Generation Z as it is for previous generations, in fact Generation Z expect technology as a basic necessity part of their everyday lives (Hemsley, 2016, p. 1). “While adults may think that because Gen Z is always connected, they are aloof or unaware of what’s going on beyond their mobile, tablet or computer screens, it is exactly that connectedness that makes them a very well-informed generation” (Díaz, 2015, p. 30). Dupont, (2015, p. 19) recommends the following communication tips for Generation Z: “speak in terms of value, recognize their ambitions, provide them shareable content and tools to create their own, be honest, realize they’re collaborative, but also independent and entrepreneurial”.

Birkner (2013, p. 14) discovered that Generation Z is known for having short-attention spans as they are constantly in search for the latest thrill from one of their technological devices. Previous generations relied on their parents as the primary source for information, however that has since changed for Generation Z who are highly connected to the world around them due to their skills and instant access of technology to gather information and also to be reached by information (Díaz, 2015, p. 30; Elsasser, 2015, p. 3).

Generation Z are known to be good multi-taskers with technology, as often they will watch TV, whilst paying attention to their mobile phone and/or laptop or tablet (Birkner, 2013, p. 14). However, Wiedmer (2015, p.57) argues that Generation Z prefer interacting on a digital platform rather than passive TV or print media. Munchbach (2015, p. 1) discovered that the average Generation Z person multitasks between at least five technological devices in a day, whilst spending 41% of their time in front of a screen. Carribbean Business Staff (2014, p. 41) found that 84% of Generation Z students could multitask with an Internet connected device whilst watching television.

The Interactive Advertising Bureau (2015, p.2) surveyed 1 018 American college students aged between 17-19 years old on their attitudes towards smartphones. The report showed that Generation Z were far more likely to choose mobile phones as the medium where they see the most relevant advertising messages, over PCs, TVs and other media (The Interactive Advertising Bureau, 2015, p. 2). Furthermore, the study revealed that Generation Z named smartphones as their favourite technological device, stating that the smartphone made them feel “excited, productive and curious”, followed by laptops, game consoles, TV, radio and then tablets (The Interactive Advertising Bureau, 2015, p. 4, 19). The smartphone (which delivers a multimedia platform) plays a major role in the increase of time spent on technological devices by Generation Z and it is viewed as an ‘everything hub of entertainment’ (Turner, 2015, p. 106). Birkner (2013, p. 14) found that the majority of their time online was participating in social media sites, followed by browsing the web and then thirdly doing homework. This research paper covers a wider demographic of the Generation Z market by looking at the 18-21 year old age group and also not just smartphones, but mobile applications will be further explored.

Generation Z also value their peers opinions, however marketers have more of a challenge capturing Generation Z’s attention as they have a multitude of technological devices such as a smartphone, tablet, laptop and television, therefore brands are advised to use pictures and symbols such as emojis to quickly convey a message to them, leading to them sharing it with their network of friends (Kvidahl, 2015, p. 50; Rodriguez, 2015, p. 2). The Interactive Advertising Bureau (2015, pp. 4-5) also found that the most popular brands being chosen were those most likely recommended by

their friends on social media (The Interactive Advertising Bureau, 2015, pp. 4-5). This study aims to further investigate the impact social influences have on the attitudes and behaviour of the participants towards branded mobile applications, thereby achieving objective four of the study.

The limitations of a tech savvy generation such as Generation Z are the lack of soft skills such as understanding facial expressions and verbal cues (Fister Gale, 2015, p. 41). It has been found by Fister Gale (2015, p. 41) that Generation Z prefer to do online video conferencing such as Skype, Vine and Periscope, over a traditional face-to-face meeting as they have always been accustomed to technology assisting them in the communication process. This lack of skills of Generation Z was even shown as an example provided by Fister Gale (2015, p. 41), that showed how babies pressed pictures in magazines with the hope of the picture to flip or swipe over as they would on a tablet. Generation Z have been vastly entrenched into the world of technology that they have become empowered customers seeking more from brands and there is no sign of this slowing down (Munchbach, 2015, p. 2). Therefore it is important for marketers to better understand the Tech-savvy Generation Z, which is explored in the following section.

### **2.5.3 Marketing to the Tech-savvy Generation Z**

To market effectively to Generation Z students it is recommended that a brand reaches them on their level as they are radically different to previous generations (Munchbach, 2015, p. 1). One way that Munchbach (2015, p. 2) suggests effectively marketing to Generation Z is by transforming the entire brand experience to become digital, such as the messaging, the product, the shopping experience and the after-sales service. Furthermore, Munchbach (2015, p. 1) recommends relevant content whilst advertising to Generation Z that is unique to the individual profiles of this market, which is easily gathered due to their increasing online behaviour. The importance of digital marketing to Generation Z is stated by Turner (2015, p. 106) when he says that “Generation Z youth are exposed to media more than to any other activity besides sleeping with a 67 minutes per day increase in the amount of time spent by participants consuming and interacting with media in 2009, as compared to

2004”.

Birkner (2013, p. 14) recommended customizable and shareable brand activities for Generation Z that will combine both the online and offline marketing efforts of brands. For example, there should be synergy in the marketing efforts of a TV commercial and a social media campaign towards Generation Z as a target market so that the company comes across as one brand with multiple touch points (Birkner, 2013, p. 14). There is the viewpoint of Birkner (2013, p. 14) that states that “Gen Z doesn’t distinguish between their online and offline friends; it’s all one world”. Due to Generation Z’s access to instant information on a large scale, brands need to constantly update themselves and come across as a leader of innovation, which is highly valued by the ‘iGeneration’ (Birkner, 2013, p. 14). Advertising on digital media to Generation Z needs to be both relevant and authentic with information and stories they can relate to (Díaz, 2015, p. 30). Rodriguez (2015, p. 2) recommended using nostalgia as a marketing tool for young people, as they will associate certain brands with their childhood, which creates a favourable attitude towards that brand. Dupont (2015, p. 19) further recommended shareable content that included symbols, graphics and videos to complement the marketing story aimed at Generation Z.

Celebrity endorsements are not as important in the marketing to Generation Z students, as is a well-written story that grabs their attention and allows for engagement (Díaz, 2015, p. 30). In fact, Generation Z has shown to prefer more relatable, everyday citizens (normally also in the Generation Z age category) in a marketing campaign who are mainly seen on YouTube (Hulyk, 2015, p. 33). YouTube is regarded as Generation Z’s favourite website and the medium that is best suited to reach them (Munchbach, 2015, p. 1). A recent trend for targeting Generation Z is for brands to associate themselves with influencers in the 6-21 year age category. An example of this is 16-year-old Amanda Steele, or MakeupbyMandy24 on YouTube who has 2,6 million followers being updated on the latest fashion and beauty trends for Generation Z (Hulyk, 2015, p. 33). Amanda launched a sunglasses line by Quay Australia, she was invited by Teen Vogue to New York Fashion Week and she has several brands endorsing her (Hulyk, 2015, p. 33). Another example of a Generation Z influencer is 17-year-old Nash Grier who has 12,2 million followers on Vine due to his six-second comedic mashups. Nash has been offered between \$25 000

and \$100 000 by brands such as M&M to incorporate their products into his short videos so as to capture their target market of Generation Z (Hulyk, 2015, p. 33). Hulyk (2015, p. 34) recommends the following strategic decisions when choosing a suitable Generation Z influencer: “website or blog traffic; social community size; social community engagement; relevance of influencer content to your franchise brand’s audience; alignment of the influencer’s community to your target(s)”.

The average attention span of a Generation Z person is eight seconds; thereafter they lose attention in brands very quickly (Hemsley, 2016, p. 1). In 2000, the attention span of a Generation Z student was 12 seconds, thus showing that with each year that passes Generation Z’s attention span is lessening (Hulyk, 2015, p. 32). The implications of this rapidly reduced attention span, is that the brain of a Generation Z student is developing differently in order to process large amounts of information in a fast manner (CB Staff, 2014, p. 41; Hulyk, 2015, p. 32). Marketers need to take note of this by capturing Generation Z’s attention quickly by utilizing images, short videos, emojis and multimedia that is shareable, interactive and in a high-definition format (Hulyk, 2015, p. 32). In order for brands not to come across as intrusive and annoying on mobile phones, Grant and O’Donohoe (2007, p. 242) recommended brands offer something of value to the youth that will capture their attention, by offering content capable of facilitating and aiding real friendships (e.g. through social network applications).

Packaging of products is also vitally important to brands who appeal to Generation Z as they are the generation who are drawn to visually appealing and unique brands that are Instagram-worthy (Birkner, 2013, p. 14). Instagram and Snapchat have become extremely popular mobile branded applications for Generation Z, as they prefer more visual options (Munchbach, 2015, p. 1). Munchbach (2015, p. 2) recommends offering, “more tailored, interactive and visual experiences on many platforms”.

Consumer engagement was proposed by Birkner (2013, p. 14) and Cummings (2016, para. 1) as a means of success when appealing to Generation Z, as the two-way interaction makes these young consumers feel part of the brand and more loyal towards the brand. Cummings (2016, para. 1) states that “it’s this type of engagement, augmented by offline, real-world ‘touch points’ and connections, that will have a lasting impact on this younger streaming generation in the long run”. Dupont (2015,

p. 19) recommended that marketing activities aimed at Generation Z should allow for self-expression whereby this young market is able to upload videos and photos of themselves with the brand. An example of this was Unilever's Cornetto campaign aimed at Generation Z teenagers and the theme of love, whereby they used Mofilm as a marketing platform best suited to current teenagers and young filmmakers could create video content about the complexities of teenage romance (Hemsley, 2016, p. 2). Unilever's reasoning for using Mofilm instead of TV advertising was that they felt Generation Z were unlikely to see their Cornetto TV adverts, and that Mofilm allowed them to actively engage with their teenage audience (Hemsley, 2016, p. 2). Rodriguez (2015, p. 2) also places importance on consumer engagement with Generation Z, by recommending pop-up shops, immersive store experiences and mobile branded applications. "Experience-driven campaigns are social currency for young consumers who grew up with the ability to share things instantly" (Rodriguez, 2015, p. 4). Rodriguez (2015, p. 3) suggested that Generation Z use a combination of shopping digitally, remotely and physically. Rodriguez (2015, p. 3) further elaborates on the location of purchases as an exciting marketing tool for companies to target Generation Z by focusing on customer experience and e-commerce models developed for the smartphone generation.

Generation Z appreciate brands that are honest and open about their business activities as they have various sources of online information that will reveal any deception from these brands, which normally goes viral in a matter of minutes on social media (Birkner, 2013, p. 14). In fact, Munchbach (2015, p. 2) places emphasis on honesty of marketing towards Generation Z as the youth are intimately connected with the web via their cellphone and social media. "Companies need to speak in a voice that communicates the core values that define the brand, in a language that speaks to the beliefs, ambitions and passions of these individuals" (Munchbach, 2015, p. 2). Generation Z are proposed to be more socially and environmentally aware than previous generations, including Generation Y (Wiedmer, 2015, p. 55). Generation Z are more likely to support a brand that supports a worthwhile cause and Kvidahl (2015, p. 50) recommends that companies emphasize their feel-good stories on social media and email marketing.

In terms of pricing of products, Generation Z seek value for their money. In other words, they wish to purchase the latest iPhone but will search extensively for the best possible price for the iPhone, both in-store and online offerings (Dupont, 2015, p. 19). Kvidahl (2015, p. 52) felt that Generation Z don't mind spending significantly more on a product if they view it is priced right, has high quality and provides value. Generation Z conduct online research before making a purchase and 57% of the iGeneration would rather save their money than spend immediately and frivolously (Kvidahl, 2015, p. 48).

Generation Z are known to be the least loyal consumers towards brands and quickly lose interest in brands, compared to previous generations such as Generation X and Generation Y (Hemsley, 2016, para.1). Of the participants who responded, "43% said their family influences their purchasing decisions the most, followed by friends, 35%, while 57% research products more than they used to before making a purchase" (Caribbean Business Staff, 2014, p. 41). The most important branding factor for Generation Z is uniqueness and individuality, such that stores like Forever 21 and H&M are popular amongst the iGeneration because they capture styles that rapidly change and that are able to make the youth feel like they are expressing themselves through their outfits (Rodriguez, 2015, p. 4). Generation Z prefer unique, customizable products and services because they have access to so many options when searching online (Kvidahl, 2015, p. 52). Generation Z's importance to marketers is highly valuable, as they are a large enough consumer group to offer many marketing opportunities presently and in the future (Caribbean Business Staff, 2014, p. 41). In particular, this research focuses on Generation Z and their relationship with mobile applications, discussed in the next section.

#### **2.5.4 Generation Z and Mobile Applications**

Mobile applications allow the youth market to personalise their smartphones in a fast and convenient way (Bhave *et al.*, 2013, p. 65). The following paragraphs explore the existing literature on apps most downloaded by Generation Z, the reasons behind app downloads and social influences impacting app behaviour.



There have been numerous studies on the most popular mobile applications downloaded by the youth. Dupont (2015, p. 19) argues the most popular social media tools being downloaded by Generation Z students are Twitter and Instagram as Generation Z are known for being 'visual and sound-bite communicators'. Hemsley (2016, p. 3) states that "Facebook has already lost a significant number of under 18s who have moved to Instagram or WhatsApp (both owned by Facebook), Snapchat, Secret and Whisper, so marketing to this demographic must span different networks". In a report by Cummings (2016) who surveyed 1310 American college students between the ages of 17-24, it was discovered that 78% of Generation Z use social media applications the most out of any other branded mobile application. The top five most used applications were social media, messaging, music, gaming and travel, which included examples such as Facebook, Twitter, Instagram, Pinterest, Spotify, YouTube and iTunes (Cummings, 2016). Bhave *et al.*, (2013, p.67) proved similar results as the most popular mobile applications that were downloaded by the youth participants in their study were categorized into the following four categories: messaging, social media, music and games. The top five mobile applications used least amongst Generation Z students were categories such as dating, fashion, bargain/coupon, retail and food-related (Cummings, 2016). Both Cumming's and Bhave *et al.*'s studies are different to this research as both were conducted on overseas youth markets, whereas this study focuses on South African Generation Z. In South Africa, Potgieter (2015) also conducted a study on mobile applications, however this study was of a quantitative nature with a limited number of open-ended questions in the survey focusing on public university students and their favourite app choices in South Africa. Whatsapp was found to be the most popular mobile app amongst the South African youth participants (Potgieter, 2015, p. 5). The current study is different to Potgieter's 2015 research as it is qualitative in nature and thus focuses on the reasons behind the behaviour towards mobile branded applications, therefore gaining a more in-depth knowledge of Generation Z's mobile marketing actions.

The behaviour around mobile applications amongst the youth has also previously been researched. With regards to payment of mobile applications, the youth are less inclined to pay for a mobile application when there is a suitable substitute application that provides the same benefit (Bhave *et al.*, 2013, p. 67). In South Africa, students

were mostly negative towards paying for mobile app (Potgieter, 2015, p.5). In terms of the hours per day spent on mobile devices and mobile branded applications, 41,7% spent 1-5 hours a day on apps, 35,5% spent 6-10 hours a day on apps, 16,1% spent 11-15 hours a day on apps, 3,4% spent 16-20 hours a day on apps and lastly 3,2 % spent 20+ hours a day on apps on their mobile devices (Cummings, 2016). The average Generation Z person has more than ten mobile branded applications on their smartphones, with 10% having more than forty mobile applications (CB Staff, 2014, p. 41). Hulyk (2015, p. 32) discovered that 81% of Gen Z are on social media sites, 70% watch more than two hours of YouTube everyday, 41% spends at least three hours a day on their technological device participating in activities not related to school and that 50% of all buys are done online. This research also explores the behaviour around mobile applications, in particular, payment of apps, number of apps on a Gen Z's smartphone and most used apps. However this research is South African based and has a qualitative focus so as to investigate the reasons behind the behaviour of mobile apps.

There have been a few research papers discussing the reasons for mobile application downloads. The reason for Twitter and Instagram being so popular amongst Generation Z is the fact that they are able to create their own stories and their own media, whereas many other social media apps push media onto them (Dupont , 2015, p. 19). Recent studies outlined by Bhave *et al.*, (2013, p. 66) suggest that the youth download smartphone applications for reasons such as information, connection, entertainment and to pass time. Furthermore, every application that is downloaded by the youth has got a specific purpose or addresses a specific need in their life (Bhave *et al.*, 2013, p. 66).

Various factors including family and friends have been listed as entities that influence Generation Z's adoption of mobile applications. Bhave *et al.*, (2013, p. 67) found that "friends were the primary and most important influencers in determining the choice of applications that are downloaded". However Bhave *et al.*, (2013, p. 62) focused their study on Generation Y, individuals born between 1980 and 1994, and in India, which is not the most relevant target market for South African marketers today. Thus this study aimed to capture the attitudes and behaviour of South African Generation Z students (born after 1994) towards mobile branded applications so that it can improve

the marketing for companies targeting this generation and that it can close the gap in academic knowledge of the reasons behind the behavioural actions of Generation Z students on their smartphones. In research on a more similar age group, Taylor *et al.*, (2011) focused on gathering information about the usage of mobile phone applications amongst American university students. Taylor *et al.*, (2011, p. 62) focused on a quantitative study of mobile applications related to “banking, entertainment, information services, marketing, shopping, ticketing and telematics”. These authors suggested that social networks played a vital role in student’s decisions to download and use mobile applications. Furthermore, word-of mouth was one of the fundamental methods used amongst students to recommend and download mobile applications on their smartphones (Taylor *et al.*, 2011, p. 67). However, the Taylor *et al.*, study only focused on social factors as determinants of intention and behaviour usage of mobile branded applications amongst students and did not explore the qualitative side of the research, which this study does.

## **2.6 CONCLUSION**

This chapter explored the existing literature on mobile marketing, mobile applications and Generation Z. However, none of the existing literature was both, focused on the South African Generation Z market and of a qualitative nature. Therefore this study aims to close that gap of exploring in-depth the attitudes and behaviour of the Generation Z student market in South Africa towards branded mobile applications. The updated version of the UTAUT model (the UTAUT2 model) was chosen as the most suitable theoretical framework for the study at hand as it captures the contributing influences on new technology adoption. However, this study aimed to further contribute to the UTAUT2 model by exploring additional influences that may influence user’s attitude and behaviour towards a new technology such as mobile applications. The next chapter discusses the research methodology used to achieve the objectives of the study.

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.1 INTRODUCTION**

This chapter outlines the research methodology used for the study at hand. In particular, the research problem is discussed relating to the limited academic material available on Generation Z and mobile applications. This is followed by the research questions and objectives. The research design is explorative and qualitative and is explained below. The sample design and data collection of the participants in the focus groups is explained below. The focus group guide is discussed in this chapter, as well as how the data will be analysed from them. Finally, quality control and ethical issues are elaborated on towards the end of this chapter, providing the approval from the ethics committee of the university.

#### **3.2 RESEARCH PROBLEM**

The existing academic knowledge on mobile marketing is very much limited to previous generations such as Generation X and Generation Y (Aksoy *et al.*, 2013; Beneke *et al.*, 2010; Bhave *et al.*, 2013). Generation Z (being the youth under 22 years old) is the most recent target market that many South African organisations are starting to focus their marketing efforts on, due to the fact that “this group of consumers spends the most average hours on their smartphone interacting on apps when compared to other age groups” (Potgieter, 2015, para.7). With the increasing use of mobile marketing and specifically mobile applications (due to the popularity of smartphones), there is a need to explore the attitudes and behaviour of Generation Z towards this type of inbound marketing. Inbound marketing can be described as marketing that focuses “on getting found by customers”, including social media marketing efforts (Cant & van Heerden, 2013, p. 454). In fact, as of 2015 “the average number of apps developed and submitted by developers on Apple App store was more than 1,000 per day” and e-commerce companies in South Africa have seen more than a 48% rise in shopping done using mobile devices (Siepen, 2016, para.2-3).

This further emphasizes the need for this research on mobile branded applications, so that South African companies can take advantage of this lucrative market, Generation Z.

### 3.3 RESEARCH QUESTION

The broad research question asked in this study was:

- What are the attitudes and behaviour of Generation Z students towards branded mobile applications?

### 3.4 RESEARCH OBJECTIVES

The objectives of this study were:

1. To explore the attitudes of Generation Z students towards mobile applications in South Africa and what factors affect these attitudes
2. To ascertain the behaviour of Generation Z students towards mobile applications in South Africa and what factors affect these behaviours
3. To ascertain the reasons behind Generation Z students downloading mobile applications in South Africa
4. To explore the *social influences* impacting Generation Z's attitudes and behaviour towards mobile applications
5. To explore the *facilitating conditions* impacting on the attitudes of Generation Z students towards mobile applications
6. To ascertain the extent of *performance expectancy* as a determinant of intention or usage of mobile branded applications amongst Generation Z students
7. To ascertain the extent of *effort expectancy* as a determinant of intention or usage of mobile branded applications amongst Generation Z students
8. To explore the role of *moderating factors* such as gender, age, experience and voluntariness of use towards mobile branded applications

9. To ascertain the extent of *hedonic motivation, price value and habit* as important roles in the attitudes and behaviour of Generation Z students towards mobile applications.
10. To identify any other conditions that may affect the attitudes and behaviour of Generation Z students towards mobile branded applications.

### **3.5 RESEARCH PHILOSOPHY**

The Research Philosophy used for the study was that of interpretivism. Interpretive studies involve understanding the phenomenon subjectively. Johari (2009, p.25) explained the aim of an interpretivism philosophy as increasing “understanding of the phenomenon within cultural and contextual situations; where the phenomenon of interest was examined in its natural settings and from the perspective of the participants; and where researchers did not impose their outsiders’ priori understanding on the situation”. This was relevant for the research as participants’ focus groups were conducted in their natural setting at a private tertiary institution so as to make them feel more comfortable with revealing their true attitudes and behaviour towards branded mobile applications.

### **3.6 RESEARCH DESIGN AND METHODS**

The research design chosen was an *exploratory* study (qualitative) focusing on acquiring new insight into Generation Z students in South Africa and their use of mobile applications. Exploratory research design is used to gain insight about broad and vague research topics (Cant & van Heerden, 2013, p. 133), such as Generation Z. “Through exploration the researcher can develop a vague concept into clearer, established priorities, which will improve the final research design” (Cant & van Heerden, 2013, p. 133). An exploratory research design utilizes experience surveys, literature reviews and focus groups (Cant & van Heerden, 2013, p. 133).

The research method chosen was a *qualitative* study focusing on exploring attitudes and behaviour of Generation Z students towards mobile applications in South Africa. The qualitative method has been recommended by Cant and van Heerden (2013, p.

134) as the best method for getting “respondents to speak freely about a chosen subject, and to obtain as wide as possible a response”.

Some of the characteristics of a qualitative study include, but are not limited to: the study occurring in the participant’s natural setting (e.g. students using mobile applications whilst at a private tertiary institution); the researcher acting as the key research instrument (e.g. the researcher interviewing participants in a focus group); multiple sources of data (e.g. the use of focus groups, in-depth interviews and audio-visual material); inductive and deductive analysis, making sense of participant’s meaning as opposed to the researcher’s meanings; an emerging research process and creating a holistic account of the research problem at hand (Creswell, 2013, pp. 234-235). This study suited a qualitative research method as previous studies in South Africa, such as those of Potgieter (2015), focused on the quantitative side of Generation Z’s behaviour towards mobile applications. This study aimed to investigate the in-depth reasons behind Generation Z’s attitudes and behaviour towards branded mobile applications.

### **3.7 SAMPLE DESIGN**

The study site was a private tertiary institution in Durban. The study was performed in one of the classrooms on the campus. This study site was appropriate for this study as a university/private tertiary institution is a hot spot for Generation Z students and specifically young adults (Potgieter, 2015, para.1). Furthermore, the researcher had unlimited access to the premises making the study easier to conduct when searching for participants. Due to the income bracket of a private institution, the sample consisted mainly of upper-income Generation Z students. Smartphones are relatively higher priced than average cellphones and as the topic revolves around smartphones, a private tertiary institution was the ideal site for this research.

The **target population** was Generation Z students (those born after 1994) ranging from 18-21 years old. The study was limited to tertiary education level students ranging from 18 years and older as this age group is known to spend the most amount of time on their smartphones than any other age group (Potgieter, 2015, para.7). The

other reason for choosing above 18 year olds to take part in this study was that the sample was regarded as adults who make their own decisions regarding what mobile applications to use, and they did not require parental consent for them to participate in the research. The main South African races and both genders were included. The sampling frame was drawn from students from a private tertiary institution in Durban.

The researcher used a probability sampling method. The advantage of choosing probability sampling over non-probability sampling is that each participant had a known and equal chance of being chosen in the study, thus ensuring a more representative sample (Cant & van Heerden, 2013, p. 142). Specifically, a **stratified random sampling** method was utilized which involved “the division of a population into smaller groups known as strata, where these groups share similar attributes or characteristics, in order to classify the group more effectively” (Cant & van Heerden, 2013, p. 143). These strata consisted of females and males due to the possibility of gender influencing the adoption of new technology. Gender, as shown in the theoretical framework, was a moderating factor in the perceptions of information technology (Venkatesh *et al.*, 2003, p. 469). The **sampling frame** was pre-screened, ensuring that only students above 18 years old were included. The database was then divided into gender strata with 50% of the sample being drawn randomly from each stratum. The researcher phoned the randomly selected students from the institution’s database to request participation in the study. Random selection was continued until the desired sample size was achieved, thus ensuring the quality and credibility of the research being assured.

The **sample** consisted of six focus groups, with each group consisting of between nine and thirteen students. Generally, focus groups contain between six to twelve participants; groups any larger than that have proven to be ineffective, as not all participants will be actively engaged in the session (Wiid & Diggins, 2013, p.91). Carlsen and Glenton (2011, p. 32) recommended between two to nine focus groups, concluding the focus group method once responses became repetitive. As discovered by Venkatesh *et al.*, (2003, p.469) gender played a moderating role in the adoption of new technology and therefore the sample composition needed to take this into account. All focus groups were a mixture of genders. The sample consisted of 51%



male and 49% female participants, in one of six focus groups. The total sample size was sixty-one students.

In-depth interviews were originally planned for further exploration into the topic at hand, but were not required as all participants were actively engaged in the focus groups and patterns of similar answers were revealed after the sixth focus group. The reason for possible in-depth interviews was that a limitation of focus groups is that participants may be afraid to fully disclose their opinions when in the presence of their peers (Wiid & Diggines, 2013, p.91).

### **3.8 DATA COLLECTION**

Focus groups were used as the data collection method (loosely structured). A focus group can be defined as “a research technique that relies on an objective discussion leader or moderator who introduces a topic to a group of respondents, and directs the discussion of that topic in a non-structured and natural fashion” (Wiid & Diggines, 2013, p.90). Focus groups were the most suitable data collection method for this study due to the fact that they are:

- Low cost,
- Faster in obtaining larger amounts of data,
- Interactive for groups
- Able to generate new ideas
- An in-depth exploration which is maximized amongst participants
- Non-threatening for students who feel safer in numbers,
- Easily controlled by the moderator
- Able to observe non-verbal communication during the focus group and after with the aid of a camcorder

(Wiid & Diggines, 2013, p.92)

The advantages highlighted above were ideal for this research study as the focus groups were inexpensive for gathering the data from students, they obtained fast results for a larger amount of data so as to not waste individual student’s time, the

interaction with their peers of a similar age enhanced new ideas, better interaction, and more in-depth analysis of mobile applications. The participants were at ease with their peers, the moderator could easily control between nine to thirteen participants and the researcher was able to use a dictaphone app and camcorder during the sessions to observe any body language or misheard responses. These focus group sessions were recorded (both audio and visual) so that the researcher could observe at a later stage any missed non-verbal communication and/or tone of voice. Each focus group was between one and two hours in length, which is seen as an ideal time for data collection of this type (Potgieter, 2015, para.1). In addition, refreshments were provided so as to make the participants feel comfortable and relaxed throughout the focus group, as recommended by Kitzinger (1995, p.301).

As recommended by Kitzinger (1995, pp.301-302), at the start of each focus group, each participant was given a letter from the researcher detailing what was expected of them, why the research was important, noting that the discussion was recorded and assuring them of their confidentiality. Please see Appendix A for this letter. This is discussed further in the Ethics section of the chapter.

### **3.9 THE FOCUS GROUP GUIDE**

The following key questions were asked around each of the objectives of the research:

Objective 1: To explore the attitudes of Generation Z students towards mobile applications in South Africa and what factors affect these attitudes.

These questions were asked to get a general feel of the topic and to make the participants feel comfortable with introductory, simple questions.

Q: What has been your experience of mobile applications on smartphones?

Q: Do you like mobile applications? If so, what do you like about mobile applications?

Q: What do you dislike about mobile applications?

Objective 2: To ascertain the behaviour of Generation Z students towards mobile applications and what factors affect these behaviours

These questions were asked as transition questions and key questions to develop a broad understanding of the behaviour of Generation Z students towards mobile applications.

Q: Which mobile applications do you currently have on your phone?

Q: On average, how many mobile applications do you use every day? Which ones?

Q: Do you ever delete a mobile application? When and why?

Objective 3: To ascertain the reasons behind Generation Z students downloading mobile applications in South Africa

This was a key question in gathering information on the attitudes and behaviour of Generation Z students towards branded mobile applications.

Q: Why do you download mobile applications?

Objective 4: To explore the *social influences* impacting Generation Z's attitudes and behaviour towards mobile applications

The theoretical framework, the UTAUT model developed by Venkatesh *et al.*, (2003, p. 451) suggested that subjective norms, social factors and image were the three constructs related to social influences and thus the following questions were asked:

Q: Have you ever downloaded a mobile application because someone important to you encouraged you to download it? If so, why?

Q: Have you ever downloaded a mobile application to fit in with any of your reference groups?

Q: Do you feel mobile applications improve social standing?

Objective 5: To explore the *facilitating conditions* impacting on the attitudes of Generation Z students towards mobile applications

The UTAUT model suggests that perceived behavioural control, facilitating conditions and compatibility were the three constructs related to facilitating conditions (Venkatesh *et al.*, 2003, p. 453) and thus the following questions were asked:

Q: To what extent has guidance, instructions and a customer service contact person from the app supplier, impacted your attitude towards a mobile application?

Q: Discuss if the mobile applications you download are compatible with your life as a student?

Q: Discuss if you are more likely to download a mobile application that allows you to control it or personalise it?

Objective 6: To ascertain the extent of *performance expectancy* as a determinant of intention or usage of mobile branded applications amongst Generation Z students

The UTAUT model suggests that perceived usefulness, extrinsic motivation, job-fit, relative advantage and outcome expectations were the five constructs related to performance expectancy (Venkatesh *et al.*, 2003, p. 453) and thus the following questions were asked:

Q: Discuss if (and how) mobile applications have been useful in your day-to-day tasks?

Q: Which mobile applications have you downloaded that have been useful in your everyday life?

Objective 7: To ascertain the extent of *effort expectancy* as a determinant of intention or usage of mobile branded applications amongst Generation Z students

The UTAUT model suggests that perceived ease of use, complexity and ease of use were the three constructs related to effort expectancy (Venkatesh *et al.*, 2003, p. 453) and thus the following questions were asked:

Q: Has the complexity of a mobile application ever impacted your attitude or behaviour towards it?

Q: How likely are you to download mobile applications that are perceived as being easy to use or navigate?

Q: What makes an app easy? What makes an app not easy / not worth the effort?

Objective 8: To explore the role of *moderating factors* such as gender, age, experience and voluntariness of use towards mobile branded applications

The UTAUT model suggests that gender, age, experience and voluntariness of use were all moderating influences in the adoption of information technology (Venkatesh *et al.*, 2003, p. 453) thus the following question was asked:

Q: Do you think gender, age, experience and voluntariness of use impact attitude and behaviour towards mobile applications? How?

Objective 9: To ascertain the extent of *hedonic motivation, price value and habit* as important roles in the attitudes and behaviour of Generation Z students towards mobile applications.

The UTAUT2 model suggests that hedonic motivation, price value and habit were important in determining technology acceptance and use (Venkatesh *et al.*, 2012, p. 161) and thus the following questions were asked:

Q: Discuss how likely you are to download mobile applications that are fun and enjoyable?

Q: Do you pay for apps? Discuss how the price of a mobile application could affect your attitude and behaviour towards a mobile application?

Q: Discuss to what extent habit and experience has impacted your attitude and behaviour towards mobile applications?

Objective 10: To identify any other conditions that may affect the attitudes and behaviour of Generation Z students towards mobile branded applications

This question was asked to discover any additional factors not mentioned in the theoretical framework.

Q: Finally, are there any other factors that have not been discussed that have impacted your attitude and behaviour towards mobile applications?

Open-ended exploratory and interpretative questions were asked during the focus group. The researcher made use of the following guidelines set out by Breen (2006, p. 466) and Creswell (2013, p. 244) for effective components to an interview setting (such as a focus group):

- A welcome (including the name of the moderator, the date, the place and the topic) *e.g. Hello, my name is Shana Axcell and I will be the moderator for this focus group discussion today, the 14 September 2016, at a private tertiary institution in Durban, South Africa. The topic of today's focus group is "Exploring the attitudes and behaviour of Generation Z students towards branded mobile applications in South Africa". To provide you with a background on the study, Generation Z are those born after 1994 and the study today will be focusing on those aged between 18-21. A mobile branded application can be defined as "programs designed specifically to add functionality to mobile handsets and are able to interact directly with the technical features of the phone". It is those apps on your phone that are designed to build the brand.*
- Instructions and rules or guidelines for the focus group, as well as assurance of confidentiality to the participants *e.g. A focus group is a small group of six to twelve people led through an open discussion by a skilled moderator. It is an open discussion structured around 23 questions and should not take longer than two hours today. It will be recorded both on video and on a Dictaphone mobile application. You are ensured of your confidentiality, as you will notice you are wearing numbered stickers, which is how you will be referred to in the*

*discussion e.g. Blue 1, or Pink 2. Please ensure you phones are on silent, but please keep your smartphones on you during this focus group session, as questions will be asked about the apps on them. A few reminders for this focus group: Each person will be given a turn to voice their opinion; Please speak loudly into the Dictaphone app on the smartphone in front of you; Please do not speak across each other and allow the person speaking to finish what they are saying.*

- The questions (an ice-breaker question to begin with to make all participants at ease, followed by general experiences, and progressing to specific problems). *Please refer to Appendix B for the questions.*
- Probes for the questions, allowing participants to explain their feedback further e.g. *'please elaborate further' or 'what do you mean by that?'*
- Obtainment of background information (including gender and age). *Please refer to Appendix A for the demographic information form.*
- A concluding statement of gratitude for the participants time and effort in the focus group e.g. *Thank you for your time and effort into this focus group today for the Master's topic of "Exploring the attitudes and behaviour of Generation Z students towards branded mobile applications".*

The structure of the questions included an opening question, introductory questions, transition questions, key questions and an ending question as recommended by Breen (2006, p. 471). Please refer to Appendix B for the focus group question structure.

As recommended by Breen (2006, pp. 469-472) a pilot study of a focus group is imperative in revising the question structure, learning about the effectiveness of the moderator and to obtain feedback on unclear questions asked. A pre-test of the focus group was conducted on a sample of eight students (one focus group) to evaluate if any of the questions were unclear and needed to be changed, to revise the question structure and to learn about the effectiveness of the moderator. Furthermore, pre-testing was useful in timing of the focus group as there needed to be enough time set aside for all questions to be answered so as to answer the research question (Breen, 2006, p. 471). The outcome of the pre-test was restructuring of some questions so that they followed a logical sequence and rephrasing one question to be simpler to

understand. For example, the fourth question in the test focus group was: Which mobile apps do you currently have on your phone? This question was used as an icebreaker and moved to the first question for the rest of the focus groups. In the test focus group, participants called out their apps into the Dictaphone. This was modified for the rest of the focus groups with the participants saying their apps aloud and writing the apps on the whiteboard in the classroom so that they could look at the apps whilst talking about them for the duration of the focus group session. Also, in the test focus group demographic questions were asked, whereas in the focus groups that followed the demographic questions were asked in the consent form in the beginning of the focus group. The questions outlined above and in the appendices were the final version used to question participants. Another advantage of the pre-test focus group was that the audio and visual equipment could be tested and time of the session monitored.

### **3.10 DATA ANALYSIS**

With a qualitative study, data analysis occurs both during and after the data collection (Fox & Bayat, 2007, p.105). Data analysis formed an integral part of this study as it is “employed to clarify and refine the terms, concepts, statements in the research, especially where there is an existing body of literature” (Fox & Bayat, 2007, p.106). Analysis involved increasing levels of abstraction from the original data, including thick descriptions of participants’ feelings and attitudes, thematic analysis, discussion and theorising. Analysis took place as each phase of data collection took place i.e. during and after the focus groups.

The first step in the data analysis process was to *organise and prepare the data* for analysis, by transcribing the focus group audio-visual recording, and by typing up the moderator’s notes from the focus group sessions (Creswell, 2013, p. 247).

The second step in the data analysis process is to *read through all the data* collected (Creswell, 2013, p. 247). This included making sense of the data, and trying to establish meanings behind participant’s statements, by making notes in the margins of the transcripts and moderator’s notes. Cross-checking across the different data sources



i.e. comparing the transcripts, moderator's notes, dictaphone recording and camcorder recording ensured the accuracy and quality of the data collected.

Step three of the data analysis process is to hand *code* the data and step four is to *generate themes* for the data (Creswell, 2013, p. 247). "Coding is the process of organizing the data by bracketing chunks (or text or image segments) and writing a word representing a category in the margins" (Creswell, 2013, pp. 247-248). The data was coded according to the objectives and themes, such as 'social influences', 'facilitating conditions', 'performance expectancy', 'effort expectancy', 'hedonic motivation', 'price value', habit and experience', 'moderators', 'attitudes', 'behaviour' and 'other'. These categories for the coding system were further developed and modified as the data was collected for this study, otherwise referred to as axial coding (Babbie, 2004, p.376). Therefore the researcher utilised predetermined codes for the study, but allowed for emerging codes and themes during the data analysis, which allows for flexibility and reliability in the study (Creswell, 2013, p. 247). These themes were the foundation of the findings in the study.

The fifth step of the data analysis process was to "advance how the description and themes will be *represented* in the qualitative narrative" (Creswell, 2013, p. 248). This research included a detailed discussion of each of the themes that emerged from the coding, which included sub-themes, multiple perspectives from individuals and direct quotations.

The final step (step six) of the data analysis process is *interpreting* the meaning of the themes (Creswell, 2013, p. 249). This involved comparing the meaning of the themes to existing findings of the UTAUT2 model. Creswell (2013, p.249) also suggested that new questions may arise from the interpretation of the data, of which the researcher had not foreseen earlier in the study. The study also revealed new questions that existing literature had not covered with regards to Generation Z and their attitudes and behaviour towards mobile applications. This allowed for recommended modifications to the existing technology acceptance models, which is discussed further in the findings.

### 3.11 QUALITY CONTROL

As the research was of a qualitative nature, the data quality was measured according to its trustworthiness. According to Sinkovics, Penz and Ghauri (2008, p.691) trustworthiness of research can only be achieved through credibility, dependability, confirmability and transferability. *Credibility* is defined as focusing “on establishing a match between the constructed realities of respondents and those realities represented by the researcher(s)” (Sinkovics *et al.*, 2008). This study achieved credibility by building on the established theory of the UTAUT2 model discussed in the theoretical framework, as well as using multiple sources of evidence such as the audio recording, visual recording and the moderator’s notes. Shenton (2004, p.66) further recommended that each person approached to participate in the study should be given the opportunity to refuse so that the researcher is left with those participants who genuinely wish to participate in the research. As recommended by Shenton (2004, p.67) two more methods that were utilized in this research to gain credibility and trustworthiness of the study were frequent debriefing sessions with the researcher’s supervisor and peer scrutiny of the research project.

Sinkovics *et al.*, (2008, p.699) describe *dependability* as similar to reliability such that the results remain stable over time. Dependability of this research occurred through an accurate implementation of the focus groups, questioning methods and data collection. The study followed the guidelines set out by Breen (2006, p.466) and Creswell (2013, 244) in which the following elements ensured the dependability for the study: a welcome, guidelines, ice-breaker question, transition question, key questions, concluding questions, demographic questions and a gratitude statement. *Confirmability* is strongly linked to objectivity and logical thinking (Sinkovics *et al.*, 2008, p.699). With regards to confirmability, the study built on established theories such as the TAM and UTAUT2 model discussed in the theoretical framework, as well as the data collection and analysis occurred in alternating sequences such that the analysis drove the collection and triangulation also took place through using multiple sources of evidence such as the audio recording, visual recording and the moderator’s notes. Lastly, *transferability* (generalizability) is otherwise known as external validity in that “it depends on the degree to which salient conditions overlap or match” (Sinkovics *et al.*, 2008, p.699). A thick description of the following were included in

order to assist with the transferability of the study: the number of participants involved in the fieldwork, the data collection methods employed, the number and length of the data collection sessions and the time period over which the data was collected (Shenton, 2004, p.70).

### **3.12 ETHICAL ISSUES**

Ethical clearance was granted by the University of KwaZulu-Natal Research Office (Appendix C is the Ethics Approval letter). The independence of the participants of the study, and the personal nature of their attitudes and behaviour meant that it was necessary to get informed consent from each participant (see Appendix A). Focus groups with participants (students) took place at suitable locations and at times suited to their lecture schedules. A letter from the Head of Research at the private tertiary institution in Durban was obtained giving permission to conduct the study on campus and recruit student participants. All participants were assured of the privacy and confidentiality of their information shared, and informed of their option to withdraw from the study at any time. They were also provided the option to remain anonymous if they wished. In addition to ensuring confidentiality, the following guidelines were adhered to in order to ensure the highest ethical standards: putting the participants at ease by having an ice-breaker question, establishing a rapport, explaining the focus group format and the sequence of topics, explaining why a recorder was being used and notes being taken, sticking to the allocated time and being ready with further advice or questions posed by the participants (Creswell, 2013, p. 249).

### **3.13 CONCLUSION**

The research problem at hand was to overcome the limited information available to marketers on the Generation Z market in South Africa and their use of branded mobile applications. The research objectives focused on exploring the attitudes and behaviour of Generation Z students towards branded mobile applications including: social influences, facilitating conditions, performance expectancy, effort expectancy, hedonic motivation, price value, habit and moderating factors. In addition, the objectives aimed to explore any additional conditions and reasons that affected the

attitudes and behaviour of the sample towards mobile applications. The research design was exploratory and the research method was of a qualitative nature with focus groups chosen as the most suitable data collection method. The sampling design used was a probability stratified random method, with the focus groups split by gender, between the ages of 18-21 years old from a private tertiary institution in Durban. The total sample size was 61 students. Data analysis consisted of organising and preparing the data, reading through all the data, coding, detailing and interpreting the data. Quality control of the study centered on credibility, dependability, confirmability and transferability. Ethical clearance was approved the research institution. The next chapter highlights the interpretation of the data through findings that focused on the objectives of the study mentioned above.

# CHAPTER 4

## FINDINGS

### 4.1 INTRODUCTION

This chapter explores the findings of the research study, specifically the attitudes and behaviour of Generation Z students towards branded mobile applications in South Africa. The Findings explore the positive and negative attitudes of Generation Z students towards branded mobile applications, as well as the most popular and least popular apps being downloaded by the participants.

### 4.2 SAMPLE PROFILE

**Table 4.1: Summary of the Demographic Profile of the Participants**

Demographics	Frequency %			
	Male	Female		
Gender	31 (51%)	30 (49%)		
Age	18	19	20	21
	7 (11.5%)	16 (26.2%)	19 (31.1%)	19 (31.1%)

The sample was nearly evenly split by gender with 51% of the participants being male and 49% being females. The majority of the participants (62,2%) were either 20 or 21 years old, with 26.2% being 19 years old and 11.5% being 18 years old. Gender and age played an important role in choosing the sample as the theoretical framework of the UTAUT model developed by Venkatesh et al., (2003, p. 453) proposed that gender and age were moderating influences in the adoption of new technology.

### **4.3 ATTITUDES OF GENERATION Z STUDENTS TOWARDS BRANDED MOBILE APPLICATIONS IN SOUTH AFRICA**

Participants were initially asked to write down on the white board in the classroom the branded mobile applications they currently had on their phone. This was used as an icebreaker question so as to make the participants feel at ease before questioning them on their apps. Furthermore, by writing the apps on the board it could be used as a reference to go back to for questions that followed in the study. The participants were also asked to tick next to the apps that they also had so that the frequency (popularity) of mobile apps could be calculated.

#### **4.3.1 The Positive Attitudes towards Branded Mobile Applications**

The second question asked in the research study was **“What has been your experience of mobile apps on smartphones?”** This question was asked to discover the positive and negative attitudes towards branded mobile applications in South Africa, thereby achieving the first objective of the study: To explore the attitudes of Generation Z students towards branded mobile applications in South Africa and what factors affect these. The third question asked, **“Do you like mobile apps? If so, what do you like about mobile apps?”** Although similar to Question Two, the third question hoped to focus specifically on the positive attitudes towards branded mobile applications that were not discovered in the second question. The third question achieved this because more positive attitudes were discussed compared to the second question. The seventh question the study asked, **“Why do you download mobile applications?”** Although similar to the second and third question, this question hoped to gain a more in-depth analysis of the psychology behind the attitudes of Generation Z students towards branded mobile applications. New themes were also introduced in Question Seven thus it was useful to include it as part of the study. This question was asked to ascertain the reasons behind Generation Z students downloading mobile applications in South Africa (Objective 3). The following results, however, combine the themes that emerged in all three questions as they all pertain to positive attitudes towards branded mobile apps.

**Table 4.2: Themes related to the positive attitudes towards branded mobile applications**

<u>Themes</u>	<u>Keywords</u>	<u>Covered in Question</u>	<u>Frequency</u>
Convenience	Makes life easier; accessible	2, 3 & 7	24
Staying connected	Staying connected; staying-in-touch; keeping up-to-date; communication; notified social media	2, 3 & 7	18
Functionality of apps	Organisation; functionality; navigation; news; storage; help; work opportunities; reminders	2, 3 & 7	16
Time advantage	Saves time; instant; time efficient; accessible; busy; quick	2, 3 & 7	16
Entertainment	Overcoming boredom; push time; try it out	3 & 7	15
Cost advantage	Low-cost; price; saved money; free	2, 3 & 7	5
Social acceptance	Accepted by peers	3 & 7	4
Stalking	Stalking; find people	3	4
Job opportunities	LinkedIn; work opportunities	7	1
Large variety	Variety	3	1
Personalisation	Personalise; adapt	3	1
Technical features of apps	Screen size; distorted images	2	1

An overwhelming response, mentioned twenty-four times, was that mobile apps are **convenient** and make life easier. The appeal of apps, as stated by two participants, was that they were:

*“Convenient and easy to use” and “It makes life easier”.*

With the large variety of apps available to consumers, one participant enjoyed apps as stated:

*“Well I use a lot of social media, so the apps make it much more accessible”.*

Convenience of mobile branded applications was indicated in the following statement provided by a participant:

*“Apps are also convenient in the time that we live in, as it’s so much easier to socialize on apps, than face-to-face. So it gives you a wide variety of things to do at one time”.*

One particular branded mobile application that was mentioned for its convenience benefits was Whatsapp. As one participant stated:

*“Especially with Whatsapp and the class groups, I would suffer without it as I’m forgetful about homework and assignments and due dates. With the app, you just pop a message on the group and you have 10 people ready to respond to you online”.*

**Staying connected** was very important to the participants as it was mentioned eighteen times during the focus groups. The participants felt that mobile applications made staying in touch much more accessible and convenient. Particularly the social media apps were highlighted as the branded mobile applications most used to stay connected. One of the participants felt that Facebook and Instagram let:

*“You know what everyone is doing, posting up pictures of what you’re doing, saving your memories”.*

Another participant emphasized the importance of staying connected via mobile apps, when stated:

*“Connecting with friends, seeing their pictures seeing what they doing and staying in touch”.*

Staying connected with their distant or overseas friends and family through a mobile app was also a communication benefit:



*“What I like about Snapchat and Instagram, like if you have friends that don’t stay near you, then you can keep track on what they doing, how they doing. Especially with Snapchat as you know what they doing on that day”.*

Often the participants remarked that they prefer connecting with their peers via mobile apps as opposed to face-to-face contact. One participant stated:

*“Instead of going downstairs and knocking on my friend’s door, I can just Whatsapp her. So that makes my life easier”.*

In general, mobile branded apps were seen as the driving force behind the popularity of smartphones. As mentioned by a participant,

*“You willing to pay a high price for the latest iPhone because of all the cool apps on it. Apps really drive the brand of the phone.”*

Again, they preferred dealing with a mobile app as opposed to dealing with people face-to-face or even talking to them over the phone. One participant remarked:

*“So I’m a super impatient person and I don’t like really dealing with people so if I want to go to gym class, instead of calling the gym, I can simply just logon to My Virgin app”.*

The **functionality** of a smartphone and branded mobile applications was an important factor for Generation Z whilst doing their day-to-day tasks. Sixteen participants felt that mobile applications assist Generation Z in their everyday lives. As stated by one participant:

*“Ever since going back to a really old phone, it’s made me realise how much functionality a smartphone has and how much we’ve come to rely on it in our day-to-day lives”.*

The functionality of a mobile app such as Skyscanner was mentioned as a reason for apps popularity as it combined all companies’ quotes into one app, which made their lives easier. As mentioned by one participant:

*“The functionality of apps. Like those apps with the airlines, you can download fifty different airlines apps or you can download Air Scanner (Skyscanner) and its all the*

*information in one place for you”.*

Shazam was discussed as an app that is downloaded because of its functionality of being able to tell students the name of a song and the artist by just hearing a few bars of the song. As stated by one participant:

*“I think for Shazam it adds a bit of functionality to your life, which you wouldn't have. Ten years ago when you heard a song on the radio and didn't know the name of the artist, you were like ‘who is that?’. Now you got the answer to it.”*

Apps like News24 were downloaded by the participants for their functionality of being informative, so that students were aware of events in the world, as stated by a participant:

*“Like also News24, when there were the strikes, I come through that way so it was helpful to know if the strikes were happening so I could avoid certain roads and not come at all”.*

The Google Maps mobile application was also downloaded for its functionality in providing navigation, as stated by two participants:

*“I use Maps a lot because I drive around by myself, kind of far places so that saves my life”.*

*“It helps us not get lost”*

Dropbox was downloaded for storage of the user's photos and documents and the Calendar mobile app was used for reminding. When asked in Question Seven why they download mobile apps one participant stated:

*“...reminders with my calendar. And storage for Dropbox”.*

Not only the cost advantage, but also the **time advantage** came through sixteen times as a reason for the positive attitude towards mobile branded applications. For example, participants from this Generation Z sample preferred using apps over traditional media and the Internet, as two participants stated:

*“Apps are more time efficient than going and buying a newspaper”.*

*“Instead of logging onto the Internet, you have an app that is already logged in and has your details saved, so it’s easy and quick”.*

Shopping online directly from the retailers instead of standing in queues at shopping centers was also seen as a positive experience of using an app versus brick-and-mortar stores. The participants enjoyed that branded mobile applications were available and instant at any time with one participant stating:

*“You can get airtime and buy data at any time you want to through the app”.*

Another category of mobile apps that was enjoyed for their timesaving advantages was banking. Having mobile apps ‘at their fingertips’ was seen as a major benefit for participants in their busy lives. Often, banking mobile apps such as FNB and ABSA were mentioned in terms of how they benefit the consumer as there is no longer a need to visit a bank when everything can be done from the palm of your hand i.e. with a smartphone. As one participant stated:

*“For example a banking app, you don’t have to go into the bank to make a transaction or pay for something. You can do it right on your phone and it takes only a few minutes to do it”.*

One participant felt that their days are extremely busy and mobile apps assist them in a saving time, as stated by two participants:

*“Life is becoming so busy for everyone that anything you can do shorter, makes life easier”.*

*“For me, I have a younger sister and every time I have to go with my mom to buy her new toys then after a week she will be bored and will want something else. Now she can just download a game and get rid of it when she’s bored of it and it saves a lot of money. Also I don’t even know where to put all her unwanted toys as it just creates rubbish in the house and now there’s not a lot of rubbish”.*

**Entertainment** was highlighted fifteen times as a benefit of branded mobile applications. As one participant said:

*“I like how they continuously innovating, making our lives easier and more entertaining at the same time.*

Mobile apps were downloaded to overcome boredom and keep participants entertained as stated by two participants:

*“Apps are also a nice way to kill time. When you sitting somewhere and you bored, it passes time quickly”.*

*“Just to push time. You know at sometimes at like 2o’clock when you have nothing to do, you just play on apps to do something”.*

Five participants felt that there was a **cost advantage** to mobile branded applications as indicated by the following response,

*“I think most of the social apps are very positive because I find it cheaper messaging someone through an app then using your airtime. For example, Whatsapp calls are much cheaper than actual calls and using your airtime”.*

Another app that was suggested to have saved money for Generation Z students was Facetime for cheaper video calls. One of the main reasons why the participants enjoyed mobile apps was that most of them were free. One participant even commented that if apps were connected with Bluetooth, then it was basically free to communicate with your friends and family, therefore saving costs on data usage, as stated:

*“I recently downloaded an app that used Bluetooth, which was pretty much free to communicate with friends and family”.*

Another appealing feature of mobile apps that lead to many downloads was the fact that they are relatively cheap. For instance, Whatsapp and BBM were downloaded due to them being cheap instant messaging platforms that allowed users to communicate with their peers quickly and cheaply.

**Social acceptance** of particularly social media mobile apps was important to four participants of the Generation Z study. As two participants stated:

*“I think because of influencers. If everyone has an app, you will feel left out if you don't have it”.*

*“the influence of other people”*

Many photo-editing apps with filters were downloaded so as to improve the user's physical appearance and make their photos look better, in order to have social acceptance. As one participant mentioned:

*“To get better pictures, so that you don't look as crappy”.*

Four participants said they used mobile apps to find people and even **stalk** them. One participant remarked:

*“I think apps are great to contact people, and make plans. It's just so much easier to find people where they are without them knowing you stalking”.*

After this participant's statement, two more participants agreed that stalking people was a positive aspect of branded mobile applications, specifically social media apps.

Stalking did not appear as a negative attitude towards branded mobile applications, but rather that you can observe what is going on in other people's lives without them knowing.

Apps such as Instagram are often downloaded out of curiosity, as stated by two participants:

*“So if someone tells you about something, naturally as humans we are inquisitive, so if other people say this is so cool, then you want to see what its about and if its for you or not. I think being inquisitive has got a lot to do with it”.*

*“When people say they have Instagram, you want to download it out of interest to see what it is. Probably for interest, and then you get addicted”.*

One participant mentioned **job opportunities** as a reason for downloading the LinkedIn mobile app. When asked in Question Seven why they download mobile

apps, her response was:

*“Work opportunities with LinkedIn”*

Another positive feeling about branded mobile applications mentioned by one participant was that there are a **large variety** of apps available to users:

*“I think apps are great because there is such a variety. There are so many different things you can use to do with apps”.*

The **personalisation** of apps was also mentioned as a reason for the liking of mobile apps, specifically the fitness and health apps that adapt to one’s personal circumstances. As stated by one participant:

*“With regards to the health apps, I love that you can personalise them to your own health”.*

Another positive experience that was emphasized by one participant was the **technical features of the apps**, that mobile apps suit the smartphone screen size, whereas logging onto a brand’s website from a smartphone makes the images and text distorted. As stated by one participant:

*“Safari is a real hassle to use. On a smartphone, Safari and the screen doesn’t line up properly. If you go on a computer it’s fine. But if you go on your phone, it’s often that you have to zoom in and out, up and down, to try see everything. But with an app it displays everything nicely”.*

One participant summarized four main benefits of mobile apps:

*“If you look at the board there, there are more than 30 mobile apps and they make our life easier so the aspect of convenience being number one, secondly connecting as its easier to connect with people, thirdly its cheaper to connect with people, fourthly its on-the-go as you can get it whenever you want, it’s always there for you”.*

Overall the five most prominent benefits of branded mobile applications mentioned in the focus groups were convenience, staying connected, functionality, time advantages and entertainment. Not as important but mentioned as positive themes related to branded mobile applications were the cost advantages, access to job opportunities,

large variety of apps, personalisation, social acceptance, stalking and technical features of apps.

### **4.3.2 The Negative Attitudes towards Branded Mobile Applications**

The second question asked participants **“What has been your experience of mobile apps on smartphones?”** which revealed some negative attitudes towards apps. In addition the fourth question, **“What do you dislike about mobile apps”**, aimed to get a more in-depth response from the participants on the negative attitudes towards branded mobile applications, thereby achieving the second objective of the study: To ascertain the behaviour of Generation Z students towards mobile applications and what factors affect these. The following discussion combines the themes that emerged in both questions as they all pertain to negative attitudes towards branded mobile applications.

**Table 4.3: Themes related to the negative attitudes towards branded mobile applications**

<u>Themes</u>	<u>Keywords</u>	<u>Covered in question:</u>	<u>Frequency</u>
Time consuming	Wastes time; distraction; addiction; less productivity; self-control, depression; anxiety	2 & 4	15
Adverts	Adverts	2 & 4	8
High usage of data	Drains data	2 & 4	8
Large memory space required for apps	Space consuming	2 & 4	6
Updates and notifications	Notifications	2 & 4	6
Social skills	Social media; face-to-face	2 & 4	4
Drain battery life	Battery draining	4	3
Self-esteem issues	Self-esteem	2 & 4	3
Invasion of privacy	Lack of privacy	4	2
Harmful viruses	Virus	2	1
Restarting of an app	Restart	4	1

The participants felt strongly that mobile apps are **time consuming** and distracted them but that the only time they would refrain from using their apps was when their data was running low. Time consuming was mentioned fifteen times during the focus groups and was the most frequently mentioned negative feature of branded mobile applications. One participant actually remarked,

*“It’s a bit bad in the sense that its time consuming. Sometimes I don’t get what I want to get done because I’m so busy on Instagram. Sometimes the only time I stop is when Vodacom message me telling me my data is about to be used up”.*



This distraction caused by mobile branded applications, as suggested by the participants, leads to addiction and slower productivity. One participant provided the following example:

*“I think apps are a negative experience because you get addicted. When you are meant to be studying, you instead are on Facebook and Instagram and then you end up not studying”.*

However, one of the participants actually blamed parents for app addiction because they felt that:

*“A lot of parents give their kids smartphones just to give them something to do”.*

On the other hand, some participants felt that the usage of apps was dependent on an individual’s self-control. As mentioned by a participant:

*“But I think apps distract you only how much you let it. Like I’m a strong person so when I go to Lesotho I don’t look at my phone for four days. But you choose to be distracted like when you don’t want to listen to what your lecturer has to say then you will go on your phone. It is as much as you allow it”.*

One participant indicated that the technology obsession was more prevalent amongst Generation Z, specifically those aged between ‘5-20 years old’. Three of the participants agreed and felt that the younger half of Generation Z were obsessed with mobile branded applications due to their desire for popularity.

*“You know what’s so sad is that these apps are actually thriving from the fact that people are so obsessed with their image and how they look to other people that they even allowing people to buy followers, to make themselves look and feel cooler, and it’s so sad!”*

A negative side of mobile applications for eight participants was the **adverts**. When asked about their experience of branded mobile applications in the second question, one participant remarked:

*“I hate the adverts”.*

Specifically video adverts were annoying for one participant, as stated:

*“Adverts, especially the video ones as they end up taking more data, which is so annoying”.*

The **high usage of data** required to run a mobile app was mentioned eight times as another disliked feature of mobile apps. Two participants stated:

*“I think data is quite expensive in South Africa so every app on your phone is based on data. So like Facebook, Instagram and Snapchat use a lot more than Whatsapp”.*

*“I find apps use a lot of data especially when you spend lots and lots of time on it”.*

Another negative aspect of branded mobile applications highlighted by six participants was that apps require **large memory space** on the smartphone. When asked in Question Four, what they disliked about mobile apps a participant replied:

*“Space consuming”.*

One participant explained the reason for large memory space being a disliked feature of mobile applications:

*“Some phones come with smallish space and then you download three or four apps and it says memory full and you can’t really put them on your memory card, so it’s pointless.”*

Another participant felt that even if they wanted to keep the app, they couldn’t because of the large memory space required.

Six participants saw **updates and notifications** as more annoying than useful. As stated by two participants,

*“But then the other thing I don’t like is the updates that they do to fix the bug that they have, that is when the app becomes unpopular and you tend to remove it from your phone because it isn’t as convenient as it was when you first got it”.*

*“I don’t want an app that every second of the day is going to ding-ding, meaning notifications”.*

Four participants felt strongly that branded mobile applications have weakened **social skills**, as stated by two of the participants:

*“I think apps hinder your social skills”*

*“I hate that there’s less face-to-face and it’s too easy to express yourself on social media, but then when it comes to face-to-face many people these days they can’t express their feelings in front of someone”.*

One participant emphasized the changing social dynamics of Generation Z when she stated:

*“Also the Internet only really came around in the 2000s where most of us were born in 1995, 1996, 1997 where we still played outside. I know my sister had to give my three-year-old niece the cellphone to get her to shut up. When we were that age we were shoved in front of the TV. When we were that age smartphones weren’t a big thing. I think the first one came about in 1994 but it hadn’t evolved to where it had all these apps and all these children’s apps especially”.*

Branded mobile applications also **drain battery life** of the smartphone as mentioned by three participants in Question Four when asked what they disliked about mobile apps. As stated by one participant:

*“Battery life. A lot of apps if you keep them open for the whole day, you don’t even notice but your battery goes down quite a lot”.*

**Self-esteem issues** were raised by three participants due to the social pressures and popularity around social media mobile apps. As stated:

*“Because, say for example Facebook, if you not doing what everyone else is doing, you don’t get invited to a party that other people were invited to, it can hurt your self-esteem. Some people take that very seriously”.*

Another participant felt that Generation Z had become obsessed with the way they looked on mobile apps due to self-esteem issues caused by mobile apps. She stated:

*“But I feel for a lot of the younger generation you become obsessed and it’s because they fed it. In the past you weren’t bombarded with information and images*

*constantly, and nowadays you are constantly bombarded with images. Social media apps, as an example, like Facebook and Instagram allow you to create a fictional life for other people to see. For example, when there is a picture of someone on the beach that's all you see, you don't see the 'before' picture. So I feel it's addictive, that people like getting that false praise and likes, and not everyone's like that but it is the masses".*

Another concern for two participants was the **invasion of privacy** caused by mobile apps. Apps like Tinder and Snapchat were mentioned as potential threats to privacy as Tinder (a dating app) allows you to meet up with complete strangers that could potentially be very dangerous and Snapchat (social media) allows other connections to save your photos. One participant remarked:

*"For some reason I just feel apps like Tinder shouldn't even be made because how do you know the person. What if you end up going to meet a psychopath?"*

Another participant felt that branded mobile applications crossed boundaries when it came to privacy, as stated:

*"People can always contact me. I get to a point where I don't actually want to talk to anyone; I just put my phone on airplane mode and the people that are Whatsapping me can just go away".*

One participant when asked about their experience of branded mobile applications mentioned **harmful viruses**. He stated:

*"Also apps can damage your phone like battery wise, space wise and viruses".*

Another participant disliked branded mobile applications that would suddenly **restart**, as stated:

*"When apps restart, so like something happens with the functionality and it just decides to restart".*

Overall the five most prominent dislikes of branded mobile applications mentioned in the focus groups were that apps are time consuming, adverts annoying, apps high usage of data, large memory space required for apps and updates and notifications.

Not as important, but mentioned as negative themes related to branded mobile applications, were that they drain the battery, may introduce harmful viruses, are an invasion of privacy, are annoying when they restart, cause self-esteem issues and decrease social skills.

The positive attitudes towards branded mobile applications far outweighed negatives, with 106 positive mentions of branded mobile applications (related to convenience, staying connected, functionality, time advantages and entertainment) versus 57 negative mentions (related to time wastage, adverts, high usage of data, large memory space required for apps and updates and notifications).

#### **4.4 BEHAVIOUR OF GENERATION Z STUDENTS TOWARDS BRANDED MOBILE APPLICATIONS IN SOUTH AFRICA**

The second objective of the study was: To ascertain the behaviour of Generation Z students towards mobile applications and what factors affect these. The focus groups started with the first question: **“Please take out your smartphone. Using the board behind me, please write the apps you currently have on your phone and say them out aloud”**.

#### 4.4.1 Branded Mobile Applications downloaded by the participants

The participants recorded 213 branded mobile applications on their smartphones (Appendix D). The top ten of these are shown in Table 4.4 below.

**Table 4.4: Top ten most downloaded branded mobile applications amongst the participants**

<b>Name of Branded Mobile App</b>	<b>Number of Students who had the app on their phone</b>
Whatsapp	61 (100%)
Instagram	52 (85.2%)
Facebook	51 (83.6%)
Uber	41 (67.2%)
Snapchat	38 (62.3%)
Facebook Messenger	28 (45.9%)
Twitter	21 (34.4%)
YouTube	21 (34.4%)
SoundCloud	18 (29.5%)
Shazam	17 (27.9%)

Every participant in the focus groups had Whatsapp on his or her smartphone. This was followed by 85.2% of participants having Instagram on their phone; 83.6% had Facebook; 67.2% had Uber and 62.3% had Snapchat.

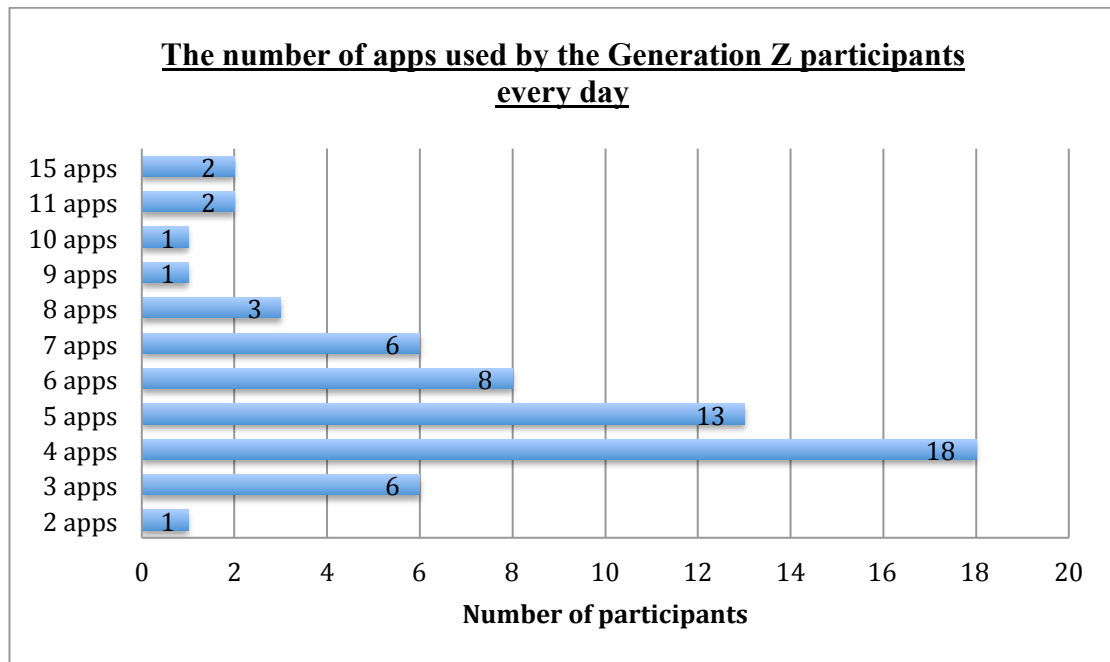
**Table 4.5: Number of apps on the participants' smartphones**

<b>Number of apps</b>	<b>Number of participants</b>	<b>Percentage</b>
10 apps	9	14.8%
9 apps	9	14.8%
8 apps	8	13.1%
7 apps	6	9.8%
12 apps	5	8.2%
15 apps	4	6.6%
13 apps	3	4.9%
11 apps	3	4.9%
22 apps	2	3.3%
16 apps	2	3.3%
14 apps	2	3.3%
6 apps	2	3.3%
42 apps	1	1.6%
25 apps	1	1.6%
20 apps	1	1.6%
19 apps	1	1.6%
17 apps	1	1.6%
5 apps	1	1.6%

The number of branded mobile applications on the participant's smartphones ranged from five to forty-two. Of the sample, 14.8 % of participants had nine or ten apps on their phone; 13.1% had eight apps on their phone and 9.8% had seven apps on their phone. The majority (52.5% of participants) had between 7 and 10 branded mobile applications on their phone. There were 21.2 % of participants that had more than 15 apps on their phone.

#### **4.4.2 Branded Mobile Applications used every day by participants**

Question Five of the research study asked “**On average, how many mobile apps do you use every day? Which ones?**” This question aimed to explore the behaviour of participants towards branded mobile applications, thereby achieving Objective Two of the study: To ascertain the behaviour of Generation Z students towards mobile applications and what factors affect these behaviours.



**Figure 4.1: The number of apps used by Generation Z every day**

Figure 4.1 shows that 29.5% of the participants use four apps every day. This was followed by 21.3% of the participants using five apps every day and 13.1% using six apps every day. So in total, the majority (63.9%) of the participants were only using between four to six apps every day, even though Figure 4.1 showed that most of them had about 7-10 apps on their phone.



**Table 4.6: The apps used every day by the participants (Appendix E)**

<b>Mobile apps</b>	<b>TOTAL</b>
Whatsapp	61
Instagram	50
Snapchat	49
Facebook	48
Messenger (Facebook)	14
Gmail	9
YouTube	9
Twitter	8
SoundCloud	6
Google Chrome	5
FNB	5
Pinterest	5

As shown in Table 4.6, the most popular apps to be used every day were Whatsapp, Instagram, Snapchat, Facebook, Facebook Messenger, Gmail and YouTube. 100% of the participants used Whatsapp every day, whereas 81.9% used Instagram every day and 80.3% used Snapchat every day.

#### **4.4.3 The Behaviour around Deleting Branded Mobile Applications**

The sixth question in the study asked, **“Do you ever delete a mobile app? When and why?”** This question was asked to further understand the behaviour around branded mobile applications amongst the participants, thereby achieving the second objective of the study: To ascertain the behaviour of Generation Z students towards mobile applications and what factors affect these.

The reasons listed for deletion were:

**Table 4.7: Reasons for deleting branded mobile applications**

<b>Theme</b>	<b>Keywords</b>	<b>Frequency</b>
Lack of storage on the smartphone	Storage; space	17
When an app is no longer useful or relevant	Useful	13
When an app is no longer entertaining	Entertaining	11
If an app is used rarely	Don't use it all the time	7
When an app becomes too addictive	Addictive	7
If an app isn't user-friendly	User-friendly	6
When an app uses too much data	So much data	4
Adverts	Adverts	3
When an app has been hacked into or gets a virus	Hacked; virus	2
When apps slow down the smartphone	Slow down	2
Paying for an app after a free trial period	Pay	1
When an app sends too many notifications to the user	Notifications	1
When an app drains the battery	Battery	1

The **lack of storage** on a smartphone was cited as the number one reason for deleting a mobile app. Two participants explained why they deleted mobile apps:

*“Also it takes up a lot of space. When I want to download new apps then there is not much space”.*

*“I delete apps when my phone hasn't got a lot of memory left”.*

Apps that were deleted due to them taking up too much space on the phone were Call

Recorder, Dropbox, Gmail, SoundCloud, Minion Rush and BBM. Often apps such as Facebook, YouTube, Gmail and Dropbox were deleted as one participant felt it easier to access these via desktop and that they took up too much space on their smartphones, as stated:

*“I can always access Dropbox on my computer and BBM because I don’t use it all the time because I have Whatsapp”.*

Four participants said they would delete a mobile app the same day once they realised they didn’t have enough space on their phone. Another participant stated they would delete a mobile app after two weeks if it took up too much space on their phones.

A commonality amongst the answers was that apps were often deleted the same day as downloading when the user felt that the app was not **entertaining** enough or when it was **no longer useful**. The following participant’s response provides evidence of this theme:

*“Well if I’m extremely bored I download an app just to try it out because it looks entertaining, but if it’s not then I just delete it. Or if its not useful then I will delete it”.*

Apps that were deleted due to them no longer being entertaining were Dubsdash, Flappy Bird, PokemonGo, Twitter and Tumblr. One participant stated they would play a gaming mobile app for a week before deleting it if it were no longer entertaining. Two participants remarked they would delete a mobile app the same day as downloading it if it was not entertaining.

Thirteen participants said they would delete apps once they found them no longer useful such as Citymapper, Tinder, Instagram, LinkedIn, MSN Money, Mxit, Skyscanner, photo-editing apps and gaming apps where they had reached the highest level possible (e.g. Candy Crush). With Tinder being a dating app, once the participant had found a suitable partner they deleted the app.

One participant outlined their reason for deleting mobile apps due to it **being used rarely**. As stated by the participant:

*“I deleted Moldiv because I don’t use it all the time”.*

Another participant mentioned that they would delete apps that they didn't use every day, especially gaming mobile apps. This particular participant deleted mobile apps once a week. Two participants stated they would delete a mobile app after two to three weeks after not using it and two additional participants said they would take a month to delete a mobile app that was used rarely.

Apps that were often deleted due to them being **addictive** were Angry Birds, BBM, Candy Camera, Candy Crush, Facebook, Flappy Bird, Subway Surfer, and Whatsapp. As one participant stated:

*"Me and Angry Birds kind of divorced, because it's too addictive. You know how they say 'too much of a good thing is bad', yeah well you just know. I need to study now".*

**User-friendliness** of mobile apps was important for six participants of the study. One participant felt that branded mobile applications that were not user-friendly would ultimately be deleted. As she stated:

*"Along with trying out apps, if an app isn't user-friendly, I get impatient and delete it.*

One participant stated they would delete an app the same day as downloading it when it was not user-friendly:

*"I would delete an app the same day because if I can't understand an app, I find it pointless".*

Some apps mentioned as not being user-friendly and were thus deleted were Tumblr and LinkedIn.

When an app **uses too much data** it is deleted as stated by one participant:

*"I deleted Snapchat because it was chowing (using) so much data"*

Apps that were deleted due to them using too much data were Facebook, Snapchat and SoundCloud. One participant said they would delete an app that used up too much data after six months. Another participant remarked they would delete an app after one month if it used up too much data.

Three participants of the Generation Z sample listed **adverts** as one of their primary reasons for deleting a mobile application. One participant, due to the annoying adverts, deleted PokemonGo. They stated:

*“The PokemonGo app had all these adverts popping up and it just frustrated me. I have no time for that 5-second countdown ad so I would rather just delete it”.*

Another participant stated:

*“I usually delete the social apps with adverts. As soon as I download an app if I see it has an advert once, I will delete it”.*

Two participants said they would delete a mobile app the same day as downloading it if they discovered it had adverts in it whilst the third participant stated they would wait three weeks before deleting a mobile app with adverts.

Two participants deleted the Facebook app as their profiles had been **hacked into** so they were concerned about their privacy. One participant commented:

*“I’ve deleted one app: Facebook. I got hacked into so I decided to just close my account, but that was after a long time, probably a year”.*

One participant stated the following about viruses:

*“You remove it...apps that have problems like bugs”.*

SoundCloud was one the branded mobile applications mentioned to have slowed down the smartphone.

Two participants deleted branded mobile applications when they realised the apps **slowed down their smartphone**. As one participant stated:

*“It takes up too much space and makes your phone slower”.*

However some of the deleted apps were re-downloaded, such as Call Recorder and LinkedIn. Two participants summarized the reason behind this in the following quote:

*“I deleted it because I didn’t understand it at first but then someone told me how it works and the benefits of it, so I downloaded it again”.*

*“Well, I deleted Call Recorder two weeks ago but then I thought ‘what if I want to listen to the calls again’ then I reinstalled it again”.*

The Utorrent branded mobile application was deleted after one week of downloading it as it initially offered a **free trial period** but then wanted money from the participant to continue using it, which the participant refused to do. As the participant stated:

*“I deleted uTorrent because of the different versions that they offer, like the Pro version where you obviously have to pay for the app”.*

**Notifications** were mentioned as one of the reasons for deletion of branded mobile applications. As one participant stated:

*“I often download a lot of apps, and if its one of those apps that keep sending updates or notifications then I normally delete it”.*

Not only the draining of data, but also the **draining of battery life** was mentioned as a reason for deletion of mobile apps. One participant stated their reason for deletion of mobile applications as:

*“...because of data usage and battery wasted”.*

This participant stated they would delete a mobile app after six months if they realised it drained their smartphone’s battery life.

The five most common reasons for participants deleting branded mobile applications were: Lack of storage on the smartphone, when an app is no longer useful or relevant, when an app is no longer entertaining, when an app becomes too addictive and when an app is used rarely. Other less important factors mentioned for deletion of apps were not being user-friendly, when an app uses too much data, has adverts, when an app has been hacked into or gets a virus, when apps slow down the smartphone, when apps require payment after a free trial period, too many notifications and when an app drains the battery.

A comparison of the reasons for deletion and the dislikes of branded mobile applications reveal that the large memory space required for mobile apps was a major issue. Large memory space required for mobile apps was the fourth most mentioned

dislike of apps and the biggest factor for apps being deleted. The biggest dislike amongst the sample was that mobile apps were time consuming and if addictive they become the fourth most mentioned reason for deletion of the app. Adverts, high usage of data, draining of the battery, viruses, invasion of privacy with regards to hacking and notifications were all listed as both dislikes and reasons for deleting of branded mobile applications. Although restarting of mobile apps was listed as a dislike factor, it was not mentioned as a factor for deleting mobile apps. Self-esteem issues and social skills were also not listed as reasons for deleting a mobile app, even though participants brought these up as negative aspects of apps. Other factors that were listed as reasons for deletion of apps but not as dislikes were: When an app is no longer useful or relevant, when an app is no longer entertaining, when an app is used rarely, when an app is not user-friendly, when apps slow down the smartphone and paying for an app after a free trial period.

#### **4.5 SOCIAL INFLUENCES IMPACTING GENERATION Z'S ATTITUDES AND BEHAVIOUR TOWARDS MOBILE APPLICATIONS**

Social influences, one of the direct determinants of behavioural intention with new technology, was defined by Venkatesh *et al.*, (2003, p.451) as “the degree to which an individual perceives that important others believe he or she should use the new system”. The eighth question asked in the study was: **“Have you ever downloaded a mobile app because someone important to you encouraged you to download it? If so, why?”** This question was asked based on the theoretical framework of the UTAUT model developed by Venkatesh *et al.*, (2003, p.452) which identified subjective norm as a construct of social influence impacting attitude and behaviour towards new technology. The ninth question, although similar to Question Eight asked, **“Have you ever downloaded a mobile app to fit in with any of your reference groups”** This question differed from the eighth question as the UTAUT model developed by Venkatesh *et al.*, (2003, p.452) found that social factors are a root construct of social influence, in addition to subjective norm, which is a direct determinant of behavioural intention for new technology. The tenth question asked participants **“Do you feel mobile apps improve your social standing?”** The tenth question was asked because image (social standing) was a core construct of social

influence that impacted the behaviour of new technology proven by the UTAUT model (Venkatesh *et al.*, 2003, p.452).

#### 4.5.1 The Role of Subjective Norm as a determinant of Behavioural Intention

Venkatesh *et al.*, (2003, p.452) defined subjective norm as “the person’s perception that most people who are important to him think he should or should not perform the behaviour in question”.

**Table 4.8: Subjective Norm Themes as a determinant of Behavioural Intention**

<b>Theme</b>	<b>Keywords</b>	<b>Frequency</b>
Family	Mom; dad; brother; sister; grandparent; family	15
Friends	Friends; peers	9
External influencers	Salespeople; consultant, advisor; instructor	5
Partners	Boyfriend; girlfriend; partner	4

**Families** were found to play the biggest role in influencing fifteen participants to download branded mobile applications. Examples of apps that were suggested by family included Ace Athlete, Citymapper, Discovery, Facebook, FNB, Life 360, Skype, Spree and Uber. Ace Athlete was encouraged for motivational reasons and FNB was suggested for convenience of having the whole family transacting with the same bank. Family members to assist with transportation suggested the Citymapper mobile app. The Discovery app was downloaded so that the family could create a team with health goals and achieve weekly rewards. One participant downloaded Facebook due to it being recommended by family so as to stay connected. Spree was recommended by a participant’s mother due to the convenience of online shopping. Skype was downloaded to communicate with overseas family members. As stated by one participant:



*“I downloaded Skype because my gran is overseas in London. She’s really important to me and she said get Skype so that we can communicate”.*

Apps such as Uber and Life 360 were often suggested to the participants by their parents due to safety reasons. As one participant stated:

*“I also downloaded Uber. My parents encouraged me to get it because if I go out drinking and stuff, they don’t want me getting into a car with people who have been drinking as well, so it’s not only safe for you but for other people on the road”.*

Many of the participants had downloaded branded mobile applications due to their **friends** recommending them. Some of these apps included Imo, Pokemon GO, Snapchat, Tinder, Uber and Wattpad. As one participant stated:

*“I downloaded Uber from learning it from friends because it was cheaper and safe”.*

Imo was downloaded due to the reason of communication with their friends. Snapchat and Pokemon GO were often mentioned as being downloaded because of the popularity of the apps amongst their friends. As mentioned by one participant:

*“Snapchat because of my best friend as she is always on it. It seemed fun to her and the filters she put on looked cool”.*

Friends suggested Tinder when they were trying to set up their friends with a boyfriend or girlfriend. One of the participant’s friends encouraged them to download Wattpad so that her audience could read her stories and access them at any time:

*“Wattpad because of my best friend. She actually got tired of me going to the library every week to get books, so she said I must download the app”.*

**External influencers** encouraged the participants to download branded mobile applications. For example, two participants mentioned that their gym instructors encouraged them to download the My Virgin Active app and the Go Health Club app so that they would not miss the gym classes and to keep track of their workouts. As the one participant stated:

*“I wouldn’t say important to me but My Virgin Active app was encouraged by one of the gym instructors so that I can know when the classes are and attend them”.*

Also, one participant downloaded the FNB mobile banking app when the consultant at the bank recommended it to the participant when they opened up their bank account so that it would be more convenient than visiting an actual branch when they wanted to transact. Salespeople also accounted for people encouraging participants to download a mobile branded app. The salesperson at the music store encouraged one of the participants to download Tab Pro to assist them in learning how to play the guitar. LinkedIn was downloaded when one of the participant's Career Centre Coordinators recommended the app for job opportunities.

**Partners** also encouraged Generation Z to download certain mobile apps. One participant was having a long-distance relationship with a female in China, and due to Facebook being banned in China, he downloaded We Chat so that they could communicate. Another mobile app that suited long-distance relationships was Skype, which three participants downloaded to communicate with their partners. Another app that was recommended by a participant's partner was Avocado. The participant stated:

*“Avocado through my boyfriend so we can stay connected and share memories together and document moments”.*

Subjective norm was a determinant of behavioural intention for the participants, particularly family, friends, external influencers and partners. Family was the most significant social influence when the participants downloaded branded mobile applications, followed by friends, external influencers and partners.

#### **4.5.2 The Role of Social Factors as a determinant of Behavioural Intention**

Social factors can be defined as “the individual's internalization of the reference group's subjective culture, and specific interpersonal agreements that the individual has made with others, in specific social situations” (Venkatesh *et al.*, 2003, p. 452).

**Table 4.9: Social Factors as a determinant of Behavioural Intention**

<b>Theme</b>	<b>Keywords</b>	<b>Frequency</b>
Friends	Friends; reference groups; peers	16
Trends	Trends; fads	10

There were various mobile applications downloaded by the participants in order to fit in with their reference groups and to not feel like they were missing out with the latest trend. Some of these apps included AliExpress, BBM, Facebook, Instagram, Nike+ Run Club, PicsArt Photo Studio, Pokemon GO, Premier League, Snapchat, Twitter and Whatsapp.

In particular, **friends** were the main social factor for downloading mobile applications amongst the 26 participants who answered. AliExpress was downloaded so that everyone in the same reference group (friends) wore the same brand of shoes, which were available from the app. BBM, Facebook, Twitter and Whatsapp were downloaded so as to communicate with their reference group and to overcome a feeling of being excluded from their peers. Instagram and Snapchat were downloaded as participants wanted to have the same fun filters on their photos as all of their friends and to overcome the fear of missing out (FOMO). As one participant stated:

*“Snapchat. Everyone was using it, and I was like ‘should I get it’, because of FOMO (fear of missing out). I resisted for a while but then I ended up getting it, and began trying it out and ended up liking it”.*

The Nike+ Run Club mobile app was downloaded amongst a group of friends who enjoyed running so that they could track each other’s progress. PicsArt Photo Studio was downloaded to:

*“fit in with this group of hippies, because they were all doing such cool pictures”.*

Premier League and Pokemon GO were two other popular mobile app games that were downloaded by many Generation Z students due to them being fun and the latest **trend** at the time. One participant remarked:

*“Whenever I hung out with my friends, there was normally more than one person on Pokemon Go so it convinced me to download it as well”.*

One participant explained their social reasoning for downloading branded mobile applications:

*“I don’t really think it’s about fitting in. It’s like a trend. They come and go. I would say you download an app not to fit in, but because a lot of people have it so you may as well just have it, just for the sake of it”.*

Social factors, in particular friends, accounted for 61,5% of behavioural intention of mobile apps amongst the participants of the study. Of the participants who answered, 38,5% stated they would download mobile apps to stay ahead of trends.

### **4.5.3 The Role of Image as a determinant of Behavioural Intention**

Image was defined as “the degree to which use of an innovation is perceived to enhance one’s image or status in one’s social system” (Venkatesh *et al.*, 2003, p. 452).

**Table 4.10: Image as a determinant of Behavioural Intention**

<u>Theme</u>	<u>Keywords</u>	<u>Frequency</u>
Image	Image; social standing; popularity; likes; comments; followers; self-esteem	15
Functionality	Communication; convenience; format; functionality	14

Twenty-nine participants responded to the tenth question: **“Do you feel mobile apps improve your social standing?”** There were mixed reactions to this question from the focus group participants. Of those that responded, 51.7% of the participants who answered Question Ten agreed that **image** played a role in behavioural intention of branded mobile applications. Those that felt mobile apps did improve their social standing accredited social media apps for this because they felt that social media apps

kept them updated with the lives of their friends and the world. One participant even felt that social media uncovered hidden talents, which allowed them to improve their social standing. As stated by one participant:

*“Well I like clubbing and dancing a lot and with YouTube I can follow a lot of new dance trends. It may be funny now but when you learn a dance move that no one knows yet it kind of puts you on that platform that everyone is aspiring to get to”.*

The participants highlighted the features of social media apps that allowed followers to like and comment on posts which indicated one’s social standing. Many participants indicated that the more likes, comments and followers you had on social media apps, the more popular you were. As mentioned by one participant:

*“So I think the cooler the picture is, the more response you get from it, and more likes, more comments, more reactions. I think all of that improves your social standing, as it will definitely make you more visible”.*

Participants did however emphasize this depended on one’s personality. Those that agreed also felt strongly that mobile apps build a user’s self-esteem. As said by one participant:

*“For example, I really like photography, so when I put my stuff up on Instagram, other people like it and other photographers comment on it so by them giving me that positive comment, it does allow me to embrace and feel proud of myself. So I don’t think it’s all negative or doesn’t really uphold your social standing, it makes me want to continue whatever I love doing and take it further”.*

Many participants felt that social media apps were vain and focused purely on physical appearances or physical possessions. Four participants described the social media apps as superficial, virtual and a false sense of admiration type of platform. A few participants even mentioned that followers were bought and paid for on the social media apps so that the user’s social standing would improve. A common thread amongst the participants was that posting your latest brand purchase or experience such as an overseas holiday gained respect amongst one’s following on the mobile app. As one participant stated:

*“Whether you bought a new car, or went overseas, or bought a new pair of Yeezys, they may not say it to your face, but they treat you with some degree of respect, so it does improve your social standing”.*

One participant remarked that Twitter was a more suitable social media app as ‘followers’ were based on your thoughts as opposed to an app like Instagram that focused mainly on physical appearances.

Of those that responded, 48.3% disagreed with the notion of mobile apps improving social standing and felt that apps were downloaded purely for their **functionality**. One participant remarked that a mobile app was purely there for communication and not popularity contests:

*“No I don’t think an app defines you in your social life. An app is basically there just to keep you in contact with the people around you. It’s not to give you some sort of popularity contest”.*

These participants felt that the purpose of mobile apps were convenience and to make a user’s life easier, as stated by one participant:

*“I think apps are solely for you and your benefit. It makes your life easier and convenient”.*

These participants emphasized that apps were very personal to the individual and thus should not be seen as a way to improve social standing. One participant remarked:

*“Just in general, I know quite a lot of friends who don’t use social media because they don’t want to seem like they only care about themselves. In their perspective, if you take a lot of photos of yourself, you’re doing all that because you only care about yourself. They want to be known for their personality and not for how they look or how they act. They just want to be known for who they are and how they think”.*

In addition, one participant felt that mobile apps do not improve your social standing, as they are so widely available that they are not unique to one individual. Some participants even felt that those users who had a large following on social media apps were actually disliked and seen as fake and superficial. One participant felt that it was the user themselves who created their social standing, as opposed to the mobile app

doing that for them. The participant stated:

*“I think it’s a good format for it but it won’t necessarily improve it. For example, you not going to get likes because you downloaded Instagram, you going to get likes because you hot on Instagram. It’s who you are; the apps are just the format really”.*

Overall, there were more participants who agreed with the notion of image playing a role in behavioural intention of branded mobile applications amongst the Generation Z population than there were with those that disagreed with the notion.

#### **4.6 FACILITATING CONDITIONS THAT IMPACT ON THE ATTITUDES OF GENERATION Z STUDENTS TOWARDS MOBILE APPLICATIONS**

Facilitating conditions can be defined as “the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system” (Venkatesh *et al.*, 2003, p.453). The three root constructs of facilitating conditions were: perceived behavioural control, facilitating conditions and compatibility (Venkatesh *et al.*, 2003, p.453). Question Eleven of the study asked, **“To what extent has guidance, instructions and a customer service contact person from the app supplier, impacted your attitude towards a mobile app”**. This question was asked to observe the impact of facilitating conditions on the participant’s attitudes towards branded mobile applications. Question Twelve asked participants to **“Discuss if the mobile apps you download are compatible with your life as a student”** This question was asked to establish if branded mobile applications were compatible with their needs as a student and if that impacted their attitudes and behaviour towards those apps. Question Thirteen of the study asked participants to **“Discuss if you are more likely to download a mobile app that allows you to control it or personalise it”**. The thirteenth question was asked in the hope of establishing if perceived behavioural control was important to the participants and if that impacted their behaviour towards mobile applications.

#### 4.6.1 The Impact of Facilitating Conditions on the Attitudes of Branded Mobile Applications

Venkatesh *et al.*, (2003, p. 454) defined facilitating conditions as “objective factors in the environment that observers agree make an act easy to do, including the provision of computer support”.

**Table 4.11: Facilitating Conditions impact on the Attitudes of Branded Mobile Applications**

<u>Theme</u>	<u>Keywords</u>	<u>Frequency</u>
Agreement	Guidance; instructions; customer service person,	10
Disagreement	Figure it out yourself; trial and error; delete; ask friends	9

Nineteen participants answered Question Eleven: **“To what extent has guidance, instructions and a customer service contact person from the app supplier, impacted your attitude towards a mobile app?”** Of the participants that answered the question, 52.6% **agreed** that they enjoyed having assistance when navigating around a new app. One such app that was discussed was Facebook whereby a participant appreciated the set-up assistance when they first downloaded the mobile app, as mentioned:

*“Facebook does that because when you first get it, it gives you steps on how to use the app. It was nice to know that there were steps to follow and it helped you knowing what you were doing on the site”.*

Another app that was liked by two participants because of its video tutorials was Snapchat. Two participants provided examples of problems they had with billing issues on the Uber app and that the customer service department on the app were extremely efficient and they felt more positive towards that app after their experiences. As one participant explained:



*“I had to deal with someone from Uber. There was an option to complain, and my Uber driver cancelled the trip yet I was still charged for it. So I reported it online and they refunded it straight away.”*

One participant commented on the sense of security mobile apps provide when they offer guidance:

*“I have never used an app’s tutorials but there’s a sense of security when there is someone you can contact, as opposed to downloading and leaving it at that”.*

Gaming apps were suggested as possible mobile apps that would benefit from guidance and instructions when a user does not know how to play the game initially. Overall, the participants wanted a customer service contact person more as a contingency offering when the app had problems or bug issues.

However 47.4% of participants **disagreed** and felt that guidance, instructions and a customer service contact person did not impact their attitude towards a mobile app. As stated by one participant:

*“When you get an app you just try to figure it out yourself, you don’t look for guidance or instructions and it’s normally because you hear about it from someone else so you sort of get the idea how to use it yourself”.*

Three of the participants felt annoyed when an app provided guidance and instructions. Many of the participants felt that apps were not challenging and that within a few minutes they would be able to navigate around an app with ease, so there was no need for guidance, instructions and a customer service contact person. Some actually felt that the addition of guidance, instructions and a customer service contact person would lead them to deleting an app. As stated by a participant:

*“Well yes it would, it would deter me because I hate it when people contact me, especially from service providers. When you get contacted by someone, it just feels like they invading your space and privacy”.*

Furthermore, two participants suggested that they would rather ask their friends about an app as opposed to a customer service contact person from the app supplier.

Three participants made recommendations regarding facilitating conditions of mobile apps. One participant suggested that guidance, instructions and a customer service contact person for mobile apps were only really suitable for older ages. When asked what age was appropriate for assistance on a mobile app, feedback was forty years and older. As one participant said:

*“I worked for an online casino and part of our duty was phoning people. I had to help a 75 year old man on how to work it in terms of depositing money, downloading it etc. So from that aspect, certain consumers might enjoy guidance and instructions. So for example if someone phoned me and told me how to use Instagram I would put the phone down, but maybe for people above a certain age, maybe they need guidance”.*

A second recommendation put forward by another participant stated:

*“But it also depends on the app. A functional app should have instructions and guidance, such as a banking app and Uber because they deal with money. But if it something like YouTube or Instagram, you will probably just exit and try again at a later stage so you don’t need instructions for social apps”.*

The final recommendation was that guidance and instructions should be included for paid apps but not for free apps.

Overall the majority (52.6%) of participants felt that facilitating conditions including instructions, guidance and a customer service contact person from the app supplier made them more positive towards the app. However video tutorials were the preferred choice of facilitating conditions for branded mobile applications.

#### **4.6.2 The Impact of Compatibility on the Attitudes of Branded Mobile Applications**

Compatibility can be defined as “the degree to which an innovation is perceived as being consistent with existing values, needs and experiences of potential adopters” (Venkatesh *et al.*, 2003, p.454).

Thirty-eight participants responded to this question on compatibility, of which 100% felt more positive towards branded mobile applications that were compatible with their life as a student. The following branded mobile applications were suggested by the participants as being compatible with life as a Generation Z student: BookoutSA, Dropbox, Facebook, Firefox, FNB, Google Chrome, Google Drive, Instagram, iScanner, LinkedIn, News24, Skyscanner, Twitter, Uber and Whatsapp. BookoutSA, a relatively new mobile app, was created with students in mind by offering a selling place for students to sell their second-hand textbooks. Facebook and Whatsapp assisted students through communication, especially about upcoming assessments for their courses. As stated by one participant:

*“I think Whatsapp because at the moment we doing a project and we can’t all get together sometimes so we created a group on Whatsapp where we send each other messages saying what we have done in the project and how far we got and what is our timeframe. It’s quicker and more efficient!”*

The Uber mobile app assisted students with transport from college back home, and to their social activities on the weekends. Google Chrome, Firefox and News24 assisted the participants with gathering needed information for their courses. Banking apps such as FNB and ABSA were used to keep track of the students’ budgets, as stated:

*“Banking apps because you want to check what your balance is because most students are on a budget. It’s quick and easy instead of logging in, into the actual Internet”.*

Two participants liked price comparison mobile apps such as PriceCheck and Skyscanner as they were on a tight budget and needed the cheapest options on products and services.

Instagram and Twitter were mobile apps suggested as compatible apps for students as they maintain socialization amongst their friends. LinkedIn was compatible with the life of a student as it provided them with job opportunities. The iScanner app was liked because of its ability to scan college documents and study notes from their smartphones. Google Drive and Dropbox were used specifically for storage purposes as stated by the following participant:

*“We use Dropbox for our course. We use it for our entire course. Our lecturers are on it and they put up course material, all of the slideshows, all of the Ice Tasks given to us, student manuals, assignments, any other readings and extra notes. So it’s really helpful. I use it more to get student information than our Student Portal because the lecturer’s are actually on it so its very convenient”.*

Compatibility of branded mobile applications as a facilitating condition positively impacted the participants’ attitudes towards apps.

### **4.6.3 The Impact of Perceived Behavioural Control on the Behaviour of Branded Mobile Applications**

Venkatesh *et al.*, (2003, p.454) define perceived behavioural control as reflecting “perceptions of internal and external constraints on behaviour and encompasses self-efficacy, resource facilitating conditions, and technology facilitating conditions”. Table 4.12 shows the results of participant’s agreement towards perceived behavioural control having an impact on their attitudes towards branded mobile applications.

**Table 4.12: Perceived Behavioural Control and its impact on the Attitudes of Branded Mobile Applications**

<u>Theme</u>	<u>Keywords</u>	<u>Frequency</u>
Agreement	Personalisation; control; personality; tailored	15
Indifferent	Bonus; skeptical; purpose	4
Disagreement	Informational; utilitarian; functional	2

There were mixed feelings towards the thirteenth question on perceived behavioural control. Twenty-one participants responded to the question. Of those who responded, 71.4% of these participants agreed that perceived behavioural control of branded mobile applications made them more positive towards those apps. Of the participants

that answered the question, 9.6% felt that perceived behavioural control did not impact their attitude or behaviour towards mobile apps and 19% felt indifferent. In addition, 14.2% of the participants stated they would use a mobile app more if personalisation were allowed.

Three participants felt strongly that social apps needed a level of personalisation and control but functional apps did not necessarily need customisation. One participant mentioned that music player mobile apps such as SoundCloud should have a level of personalisation so that the user could create their own unique playlists and recommendations of the music genres they enjoyed. As stated by a participant:

*“If it’s something like a music player, like if it involves making playlists, yes I would like to customize them. I would like to customize how they sorted, even change of view of album pictures”.*

Also social media branded mobile applications like Facebook, Instagram, Pinterest and Twitter were expected to have a level of personalisation and control as they portrayed your profile and personality. Personalisation was also seen as important in fitness mobile apps so that gym programmes were tailored to the individual. Control of the app was also very important to Generation Z, as they did not want their privacy invaded by unwanted followers on their social media apps. By personalising social media apps, the participants indicated they would use the app more, as indicated in the following quote:

*“If you got those things coming up on your feed that you want to see, you going to go to that app more often because you being shown the things you want to see”.*

According to two participants, functional apps such as Google Chrome and Uber did not need personalisation, as they are purely informational and utilitarian. As summarized by one participant:

*“Social apps must definitely have the ability to be personalised. Functional apps need not be personalised, as they don’t need to go into your life. That’s why you download functional apps because of what it has to offers, not of what you can change!”*

The majority of participants answering this question (71,4%) were more favourable to branded mobile applications that allowed for a level of control or personalisation. However it was recommended that perceived behavioural control was more important with social apps as opposed to functional apps.

#### **4.7 THE EXTENT OF PERFORMANCE EXPECTANCY AS A DETERMINANT OF USAGE OF MOBILE BRANDED APPLICATIONS AMONGST GENERATION Z STUDENTS**

Performance expectancy, one of the determinants of technology adoption, can be defined, as “the degree to which an individual believes that using the system will help him or her to attain gains in job performance” (Venkatesh *et al.*, 2003, p.447). Perceived usefulness and relative advantage were core constructs of performance expectancy and thus Questions Fourteen and Fifteen asked participants to “**Discuss if (and how) mobile apps have been useful in your day-to-day tasks**” and, “**Which mobile apps have you downloaded that have been useful in your everyday life?**”

**Table 4.13: Performance Expectancy as a determinant of Mobile Brand App Usage**

<u>Theme</u>	<u>Keywords</u>	<u>Frequency</u>
Functionality	Navigation; learning; keep track; overcoming problems; communication	29
Entertainment	Entertainment; leisure; fun; enjoyable	6

Thirty-five participants answered Question Fourteen: “**Discuss if (and how) mobile apps have been useful in your day-to-day tasks**”. The participants found the following branded mobile applications useful in their day-to-day tasks: Colornote, Facebook, Go Health Club, Google Maps, Instagram, My Virgin Active, News24, Pinterest, Podcasts, Snapchat, Twitter, Uber and Whatsapp. For organisation, the Colournote mobile app assisted one participant in planning her day. Only 17.1% of the participants who answered found Facebook, Instagram, Snapchat, Twitter and

9gag useful for daily **entertainment** and for gathering information or news. As said by one participant:

*“...Facebook to waste time and see what everyone’s doing to keep updated”.*

The majority of participants (82.9%) listed **functionality** of the apps making them more useful in their day-to-day tasks. Google Maps assisted two participants in day-to-day navigation around their areas that they lived in. My Virgin Active and the Go Health Club mobile apps assisted five participants with planning their daily fitness activities. One participant found News24 useful for keeping track of the latest news, especially amongst fears of student strikes at the universities in South Africa. Pinterest was useful for one participant with motivational quotes and for learning purposes. Podcasts helped the one participant with her daily insomnia by relaxing her and distracting her mind from other problems. Uber was useful for two participants when they encountered transport problems. Whatsapp being the most popular mobile app for day-to-day tasks was useful for twenty-four participants for communication amongst family and friends. The participant below indicated the advantage of Whatsapp over the other apps:

*“Whatsapp definitely, the other apps are kind of novelty when you have spare time. But Whatsapp gets important information across really quickly”.*

The top three most useful branded mobile apps for everyday life for the participants were:

1. Whatsapp
2. Gmail
3. ABSA, Facebook, FNB & Snapchat

Other apps that were regarded as useful included: Colornote, Facebook Messenger, Fit Tracker, Fitness Pro, Go Health Club, Google Maps, Instagram, My Fitness Pal, My MTN, My Net Diary, My Virgin Active, News24, Notepad, Pinterest, Podcasts, Premier League, PriceCheck, Rugby 360, S Planner, SoundCloud, Standard Bank, Twitter, Uber, YouTube and 9gag.

Performance expectancy, particularly perceived usefulness, was a determinant of usage of branded mobile applications amongst the participants. Whatsapp was extremely popular with thirty-two participants, stating they used the app for its usefulness.

## **4.8 THE EXTENT OF EFFORT EXPECTANCY AS A DETERMINANT OF INTENTION OR USAGE OF MOBILE BRANDED APPLICATIONS AMONGST GENERATION Z STUDENTS**

Effort expectancy, one of the determinants of technology adoption, can be defined as: “the degree of ease associated with the use of the system” (Venkatesh *et al.*, 2003, p.450). Venkatesh *et al.*, (2003, p.451) proposed that there were three root constructs of effort expectancy: complexity, perceived ease of use and ease of use. In order to establish if complexity was a determinant of intention or usage of mobile branded applications, Question Sixteen was asked: **“Has the complexity of a mobile app ever impacted your attitude/behaviour towards it?”** Questions Seventeen and Eighteen asked: **“How likely are you to download mobile apps that are perceived as being easy to use or navigate?”** and, **“What makes an app easy? What makes an app not easy/not worth the effort?”** These questions were asked to establish ease of use as a determinant of intention or usage of mobile branded applications amongst the participants.

### **4.8.1 Complexity as a determinant of Intention or Usage of Mobile Branded Applications**

Venkatesh *et al.*, (2003, p.451) defined complexity as “the degree to which a system is perceived as relatively difficult to understand and use”. Question Sixteen asked: **“Has the complexity of a mobile app ever impacted your attitude/behaviour towards it?”**



**Table 4.14: Complexity as a determinant of Intention of Usage of Mobile Branded Applications**

<u>Theme</u>	<u>Keywords</u>	<u>Frequency</u>
Not user-friendly	User-unfriendly; complicated	11
Too many steps	Steps; processes; pages	5
Cluttered	Clutter; adverts; notifications	2
Slow pace	Login	1

Nineteen participants responded to this question. All participants became very ‘annoyed’ when faced with a complex mobile app. Highly complex apps were slow at login, cluttered, had too many steps and were not user-friendly. Apps were seen as being convenient, so when an app became too complex, participants would simply delete the app and rather observe it from a web browser. As stated by a participant:

*“Yes because if it’s complicated, you going to get quite over it and end up deleting the app and you don’t want to waste time and data trying to figure this app out”.*

Some of the apps suggested to be too complex were iTunes, My Net Diary, SoundCloud, Tumblr and Twitter. Furthermore, gaming apps that became too complex were also deleted. As stated by one participant:

*“Reiterating what I said earlier about not getting past the Candy Crush level, because there was no way to get past that level, so I deleted it”.*

**User-friendliness** of apps was important to 57.9% of the participants who answered. As stated by one participant:

*“If an app is too complex, it’s basically like going onto a web browser to use it. I would rather have something that’s easy to use”.*

A complex search on an app with **too many steps** was also listed as a reason for frustration for 26.3% of the participants who answered. Two participants stated that

they enjoyed a challenge in figuring out a new mobile app but only to the point where it didn't become frustrating. The following participant reiterates this point:

*“I would agree to a point but then you get tired of the challenge. For example, you can't be on a level for like a whole month on a gaming app, that's ridiculous”.*

Of the participants who answered, 10.5% mentioned that they did not enjoy apps that were too **cluttered** with adverts. Another participant found an app complex and annoying when it asked for a lot of personal details in order to set-up the app on the phone. As stated by one participant:

*“With the setup, if they want too much information such as my location or where I am, or when I was born, I will usually just delete the app”.*

One participant remarked on the **slow pace** of certain mobile apps as a frustration. As stated:

*“I'm really impatient. Like if something doesn't happen quickly or easily, I would rather put my phone down otherwise I'm going to throw it at something. I get so annoyed”.*

One hundred percent of the participants who answered felt that complexity of apps including slow logins, clutter, numerous steps, and confusing layouts made them more negative towards the app. Some participants even remarked that they would delete complex branded mobile applications.

#### **4.8.2 Perceived ease of use as a determinant of Intention or Usage of Mobile Branded Applications**

Venkatesh *et al.*, (2003, p.451) defined perceived ease of use as “the degree to which a person believes that using a system would be free of effort”. Question Seventeen asked: **“How likely are you to download mobile apps that are perceived as being easy to use or navigate?”**

**Table 4.15: Perceived ease of use as a determinant of Intention of Usage of Mobile Branded Applications**

<u>Theme</u>	<u>Keywords</u>	<u>Frequency</u>
Easy to use	Free of effort; easy; uncomplicated	13
Convenient	Convenient	3
Enjoyable	Entertaining; enjoyable; fun	1

Seventeen participants responded to this question. All the participants agreed that they are more likely to download mobile apps that are perceived as being easy to use or navigate. However, 76.5% felt that apps that were easier to use they used more, 17.6% felt that apps that were more convenient in that they made their lives easier were used more and 5.9% felt that apps that were enjoyable were easier to use. All the participants emphasized that mobile apps should be convenient, easy to use, efficient and enjoyable. As a guideline, one participant agreed that anything on an app should not be more than three clicks away. As stated:

*“Anything that takes more than five clicks, actually three clicks, is not what I want. My phone had so many apps and I deleted them, six at a time. I just want to open the app, see the categories and then one extra click away and I don’t want it”.*

One particular participant felt that Generation Z’s lives are so busy that they need a mobile app that is **convenient** and easy to use. As stated by the participant:

*“Nowadays people live so fast so I guess something that is easy to use is better than something that will consume time because you want to do whatever you got to do as fast as possible and then move on”.*

One participant explained why Instagram was so popular amongst users:

*“I agree, you want it to be convenient for you. So like you go onto Instagram, it refreshes itself and there’s only like four things you can go onto on the bottom, so it’s simple”.*

Uber was also mentioned as a branded mobile app that is easy to use and is thus popular amongst Generation Z. Other apps that were listed as **easy to use** were Shazam, Snapchat, Weather and Whatsapp. One particular participant compared branded mobile applications to driving:

*“Just like driving, when you know what you doing and what you looking for, it becomes easier”.*

Not just ease of use, but also **enjoyability** impacted attitude and behaviour of one participant:

*“...and if it’s enjoyable of course”.*

However, one participant felt strongly that if the user interface of apps was too simple it would be seen as childish and they would probably not download it. As stated by the participant:

*“I think user interface is everything. I think if it’s easy to get to something its convenient and you don’t have to stress about it and finding this and finding that. But sometimes if an interface is too easy, you feel it is childish”.*

Of the participants who answered this question, 100% agreed that perceived ease of use was a direct determinant of intention or usage of branded mobile applications. In particular, apps that were easy to use, convenient and enjoyable were more likely downloaded by the participants.

#### **4.8.3 Ease of Use as a determinant of Intention or Usage of Mobile Branded Applications**

Ease of use can be defined as “the degree to which using an innovation is perceived as being difficult to use” (Venkatesh *et al.*, 2003, p. 451). Question Eighteen asked: **“What makes an app easy? What makes an app not easy/not worth the effort?”** This question differed from Question Seventeen as Question Eighteen hoped to uncover not just the factors that made an app easy, which Question Seventeen covered, but also what made an app not easy.

**Table 4.16: ‘What makes an app easy’? Versus ‘What makes an app not easy’?**

<u>What makes an app easy?</u>	<u>What makes an app not easy/not worth the effort?</u>
It must <b>flow</b> (simple user interface) and have a logical sequence.	Pop-up <b>adverts</b> on the app.
Simple <b>instructions</b> at the start of the app.	When the app drains the <b>battery</b> life.
The <b>layout</b> must fit to your phone’s screen size.	Too much <b>clutter</b> on the app.
When it is <b>quick to login</b> to an app and the app remembers your username and password automatically.	When it requires a lot of <b>data</b> for the app to operate effectively.
When it is <b>quick to upload</b> content onto an app.	When an app is not <b>entertaining</b> .
It must be <b>simple</b> and direct.	If it takes too long to <b>load</b> .
An app that incorporates the most <b>universal standard of symbols</b> .	<b>Paying</b> for features on an app.
When the app is <b>well organized</b> .	When an app requires <b>personal details</b> from the user.
	When the app requires a <b>strong connection signal</b> from the mobile service provider.
	<b>Technical jargon</b> on the app.

Twenty-four participants responded to this question. There were a variety of factors listed by the participants on what makes an app easy. Of the participants who answered, 33% stated an app must be simple and direct. As explained by one participant:

*“So there’s not too many like settings you have go onto to and you just go onto an app and all you have to do is scroll, or just click on one thing and you on your profile”.*

Of those that responded, 25% of the participants felt that an app that flows easily from one section to the next was an easy app and 41.6% of the participants mentioned that the layout of an app makes an app easy. Another participant felt that apps should be organized, as explained:

*“For example, there’s specific buttons to show what this is for, or this is your profile, or this is your news feed, this is your messages, so it needs to be all in order, not like everywhere on top of each other”.*

Of the participants who answered, 12,5% felt that quick logins made apps easier and another participant felt that apps that enabled quick uploads were also what made apps easier. Another participant felt that all apps should use a universal standard of symbols on apps, which would make them easier to use. It was recommended by one participant that there should be simple instructions at the set-up stage of the app to make it easier for the user.

A variety of factors were listed by the participants on what makes an app not easy/not worth the effort. Two participants said an app was not worth the effort when it took too long to load. Clutter of apps was mentioned by three participants, in particular too many adverts on the app. One participant felt that an app that is not entertaining is not worth the effort of keeping it on the smartphone. Two participants felt that pushing adverts such as pop-ups made an app not worth the effort. Another participant felt that any form of charging on an app was not worth the effort of keeping the app. One participant used Whatsapp more than Facebook, as Facebook needed a stronger connection signal to download images, therefore this participant felt that strong connection signal needed by apps made them not worth the effort. Following on from this, one participant felt that apps that take up too much data were not worth the effort and another participant felt that apps that waste the battery life of the phone are not worth the effort. Two participants did not find apps like LinkedIn worth the effort when it asked for me personal details at the setup stage. One participant found complicated technical jargon on an app not worth the effort of keeping it.

Every participant who responded to questions sixteen, seventeen and eighteen of the study highlighted effort expectancy as a determinant of intention or usage of mobile branded applications. Highly complex apps were described as those apps that were

cluttered, had too many adverts, drained data and battery life, took too long to load at login, charged for features on an app, had a confusing user interface and had unknown technical jargon. All the participants responding to these questions concluded that highly complex apps were deleted. All the participants agreed that they were more likely to download branded mobile applications that were easy to use. Apps that were easy to use were described as being simple, had flow to their system, included simple instructions at login making quick logins and content preferable, effective layout, well organized and incorporated universal standard of symbols.

## **4.9 THE ROLE OF HEDONIC MOTIVATION, PRICE VALUE AND HABIT ON THE ATTITUDES AND BEHAVIOUR OF GENERATION Z STUDENTS TOWARDS MOBILE APPLICATIONS**

Venkatesh *et al.*, (2012, p.160) proposed three new constructs to their Unified Theory of Acceptance and Use of Technology Model with the UTAUT2 model: hedonic motivation, price value and habit. Therefore this study aimed to question the participants on the role of hedonic motivation, price value and habit on their attitudes and behaviour towards mobile applications.

### **4.9.1 Hedonic Motivation and its impact on Attitudes and Behaviour towards Mobile Applications**

Hedonic motivation can be defined as: “the fun or pleasure derived from using a technology” (Venkatesh *et al.*, 2012, p.161). Question Nineteen of the study asked participants to: “**Discuss how likely you are to download mobile apps that are fun and enjoyable**”. This question was asked to determine the impact hedonic motivation has on the attitudes and behaviour of participants towards branded mobile applications.

**Table 4.17: Hedonic Motivation’s impact on attitudes and behaviour towards mobile applications**

<u>Theme</u>	<u>Keywords</u>	<u>Frequency</u>
Agreement	Fun; enjoyable; social acceptance; escapism	29
Disagreement	Functional; addictive	3

Thirty-two participants responded to this question. Of the participants who answered, 90.6% agreed that they would be more likely to download mobile apps that were fun and enjoyable. Some of the branded mobile applications mentioned as being fun and enjoyable were Facebook, Instagram, Picolo, Pinterest, Pokemon GO, Snapchat, Stick Cricket and YouTube. Many linked fun mobile apps to social acceptance, as stated by one participant:

*“If everyone’s been talking about how great an app is or how much fun they are having, you don’t want to miss out on that”.*

Many remarked that mobile apps were a means of escapism from the real world and that mobile apps should be entertaining so as to distract them from the ‘real world’. As one participant stated:

*“It’s like when you have a hard day at work or varsity, like you’ve just had lectures and its nice to just go to an app that is going to distract you and keep your mind off all the things that are annoying you”.*

In particular, mobile gaming apps such as Pokemon Go and Stick Cricket are primarily downloaded because of them being fun and enjoyable. One particular participant felt that mobile apps were more fun and enjoyable than television. An overwhelming response to this question was that mobile apps should be fun and enjoyable to overcome the boredom that Generation Z often experience in their day-to-day lives. A few participants agreed that branded mobile applications that were not fun and enjoyable were the first to be deleted.



Those that disagreed felt that they would download mobile apps for their functionality, not necessarily if they were fun or enjoyable. Furthermore, 25% of the participants felt that mobile apps are addictive and that they would rather entertain themselves in other ways than staring at their smartphone. As stated by one participant:

*“I prefer just going out. Apps keep me in the house. I prefer going out to play soccer. They make you lazy”.*

These other preferred entertaining activities mentioned were nightclubbing and playing cards or soccer. But some participants disagreed with this and preferred to play games such as cards on a mobile app. Two participants felt that social apps should be fun and enjoyable whereas functional apps do not need to be fun and enjoyable but rather just efficient and effective in their purpose.

One participant summarized the reason why Generation Z prefers fun and enjoyable mobile apps:

*“I think if it’s more fun and engaging then you are more likely to be on it. Whereas if it’s boring I’m not going to use it as much, which is why our generation has more of those fun and interactive apps because our attention span is shorter and we prefer things NOW, rather than things in the long run!”*

The majority of participants (90.6%) agreed that hedonic motivation impacted their attitudes and behaviour towards mobile applications in a positive manner. In particular, social media and gaming apps were downloaded due to them being fun and enjoyable.

#### **4.9.2 Price Value and its impact on Attitudes and Behaviour towards Mobile Applications**

Venkatesh *et al.*, (2012, p.161) define price value as “consumers’ cognitive tradeoff between the perceived benefits of the applications and the monetary cost for using them”. Question Twenty asked: **“Do you pay for mobile apps? Discuss how the price of a mobile app could affect your attitude and behaviour towards a mobile**

app”. This question was asked to establish the impact price value has on the attitudes and behaviour of the participants towards branded mobile applications.

**Table 4.18: The impact of price value on attitudes and behaviour towards mobile applications**

<u>Theme</u>	<u>Keywords</u>	<u>Frequency</u>
Had not paid for an app	Unwilling to pay; substitute apps;	29
Paid for an app	Quality; unique	8

Thirty-seven participants responded to this question. Of the participants who answered, 78.4% had not paid for mobile apps. However, 21.6% of the participants had paid for mobile apps. One participant paid for Tab Pro (a guitar learning app) as they could not find another app with the same functionality. However this particular participant waited for a sale before they purchased the pro version. Two particular participants didn’t mind paying for apps that they knew they would use daily and therefore felt they were getting their money’s worth. The example given was Premier League, which they played every day. One participant mentioned that they would pay for a mobile app for its functionality, such as the Samsung Smart Watch app so that the smart watch and app would sync. One participant also stated that they would not mind downloading paid apps if their parents agreed to pay for it. Also, only established, tried and tested mobile apps were more likely to be paid for by Generation Z. One such mobile app that three participants said they would pay for was Whatsapp as they felt it was necessary to communicate with their friends and family. In terms of the actual price, many of the participants felt that Whatsapp should charge a price no higher than texting and that it should be a once-off charge, as said by a participant:

*“I wouldn’t mind buying Whatsapp if you could buy it once off, so if you change phones then like you do now, you can just put in your information in the beginning, and it will remember you, without having to buy it each time”.*

Another mobile app that one participant agreed they would pay for was Uber. When asked the reason why, the participant felt that Uber was a necessity in his daily life.

As a guideline, three participants agreed that they would not pay more than R20-R50 for a mobile app.

Many of the participants refused to pay for a mobile app. One participant felt that South Africa and Africa in general should not be paying for mobile apps, as they are developing/emerging communities. With all the participants being students, they repeatedly highlighted the fact that they were on tight budgets and therefore refused to pay for a mobile app. Another reason provided by the participants for not paying for mobile apps was that apps are constantly innovating and thus they are temporary. Due to the wide variety of mobile apps available, many participants felt there was no need to pay for a mobile app when there was more than likely a free substitute that fulfilled the same purpose. As stated by one participant:

*“I have never paid for an app. I don’t think I would be desperate enough to pay when there could be another version from another company that is free”.*

However, two participants stated that paid mobile apps gave off the impression that they were superior in quality and functionality compared to the free apps. As one participant said:

*“Apps don’t actually cost that much and normally the ones with a price are a lot better than the free ones”.*

One participant commented on how annoyed they had become with apps that offered a limited free trial and then attempted to charge them for continuation of the app. This resulted in them deleting the app when asked for payment.

The majority of participants (78.4%) who answered this question had not paid for mobile apps and felt that a price tag would negatively impact their attitude and behaviour towards the app. Those that had paid for an app previously (21.6%), did it mainly for its functionality, which normally lead to satisfaction and continued usage of the app.

### 4.9.3 Habit and its impact on Attitudes and Behaviour towards Mobile Applications

Habit can be defined as “the extent to which people tend to perform behaviours automatically because of learning” (Venkatesh *et al.*, 2012, p.161). Question Twenty-one asked: **“Discuss to what extent habit and experience has impacted your attitude and behaviour towards mobile apps”**. This question was asked to establish the impact habit has on Generation Z’s attitudes and behaviour towards mobile applications.

Seventeen participants responded to this question. One participant felt that habit and experience of gaming mobile apps in particular made them enjoy the app more and play them daily. As one participant said:

*“There was a game once, that at first was so complicated, but then after a while I knew how to use it, it became better. I knew how to use it, how to access everything, so I had a positive image of it”*.

Social media apps like Facebook, Instagram, Snapchat and Whatsapp were also enjoyed more once participants used the apps more and gained experience with them. One particular participant found that habit and experience with Whatsapp lead him to using the app for both business and social communication, when initially he only wanted the app for social reasons. Often these social media apps became more enjoyable as the user discovered all the features of the app through exploration of it. With Generation Z’s obsession with selfies (photos of oneself), one participant stated that they used Instagram more often as they gained experience with the various features of the app. As stated by one participant:

*“I feel the more you use an app, the more you love it, the more you get used to it, the more you keep going on it”*.

However, three participants deleted Facebook as the app was seen as addictive and stagnant in their offering as highlighted by the following participant:

*“The more you use an app; the more you come to understand it and you can use it a lot more efficiently, but then other apps like Facebook I deleted for a long time*

*because it felt like I was just seeing the same stuff and reading the same things over and over again, there was nothing new or fresh being updated”.*

However, one participant mentioned that they would often delete mobile apps like Facebook but then re-install them due to habit and addiction. Two participants stated that it was habit for them to check their mobile apps as they woke up in the morning and the last thing to do before they fell asleep at night. As stated by one participant:

*“For me apps like Facebook, Instagram and Candy Crush that I use a lot, it has now become a habit of just logging on without even realizing it. In the morning when I open my eyes the first thing I do is check Facebook”.*

Another app that was deleted by one participant due to habit and experience was BBM. Once the participant gained experience on Whatsapp, they felt that BBM was inferior in its features and photo quality, that it led users to replacing BBM with Whatsapp.

Hedonic motivation was extremely important to the participants with 90,6% of participants who responded, agreeing it had an impact on their attitudes and behaviour towards branded mobile applications. The majority (78,4% of the participants) had not paid for an app and emphasized their negative attitudes towards those apps that had a price tag. Habit and experience had an impact on attitudes and behaviour of the participants with several participants using an app more once they gained experience with them and checked them regularly on a daily basis.

#### **4.10 THE ROLE OF GENDER, AGE, EXPERIENCE AND VOLUNTARINESS OF USE ON THE ATTITUDES AND BEHAVIOUR OF GENERATION Z STUDENTS TOWARDS BRANDED MOBILE APPLICATIONS**

Venkatesh *et al.*, (2012, p.162) believed that gender, age, experience and voluntariness of use were moderating factors in the adoption of a new technology. Question Twenty-two asked: **“Do you think: Gender, Age, Experience and Voluntariness of use impact attitude and behaviour towards mobile apps? How?”** This question aimed to investigate the role of gender, age, experience and

voluntariness of use on the attitudes and behaviour of Generation Z students towards branded mobile applications.

#### **4.10.1 The role of Gender as a moderating factor on attitudes and behaviour of Generation Z students towards Branded Mobile Applications**

Twenty-eight participants responded to the question on the role of gender as a moderating factor on the attitudes and behaviour of Generation Z students towards branded mobile applications. Of the participants who answered, 82,4% agreed that gender impacted their attitudes and behaviour towards branded mobile applications, whereas 17,6% disagreed with the notion. Overall, 21,4% of the participants felt that many social media apps were targeted to a particular gender. As stated by one participant:

*“I feel like social media has become a girl’s platform to put themselves to the world. Like girls nowadays use social media to put themselves on the map”.*

Of the participants who answered, 14,3% of the participants stated that photo-editing apps with filters were more relevant for females as they are more aware of their physical appearance. As stated by one participant:

*“I feel like they (men) don’t care how they look in pictures. They don’t use filters as much as we do”.*

Equally both the male and female participants suggested that shopping apps like Spree were more suitable for the female market. Another category of mobile apps that was mentioned by the female participants as being targeted only towards females was the period tracking apps such as My Calendar and Period Diary. Whereas, Supersport, Rugby 360 and Premier League (sporting mobile apps) were suggested (by mainly the male participants) as male-targeted mobile apps. Apps that were mentioned for specifically the female market were My Calendar, Pinterest and Snapchat. Two participants (one male and one female) disagreed and felt that all social media apps

were targeted to both genders and that apps were there for interest, not gender. An issue that was raised three times was the question of which mobile apps were suited to the transgender and homosexual market. One female participant felt that gay men would also use Candy Camera due to its filters and making their physical appearance look better.

#### **4.10.2 The role of Age as a moderating factor on attitudes and behaviour of Generation Z students towards branded mobile applications**

Thirty participants responded to the question on the role of age as a moderating factor for attitudes and behaviour of Generation Z students towards branded mobile applications.

Age was perceived to play a major role in the attitude and behaviour towards mobile apps, with 86.7% of these participants stating that the branded apps they had on their phones were not the same apps as their parents or grandparents. In particular, Instagram, Snapchat and gaming apps were suggested as apps suitable for Generation Z whereas ENCA, Facebook, News24, PriceCheck and Whatsapp were suggested for their parents and grandparents' age. One participant commented that casino and gambling apps were popular amongst the older generation i.e. grandparents. As stated by one participant:

*“You see the kids downloading apps on making cakes and building Barbies, but our generation we like Snapchat and all social media apps. Older generations like banking apps”.*

Furthermore, two participants felt that older generations have fewer mobile apps than them, as they are scared of technology, whereas Generation Z grew up with technology. One participant pointed out that an app such as Picolo, which is a drinking game, would only be legally targeted to over eighteen year olds. Gaming apps were suggested to be more suitable to Generation Z, whereas older generations such as Generation X and Generation Y would prefer functional apps. However, 13.3% of the participants did not feel age played a role in the downloading of mobile

apps with Facebook as an example:

*“I agree that age shouldn’t play a role in social media, but it does feel really bad when my aunt is telling me to add her on Facebook and tagging me in things that I don’t want to be tagged in. I don’t use it for the same things that you do, so please do not interact with me. I do not like to keep up with family, that why Whatsapp is there. Facebook is for people that I want to discover have similar interests”.*

The majority of participants who answered this question (86.7%) agreed that age was a moderating factor for attitudes and behaviour of Generation Z students towards branded mobile applications. In particular, gaming apps were suggested as more prevalent for younger generation, compared to older generations and that younger generations generally have more apps than those older to them.

#### **4.10.3 The role of Experience as a moderating factor on attitudes and behaviour of Generation Z students towards branded mobile applications**

Nine participants out of the 61 responded to the question on the role of experience as a moderating factor for attitudes and behaviour of Generation Z students towards branded mobile applications. The low response rate could be indicated by confusion of the term ‘experience’ which had to be explained to participants. Also this question was near the end of the focus groups, when participants began to get tired.

100% of these participants felt that experience did play a role in their attitude and behaviour towards branded mobile applications. Many felt that Generation Z grew up with technology and therefore have the experience with it, so if an app was not easy they would rather delete it the same day as downloading it. As stated by two participants:

*“Definitely the younger generations grasp technology a lot easier than the older generation. The younger generation will use apps more.”*

*“Yes my cousin uses a lot more apps than me because she is better with technology”.*



Of those who responded to this question, all agreed that experience is a moderating factor for attitudes and behaviour of Generation Z students towards branded mobile applications. They accounted this for Generation Z being born with technology, whereas older generations have had to learn about technology during their lifetime.

#### **4.10.4 The role of Voluntariness of Use as a moderating factor for attitudes and behaviour of Generation Z students towards branded mobile applications**

Thirteen participants responded to the question on the role of voluntariness of use as a moderating factor for attitudes and behaviour of Generation Z students towards branded mobile applications.

In terms of voluntariness of use, 76.9% of the thirteen participants enjoyed the aspect of choosing their own mobile apps and personalising their phones. As stated by one participant:

*“Most of the apps I have got, excluding Instagram, I downloaded because I wanted to try them out. For Instagram, it was because of my friends. So yes voluntariness of use makes a difference”.*

The one comment that repeatedly came through was that the participants became annoyed with the pre-loaded apps that could not be deleted on their phones and took up space, which they would rather have had for more preferable apps. As stated by one participant:

*“You can’t delete the pre-loaded apps on your phone. I don’t use them. I just put them in a separate folder and leave them there”.*

However, 23.1% of the participants felt that freedom of choice with apps was expected and thus voluntariness of use did not play a major role in influencing their attitude and behaviour towards mobile apps. As stated by one participant:

*“No I don’t think it impacts your attitude and behaviour because anyone can get an app”.*

The majority of the participants agreed that gender (82,4%), age (86,7%), experience (100%) and voluntariness of use (76,9%) did impact their attitudes and behaviour towards branded mobile applications.

#### **4.11 OTHER CONDITIONS AFFECTING THE ATTITUDES AND BEHAVIOUR OF GENERATION Z STUDENTS TOWARDS BRANDED MOBILE APPLICATIONS**

The last question of the study asked: **“Finally, are there any other factors that have not been discussed that have impacted your attitude and behaviour towards mobile apps?”** This question was asked to establish any other factors not mentioned in the theoretical framework that could add value to future studies on technology adoption and its impact on attitudes and behaviour of users.

**Table 4.19: Other conditions affecting the attitudes and behaviour of Generation Z students towards branded mobile applications**

<b>Theme</b>	<b>Keywords</b>	<b>Frequency</b>
Privacy	Privacy	5
Anti-social behaviour	Anti-social	2
Availability of apps	Availability	2
Lifestyle & Personality	Lifestyle; personality	2
Media	Media	2
Syncing of apps	Syncing	2
Adverts	Adverts	1
Charging for an app	Payment	1
Cyber bullying	Bullying	1
Nostalgia	Nostalgia; memories	1
Notifications	Notifications	1
Reactions to posts	Likes; follows; popularity	1
Trends	Trends	1

The biggest issue that was raised in the last question was the threat of **privacy**. Some participants felt that mobile apps displayed every aspect of their lives and they did not enjoy an invasion of privacy. As one participant said:

*“The one reason why I don’t want Facebook is I don’t want everyone to know what’s going on in my life, for example who I’m sitting with. So privacy is an issue”.*

Many students have become very negative towards brand mobile applications, as they have led to **anti-social behaviour**. Two participants stated that they could not connect with their peers as most of the time Generation Z are addicted at looking at their smartphones. As stated by one participant:

*“I think social media apps have made our generation very anti-social when we go out somewhere. Like when we go to Connors, we end up sitting putting our phones in a pile in the middle of the table, and the first person who has to pick it up has to pay the bill. Otherwise everyone sits on their phones, instead of having a normal human conversation”.*

The **unavailability** of certain apps and certain features within the apps in South Africa made the participants quite negative towards them. Examples provided were iTunes, Pokemon Go and Spotify. As one participant said:

*“For instance PokemonGo is still not available on the South African app stores”.*

Two participants felt that **lifestyle and personality** also impacted one’s attitude and behaviour towards mobile apps. The examples provided were of one enjoying finance and therefore downloading The Economist app and another enjoying fitness therefore downloading the My Virgin Active app. As stated by one participant:

*“I think your personality dictates what apps you download. Like I am a Finance student so I enjoy The Economist Podcasts”.*

The **media** also played a role in influencing the participants’ attitudes and behaviour towards branded mobile applications. One example of this was the app Uber whereby

news articles in the media had displayed the horror stories of some Uber trips whereby people had been mugged and raped, which led the one participant to deleting the app. Another participant who feared for her safety when using Uber felt negative towards the app. As stated by one participant:

*“I used to use Uber quite a lot, but after some of the scary stories on the news, I use it less”.*

**Syncing of apps** made participants more positive towards the apps. In other words, when one post could be uploaded to three different apps at the same time (such as Facebook, Instagram and Twitter), this saved time for the user and they enjoyed the apps more. As stated by one participant:

*“I would rather download an app that is linked to another app then writing down all my details again.”*

In addition, they enjoyed it when those apps remembered their Facebook login details thereby saving them time again from having to login to each separate app. Separating apps such as Facebook and Facebook Messenger was unpopular with the participants as it wasted their time and space on their phone.

Throughout the focus groups, **adverts** on mobile apps were seen as extremely annoying to Generation Z. Often these annoying adverts led to the app being deleted.

One participant felt that apps that **charged** money impacted his attitude and behaviour negatively towards the app. As stated by the participant:

*“When an app deceives you and doesn’t tell you that you downloading a free version only for a short while, and you suddenly get a message saying you need to pay R100 now to continue”.*

**Cyber bullying** was mentioned as a factor that negatively impacted the attitude and behaviour of Generation Z towards mobile apps. As stated by one participant:

*“Also the bullying aspect of social media. I feel an app should be developed whereby you cant post a comment or dislike it”.*

Pokemon GO in particular was downloaded due to **nostalgia**. The participant who had downloaded Pokemon GO had watched the TV series when they were children and thus they already had a positive attitude towards the brand so they downloaded the gaming mobile app. As stated by one participant:

*“Pokemon Go for nostalgia because I used to watch the series. As you play the game, it brings back all your memories of it”.*

Throughout the focus groups, participants commented on how annoying **notifications** were in mobile apps. Many participants stated that they disliked notifications in an app and would often end up deleting it. One participant stated:

*“Also if the app whines at you and send you notifications, that’s pretty irritating. For example, ‘you haven’t been on the app for three days, you missing out’. I get frustrated and get rid of the app”.*

One participant felt that the **reactions** received on social media posts made them either like or dislike the mobile app. Often when a user received many likes, positive comments and followers they liked the app more and used the app more. As stated by one participant:

*“For some people with apps like Instagram and Facebook, the more likes they get and the more reactions they get towards something like a photo they uploaded, or something they have done on that platform, their self-esteem increases. They feel like they liked more. They would use it more”*

A final factor discussed was that **trends** led to positive attitudes towards branded mobile apps and downloading. For example, when most of their friends started downloading Snapchat, it led to a participant downloading it because it was a trend with the app having fun filters. Also one participant mentioned Angry Birds as a trend:

*“If apps are mainstream, then a lot of people are going to get it, and that annoys me. I only got Angry Birds when people stopped playing it because I don’t want to be part of the crowd. I got it because I was curious. So a trend is a factor”.*

The biggest condition that was raised by participants in the last question was privacy and its impact on their attitudes and behaviour towards branded mobile applications. This was followed by issues of: anti-social behaviour, availability of apps, lifestyle and personality, the media and syncing of apps. Additional factors included: adverts, charging for an app, cyber bullying, data and memory space, notifications, reactions to posts, reviews and ratings of an app and trends.

## **4.12 CONCLUSION**

The Findings Chapter explored in-depth the attitudes and behaviour of Generation Z students towards branded mobile applications. The participants displayed both positive and negative attitudes towards branded mobile applications, however there were more positive than negative attitudes. Amongst the positive attitudes were the convenience of apps, staying connected, their functionality, time savings and entertainment. Amongst the negative attitudes were issues such as time consuming, containing adverts, high usage of data, large memory space required for apps and updates and notifications. Many of the negative attitudes around branded mobile applications resulted in the behaviour of participants deleting those apps. The most popular branded mobile application was Whatsapp and all the participants used it every day.

Social influences such as family and friends were a determinant of behavioural intention amongst the participants. Facilitating conditions of mobile apps including instructions, guidance and customer service contact people was only deemed important by 52.6% of the participants. Performance expectancy showed to be determinant of usage of branded mobile applications amongst the participants, with thirty-two participants stating they used Whatsapp for its usefulness. Effort expectancy proved to be a determinant of intention or usage of mobile branded

applications by the participants. Apps that were easy to use and simple were preferred to more complex ones. Hedonic motivation, price value and habit all played a significant role for the participants when downloading and using the branded mobile applications. The majority of the participants agreed that gender (82.4%); age (86.7%); experience (100%) and voluntariness of use (76.9%) did impact their attitudes and behaviour towards branded mobile applications. The biggest additional condition affecting the attitudes and behaviour of the participants towards branded mobile applications was the issue of privacy.

# **CHAPTER 5**

## **DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

### **5.1 INTRODUCTION**

The main objective of this study was to explore the attitudes and behaviour of Generation Z students towards branded mobile applications and what factors affect these. The study focused on the theoretical framework of the UTAUT2 model by Venkatesh *et al.*, (2012, p.157) which aimed to establish the roles of social influences, facilitating conditions, performance expectancy, effort expectancy, hedonic motivation, price value and habit on the attitudes and behaviour of Generation Z students towards branded mobile applications. Gender, age, experience and voluntariness of use were also included to establish their effect on attitude and behavioural intention of the sample. Finally, additional conditions were uncovered during the study that impacted the attitudes and behaviour of the participants towards branded mobile applications.

### **5.2 DISCUSSION AND CONCLUSIONS**

This section discusses findings related to each of the objectives in comparison to existing literature, and draws conclusions.

#### **5.2.1 Attitudes of Generation Z students towards mobile applications in South Africa and what factors affect these**

Objective One aimed to investigate the attitudes of Generation Z students towards mobile applications in South Africa and what factors affect these attitudes. Objective Three aimed to ascertain the reasons behind Generation Z students downloading mobile applications in South Africa. The following discussion however combines the two objectives, which emerged in the second, third and seventh questions as they all pertain to positive attitudes towards branded mobile apps. In terms of **attitude**, the



participants had a positive attitude towards branded mobile applications due to their convenience, connectivity, functionality, time advantages and entertainment.

This confirms the findings by Chiem *et al.*, (2010, pp. 51-53) who also discovered that utilitarian mobile apps that provided functionality were most preferred by consumers in Switzerland and Italy. Another study by Ruiz-Del-Olmo and Belmonte-Jimenez (2014, p. 79) showed that connectivity and entertainment were also benefits of mobile apps for the youth in Spain. In South Africa, a similar study by Potgieter (2015, p. 4) also found entertainment to be a major benefit of mobile applications for the youth segment of the country.

However there were some negative attitudes amongst the participants towards branded mobile applications, but the 106 positive mentions far outweighed the 57 negatives. Some of these dislikes included mobile branded apps being time consuming, having adverts that are annoying, high usage of data, large memory space required for apps and updates and notifications.

These findings confirm the study performed by Ruiz-Del-Olmo and Belmonte-Jimenez, (2014, p. 79) who also found that mobile applications were disliked due to their high usage of data which was a financial burden on the users. In addition, Bhave *et al.*, (2013, p.68) also discovered that consumers become annoyed when an advert appeared whilst they were actively involved with the mobile application, particularly when they were communicating with friends or playing games (Bhave *et al.*, 2013, p. 68). These findings differed to Taylor *et al.*, (2011, pp. 67-68) who stated that adverts were not seen as annoying to the consumer as mobile apps are a pull based tool for mobile marketers. However, the participants expressed more positive attitudes towards branded mobile applications than negative attitudes.

### **5.2.2 Behaviour of Generation Z students towards mobile applications in South Africa and what factors affect these**

The second objective of the study was to explore the behaviour of Generation Z students towards mobile applications and what factors affect these behaviours. In terms of **behaviour**, the five most popular branded mobile apps amongst the

participants were Whatsapp, Instagram, Facebook, Uber and Snapchat. This confirms the study by Potgieter (2015, pp. 4-5) who found Facebook and Whatsapp to be the most popular branded mobile applications amongst university students in South Africa. On average most participants had between seven to ten branded apps on their mobiles but only made use of four to six apps every day. These findings differ to the findings of CB Staff (2014, p. 41) who revealed that the average Generation Z student has more than ten branded mobile applications on their smartphones. The most popular mobile apps used daily (ranked in popularity) were Whatsapp, Instagram, Snapchat, Facebook and Facebook Messenger. The findings showed that the participants would often delete branded mobile apps when there was a lack of storage on their smartphone, when an app was no longer useful or relevant, when an app was no longer entertaining, when an app became too addictive and when an app was used rarely. Most often branded mobile apps would be deleted the same day as they were downloaded.

The second objective of the study showed that many of the negative attitudes towards branded mobile applications, lead the participants to deleting the app.

### **5.2.3 The Social Influences impacting Generation Z's attitudes and behaviour towards mobile applications**

Objective Four set out to explore the social influences impacting Generation Z's attitudes and behaviour towards mobile applications. This study reaffirmed the findings of the theoretical framework, the UTAUT model, proposed by Venkatesh *et al.*, (2003, p. 451), that **social influences** impacted user's attitude and behaviour towards new technology. The biggest social influence that impacted the participant's attitudes and behaviour towards mobile applications (Objective Four of the study) were their family, followed by their friends, external influencers (including salespeople) and their partners. These findings are a contrast to the findings of Taylor *et al.*, (2011, p. 67) who found that friends were more influential than family with regards to the youth and adoption of mobile applications. Families, in particular parents, suggested branded mobile applications such as Uber and Life360 for safety reasons. As mentioned by one participant:

*“I also downloaded Uber. My parents encouraged me to get it because if I go out drinking and stuff, they don’t want me getting into a car with people who have been drinking as well, so it’s not only safe for you but for other people on the road”.*

Friends were also important for their advice on branded mobile applications. In particular, apps like Facebook, Instagram, Snapchat and Whatsapp were downloaded to communicate with their friends and to ‘fit in’ with their peers.

Image and subjective norm were very much related to social influences, with many participants downloading branded mobile apps to keep up with trends. Overall, there were more participants who agreed with the notion of image playing a role in behavioural intention of branded mobile applications amongst the Generation Z population than there were with those that disagreed with the notion. Of those who responded, 53,6% of the sample felt that social media mobile apps in particular, improved one’s social standing. One particular participant believed that apps made them more visible to the outside world, thus improving their social standing.

Therefore this study confirmed the results of the theoretical framework the UTAUT model by Venkatesh *et al.*, (2003, p. 451) which suggested that social influences was a determinant of new technology intention and usage. In particular, family was the biggest social influence that impacted the participant’s attitudes and behaviour towards branded mobile applications.

#### **5.2.4 The Facilitating Conditions impact on the attitudes of Generation Z students towards mobile applications**

Objective Five of this study was to explore the **facilitating conditions** impacting on the attitudes of Generation Z students toward branded mobile applications. Overall the majority (58,3%) of participants felt that facilitating conditions (including instructions, guidance and a customer service contact person from the app supplier) made them more positive towards the app. Facebook, was provided as an example of a mobile app that makes use of facilitating conditions to assist the user.

Short video tutorials were the preferred choice of facilitating conditions for branded mobile applications. These short video tutorials can probably be explained by the findings of Hemsley (2016, p. 1) who discovered that the average attention span of a Generation Z student was eight seconds.

Of the participants who responded, 41,7% enjoyed the challenge of navigating around a new mobile app by themselves without the assistance of guidance, instructions and a customer service contact person and thus facilitating conditions did not impact their attitude towards branded mobile applications. However, with compatibility being one of the influences of facilitating conditions proposed by the UTAUT model by Venkatesh *et al.*, (2003, p. 453), all the participants enjoyed mobile apps that were compatible with their student lives. Some of these apps included ABSA, Dropbox, FNB and Instagram. Perceived behavioural control, one of the constructs of facilitating conditions proposed by the UTAUT model by Venkatesh *et al.*, (2003, p. 453) proved to be important for 71,4% of the participants. These participants were more favourable to branded mobile applications that allowed for a level of control or personalisation. This supports the findings of Beneke *et al.*, (2010, p. 80) who argued that the level of personalization of the mobile advertising (such as mobile applications) has a positive effect on the attitudes of consumers towards mobile advertising (branded applications). It was recommended however by the participants that perceived behavioural control was more important with social apps as opposed to functional apps.

Therefore this study confirmed the findings of the theoretical framework the UTAUT model by Venkatesh *et al.*, (2003, p. 453) which suggested that facilitating conditions was a determinant of new technology intention and usage. The majority (58.3%) of the focus group participants in this study agreed that facilitating conditions, in particular video tutorials, made them more favourable towards branded mobile applications.

### **5.2.5 Performance Expectancy as a determinant of intention of usage of mobile branded applications amongst Generation Z students**

The sixth objective of the study was to ascertain the extent of **performance expectancy** as a determinant of intention or usage of mobile branded applications amongst Generation Z students. Rondeau (2005, p. 65) proposed that mobile applications that are not perceived as being useful will be used minimally, which will lead to it being deleted by the user to make room for a better app. Sohn *et al.*, (2014, p. 34) further suggested that branded mobile apps need to be informative about their products and services, as well as provide a clear value to the consumer that will assist them in their daily activities and be goal-orientated. In terms of perceived usefulness, extrinsic motivation, job-fit, relative advantage and outcome expectations, the participants downloaded and used more functional mobile apps that were useful in their everyday lives. The most useful branded mobile applications downloaded and used by the participants were Whatsapp, Gmail, ABSA, Facebook, FNB and Snapchat. Whatsapp was extremely popular with 52,5% of the participants, stating they used the app for its usefulness.

Therefore this study confirmed the findings of the theoretical framework the UTAUT model by Venkatesh *et al.*, (2003, p. 453) which suggested that performance expectancy was a determinant of new technology intention and usage. In particular, this study showed that functional, useful mobile apps were determinants of usage of the mobile marketing tool.

### **5.2.6 Effort Expectancy as a determinant of intention of usage of mobile branded applications amongst Generation Z students**

The theoretical framework, the UTAUT model developed by Venkatesh *et al.*, (2003, p. 453) suggested that **effort expectancy** was a direct determinant of new technology adoption. Objective Seven aimed to ascertain the extent of effort expectancy as a determinant of intention of usage of mobile applications amongst Generation Z students. Gilman (2016, p. 55) recommended ease of use with the aim of building a long-lasting relationship when the user downloaded the mobile app. Rondeau (2005, p.63) further emphasized that the ease of use of the mobile app plays an important

role in the designing of a successful mobile marketing tool. This study confirmed that perceived ease of use of branded mobile applications lead to a more positive attitude and increased behaviour of Generation Z students towards apps. In particular, the participants suggested that mobile apps should be convenient, easy to use and enjoyable. Furthermore, the participants recommended that the apps be efficient in the way they complete their function as quickly as possible for the user. This included having features such as simple instructions at login, simple and organized layout and use of a universal standard of symbols within the app. In contrast, complex apps that required effort were described as those apps that were cluttered, had too many adverts, drained data and battery life, took too long to load at login, charged for features on the app, had a confusing user interface and had unknown technical jargon. Often apps that were complex were deleted the same day as the download.

Repeatedly, participants stated that they enjoyed a challenge in figuring out a new mobile app but only to the point where it did not become frustrating. As a guideline, mobile apps should not have features that are more than three clicks away from the home page.

Therefore this study confirmed the findings of the theoretical framework the UTAUT model by Venkatesh *et al.*, (2003, p. 453) which suggested that effort expectancy was a determinant of new technology intention and usage. In particular, apps that were easy to use, convenient and enjoyable lead to a more positive attitude and increased behaviour of the participants' usage towards the apps.

### **5.2.7 The roles of hedonic motivation, price value and habit in the attitudes and behaviour of Generation Z students towards mobile applications**

Objective Nine set out to explore the extent of hedonic motivation, price value and habit in the attitudes and behaviour of Generation Z students towards mobile applications. The extent of **hedonic motivation, price value and habit** (objective nine) all played a significant role in the attitudes and behaviour of Generation Z students towards branded mobile applications. Ruiz-Del-Olmo and Belmonte-Jimenez (2014, p. 79) found that entertainment was important to Spanish students when choosing mobile apps. Of the participants who responded, 90,6% were more

favourable towards fun and enjoyable branded mobile apps, which would subsequently lead them to using the app more. One participant suggested that fun and enjoyable apps were popular due to the short attention span of Generation Z.

Some of the branded mobile applications mentioned as being fun and enjoyable were Facebook, Instagram, Piccolo, Pinterest, Pokemon GO, Snapchat, Stick Cricket and YouTube.

With all of the participants being students, price value was important and many refused to download mobile apps that had a price tag. This further confirms the findings of Potgieter (2015, p. 5) who found that South African students have a negative attitude towards paid mobile apps and will generally only buy a mobile app if it is considered 'vital' or if it is superior to a free application. Of the participants who responded, 78,4% had not paid for mobile apps. However, some participants felt that branded mobile applications that had a price tag were more superior in quality compared to the free apps.

In terms of habit, high levels of engagement or involvement in a mobile application were proven by Junghyun and Eun Ah, (2016, p. 85) to have a stronger effect on the experience of the branded application.

The participants in this study felt more favourable and used an app more when they gained experience with the app and checked them regularly.

Therefore this study confirmed the findings of the theoretical framework the UTAUT2 model by Venkatesh *et al.*, (2012, p. 174) which suggested that hedonic motivation, price value and habit influence technology use. In particular, hedonic motivation was important for the majority of participants of the study who stated they would use an app more if it were fun and enjoyable. In terms of price value, there was a negative attitude towards mobile apps amongst participants when they were charged for an app. Habit led the participants to feel more comfortable with an app and resulted in regular usage.

### **5.2.8 The role of moderating factors such as gender, age, experience and voluntariness of use towards branded mobile applications**

Objective Eight of this study was to explore the role of **moderating factors** such as gender, age, experience and voluntariness of use towards mobile branded applications. Gender played a role when certain apps were downloaded including photo-editing apps and sporting apps. This finding differs from Baysinger (2015, p. 19) who believed that Generation Z were less gender-stereotyped compared to generations before them. Of the participants who responded, 82,4% agreed that gender impacted their attitudes and behaviour towards branded mobile applications, whereas 17,6% disagreed. One participant believed that social media apps were targeted towards females specifically.

The findings differ from those of Sohn *et al.*, (2014, pp. 34,36) who found that in Germany, women expressed a preference to utilitarian apps, that is, those mobile apps that are information-driven, goal-oriented and functional, as opposed to hedonic apps that provide entertainment, pleasure and enjoyment. However as proposed by Venkatesh *et al.*, (2003, p. 469), this could simply be a matter of masculinity versus femininity, as this study also discovered that the homosexual and transgender market would behave differently when downloading certain branded mobile applications.

The findings of this study revealed that age played a major role in terms of the type and the number of apps being downloaded. Of the participants who responded, 86,7% stated that the branded apps they had on their phones were not the same apps as their parents or grandparents. The participants revealed that they would download many more branded mobile apps than some of the older generations as they were not scared of technology and that the apps they were downloading were more social as opposed to functional which they felt were more popular amongst the older generations. It was suggested by one participant that social media apps were better suited for Generation Z, whereas older generations would prefer the banking apps.

These findings on age confirm the study by Baysinger (2015, p. 19) who suggested that Generation Z are more tech-savvy than previous generations, and are more likely to be involved with the social media apps as they grew up with them.



Experience with technology was found to play a role in the attitudes and behaviour of Generation Z towards mobile apps. All the participants felt that Generation Z grew up with technology and therefore have the experience with it, so if an app was not easy they would rather delete it the same day as downloading it.

Of the participants who responded, 76,9% deemed voluntariness of use as a major contributor towards positive attitudes of branded mobile applications. One participant mentioned Instagram as a mobile app that allows for voluntariness of use and that it impacted their attitude in a positive manner.

Therefore this study confirmed the results of the theoretical framework the UTAUT2 model by Venkatesh *et al.*, (2012, p. 172) which suggested that gender, age, experience and voluntariness of use all play a significant role in technology usage. In particular, gender played a significant role for the focus group participants when downloading photo-editing and sporting apps. Furthermore, age was also shown to have a significant role in technology usage, with participants' apps being different to those of their parents and grandparents. In terms of experience, the participants felt experienced with technology and thus were more comfortable using mobile apps. Finally, the majority of students also indicated that voluntariness of use was a major contributor towards positive attitudes towards branded mobile applications.

### **5.2.9 Other conditions that affect the attitudes and behaviour of Generation Z students towards branded mobile applications**

The final objective of this study was to identify **any other conditions** that may affect the attitudes and behaviour of Generation Z students towards mobile branded applications. The biggest condition that was raised by participants in the last question was privacy and its negative impact on their attitudes and behaviour towards branded mobile applications. Privacy was also found to be a factor that impacted negatively on consumers' attitudes towards mobile applications by Beneke *et al.*, (2010, p. 84).

Other issues that negatively affected the participants' attitudes and behaviour towards apps were the adverts, charging for an app, the large amount of data and memory

space required to run the app and notifications. Some participants also revealed that they felt negative towards apps as they have lead to anti-social behaviour amongst their friends and increased cyber bullying. Furthermore, the participants felt that certain apps were only available in some countries and this impacted their attitude and behaviour towards those branded mobile applications. When downloading apps, the participants looked towards the media, reactions to posts, reviews and ratings and trends when formulating their attitudes and behaviour towards apps. Lifestyle and personality were also factors mentioned by the participants to change their behaviour around apps, by downloading certain apps that matched with their lifestyle. With regards to any other condition that negatively affected the participants' attitudes and behaviour towards branded mobile applications, one participant mentioned data and space.

Ruiz-Del-Olmo and Belmonte-Jimenez (2014, p. 79) also found that students who did not make use of mobile apps attributed it to the lack of data due to financial restrictions.

With regards to reviews and ratings of an app, one participant mentioned they would examine the comments and reviews before downloading a mobile app.

Potgieter (2015, p.4) also discovered that reviews and ratings of an app were deemed as an important issue connected to attitudes and behaviour of mobile applications.

The positive attitudes far outweighed the negative attitudes towards branded mobile applications, amongst the participants of the study. Social influences, facilitating conditions, performance expectancy, effort expectancy, hedonic motivation, price value and habit all played a significant role in the attitudes and behaviour of Generation Z students towards branded mobile applications. Furthermore, gender, age, experience and voluntariness of use did impact the usage intention of the branded mobile apps amongst the participants. However, this study found that privacy was another significant factor that negatively impacted the feelings and behaviour of the participants towards branded mobile applications.

## **5.3 RECOMMENDATIONS**

The recommendations made here are based on the findings of the study and are supported by literature.

### **5.3.1 Recommendations for Marketers of Branded Mobile Applications**

#### **5.3.1.1 Convenience of Branded Mobile Applications**

The most important benefit of branded mobile applications for the participants was convenience. Therefore, marketers need to ensure first and foremost that their branded mobile application makes life easier for the user. The benefits of the app need to be highlighted in their information section on the app store, as well as within the app. Due to the large variety of branded mobile applications available on smartphones, the apps are fighting for 'share-of-space' and thus a marketer needs to differentiate their app with unique benefits to the user. This recommendation was also suggested by Bhave *et al.*, (2013, p. 65) who felt that mobile applications allow the youth market to control their preferences and customize their smartphone to their own unique interests in a fast and convenient way.

#### **5.3.1.2 Entertainment within the app**

Entertainment was in the top five most important features of branded mobile applications in the study, with 90,6% of the sample agreeing that they felt more favourable towards fun and enjoyable branded mobile applications.

Bhave *et al.*, (2013, p. 66) also mentioned hedonic motivation and entertainment as reasons for mobile application downloads amongst the youth. Therefore, marketers need to ensure that their branded mobile application is constantly innovating in being entertaining. This could include videos, images, photo filters, games or any other form of entertainment that would capture the Generation Z user's interest. Hemsley (2016, p. 1) discovered that the average attention span of the Generation Z student is

eight seconds, therefore brands need to ensure that their entertainment within the app captures interest within eight seconds.

### **5.3.1.3 Avoid in-app advertising**

Adverts were listed as the second highest negative feature of branded mobile applications and were often the reason for deletion of the app.

Pop-up adverts in particular were mentioned as annoying features of a branded mobile application. Therefore, marketers need to avoid in-app advertising at all costs. If necessary, the occasional advert would be recommended, but not to the point of it annoying the user and disturbing their entertainment within the app. Perceived usefulness of mobile adverts reduced irritation amongst the youth, in particular when adverts were relevant and it provided value for the user (Martí Parreño *et al.*, 2013, p. 743). Therefore, adverts to the Generation Z market should focus on budget-saving offers or a benefit that will add value to their life as a student.

### **5.3.1.4 Be honest in your Pricing Strategy**

Of the participants who responded, 78,4% had not paid for mobile apps. Therefore, it is not recommended that a new branded mobile application charge the youth market. Bhave *et al.*, (2013, p. 67) also discovered that the youth are less inclined to pay for a mobile application when there is a suitable substitute application that provides the same benefit. However, once established (such as Whatsapp), the participants were more willing to pay for apps. Furthermore, if the participants found the apps with prices superior in value compared to the free apps, they would download them. Therefore, it is recommended that a new branded mobile application should be free, in particular social media apps. Functional apps that are established and have differentiating features can charge but they need to be aware of the yield value of the Generation Z consumer. In the study, participants were not willing to pay more than R50 for an app. If the app is free, do not suddenly expect payment after a 'free' trial period.

Marketers need to be ethical in their pricing strategy of branded mobile applications, in order to ensure acceptance and liking of their app amongst the Generation Z market.

#### **5.3.1.5 Connectivity for the users of the app**

Social influences, in particular family and friends played an important role for the participants when downloading branded mobile applications. Social apps like Avocado and Skype were popular as they were able to connect distant users and save memories.

Bhave *et al.*, (2013, p. 66) also suggested that the youth download smartphone applications for reasons such as information and connection. Therefore, marketers of branded mobile applications in South Africa need to ensure that the app has the added feature of connectivity with the user's social connections. Marketers need to encourage word-of-mouth once a user has downloaded and developed a bond with a mobile app. This could mean a reward programme or incentive offered to users when they recommend the branded mobile application to their family, friends or partners.

#### **5.3.1.6 Develop and market apps that are functional for GenZ**

The most useful and functional mobile apps downloaded by the participants were Whatsapp, Gmail, ABSA, Facebook, FNB and Snapchat. Aside from the social, hedonic apps that were popular, two of the most useful mobile apps listed were banking and travel apps. These apps were popular as they saved the participant's time and were user-friendly. Chiem *et al.*, (2010, pp. 51-53) also discovered that in Italy and Switzerland the most downloaded mobile applications were functional and provided value to the user. Therefore marketers of brands in South Africa need to develop useful, functional apps targeted to the Generation Z market. Aside from banking apps other industry apps that would be useful to the Generation Z market would be travel, education, fitness, news, telecommunication, entertainment and sport.

### **5.3.1.7 Make sure your app is Time Efficient for the user**

Make sure the app is user-friendly and all pages of the app are no more than three clicks away from the home page. The Generation Z consumer wants instant gratification (Birkner, 2013, p. 14). Birkner (2013, p. 14) discovered that Generation Z is known for having short-attention spans as they are constantly in search for the latest thrill from one of their technological devices. Therefore, marketers need to ensure that the branded mobile application is user-friendly and time efficient for the Generation Z consumer.

### **5.3.1.8 Respect the Privacy of the Mobile App User**

Privacy was mentioned repeatedly throughout the study, and played a role in the attitudes and behaviour of the participants towards branded mobile applications. The participants of the study listed invasion of privacy as a dislike and reason for deletion of mobile apps. Permission marketing is of key importance when developing and marketing a branded mobile application for the Generation Z market.

Beneke *et al.*, (2010, p. 85) recommended permission marketing as a means of overcoming the mobile consumer's fear of invasion of privacy, which involves obtaining consent from the consumer to receive mobile advertisements. Permission marketing should not just involve advertisement consent, but also geo-location consent. Furthermore, the marketers and app developers need to work alongside each other to ensure that their app has the highest protection of privacy for their users. This would include privacy of their profiles and their posts.

The final recommendation that summarizes all the above recommendations is to always keep the Generation Z consumer in mind when developing and marketing the app.

## **5.3.2 Recommendations for App Developers**

The app developers and marketers of a branded mobile application should not work separately but rather alongside each other to ensure the most effective app is developed for the Generation Z market.

### **5.3.2.1 Avoid bombarding the app user with too many notifications and updates**

Notifications and updates are a necessity for mobile apps, but they should not reach a point that they bombard the user so much that they end up deleting the mobile app. Updates and notifications were listed in the top five dislikes of mobile applications for the participants of the study and would often be a cause for deletion.

Market research should be performed by companies to establish the effective level of notifications and updates, before the users start deleting the mobile app. Böhmer *et al.*, (2011, p. 48) argued that the update frequency strongly depended on the release strategy of the developer, thus app developers need to research the app update frequency level most suitable for their target market.

### **5.3.2.2 Develop a mobile app that requires less usage of data**

The second biggest dislike of branded mobile applications amongst the participants was the large amounts of data the apps need to function properly. This can also lead to deletion of a branded mobile application.

In addition to Snapchat, Facebook and SoundCloud were also deleted by the participants due to their high usage of data. App developers need to innovate to produce apps that require less data, especially those apps targeted to the Generation Z market that are money-conscious because of their student life. Chiem *et al.*, (2010, p. 50) also discovered that pre-paid mobile consumers were less likely to adopt mobile applications as they drained data and therefore cost the consumers a lot of money.

### **5.3.2.3 Develop a mobile app that requires less usage of memory space**

In addition to data, certain mobile applications also take up a large amount of memory space on the smartphone. One participant explained that some smartphones have limited memory space so the user has to be selective in which mobile apps they have on their phone so as to avoid reaching their memory space limit.

Therefore, app developers need to ensure that branded mobile applications do not require a large amount of memory space for the user. Mobile apps should be more convenient than the desktop versions of the brand, therefore apps need to be relatively small in order to avoid a user deleting the app version and using the desktop version. Grant and O'Donohoe (2007, p. 240) also found that youth placed importance on their smartphone maintaining memory space.

### **5.3.2.4 Use Universal Symbols within the app**

Make sure the app's interface is simple and uses universal coding.

Rodriguez (2015, p. 2) suggested universal symbols such as emojis are most suitable for the Generation Z market. Dupont (2015, p. 19) further recommended shareable content that included symbols, graphics and videos to complement the marketing story aimed at Generation Z. Therefore, the branded mobile application must be user-friendly and use symbols that are instantly recognizable to the Generation Z market.

App developers should work in conjunction with the marketers of brands. The participants recommended that app developers should incorporate fewer notifications and updates and develop apps that require less usage of data and memory space on the smartphone. Furthermore, universal symbols should be used within an app so that all users are able to quickly understand an app, making it more user-friendly.

### **5.3.3 Recommendations for Future Research**

The main dislikes of branded mobile applications in the study was that they were time consuming and addictive. Furthermore, the study also revealed that cyber bullying



and anti-social behaviour were issues that impacted the participants' attitudes and behaviour towards branded mobile applications. Therefore, future research in the fields of psychology and technology could investigate the effect of mobile applications on the mental wellbeing and social skills of the Generation Z market.

Future research should further address the moderating roles of gender and age as these can affect attitudes and behaviour towards mobile apps. For example, it was mentioned in the study that the homosexual and transgender market might differ in their attitudes and behaviour towards mobile applications; future research should investigate this further.

Privacy was the main additional condition that affected the attitudes and behaviour of the sample towards branded mobile applications. Therefore, future research should also broaden the UTAUT2 model by including the direct determinant role of concerns about privacy on the user's attitude and acceptance of mobile app technology. Additional determinants of technology adoption, which could be researched in the future, are: anti-social behaviour, availability of the new technology, the media, adverts, charging/payment, cyber bullying, memory space, reviews and ratings and trends. With regards to anti-social behaviour, cyber bullying and trends, future researchers should investigate the effect of social dynamics on technology adoption by the youth market. The availability of new technology from country to country should also be researched to determine its effect on new technology adoption, such as branded mobile applications. External influences such as the media and adverts should be researched to determine their influence on mobile app users. In-app features such as billing, memory space, reviews and ratings should also further be investigated to determine their effect on user's behaviour.

The study also showed that lifestyle and personality were factors that impacted attitudes and behaviour towards branded mobile application. For example, future studies could observe the lifestyle and personality of the student and the correlation of their apps that they download. Therefore lifestyle and personality should also be included into future research on the UTAUT2 model as moderating factors in the adoption of a new technology, such as branded mobile applications.

## **5.4 LIMITATIONS**

This study was of a qualitative nature, and thus the sample size was smaller than that of a quantitative study. Therefore, future research could add to this study by increasing the sample size and adding a quantitative method such as surveys.

Secondly, the target population was 18-21 years old, which was limited in the age coverage of the Generation Z market, which is aged 0-21 years old. Future studies could explore investigating the Generation Z market under 18 years old, so as to cover a wider range of the Generation Z market.

Lastly, the sample was taken from a private tertiary institution in South Africa, which could be biased in terms of the experience and income differences between the private and public sector. Therefore, future studies could investigate the attitudes and behaviour of Generation Z students in the public universities and non higher education institutions more broadly, to explore their experiences with branded mobile applications.

## **5.5 CONCLUSION**

This qualitative study set out to investigate the attitudes and behaviour of Generation Z students towards branded mobile applications in South Africa. This research was needed as there was limited literature on the Generation Z market, as most mobile marketing studies have focused on Generation X and Generation Y. Furthermore, Generation Z are more active on mobile apps than any other generation. The participants had a positive attitude towards apps because they were convenient and aided them in connecting with friends and family. They were also perceived to be entertaining, functional and time efficient. These benefits should all be incorporated into apps targeted to the Generation Z market. However there were some negative attitudes towards mobile branded apps and that included an invasion of privacy and paying for an app. The participants were also unfavourable towards apps because of the adverts, notifications, updates and dissimilar symbols used within the app. The high usage of data and memory space required for branded mobile applications were

further negative attitudes of the participants in the study. These negatives should all be avoided and/or researched to develop a better level of understanding on the Generation Z market and their interaction with mobile apps. Social influences, facilitating conditions, performance expectancy, effort expectancy and hedonic motivation, price value and habit all affected the participants' attitudes and behaviour towards branded mobile applications. The moderating roles of age, gender, experience and voluntariness of use were all considered relevant in the adoption and attitudes towards branded mobile applications. The consumer should be the focus of attention for both the marketer and the app developer, so as to ensure a more positive attitude towards the app and increased usage.

This research makes three contributions. Firstly, it extends the research of the UTAUT2 model and proposes privacy as an additional direct determinant of new technology adoption. Secondly, it provides valued information to marketers on the relatively unknown Generation Z market and their in-depth attitudes and behaviour towards branded mobile applications. Thirdly, this research provides guidelines to app developers on how to better build an app that is most suitable for the youth of South Africa.

**Table 5.1: Summary of research objectives and findings**

<b>Objective</b>	<b>Findings</b>
1. To explore the attitudes of Generation Z students towards mobile applications in South Africa, and what factors affect these attitudes	The participants had a positive attitude towards branded mobile applications due to their convenience, connectivity, functionality, time advantages and entertainment. However there were some negative attitudes towards branded mobile applications, but the 106 positive mentions far outweighed the 57 negatives. Some of these dislikes included mobile branded apps being time consuming, having adverts that are annoying, high usage of data, large memory space required for apps and updates and notifications.
2. To ascertain the behaviour of Generation Z students towards mobile applications and what factors affect these behaviours	The five most popular branded mobile apps mentioned by the participants were Whatsapp, Instagram, Facebook, Uber and Snapchat. On average most participants had between seven and ten branded apps on their mobile phones but only made use of four to six apps every day. The findings showed that the participants would often delete branded mobile apps when there was a lack of storage on their smartphone, when an app was no longer useful or relevant, when an app was no longer entertaining, when an app became too addictive and when an

	app was used rarely.
3. To ascertain the reasons behind Generation Z students downloading mobile applications in South Africa	The participants downloaded branded mobile applications due to their convenience, connectivity, functionality, time advantages and entertainment.
4. To explore the social influences impacting Generation Z's attitudes and behaviour towards mobile applications	The biggest social influence that impacted the participant's attitudes and behaviour towards mobile applications were their family, followed by their friends, external influencers (including salespeople) and their partners.
5. To explore the facilitating conditions impacting on the attitudes of Generation Z students towards mobile applications	Overall the majority (58,3%) of participants felt that facilitating conditions (including instructions, guidance and a customer service contact person from the app supplier) made them more positive towards the app.
6. To ascertain the extent of performance expectancy as a determinant of intention or usage of mobile branded applications amongst Generation Z students	Performance expectancy, specifically functionality and usefulness were determinants of usage of mobile apps.
7. To ascertain the extent of effort expectancy as a determinant of intention or usage of mobile branded applications amongst Generation Z students	This study confirmed that the extent of effort expectancy of branded mobile applications lead to a more positive attitude and increased behaviour of Generation Z students towards apps. In particular, the participants suggested that mobile apps should be convenient, easy to use and enjoyable.
8. To explore the role of moderating factors such as gender, age, experience and voluntariness of use towards mobile branded applications	<p>Gender played a role when certain apps were downloaded including photo-editing apps suited to females and sporting apps suited to males.</p> <p>The participants revealed that they would download many more branded mobile apps than some of the older generations as they were not scared of technology and that the apps they were downloading were more social as opposed to functional</p>

	<p>which they felt were more popular amongst the older generations.</p> <p>All the participants felt that Generation Z grew up with technology and therefore have the experience with it, so if an app was not easy they would rather delete it the same day as downloading it. Of the participants who responded, 76,9% deemed voluntariness of use as a major contributor towards positive attitudes of branded mobile applications.</p>
<p>9. To ascertain the extent of hedonic motivation, price value and habit as important roles in the attitudes and behaviour of Generation Z students towards mobile applications</p>	<p>Of the participants who responded, 90,6% were more favourable towards fun and enjoyable branded mobile apps, which would subsequently lead them to using the app more. With all of the participants being students, price value was important and many refused to download mobile apps that had a price tag. The participants in this study felt more favourable and used an app more when they gained experience with the app and checked them regularly.</p>
<p>10. To identify any other conditions that may affect the attitudes and behaviour of Generation Z students towards mobile branded applications</p>	<p>The main condition that was raised by participants in the last question was privacy and its negative impact on their attitudes and behaviour towards branded mobile applications. Other issues that negatively affected the participants' attitudes and behaviour towards apps were the adverts, charging for an app, the large amount of data and memory space required to run the app and notifications.</p>

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# APPENDICES

## Appendix A: Information Sheet and Letter of Consent

### UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE (HSSREC)

#### APPLICATION FOR ETHICS APPROVAL For research with human participants

#### Information Sheet and Consent to Participate in Research

Date:

Greetings,

My name is Shana Axcell from UKZN School of Management, IT & Governance. My contact email addresses are [sdoyle@vconnect.co.za](mailto:sdoyle@vconnect.co.za) or [18234@iieconnect.co.za](mailto:18234@iieconnect.co.za) and contact number 031 573 2038. My supervisor is Prof Debbie Ellis. She can be contacted at [vigard@ukzn.ac.za](mailto:vigard@ukzn.ac.za) or 033 260 5899.

You are being invited to consider participating in a study that involves research exploring the attitudes and behaviour of Generation Z students towards mobile branded applications in South Africa. The aim and purpose of this research is to gain an in-depth understanding of the attitudes and behaviour of Generation Z students (those born after 1994) towards mobile branded apps at a private tertiary institution in Durban. The study is expected to include sixty participants, with ten in each focus group. The duration of your participation if you choose to participate and remain in the study is expected to be two hours and it will be performed during a weekday outside of your lecture time schedule. The focus group will be recorded with a camcorder and a dictaphone application.

We hope that the study will create the following benefits: to probe further into the main reasons for Generation Z downloading mobile applications and to further discover their most popular branded mobile applications. If this study is not conducted we face the challenge of not developing insight into the mind of the consumer (Generation Z students) and how best we can appeal to them. This study will allow companies to implement the most appropriate marketing strategies when developing their branded mobile applications for Generation Z students such as yourself. This study aims to benefit those born after 1994 by providing companies with information on how to make branded mobile application more suitable (both functional and social) for respondents such as yourself.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number HSS/1060/016M).

In the event of any problems or concerns/questions you may contact the researcher at 031 573 2038 or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

**HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS  
ADMINISTRATION**

Research Office, Westville Campus  
Govan Mbeki Building  
Private Bag X 54001  
Durban 4000 KwaZulu-Natal, SOUTH AFRICA  
Tel: 27 31 2604557- Fax: 27 31 2604609  
Email: [HSSREC@ukzn.ac.za](mailto:HSSREC@ukzn.ac.za)

Your participation in the study is voluntary and by participating, you are granting the researcher permission to use your responses. You may refuse to participate or withdraw from the study at any time with no negative consequence. There will be no monetary gain from participating in the study. Your anonymity will be maintained by the researcher and the School of Management, I.T. & Governance and your responses will not be used for any purposes outside of this study.

All data, both electronic and hard copy will be securely stored during the study and archived for 5 years. After this time, all data will be destroyed.

If you have any questions or concerns about participating in the study, please contact me or my research supervisor at the numbers listed above.

Sincerely

SHANA AXCELL

-----  
**CONSENT TO PARTICIPATE**

I \_\_\_\_\_ have been informed about the study entitled “Exploring the attitudes and behaviour of Generation Z students towards mobile branded applications in South Africa” by Shana Axcell.

I understand the purpose and procedures of the study.

I have been given an opportunity to ask questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher at 031 5732038 or [sdoyle@veconnect.co.za](mailto:sdoyle@veconnect.co.za).

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

**HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS  
ADMINISTRATION**

Research Office, Westville Campus  
Govan Mbeki Building  
Private Bag X 54001  
Durban  
4000  
KwaZulu-Natal, SOUTH AFRICA  
Tel: 27 31 2604557 - Fax: 27 31 2604609  
Email: [HSSREC@ukzn.ac.za](mailto:HSSREC@ukzn.ac.za)

Additional consent, where applicable

I hereby provide consent to:

Audio-record my interview / focus group discussion YES / NO  
Video-record my interview / focus group discussion YES / NO

\_\_\_\_\_  
**Signature of Participant**

\_\_\_\_\_  
**Date**

**DEMOGRAPHIC DETAILS**

**Please confirm your gender:** \_\_\_\_\_

**Please confirm your age:** \_\_\_\_\_

## **Appendix B: Focus Group Questions**

### **Opening Question**

1. Please take out your smartphone. Using the board behind me, please write the apps you currently have on your phone and say them out aloud. Elaborate on apps that are not known.

### **Introductory questions:**

2. What has been your experience of mobile apps on smartphones?
3. Do you like mobile apps? If so, what do you like about mobile apps?
4. What do you dislike about mobile apps?

### **Transition questions:**

5. On average, how many mobile apps do you use every day? Which ones?
6. Do you ever delete a mobile app? When and why?
7. Why do you download mobile apps?

### **Key questions:**

8. Have you ever downloaded a mobile application because someone important to you encouraged you to download it? If so, why?
9. Have you ever downloaded a mobile application to fit in with any of your reference groups?
10. Do you feel mobile apps improve your social standing?
11. To what extent has guidance, instructions and a customer service contact person impacted your attitude towards a mobile application?
12. Discuss if the mobile applications you download are compatible with your life as a student.
13. Discuss if you are more likely to download a mobile application that allows you to control it or personalise it.
14. Discuss if (and how) mobile applications have been useful in your day-to-day tasks.
15. Which mobile applications have you downloaded that have been useful in your everyday life?
16. Has the complexity of a mobile application ever impacted your attitude or behaviour towards it?



17. How likely are you to download mobile applications that are perceived as being easy to use or navigate?

18. What makes an app easy? What makes an app not easy / not worth the effort?

19. Discuss how likely you are to download mobile applications that are fun and enjoyable.

20. Do you pay for mobile apps? Discuss how the price of a mobile application could affect your attitude and behaviour towards a mobile application.

21. Discuss to what extent habit and experience has impacted your attitude and behaviour towards mobile applications.

22. Do you think gender, age, experience and voluntariness of use ever impact your attitude and behaviour towards mobile applications? How?

### **Ending Question**

23. Finally, are there any other factors that have not been discussed that have impacted your attitude and behaviour towards mobile applications?

Time allocation: A maximum of 4 minutes per question, so as to keep the focus group under two hours. This 4-minute allocation was simply used as a planning guide to keep to a time limit, however it was not used on the days that the focus groups were conducted, as each question was open to the necessary discussion provided, regardless of length of time.

## Appendix C: Ethics Approval Letter from University of KwaZulu-Natal



07 November 2017

Mrs Shana Mary Axcell 205524110  
School of Management, IT Governance  
Pietermaritzburg Campus

Dear Mrs Axcell,

**Protocol reference number: HSS/1060/016M**

**New project title:** Exploring the attitudes and behaviour of Generation Z students towards branded mobile applications

### **Approval Notification – Amendment Application**

This letter serves to notify you that your application and request for an amendment received on 06 October 2017 has now been approved as follows:

- Change in Title

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form; Title of the Project, Location of the Study must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

**PLEASE NOTE:** Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for period of 3 years from the date of original issue. Thereafter Recertification must be applied for on an annual basis.

Best wishes for the successful completion of your research protocol.

Yours faithfully

Dr Shenuka Singh (Chair)

/ms

Cc Supervisor: Professor Debbie Vigar-Ellis  
Cc Academic Leader Research: Professor Brian McArthur  
Cc School Administrator: Ms Debbie Cunyngame

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#### Humanities & Social Sciences Research Ethics Committee

Dr Shenuka Singh (Chair)

Westville Campus, Govan Mbeki Building

Postal Address: Private Bag X54001, Durban 4000

Telephone: +27 (0) 31 260 3587/8350/4557 Facsimile: +27 (0) 31 260 4609 Email: [ximbap@ukzn.ac.za](mailto:ximbap@ukzn.ac.za) / [snymanm@ukzn.ac.za](mailto:snymanm@ukzn.ac.za) / [mohunp@ukzn.ac.za](mailto:mohunp@ukzn.ac.za)

Website: [www.ukzn.ac.za](http://www.ukzn.ac.za)



Forfeiting Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

**Appendix D: Most downloaded branded mobile applications amongst the participants**

<b><u>Name of Branded Mobile App</u></b>	<b><u>Number of Students who had the app on their phone</u></b>
Whatsapp	61
Instagram	52
Facebook	51
Uber	41
Snapchat	38
Facebook Messenger	28
Twitter	21
YouTube	21
SoundCloud	18
Shazam	17
Dropbox	16
LinkedIn	16
Pinterest	16
Skype	16
FNB	13
Google Maps	13
News24	12
Google Chrome	11
Gmail	10
Pokemon GO	9
Ster Kinekor	8
BBM	7
Find iPhone	6
Kauai	6
PicsArt	6
Supersport	6
Candy Camera	5
Google Plus	5
Maps	5
Zapper	5
Facetime	4
Go Health Club	4
InstaSize	4
Premier League	4
We Heart It	4
Weather	4
9gag	4
ABSA	3
Ask FM	3
Candy Crush	3
Colornote	3
Color Switch	3
Discovery	3

Find Friends	3
Life 360	3
Netflix	3
PlayStation	3
Prisma	3
SHAREit	3
Spider Solitaire	3
Spree	3
Square InstaPic	3
Superbalist	3
Superbru	3
Tinder	3
uTorrent	3
Wattpad	3
Windguru	3
YouCam Makeup	3
Airbnb	2
AliExpress	2
Amino	2
Bid or Buy	2
Bitmoji	2
Color Effect Photo Editor	2
Deezer	2
DeviantArt	2
Facebook Page Manager	2
Firefox	2
Free Music	2
GoPro	2
Google Street View	2
Gumtree	2
Huawei HiLink	2
Kik	2
Kindle	2
Layout	2
Magicseaweed	2
Moldiv	2
My Media	2
OLX	2
Picolo	2
Podcasts	2
Polaris Office 5	2
PriceCheck	2
PTD Helper	2
S Health	2
Smart TV Remote	2
SoundLoader	2
Tubidy	2
VivaVideo	2

WeChat	2
Withings	2
ZingBox	2
Acapella	1
Ace Athlete	1
Adidas	1
AllShare Cast	1
Angry Birds	1
Antivirus & Security	1
App Sender	1
Bidtrack connect	1
BJWJ	1
Booking.com	1
Business Insider	1
Calculator	1
Calendar	1
Call Recorder	1
CamScanner	1
Capitec Bank	1
Casino24	1
Cheapflights	1
Citymapper	1
Clash of Clans	1
Countdown	1
DSTV Now	1
Domino's South Africa	1
Duolingo	1
Easy Converter	1
Easyjet	1
Emirates	1
ENCA	1
Entrepreneur Daily	1
Excel Sheets	1
Fitness Pro	1
Font Candy	1
Fuelbook	1
Games	1
Geki Yaba Runner	1
Groupon	1
GuitarTuna	1
Gym Workout Tracker & Trainer	1
Health	1
Huawei Wear	1
IGN	1
Imo	1
Instafollowr	1
Insta Square	1
iScanner	1

Keeper	1
Kleek	1
Learn C#	1
Learn C++	1
Learn HTML	1
LiveScore	1
Look – Habit Tracker	1
Madbarz	1
Magisto	1
Memo	1
My Calendar	1
My Data Manager	1
My Fitness Pal	1
My MTN	1
My Net Diary	1
My Study Life	1
Musify	1
Musinow	1
National Rail Enquiries	1
Nike + Run Club	1
OLX	1
One Drive	1
One Note	1
Pacer	1
Passes	1
Photo Grid	1
Photo Studio	1
Period Tracker	1
Period Diary	1
Piano Music	1
Pixlr Express	1
PlayStation®Messages	1
PriceCheck	1
Private Photo Vault	1
QR Reader	1
Rugby 360	1
Runkeeper	1
Score! Hero	1
S Planner	1
Seconds	1
Skyscanner	1
SlideMaker	1
Smule	1
SoundHound	1
Speedtest.net	1
Spotify	1
Spur	1
Stack	1

Standard Bank	1
Stick Cricket	1
Striata Reader	1
Study Music	1
Super Animals	1
Super Puzzle Game	1
Tab Pro	1
Takealot	1
Tech News	1
TED	1
Tiny Scanner	1
TripAdvisor	1
Toolani	1
Viber	1
Vicinity	1
Video DL	1
Video Game News	1
ViewTrip	1
VSCO	1
War Dragons	1
Yoga.com	1
YouCam Perfect	1
Zando	1
Zello	1
90Min	1
17TRACK	1

**Appendix E: The apps used every day by the participants**

<b>Mobile apps</b>	<b>TOTAL</b>
Whatsapp	61
Instagram	50
Snapchat	49
Facebook	48
Messenger (Facebook)	14
Gmail	9
YouTube	9
Twitter	8
SoundCloud	6
Google Chrome	5
FNB	5
Pinterest	5
9gag	3
BBM	3
Candy Crush	3
Dropbox	3
Go Health Club	3
News24	3
Candy Camera	2
Google Maps	2
LinkedIn	2
My Virgin Active	2
Netflix	2
Skype	2
Supersport	2
Uber	2
YouCam Perfect	2
90Min	1
ABSA	1
Bible	1
Bid or Buy	1
Bidtrack connect	1
Business Insider	1
Calendar	1



Color Switch	1
Colornote	1
Duolingo	1
ENCA	1
Firefox	1
Imo	1
Insta Square	1
Instasize	1
InstaSize	1
Kauai	1
Kick	1
LiveScore	1
Loop – Habit Tracker	1
Musify	1
My Calendar	1
My Fitness Pal	1
My Net Diary	1
My Study Life	1
Pacer	1
Piano Music	1
PicsArt	1
PlayStation	1
Polaris Office 5	1
Rugby 360	1
S Health	1
S Planner	1
Shazam	1
Spider Solitaire	1
Spree	1
Stick Cricket	1
Superbalist	1
Takealot	1
Tech News	1
Ted	1
Tubidy	1
Viber	1
Video DL	1
Video Game News	1

War Dragons	<b>1</b>
Wattpad	<b>1</b>
Weather	<b>1</b>
WeChat	<b>1</b>
Yoga.com	<b>1</b>