

South African Generation Y students' attitude towards on-demand streaming services

M van der Merwe



orcid.org 0000-0002-9398-5480

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Supervisor: Dr R Müller

Co-supervisor: Prof AL Bevan-Dye

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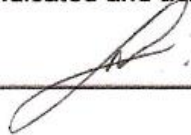
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DECLARATION

DECLARATION

I, **Marinda van der Merwe**, declare that **Generation Y students' attitudes towards on-demand streaming services** is my own work and that all the sources I have used or quoted have been indicated and acknowledged by means of complete references.

Signature: _____



Date: _____

17 November 2018

LANGUAGE EDITING

LETTER FROM THE LANGUAGE EDITOR

Ms Angeliki Albanis

English Language Editing

SATI membership number: 1003365

Tel: 076 618 4561

E-mail: angeliki.albanis@gmail.com

18 November 2018

To whom it may concern

This is to confirm that I, the undersigned, have language edited the completed research of Marinda van der Merwe for the Master of Commerce thesis entitled: *South African Generation Y students' attitude towards on-demand streaming services*.

The responsibility of implementing the recommended language changes rests with the author of the thesis.

Yours truly,



Angeliki Albanis

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ABSTRACT

Keywords: Generation Y, subscription services, video on-demand, streaming, intention to use, attitude towards, streaming services, technology acceptance model, TAM, South Africa

The world is becoming more and more digital. In recent years there has been a shift within the way entertainment is being consumed – from the traditional albums and DVDs to more digital options like audio and video-on-demand subscription services, also known as streaming services. This gives the users the opportunity to watch their favourite movie or listen to their favourite song wherever and whenever they want to, as long as an internet connection is available. This has led to consumers becoming independent, as it gives them control over when, where, and how they consume content.

Streaming services are a fairly new development in South Africa, with a current internet penetration rate of 54 percent which partly explains the slow adoption amongst consumers. Although the adoption rate is relatively low, there has already been a decline in the selling of DVDs and CDs as the appeal of owning a physical library has become less attractive in an age where there are so many other ways to access films and music. DStv subscriptions are declining as customers move towards on-demand streaming services. Although this shift is gradual, the effect it has on the financial reports of the traditional TV industry is stark.

Generation Y is seen as one of the first generations who had access to technology and the internet from an early age. This makes them more likely to write blogs, download music, send instant messages, and watch online videos, on-demand. Thus, combined with their potential to be high-income earners with the highest potential spending power, as result of obtaining a tertiary qualification make Generation Y students the ideal segment for streaming-service adoption.

The primary objective of this study is to determine Generation Y students' intention to use music and video on-demand streaming services. The sampling frame comprised a list of the 26 South African registered HEIs, a convenience sample of two HEIs situated in Gauteng province was selected. By using a non-probability convenience sample of 500 Generation Y students between the ages of 18 and 24 was selected for this study. A self-administered questionnaire was used to gather the required data. After the data cleaning, the 425 questionnaires which were usable giving a response rate of 85 percent. The collected data was analysed using an exploratory factor analysis, a descriptive statistical analysis, a correlation analysis, structural equation modelling and a two independent-sample t-test.

Structural equation modelling revealed that Generation Y students displayed positive attitudes and intentions to use towards on-demand streaming services. Furthermore, perceived usefulness, perceived ease of use, and subjective norms displayed a positive influence on Generation Y students' attitude towards on-demand streaming services. Although, social norms, opinions of family and friends, only have a slight influence on their choice of which on-demand streaming service to use or subscribe to. To conclude, the model indicated that Generation Y students' attitude has a significant positive impact on their intention to use on-demand streaming services.

The literature within this study is a clear indication that streaming services are taking over the entertainment industry. The growth in the streaming service industry increases competitiveness between the different streaming service providers. Consequently, for the service providers to be successful, they should attract subscribers through distinguishing factors such as competitive advantages in their marketing strategies. To obtain a competitive advantage, marketers and service providers should know what their potential target market's wants, and needs are and then develop their marketing strategies accordingly.

The youth are considered to be the current trendsetters within the market, influencing not only consumer behaviour within their generational cohort but consumer behaviour in general. Therefore, it is important for marketers to know the factors influencing Generation Y consumers' attitude and behavioural intention on-demand streaming services

LIST OF ABBREVIATIONS AND ACRONYMS USED

AM	-	Amplitude Modulation
AMOS	–	Analysis of moment structures
BBC	–	British Broadcasting Corporation
BRICS	–	Brazil, Russia, India, China and South Africa
CD	–	Compact disk
CFA	–	Confirmatory factor analysis
DStv	–	Digital Satellite Television
DVD	–	Digital Video Disk
DVR	-	Digital Video Recorders
EFA	–	Exploratory factor analysis
ESPN	–	Entertainment and sports programming network
FM	-	Frequency Modulation
GB	–	Gigabyte
H ₀	–	Null hypothesis
H _a	–	Alternative hypothesis
HEI	–	Higher education institution
iPod	–	Internet portable open database
iTunes	-	Interface on iPod
iPad	-	Internet Protocol Adapter
iTV	-	Interactive Television

KDKA	–	Pioneer Broadcasting Station
KMO	–	Kaiser-Meyer-Olkin
LP	–	Long Play
Mbone	-	Multicast Backbone
MP 3	-	Motion Picture Experts Group Layer-3
NASA	–	National Aeronautics and Space Administration
PCCW		Pacific Century CyberWorks
PEoU	–	Perceived ease of use
PU	–	Perceived usefulness
SACEM		Society of Authors, Composers, and Editors of Music
SN	–	Subjective norms
SPSS	–	Statistical package for social sciences
StatsSA	–	Statistics South Africa
TAM	–	Technology Acceptance Model
TRA	-	Theory of Reasoned Action
TV	–	Television
UK		United Kingdom
USA		United States of America
VCR	–	Videocassette recorder
VoD	–	Video on Demand

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CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION

The world is becoming more and more digital (TechCentral, 2017B). In recent years there has been a shift within the way entertainment is being consumed – from the traditional albums and DVDs to more digital options like audio and video-on-demand subscription services, also known as streaming services (Bhoot, 2017). The term on-demand service is described as a service where the subscriber requests information such as a song or video, and the server delivers the requested information in real time as it is based on streaming technology (Vilas *et al.*, 2005). On-demand services are a more convenient version of the physical video and music stores (DiscoverDigital, 2017). The service can be delivered over the internet to televisions, computers, laptops, smartphones, and tablets (INFONETICS, 2011). This gives the users the opportunity to watch their favourite movie or listen to their favourite song wherever and whenever they want to, as long as an internet connection is available (Tryon, 2013:59). This has led to consumers becoming independent, as it gives them control over when, where, and how they consume content (Bond, 2015). Consumers have started to place higher value on immediacy, mobility, and access to preferred content (PWC, 2017).

Streaming technology, called the Multicast Backbone (Mbone), was developed around 1992. This network was used for internet radio stations as it allowed data to be streamed efficiently from one server to several receivers at the same time. (Bucknall, 2012). On 5 September 1995, the first live streaming event was broadcasted; ESPN SportsZone streamed a baseball game between the Seattle Mariners and the New York Yankees (The Guardian, 2013). Only in the late 90 did streaming become characterised by playing video data as in real time and there was no need for the video to be downloaded in its entirety before viewing it. In 1997, the first streaming video viewer was launched (Bucknall, 2012).

In South Africa on-demand streaming services are still a new segment, largely because people do not know what on-demand streaming services are and how they work (Van Zyl, 2016C). This study examined the diffusion of an innovation model, which is used to explain when and by whom the products are adopted (Rogers & Shoemaker, 1971). This model was utilized to measure the adoption and attitudes towards the largest on-demand streaming services, such as *Netflix*, *ShowMax*, *Google Play*, and *Deezer* (Vermeulen, 2017B; Channel24, 2017B). For this study, YouTube and social media networks were excluded. Furthermore, to enhance the understanding of the adoption of on-demand streaming services, the technology acceptance model (TAM) was utilised to predict user's intention to use the service. TAM shows that perceived ease of use

(PEoU) and perceived usefulness (PU) play important roles when adopting new technology (Jin, 2014:472).

This study focused on the Generation Y cohort, which comprises individuals born between the years 1986 and 2005 (Markert, 2004:21). Generation Y is seen as one of the first generations who had access to technology and the internet from an early age. This makes them more likely to write blogs, download music, send instant messages, and watch online videos, on-demand (Djamasbi *et al.*, 2010). Thus, combined with their potential to be high-income earners with the highest potential spending power, as result of obtaining a tertiary qualification make Generation Y students the ideal segment for streaming-service adoption (Bevan-Dye *et al.* 2009:174).

1.2 PROBLEM STATEMENT

People are accessing entertainment content very differently than they did prior to 2008 (Gupta, 2017). The accessibility of online entertainment content gives users the entertainment content that they want, when they want it, without being tied down to the traditional model of scheduled programming that limited the variety of shows with constant repetition (Fripp, 2017; The Citizen, 2017).

This study provides insight into the current on-demand streaming services industry in South Africa, as well as the attitudes and preferences of Generation Y students towards these services. Generation Y is starting to move away from traditional TV and more towards on-demand streaming services because these can be personalised and offer original content (Millennial Marketing, 2017).

Streaming services are a fairly new development in South Africa, with a current internet penetration rate of 54 percent, which means that 46 percent of the SA population have no access to internet, this partly explains the slow adoption amongst consumers (Matangira, 2018). Although the adoption rate is relatively low, there has already been a decline in the selling of DVDs and CDs as the appeal of owning a physical library has become less attractive in an age where there are so many other ways to access films and music (Allan, 2017; Ossia Records, 2017).

DStv subscriptions are declining as customers move towards on-demand streaming services (Fin24, 2017); as streaming offers ease of consumption to consumers with anytime-anywhere access and has no storage requirements (Bond, 2015). Although this shift is gradual, the effect it has on the financial reports of the traditional TV industry is stark (Bond, 2015). Traditional TV providers started to respond to this development by introducing their own Video on-Demand (VoD) services such as DStv's Online, Box Office, and Catch Up services (Seanie, 2017).

The streaming services industry in South Africa has tremendous growth potential, as South Africans are beginning to change their traditional habits to online streaming services which will create opportunities for all players in the media ecosystem: audiences, advertisers, and content providers (Mzekandaba, 2016). With the above stated, there is a shortfall of published literature that specifically focuses on the South African Generation Y's consumer attitudes towards on-demand streaming services.

1.3 OBJECTIVES OF THE STUDY

The following primary, theoretical, and empirical objectives have been formulated for the study.

1.3.1 Primary objective

The primary objective of this study is to determine Generation Y students' intention to use music and video on-demand streaming services.

1.3.2 Theoretical objectives

In order to achieve the primary objective, the following theoretical objectives were formulated for the study:

- Conduct a literature review regarding the origin, history, and development of on-demand streaming services.
- Outline the on-demand streaming services market within South Africa.
- Conduct a literature review regarding the origin, history, and uses of the technology acceptance model (TAM).
- Conduct a review of literature pertaining to the characteristics of members of the Generation Y cohort.
- Conduct a literature review regarding the diffusion of innovation process.

1.3.3 Empirical objectives

In accordance with the primary objective of the study, the following empirical objectives were formulated:

- Determine Generation Y students' preferences towards on-demand streaming services

- Determine Generation Y students' attitudes towards music and video on-demand streaming services.
- Determine Generation Y students' perceived usefulness of streaming services.
- Determine Generation Y students' perceived ease of use of streaming services.
- Determine Generation Y students' subjective norms regarding on-demand streaming services in order to ascertain whether they influence their interest and intention to use these services.
- Determine Generation Y students' intentions to use on-demand streaming service
- Determine whether subjective norms, perceived usefulness, perceived ease of use and attitude influence Generation Y students' intention to use on-demand streaming services.
- Determine whether male and female Generation Y students differ in their subjective norms, perceived usefulness, perceived ease of use, attitude, and intention to use on-demand streaming services.

1.4 HYPOTHESES

In order to achieve the empirical objectives of the study, the following hypotheses were formulated:

- H₀₁ - Drivers of on-demand subscription streaming service adoption is not a five-factor structure comprising perceived usefulness, perceived ease of use, subjective norms, attitude, and intention to use.
- H_{a1} - Drivers of on-demand subscription streaming service adoption is a five-factor structure comprising perceived usefulness, perceived ease of use, subjective norms, attitude, and intention to use.
- H₀₂ - Perceived usefulness does not positively influence Generation Y students' attitude towards on-demand subscription streaming service.
- H_{a2} - Perceived usefulness does positively influence Generation Y students' attitude towards on-demand subscription streaming service.
- H₀₃ - Perceived ease of use does not positively influence Generation Y students' attitude towards on-demand subscription streaming service.

- H_{a3} - Perceived ease of use does positively influence Generation Y students' attitude towards on-demand subscription streaming service.
- H₀₄ - Subjective norms do not positively influence Generation Y students' attitude towards on-demand subscription streaming service.
- H_{a4} - Subjective norms do positively influence Generation Y students' attitude towards on-demand subscription streaming service.
- H₀₅ - Attitude does not positively influence intentions to use of Generation Y students towards on-demand subscription streaming service.
- H_{a5} - Attitude does positively influence intention to use intentions of Generation Y students towards on-demand subscription streaming service.
- H₀₆ - There is no difference between male and female Generation Y students' perceived usefulness, perceived ease of use, subjective norms, attitude, and intention to use concerning on-demand subscription streaming service
- H_{a6} - There is a difference between male and female Generation Y students' perceived usefulness, perceived ease of use, subjective norms, attitude, and intention to use concerning on-demand subscription streaming service.

1.5 RESEARCH DESIGN AND METHODOLOGY

The study comprised a literature review and an empirical study. For this study, a quantitative research approach, by means of the survey method, was followed for the empirical portion of the study.

1.5.1 Literature review

In order to explore this subject to its full extent, a review of South African and International literature was conducted. Secondary data sources such as relevant textbooks, journal articles, newspaper articles, the internet, business articles, and online academic databases were included.

1.5.2 Empirical study

The empirical portion of this study comprised the following methodology dimensions:

1.5.2.1 Target population

The target population relevant to this study was undergraduate Generation Y full-time students, enrolled at Higher Education Institutions (HEI) in South Africa within the province of Gauteng. The target population is defined as follows:

- Element: Generation Y students aged between 18 and 24.
- Sampling Unit: South African registered public HEIs.
- Extent: Gauteng, South Africa.
- Period: 2018.

1.5.2.2 Sampling frame

The sampling frame comprised a list of the 26 South African registered HEIs (USAF, 2017). From the sampling frame, a convenience sample of two HEIs, one traditional university and one university of technology, situated in Gauteng province was selected. Gauteng province was selected because it has the largest share of the South African population and is the economic hub of South Africa (South Africa, 2017). A convenience sample of full-time, undergraduate Generation Y students were selected from the two HEIs.

1.5.2.3 Sample method

A non-probability convenience sample of 500 Generation Y students between the ages of 18 and 24 was selected for this study. The self-administered questionnaires were distributed to the respondents at each of the two HEIs.

1.5.2.4 Sample size

The sample size selected for this study is 500 Generation Y students. In accordance with previous studies done by Helkkula (2016:23) (sample size:136), Pal and Triyason, (2017:6) (sample size:349), and Ho and Yang (2015:8) (sample size: 347), a sample size of 500 respondents was deemed sufficient. The chosen sample size is also in line with the requirements of the statistical techniques used to analyse the collected data. The sample was split evenly between the two selected HEI campuses, with 250 students per HEI campus. Of the questionnaires distributed, 425 usable questionnaires were returned.

1.5.2.5 Measuring instrument and data collection method

For this study, a structured, self-administered questionnaire was utilised to collect the required data. The questionnaire adapted existing scales used in previously published research. The

questionnaire was divided into three sections: Section A gathered the respondents' demographic data to test the representativeness of the sample; Section B aimed to determine the hobbies of Generation Y, as well as their preference of on-demand streaming services and Section C measured Generation Y students' attitudes (Shin, 2008), perceived usefulness (Nysveen, 2005; Wang, 2014), ease of use (Cha, 2013; Wang, 2014), subjective norms (Jin, 2014; Yoon & Rolland, 2015), and intention to use (Nysveen, 2005; Shin, 2008) on-demand streaming services. Scaled responses were measured using a six-point Likert scale ranging from strongly disagree (1) to strongly agree (6). A six-point Likert scale was chosen as it excludes a neutral response, an option which is regarded as indecisive and redundant (Pallant, 2010:10).

The survey was accompanied by a cover letter explaining the nature of the study, requested participation from students and assured confidentiality of the respondents' information. The relevant universities were contacted to ask if fieldworkers were permitted to approach students on their campuses to collect data. After permission was obtained, the questionnaires were given to fieldworkers who intercepted students on the grounds of the relevant campuses. All respondents were informed that completing the survey was strictly on a voluntary basis.

1.5.3 Statistical analysis

The captured data were analysed using the Statistical Package for Social Sciences (SPSS) and Analysis of Moment Structures (AMOS), Version 25.0 for Windows. The following statistical methods were used on the empirical data sets:

- Exploratory factor analysis
- Reliability and validity analysis
- Descriptive analysis
- Correlation analysis
- Structural equation modelling
- Two-independent- sample t-test

1.6 ETHICAL CONSIDERATIONS

Ethical clearance was sought from the Ethics Committee of the Faculty of Economic and Management Sciences at North-West University (Vaal Triangle Campus). The questionnaire was deemed feasible and presentable and cleared the ethical standards. The following ethical clearance number was received: **ECONIT-2018-09**.

Participation in the survey was strictly voluntary. All respondents were free to decline or withdraw at any point in the research process. The respondents' responses were treated as confidential and were assessed in a fair manner.

1.7 CHAPTER CLASSIFICATION

This study comprised the following five chapters.

Chapter 1: Introduction and background to the study

This chapter includes an introduction and brief background on on-demand streaming services. The problem statement, research objectives, and the methodology used in the study are discussed.

Chapter 2: Literature review

This chapter consists of a detailed literature review exploring on-demand streaming services. The main aim of this chapter is to give a brief history of traditional entertainment mediums and the evolution thereof. Streaming services are introduced as well as their history, features, and marketing of the different types. The current landscape of on-demand streaming services in South Africa is examined.

Furthermore, the various drivers of on-demand streaming service adoption are clearly defined and explored in detail. This chapter investigates the diffusion of the innovation process regarding on-demand streaming services. It concludes with the focus on Generation Y's characteristics in relation to their attitudes towards adoption of technology and the appeal of marketing methods to them.

Chapter 3: Research design and methodology

This chapter highlights the research methodologies chosen for the study. The target population, sampling method, sample size, and the data collection methodology are explained in this chapter. Furthermore, the design, layout, pre-testing, pilot testing, and administration of the questionnaire will be explained. Lastly, the different data analyses and statistical procedures utilised for this study are detailed.

Chapter 4: Results and findings

In this chapter, the analysis of the data, the interpretation, and the findings are discussed in detail.

Chapter 5: Conclusions and Recommendations

This chapter comprises an overview of the entire study by providing conclusions and recommendations derived from the main findings. The chapter reflects on the limitations of the study, which could act as a guide for possible future studies.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

This chapter focuses on the theoretical objectives outlined in Chapter 1 (Section 1.3.2). The primary objective of this study aims to determine Generation Y students' intention to use music and video on-demand streaming services.

In order to investigate the primary research objective, Section 2.2 outlines the origin and development of entertainment. This begins with the origin of entertainment (Section 2.2.1), moving onto a brief history and evolution of music (Section 2.2.2), and television (Section 2.2.3). In Section 2.3 the modern method of entertainment - namely, on-demand streaming services - is explained, followed by a brief history of music and video streaming services (Section 2.3.1). The current global landscape of on-demand streaming services is explored (Section 2.3.2.1), followed by the South African landscape streaming service landscape (Section 2.3.2.2). The market shares, features, and prices of music on-demand streaming services (2.3.3.1) and video on-demand streaming services (2.3.3.2) are examined. This is followed by the marketing methods of on-demand streaming services (Section 2.3.4).

The influencers of on-demand streaming services (Section 2.4) are discussed in the context of the constructs used in the empirical portion of this study. This begins with the Technology Acceptance Model (Section 2.4.1), followed subjective norms (Section 2.4.2) and closing by the diffusion of the innovation process (Section 2.4.3). Lastly, the literature relating to the Generation Y cohort (Section 2.5) is reviewed in order to gain clarification on the characteristics often associated with this cohort.

2.2 ORIGIN AND DEVELOPMENT OF ENTERTAINMENT

The way that individuals choose to entertain themselves changes constantly over the course of time (Hyde, 2016). Entertainment is seen as an activity that gives pleasure and delight and keeps individuals captivated for hours (IMERSA, 2017); it acts as a distraction from an individual's daily routine (Binatli & Sunal, 2014:17). The outcome of entertainment is a happy and satisfied psychological state (Vogel, 2015).

2.2.1 Origin of Entertainment

One of the first forms of entertainment started with the gladiators, centuries ago, where audiences would gather at arenas to watch them fight. This practise smoothed out over time to bring theatre to the people, where entertainment of various genres was presented in the form of plays performed by actors. (Hyde, 2016). It has been less than a century since individuals started enjoying entertainment in the comfort of their homes through radio and television (Ismail, 2017). Individuals were limited to a few channels of choice, until cable and satellite TV came along and offered a wider variety of channels to choose from (Ismail, 2017).

As a result of technology, the entertainment world recently started to migrate towards digital media by means of the internet (Downs, 2017), which offers individuals unlimited entertainment options so that they are no longer limited to their television set (Ingram, 2015; Hyde, 2016).

The media and entertainment industry comprise film, print, radio, and television (Vault, 2018). For the purpose of this study, only music and television will be discussed.

2.2.2 Music

The origin of music begins with cultures that tried to imitate the sounds of nature and soon realised that there was a pattern in the sounds made by animals (Haugh, 2016). Music, in its most primitive form, can be traced back to cultural rituals such as tribal dances which led to the initiation of singing, chanting, and drumming (Roshan, 2017). Figure 2.1 illustrates how the music industry transformed over the last two decades. The journey started with the desire or idea to be able to listen to music without the artist performing live in front of an audience (Wiener, 2017).

The phonograph made music an intimate experience for listeners in 1877 as it made it possible for individuals to listen to it in their living rooms (Ryals, 2005). The first voice recording made on the phonograph was by Thomas Edison, who shouted the words to the nursery rhyme “Mary had a little lamb” (Fabry, 2018). The playback medium was cylindrical in shape and too difficult for people to use, also the tinfoil on which the recordings were made was not durable (Sturgill, 2012).

In 1887, Emile Berliner replaced the cylinder and tinfoil with a flat plate which rotated a hard rubber disc and called this the gramophone (Neely, 2017). The gramophone could play recorded sounds. This breakthrough sparked the mass production of records, which resulted in 25 000 hard rubber disks being pressed in 1889 (Lennon, 2017). Long Play (LP) record, better known as vinyl, was introduced in 1948 (DMS, 2017). The vinyl was available in two sizes, 10-inch and 12-inch

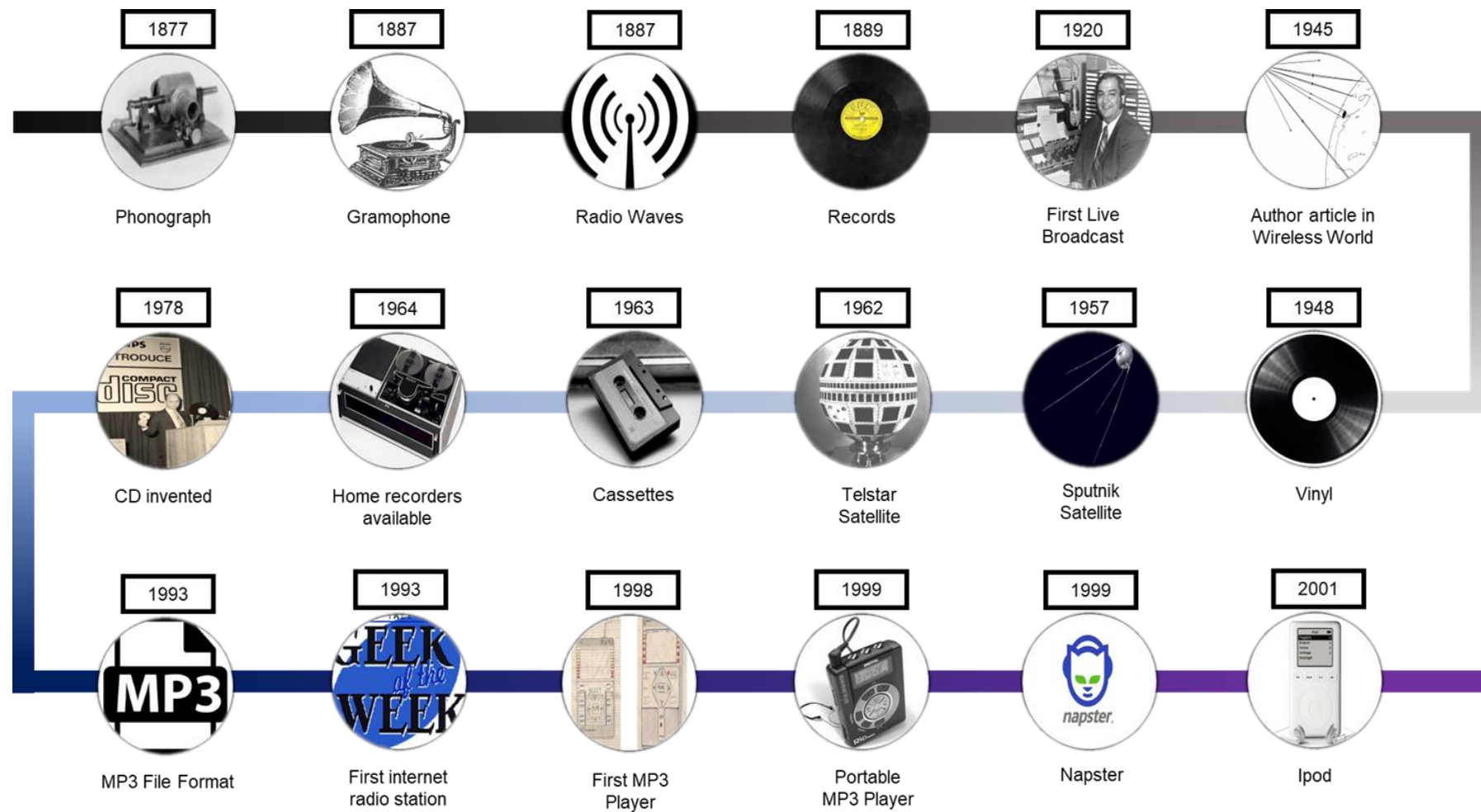


Figure 2-1: Timeline for evolution of music

diameter (WilsonGunn, 2015). The 10-inch was used for non-classical music and recorded 15 - plus minutes on one side whereas the 12-inch vinyl were meant for classical music and they could record up to 25 minutes on each side (Neely, 2017). This was the primary medium used for music throughout the sixties, seventies, and eighties and is still commonly used because of the sound quality and the listening pleasure it provides (DMS, 2017).

In 1887, the physical existence of radio waves was proven, but it was only until 1920 when the possibility of broadcasting ascended. In 1906, the first Amplitude Modulation (AM) radio experimental broadcast was done (Roy, 2009). On November 2, 1920, radio station "KDKA" made United States of America's first commercial broadcast, with the aim to broadcast the Harding-Cox presidential election results before they were published in the newspaper (ETHW, 2015). In 1933, Frequency Modulation (FM) broadcasting was developed but was only adopted in the 1960s (Roy, 2009). In 1945, Arthur C Clarke wrote an article in *Wireless World* about a system that used satellites in geostationary orbit (Tweney, 2011). Signals would be transmitted to the satellite in the geostationary orbit that would rebroadcast the signals back to the earth (Tweney, 2011). In 1957, Sputnik 1 became the first satellite launched into the earth's orbit and managed to transmit a single bleep (Wall, 2017). The launch of Telstar in 1962 was a milestone in satellite development, not only for radio but also for television, as it demonstrated the feasibility of transmitting information via satellite (NASA, 2012).

In 1963, the compact audio cassette was introduced by Philips at the Berlin Radio Show (Dormon, 2013). The main aim of this invention was portability of music (Dormon, 2013). The cassette was available as a pre-recorded cassette which already contained music, and a recordable cassette which contained no content (ETHW, 2012). Cassettes allowed more recording time for an album than vinyl records, as it allowed up to 45 minutes per side (Rogers, 2013). In 1964, the first home recorders operating with the compact cassette technology were released in the United States, and in 1966 the first music albums were released on cassette format (Rogers, 2013). This product was favoured amongst the youth due to its uniqueness; it was inexpensive and could be used to record personalised music collections (Taylor, 2010; Payne, 2015). However, people still preferred to listen to vinyl records at home, and cassettes were mainly used in car stereos as they were portable and conveniently small in size (Haire, 2009).

In 1978, the compact disc (CD) invention was announced by Philips (CNN, 2012). This invention is an optical storage medium onto which digital data can be recorded (Foote, 2017). The disc had a diameter of 120mm and allowed recording time of 74 minutes (Waniata, 2018). CDs were manufactured at only two facilities in the entire world, owned by Philips and Sony respectively (Hopewell, 2012). CDs only overtook the cassette tape market in the late 1980s (CNN, 2012). As

time passed CDs were used for data and video storage, evolving into re-writable media and Blu-Ray DVDs (CNN, 2012).

The music industry moved into a new level of technology development in 1993 with the introduction of Motion Picture Experts Group Layer-3 (MP3) sound file and the first internet radio station (Ashbrook, 2016; Fraunhofer, 2018; Scrimgeour, 2018). MP3 is a standard format used for audio compression which makes music files small, with little to no loss of sound quality (Bellis, 2018). This makes it a very convenient, useful, and popular way of storing music (BBC, 2012). In 1998 the first MP3 music player, Winamp, became available and in 1999 the first portable MP3 players made their debut (Velasco, 2017). *Apple* launched an MP3 player known as the *iPod* in 2001 and their online music library for the *iPod*, called *iTunes* (Waniata, 2018). The aim was to provide listeners access to a platform where they could purchase songs individually without any subscription fees (Roshan, 2017). It proved to be a viable business model (CNN, 2012).

In 1999 the digital music revolution started with Napster (Lamont, 2013), a website for peer-to-peer music sharing in MP3 format (Brewster, 2017). However, ethical issues caused the site to close as there was a lack of control over copyrighted material (Harris, 2018). By the time Napster closed down in 2001, they had 21.4 million active users, which made a statement about free peer-to-peer music sharing being the future for the music industry as an option worth exploring (Brewster, 2017). This is where the story of streaming services unfolds (Roshan, 2017). Streaming services and the history thereof will be discussed in Section 2.3.1.

2.2.3 Television

Television is a device used to transmit scheduled broadcasts to the public (Westerlund, 2014). Figure 2.2 illustrate the evolution of television over the last two decades. In 1926, the first working television system was demonstrated in the United Kingdom (Eboch, 2015:17). It was 1929 when scheduled television programming began in the United Kingdom, with British Broadcasting Corporation (BBC) transmitting a picture after radio broadcasting was done for the day (Eboch, 2015:17). In 1930, pictures and sound could be broadcasted together and by 1931, television was broadcasted from 25 stations (Eboch, 2015:17). In 1930, the electronic television was patented (Eboch, 2015:20). In 1944, the first fully electronic colour television was demonstrated to the world (Roy, 2009).

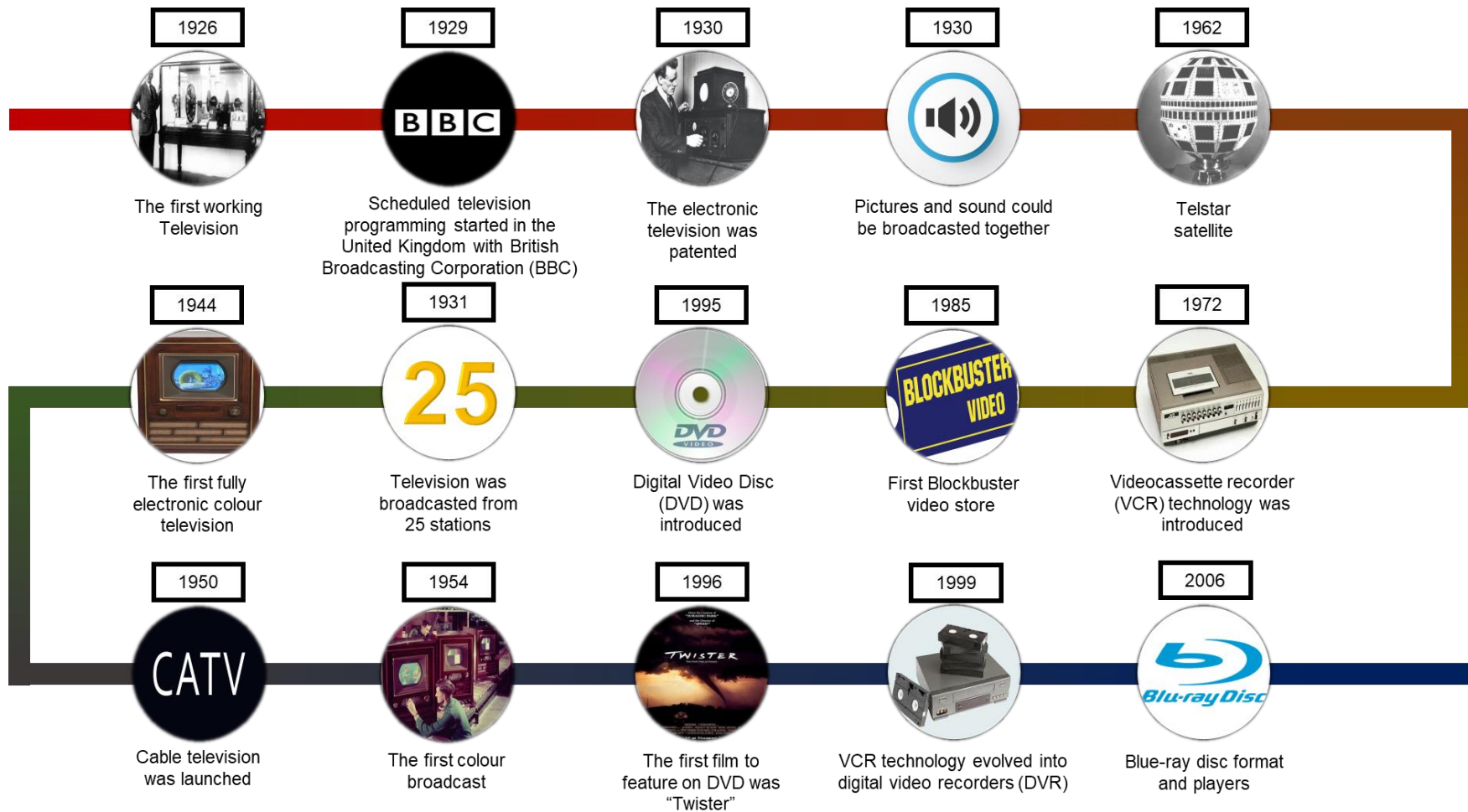


Figure 2-2: Timeline for the evolution of television

In 1950, cable television was launched with the aim of providing television to individuals living in rural areas, as they were unable to receive broadcast signals (Kellison, 2006:28). The cable television signal is distributed by means of satellites, for which subscribers had to pay a specified monthly subscription fee in addition to a once off installation fee (Britannica, s.a). Cable television offered up to 50 channels as they distributed signals from both normal television broadcast band as well as the non-broadcast frequencies (Britannica, s.a).

In 1954, the first colour broadcast was aired in the United States (Gibbs, 2016). Since then, the television experienced continuous improvements in quality as the screens became bigger, cameras more sensitive, and the transmissions stronger to ensure superior picture quality (Gibbs, 2016). In 1962, Telstar satellite was launched, which was the first technology that enabled transatlantic television transmissions (Collins, 2012). Satellites are used to transmit major sports and news event coverage around the world to TV networks for re-transmission (Telesat, 2018).

As time passed the videocassette recorder (VCR) technology was introduced in 1972, transforming television into a more interactive device (Kellison, 2006:32). This generated two trends: the consumers were able to purchase or rent content that was previously only available in cinemas or on television; it enabled consumers to record television programs on blank videotapes to watch at their leisure (Kellison, 2006:32). In 1985, the first Blockbuster video store opened in Dallas, Texas, after which the rental market excelled in the late eighties and early nineties (Pink, 2017). This technology was the first to give consumers a glimpse of on-demand content.

In 1995, the Digital Video Disc (DVD) was introduced, which could store up to 4.7 gigabytes (GB) of data such as high-definition video files (Britannica, s.a). DVDs were a compact product with higher resolutions and instantaneous access to any moment in a movie, as opposed to arbitrarily rewinding a videocassette (DiskBank, 2015).

The first film to feature on DVD was “Twister”, in 1996 (ComputerHope, 2018). In 2000, DVDs transcended VHS tapes causing video rental companies, like *Blockbuster*, simply to migrate to the new viewing format (Pink, 2017). In 2006, Blue-Ray disc format and players were launched (TechSpirited, 2018). These discs are seen as the next big application of optical media, as it allows high definition video recording in the highest possible quality (PCWorld, 2008). There are two types of disc available, the single layer which has 25 GB data capacity and the double layer which has 50 GB data capacity (Blu-raydisc, 2018). More than 1,200 movie titles were released on Blu-Ray in the United States by the end of 2008 (TechSpirited, 2018).

VCR technology evolved into digital video recorders (DVR) in 1999, a technology which allowed consumers to record content, pause live television, and skip commercials (Pink, 2017). The most

recent innovation, video-on-demand (VoD), offers streamed video content (Bludov, 2018). This poses a threat to traditional television mediums as it enables consumers to choose what to watch and when to watch it. To counter this blow to the traditional television trade, satellite television service providers have started to offer a similar service to the market (Hughes, 2015). That is, after a program is broadcast and missed by the consumer, there is an option to watch the program online - but the program is available only for a limited time period (BusinessTech, 2018).

Television became an inescapable part of modern culture as we depend on TV for entertainment, news, education, culture, weather reports, and sports bulletins (Caron, 2009). However, scheduled television is a thing of the past with the advancement of technology. It is no longer necessary to rush home to catch a favourite show or to use the commercial breaks to call a friend to discuss what just happened on the show (Mcintosh, 2015). With modern technology, one can communicate while watching one's favourite series or even push pause on live television should something urgent come up (Mcintosh, 2015).

2.3 THE MODERN METHOD OF ENTERTAINMENT: ON-DEMAND STREAMING SERVICES

The Cambridge dictionary defined streaming as "*the activity of listening to or watching sound or video directly from the internet*" (Cambridge University Press, 2018). Vonderau (2015:717-718) defines streaming as a system which delivers music, movies, or videos on the internet.

Streaming refers to a delivery method of data (Hannon, 2012). It is defined as the transmission of a continuous flow of audio and/or video data to the device used for streaming; the device will display the transmitted data while the following data are being transmitted (Vilas *et al.*, 2005; Hannon, 2012). Once the transmitted data have been displayed they will be discarded, as the data are not stored on the device (Vilas *et al.*, 2005). Therefore, users do not require any substantial storage space while streaming (Fleury, 2012). Additionally, this feature helps to protect content from piracy, as there is no stored copy of the data at the end-point (Fleury, 2012).

Streaming is changing the way people watch videos and listen to music as it provides entertainment anywhere, anytime (Mooney, 2016:6). People do not have to gather around the television on a specific day and time to watch their favourite television show, or purchase a CD to listen to their favourite songs anymore (Mooney, 2016:6).

2.3.1 A brief history of streaming services

The Multicast Backbone (Mbone), an experimental network, was developed in 1992. This network's main function was multicasting, which means that it allowed data to be streamed

simultaneously from one server to several receivers (Follansbee, 2004:137). This network was utilised as an internet radio station (TechRadar, 2012). The first streamed audio channel broadcast was in 1993, named Talk Radio (Riismanderl, 2018). The station presents a stream of music data that users can subscribe to; however, the audio was streamed whether the listener had requested it or not (Riismandel, 2018). Streaming was introduced commercially by Real Networks in 1995 by streaming a live audio broadcast of a baseball game between Seattle Marines and New York Yankees (Zambelli, 2013; RealNetworks, 2018). It was the world's first live streaming event (Zambelli, 2013).

In 2001, Napster exhibited that online sharing of music was an option worth exploring (Brewster, 2017). *Apple* launched their *iTunes* store in 2003. This was not a streaming platform, but the foundations had been laid as they had 30-second previews of tracks that consumers were invited to listen to prior to buying the track (Apple, 2003). In 2005, music streaming gained the public's attention with *Pandora* (Levy, 2015). *Pandora* created an online service that recommended new music based on the user's preferences and allowed users to bookmark artists or discover new ones (Brewster, 2017). By 2013, the website had over 200 million users, which demonstrates the influence of the modern world of streaming (Mlot, 2013; Brewster, 2017).

The corresponding technology of multicast is known as unicast, and this is used when one server sends a data stream over the internet to a single receiver, such as the user's PC (Follansbee, 2004:137). This method is used for video-on-demand streaming (Follansbee, 2004:137).

Interactive TV (iTV) was introduced in 1998, in Hong Kong, as the world's first commercial VoD service (Chetham, 2002; Smith, 2017). *iTV* offered their subscribers access to video, music, shopping, and banking services, on-demand (Mungan, 1999). Ninety thousand households subscribed to *iTV*, but the services struggled due to technical issues, legal issues, and consumer confusion (Shackleton, 2002; Smith, 2017) which led to *iTV* closing down. PCCW, the initial owners of *iTV*, followed the basic idea of *iTV* and improved the services creating NOW Broadband, an internet based VoD (Smith, 2017).

Video streaming became mainstream in the late 90s, with several competing streaming viewers available (TechRadar, 2012). The first was *Real Player* which was launched in 1997, followed by *Windows Media Player* introduced by *Microsoft* in 1999, and *QuickTime* was introduced by *Apple* (TechRadar, 2012).

2.3.2 Current landscape of streaming services

2.3.2.1 Global streaming services landscape

Over the last few years, online media consumption has advanced tremendously (Delloite, 2015). Research found that 4 billion people are using the internet around the world, and 52 percent of web traffic is caused by mobile phones (Kemp, 2018). Since *Netflix* was introduced in 2010, at least 50 new streaming platforms were launched worldwide (Keslassy, 2016). This allows consumers much freedom when selecting media and entertainment options (Minor, 2018).

As users move away from traditional mediums towards streaming services, their expectations shift to a higher quality of experience (Delloite, 2018). Additionally, exclusive, high-quality, and original content is also a major driver for customers when choosing subscriptions services (Williams, 2015).

In 2018, statistics indicated that the revenue for video-on-demand streaming services worldwide amounted to US\$19,572 million, with an expected growth to US\$23,883 million by 2022 (Statista, 2018H). In addition, the music on-demand streaming service segments revenue worldwide amounts to US\$9,150 million with an expected growth to US\$12,363 by 2022 (Statista, 2018G).

2.3.2.2 South African streaming service landscape

The rapid penetration and decreasing prices of mobile phones, as well as the efforts to grant everyone access to internet contributed to prepare the South African market for streaming services (Motsai, 2018).

Approximately 46 percent of the South African population has no internet access, causing individuals to rely on mobile phones and mobile data (Daniel, 2018; Matangira, 2018). Mobile phones are responsible for roughly 75 percent of all web traffic in South Africa (DigitalStatistics, 2017). Research done at the beginning of 2018 showed that South Africa's data prices are third most expensive within the BRICS nations (BussinessReport, 2018). However, recently data prices within South Africa decreased by 16.4 percent (Business Insider, 2018). *Vodacom* confirmed that, as a result, their data traffic increased by 28.6 percent (Business Insider, 2018). This contributes to the growth of streaming services in South Africa (ITNewsAfrica, 2018). Approximately 20 percent of South Africans who subscribe to streaming services do so with their end goal being to cancel their television subscription (BusinessTech, 2018). This resulted in *MultiChoice* losing over 100,000 *DStv Premium* subscribers during the previous financial year (BusinessTech, 2018).

According to statistics, the revenue for the video streaming on-demand segment in South Africa amounts to US\$22 million for 2018 and is expected to grow to US\$30 million by 2022 (Statista, 2018H). The revenue for the Music streaming on-demand segment amounts to US\$18 million for 2018 and is expected to grow to US\$24 million by 2022 (Statista, 2018I).

It is clear that the future of entertainment in South Africa lies in the hands of online streaming service (ITNewsAfrica, 2018).

2.3.3 On-demand streaming services

For the purpose of this study, this section aims to introduce the different streaming services trending in South Africa, with emphasis on the subscription-based services. Figure 2.3 presents the streaming services trending in South Africa.

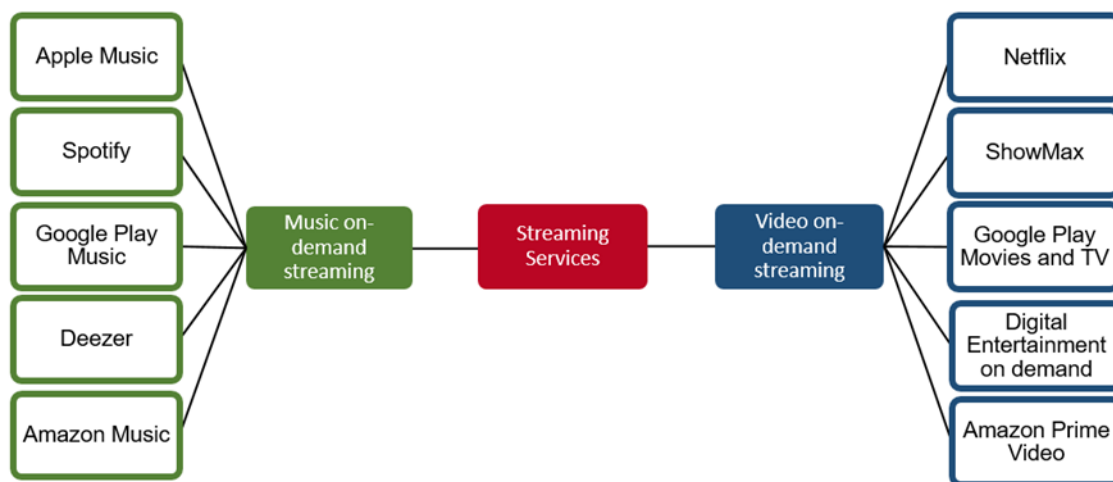


Figure 2-3: Trending streaming services in South Africa

2.3.3.1 Music on-demand streaming services

2.3.3.1.1 Apple Music

Apple music was launched in June 2015 as a revolutionary music streaming service (Sandler, 2017). *Apple music* is available in 114 countries with 50 million paying subscribers worldwide (Statista, 2018B; Sandler 2018). This service consists out of two elements: the *iCloud Music Library*, which combines the user's music library and the purchased songs from *iTunes*; and the *Apple music* catalogue that consist of 45 million songs (Chambers, 2018; Caldwell, 2018).

Features of *Apple music* include an offline library where the users can save music to a playlist to listen to while not having access to the internet (Betters, 2018); it recommends similar artists and songs from the genre and artist that the user has selected (Business Insider, 2018); it offers live

radio stations as well as on-demand stations for every genre, or the user can customise their station (Apple, 2018).

Apple music launched in South Africa in 2015 and users can subscribe to this streaming service for a monthly fee of R59.99 (Vermeulen, 2018E). Furthermore, *Apple music* gives potential users the option to enjoy the full experience of their services for a free trial period of three months (Van Zyl, 2015).

2.3.3.1.2 Spotify

Spotify is a one of the most well-known digital streaming services that launched in 2008 and boasts a catalogue of over 35 million songs (Bond, 2017; Media, 2018). *Spotify's* paying subscribers increased with an astonishing amount of 57 million within a one-year period. In June 2018, *Spotify* had 83 million paying subscribers worldwide (Statista, 2018F).

Spotify is not only a digital music streaming service but also a podcast and video streaming service that gives users access to millions of songs and other content from artists worldwide (Spotify, 2018). The aim of this application is to allow their users to browse, discover, build their own music collection, and share music with their friends (Media, 2018)

Spotify is not only available as subscription-based option but also offers an ad-supporter option (Venkatesh, 2018). The ad-supported option is run by advertisements, which allows consumers access to only selected features (Walker, 2018). Contrastingly, the subscription-based option is known as *Spotify premium*, which includes features like the offline mode where the user can save up to 10 000 songs (Roettgers, 2018). This saved content will be available for the user to access, on up to five different devices, while offline due to limited data or traveling to internet restricted locations (Willings, 2018; Roettgers, 2018). Another feature that is included into the premium option is user access to podcasts, exclusive music videos, and live-stream concerts (Welch, 2015; Bond, 2017).

The application will suggest alternative songs or artists that the user might like based on the user's listening history or personalised playlists (Walker, 2018). Users can follow their favourite artist on this application, which serves to inform the user when the artist releases new content (Walker, 2018). *Spotify* also has a running feature which provides a playlist that is tailored to the user's running speed (Hall, 2018).

Spotify entered the South African market in March 2018 at the monetary cost of R59.99 per month (McLeod, 2018). Since *Spotify* launched in South Africa, their subscribers increased with 8 million subscribers worldwide (AFP, 2018).

2.3.3.1.3 Google Play Music

Google Play Music, launched in November 2011, is a music and podcast streaming service with a catalogue of 40 million songs (Lee, 2017; Wagoner, 2018). This application also provides the services of an online store as well as music storage, where users can upload up to 50,000 items of their own (Finder, 2017). *Google Play Music* allows users to choose between different streaming qualities when streaming using Wi-Fi they could select a higher quality streaming option and when they are using mobile data where they could select a lower quality streaming option (Wagoner, 2018).

Google Play Music has both ad-supported as well as subscription-based options available (Callaham, 2015). With the subscription-based option, users have full access to the catalogue, without any disruptions by advertisements (Lee, 2017). *Google Play Music* has approximately 24 categories of podcasts available for users to choose from (Lee, 2017). Users can create and share their playlists, and this application will suggest music based on the users listening history (Keller, 2018). Users can download their playlist onto their smartphones and use the *Google Play Music* application to listen to music offline. The only requirement for users is to verify their subscription once a month by going online (Keller, 2018).

Google Play Music is planning to merge with *YouTube Red* service in 2019 to enable users to stream both videos and songs (The Verge, 2017). These two services combined have 7 million subscribers worldwide (Vanian, 2017). *Google Play Music* was launched in South Africa in December 2015. The current monetary cost to subscribe to this service is R59.99 per month (Vermeulen, 2018E).

2.3.3.1.4 Deezer

Deezer is a re-launch of a service that was originally called *Blogmusik* in 2006 (Wordpress, 2014). *Blogmusik* streaming services closed down in April 2007, as the company was charged with copyright infringement by Society of Authors, Composers, and Editors of Music (SACEM). After an agreement was reached to pay license fees to the copyright owners, *Deezer* was launched in August 2007 (TechCrunch, 2007; Rozat, 2011). *Deezer* has 14 million active users across 180 countries (Smith, 2018).

Deezer provides both subscription-based as well as ad-supported options to customers (IFPI Digital Music Report, 2011). The subscription-based service gives the user full access to all the features, such as the offline listening option where the user can use the application without using data or the internet (Deezer, 2018). Other features include 'Flow' which takes all of the user's streamed music history and provides the user with a nonstop music feed. This service

recommends other new artists, songs, or radio stations to the user based upon their listening habits (Wordpress, 2014).

This streaming service catalogue contains 43 million songs and is available in 180 countries, worldwide (Macro, 2018). *Deezer* launched in South Africa in 2013 and the current monthly cost to use this subscription is R59.99 (Channel24, 2016; Vermeulen, 2018E).

2.3.3.1.5 Amazon Music Unlimited

Amazon Music Unlimited was found in 2016 and is available in 28 countries, excluding South Africa (Russell, 2017). *Amazon Music Unlimited* has a music catalogue of 40 million songs (Brackett, 2017), and subscriptions increased with 100 percent in the first six months of 2018 (Deahl, 2018).

Amazon Music Unlimited features include a personalized radio station based on the user's music preferences (Field, 2018) recommendations of artists, songs, or albums to users based on their listening history (Field, 2018); users are able to generate their own playlist and share it with their friends, or download it onto a device and play the content while offline (Langride & Grabham, 2018). *Amazon Music Unlimited* is compatible with the use of *Amazon Echo* and the *Alexa* digital assistant (Griffith, 2018).

Amazon Music Unlimited offers a 30-day free trial after which a monthly fee of \$9.99 is required (Casey, 2018). However, the *Amazon Unlimited Music* service is currently geo-blocked outside USA, although they plan to launch this service in the UK, Germany and Australia in 2018 (VPN, 2018).

2.3.3.2 Video on-demand streaming services

2.3.3.2.1 Netflix

Netflix started in 1997 as a video business, called *Kibble* situated in Los Gatos, California, USA (Rossen, 2015). Later, the name changed to *NetFlix.com*, and subsequently to *Netflix* (Rodrigues, 2017). The company started a DVD subscription rent-by-mail service, where users had access to unlimited DVDs which were sent to their homes (BBC, 2018). There was a big demand for DVD rentals as shown by the increase in subscribers from 700,000 in 2002 to 3.6 million in 2005 (BBC, 2018). *Netflix* introduced the streaming feature in 2007 and became available in Canada, Latin America, and the Caribbean in 2010 (BBC, 2018). Currently, *Netflix* subscription services are available in 190 countries worldwide, with 137 million streaming subscribers (Statista, 2018E). *Netflix* does not give a breakdown of figures for subscribers outside of the US (BusinessTech, 2018).

Netflix subscribers have access to an unlimited number of films, documentaries and television programmes from their catalogue (Digital Unite, 2018). *Netflix* allows their users to download content on their application to watch while they are offline (Bogdana, 2018; Netflix, 2018). This subscription service is also advertisement-free, thus, users will not be interrupted while watching their content of choice (Bogdana, 2018).

Nexflix launched into the South African market in January 2016 (Reuters, 2016). According to Statista (2018A), *Netflix* will see an increase in subscribers to more than 337 000 in 2020, in South Africa.

From August 2018, the *Netflix* subscription fee is billed in South African Rand (MyBroadband, 2018). The users were billed previously according to a dollar-based subscription fee, which was inconvenient as the monthly fee fluctuated along with the exchange rate (MyBroadband, 2018; Ferreira, 2018). The monthly subscription cost of the premium package is currently R169/month, which allows users to use *Netflix* on four devices. The standard subscription option allows this service to be used on two devices and the fee is R139/month. Lastly, the basic plan will cost R99/month and can be used on one device, only (Ferreira, 2018).

2.3.3.2.2 ShowMax

ShowMax is an online subscription video-on-demand service owned by Naspers (BusinessTech, 2018). This service launched in August 2015, is available in 60 different countries (Mybroadband, 2017), and has 12.2 million subscribers (McLeod, 2017).

ShowMax provides their subscribers with many hours of local and international movies and series (ShowMax, 2018). *ShowMax* offers content that is produced within South Africa, which gives them a relative advantage above *Netflix* in the South African market (Channel24, 2016).

ShowMax was integrated into DStv in 2017, which made *ShowMax's* video streaming services available on *DStv's* digital platforms (Vermeulen, 2018B). When users only subscribe to *ShowMax*, the monthly subscription fee is R99 (ShowMax, 2018). Since the *ShowMax* merger with *DStv*, the customers with the premium option have access to *ShowMax* free of charge; while the customers with the compact or compact plus option will pay R49 per month for access to *ShowMax* (Ferreira, 2018).

DStv lost one hundred thousand *DStv Premium* subscribers in the last financial year (Haden, 2018) due to the fact that customers are dissatisfied with the repetitive programming (Snyman, 2017). Furthermore, *DStv* pre-determines the channels for each of the packages and subscribers do not have the freedom to choose their own channels (Vermeulen, 2018F); that is, subscribers do not have control over what they spend their subscription fees on (Vermeulen, 2018A). By

merging with *ShowMax*, *DStv* gives their customers the gateway to ten thousand hours of content on which they can decide when and what they want to watch (ShowMax, 2018).

2.3.3.2.3 Google Play Movies and TV

Google Play Movies and TV was launched in March 2012 and is available in 100 countries, worldwide (Callaham, 2017). This video on-demand is operated by *Google* (Spangler, 2018). *Google* integrated content libraries from 28 streaming services into their *Google Play Movies and TV* service (Spangler, 2018). This library provides the *Google Play Movies and TV* service users the advantage of watching content that is otherwise exclusively available to a different streaming provider (Perez, 2018).

This service uses their subscribers' preferences to create a personalised viewing list for each user (Perez, 2018). *Google Play Movies and TV* also offers users the option to pre-order movies, as films are available immediately after their release (Sarnataro, 2015). This service allows the users to download the movie or TV series to their smart phone or Android tablet to watch while offline (Google.com, 2018). Users with *iPhones* or *iPads* will not find the services effective, as they must purchase a movie or TV series on a computer to be able to watch it on their phone or tablet (Sarnataro, 2015). Once the movie has been rented, the user will have 30 days to watch the movie, and only 48 hours to finish watching once they have played the movie (itnewsafrika.com, 2016).

Google Play Movies and TV launched in South Africa in 2016 (Van Zyl, 2016B). The users do not pay any subscription fee to use this service, the users only pay for each movie or TV series they purchase or rent (Finder, 2015). Renting or buying individual content becomes more profitable than signing on for a subscription service (Finder, 2015), as movie rental prices range from R11.99 to R34.99, and movie purchasing costs start at R89.99 up to R149.99 (BroadBand, 2016).

2.3.3.2.4 Digital Entertainment on Demand

Digital Entertainment on Demand, also known as *DEOD*, is a new South African video streaming service that launched in 2017 (Vermeulen, 2017A). This service provider offers their users the option to rent individual movies, subscribe to bouquets of content of their choice, or Internet TV channel programming (Lancaster, 2017). The users choose to rent individual movies and the billing will be on a pay-per-view basis (TechCentral, 2017A). As for the Internet TV channel programming, the users will be able to make their selection amongst news, sport, and entertainment channels (DEOD, 2018; Lancaster, 2017).

The premium package monthly costs will be R189, which includes all news and sports channels as well as a selection of series, music videos, and movies on-demand (TechCentral, 2017B).

DEOD offers packages which offers the user the ability to subscribe to their service either per-week or per-weekend for R5 per day (Vermeulen, 2017A). In addition, prices for the movie rental options are R30 for the newest releases and R18 for the older movies (Vermeulen, 2017A).

2.3.3.2.5 Amazon Prime Video

Amazon Unbox was launched in United States in September 2006. It was a platform where users could download or watch digital copies of movies or television shows (Boas, 2018). In 2008, they rebranded to *Amazon Video on demand* (Boas, 2018). In 2011, *Amazon Prime Instant Video* was launched by giving subscribers access to an additional five thousand movies and television shows (Boas, 2018). In 2016, *Amazon Video* went global and became available in over 200 countries. They currently have over 100 million subscribers worldwide (Vanian, 2018), and has rebranded, once again, to *Amazon Prime Video* in 2018 (Boas, 2018).

Amazon Prime Video is a video-on-demand streaming service which provides users with unlimited streaming of movies and TV shows at no additional costs (Amazon, 2018). *Amazon Prime Video's* library contains 2,017 TV titles and 18,163 movies (Nield, 2016). *Amazon* produces award-winning original content such as 'The Grand Tour' and 'The Man In The High Castle' (Channel24, 2017A).

Amazon Prime video was the first streaming service that introduced video downloads for offline viewing (Saltzman, 2018). *Amazon* makes it possible for their members to add their other on-demand subscription services to their application, so that the user conveniently has one access point (Saltzman, 2018). Customers can also control the amount of data they use when downloading or streaming content by selecting visual quality settings (Channel24, 2017A).

Amazon Prime Video launched in South Africa in December 2016 (Van Zyl, 2016A). The monthly fee starts off at R40 for the first six months; if users renew their membership, the price increase to R82 per month (Justwatch, 2016; Amazon, 2018).

2.3.4 Marketing potential for streaming services

The way people consume content is not the only thing that is changing. Advertising is changing as innovative digital options, such as programmatic and addressable adverts, allow marketers to reach their target markets in new and creative ways (Nielsen, 2016B). There are different models used when it comes to on-demand streaming services. One option is an ad-supported model, the alternative is a subscription-based model (Sharma, 2018).

2.3.4.1 Ad-supported on-demand streaming services

With ad-supported on-demand services, also known as a Freemium business model (Carroni & Paolini, 2017), the content is made available to the user at no monetary cost; however, the streaming company will add advertisements which will play during the movie or in-between songs (Hatschek & Bassett, 2016). This enables streaming service providers to provide an advertising platform for marketers by placing their advertisements in between the viewers' content (Kokemuller, a.s.)

With this business model, the streaming service provider can attract a large number of users by offering them free content which will make them attractive to advertisement companies who want to reach a large audience (Kokemuller, a.s.).

This could be a valuable marketing tool, as this service reveal a great deal about a target market, in terms of what they are doing, and how they're feeling just by looking at their choices (Mcintyre, 2015). This provide the marketers with the opportunity to understand and reach their target audiences in the right context (Walker, 2018). Although, marketing on this platform should be done with caution, as it causes interruptions which might spoil the viewing experience and, consequently, contribute in viewers' tendency to end the session (Walker, 2018).

Marketers need to rethink their approach when it comes to advertising on streaming media platforms (Patricios, 2017). They could consider options such as targeting adverts based on the relevance or product interest, product placement, sponsorships, or creating original branded content (Patricios, 2017).

2.3.4.2 Subscription-based on-demand services

With subscription-based on-demand services the user will pay a fee on a monthly basis, which will give the user all access to the catalogue without limits, with no advertisements in-between shows or songs (Kokemuller, a.s.). Research shown that subscription based on-demand streaming services grown 9 times faster than ad-supported on-demand streaming services (Peoples, 2017).

Free-trial period could be used to persuade the potential user to subscribe to your product, but it can also generate free word-of-mouth advertising. Generation Y has a tendency to try a new products or services after receiving a recommendation from friends and family (DesMarias, 2018).

2.4 INFLUENCERS OF ON-DEMAND STREAMING SERVICE ADOPTION

This section will investigate the influencers which play a role in the intention to use on-demand streaming services. As such, the technology acceptance model (TAM) and subjective norms (SN) (Wang *et al.*, 2009; Dörr *et al.*, 2013) have been identified as some of the influencers of on-demand streaming services.

2.4.1 Technology acceptance model (TAM)

TAM was proposed in a doctoral thesis at the MIT Sloan School of Management in 1985 by Fred Davis (Davis, 1985; Chuttur, 2009). The primary purpose of Davis' study was to explore the behaviour of an individual to accept the personal computer (Chang, 2008). The study was encouraged as advanced technology become more extensive around the world, but only some technological systems were adopted by users (Dziak, 2017).

TAM was built on the Theory of Reasoned Action (TRA) that was proposed in 1975 by Fishbein and Ajzen (Priyanka & Kumar, 2013:144). With the TRA theory, the hypothesis was that an individual's intention to perform behaviour is influenced by two determinants, namely, attitude and subjective norms (Cowen, 2009; Helkkula, 2016). The study concluded with the theory that human behaviours were context driven (Cowen, 2009).

TAM was created with the emphasis on information systems and the adoption and acceptance thereof (Davis *et al.*, 1989:985; Dziak, 2017). In an attempt to address why individuals, accept or reject information technology (Park, 2009:151), TAM is defined as a paradigm of how individuals come to accept or use new information systems (Adesina *et al.*, 2010).

With TAM the focus is not only on the user's behavioural intentions, with the emphasise on their attitude, but also on their perception regarding the usefulness of the system (Szajna, 1996:85; Cowen, 2009). TAM consists of six constructs: external variables, perceived ease of use (PEOU), perceived usefulness (PU), attitude towards using, behavioural intention to use, and actual system use (Davis *et al.*, 1989 Koh *et al.*, 2010). Perceived ease of use, perceived usefulness, attitude towards using, and behavioural intention to use are the fundamental functions, whereas external variables and actual system use serve only as input to and output from the mode as illustrated in Figure 2.4 (Erasmus *et al.*, 2014).

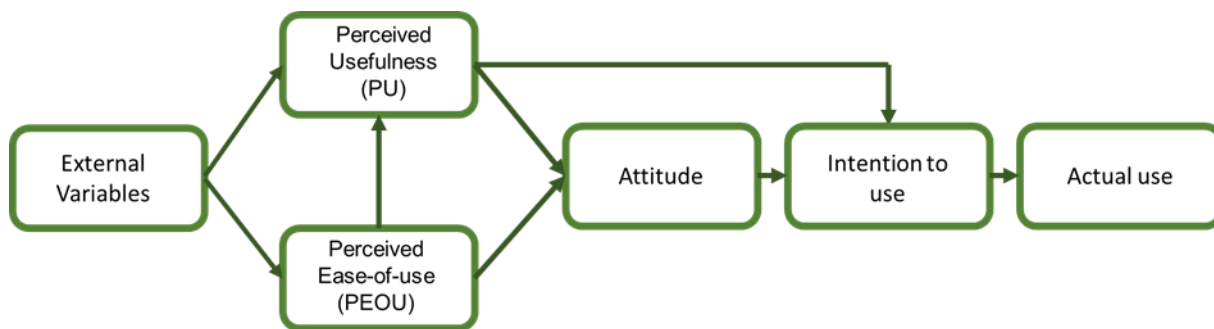


Figure 2-4: Technology Acceptance Model (Davis et al., 1989:985)

In TAM, perceived ease of use and perceived usefulness determine an individual's acceptance of a specific information system by determining their attitude towards using, followed by their behavioural intention to use, and culminates in using the system (Wu & Wang, 2005; Surendran, 2012).

2.4.1.1 Perceived ease of use (PEOU)

Davis *et al.* (1989:320) defined perceived ease of use (PEOU) as the extent to which an individual considers that using a specific system will not be complicated. Therefore, PEOU is a reflection of simplicity in using a specific system; if the system's functions and benefits are straightforward, it is more likely to be adopted (Martin & Quan-Haase, 2013:1022). Factors that can influence the ease of use of modern resources could be the characteristics of the system, as well as the technical equipment and the support thereof (Nanthida, 2011:13). The following factors play an important role when users assess a system's perceived ease of use: computer self-efficacy, perceived enjoyment, the user's objective therewith, the usability, and the intention to use the system (Nanthida, 2011: 13; Durodolu, 2016).

The literature regarding information systems states that the higher the PEOU is of a system, the higher the perceived usefulness will be thereof (Elkhani *et al.*, 2014). Therefore, PEOU contributes to better performance, by having a direct influence on PU (Yo & Hang, 2015). That is, if an innovation is perceived to be easy to use, it would reassure individuals to adopt it as they are likely find it useful and worth the effort learning the system (Nor & Pearson, 2008:42; Dziak, 2017).

Previous research found that PEOU has a direct and positive effect on PU regarding technology adoption (Brezavšček, 2013; Durodolu, 2016) and, similarly, successful acceptance of music and video streaming services (Ho & Yang, 2015; Pal & Triyason, 2017).

2.4.1.1 Perceived usefulness (PU)

The term perceived usefulness (PU) refers to the extent that an individual believes that using a specific technology system will contribute to their job performance (Davis *et al.*, 1989:320). Thus, PU is the extent to which a certain technology system will provide benefits to consumers in performing certain activities (Venkatesh 2012). According to Khayati and Zouaoui (2013), the theory of PU is established under the impression that a system will be adopted by an individual if they deem the result to be satisfactory. Therefore, if a system seems to be useful to a user, the user will overlook any trouble of a complex system as the benefits of the usability outweigh the effort to use the system (De Villiers, 2016).

PU functions as a dependent as well as an independent variable as it is influenced by PEOU and in turn PU simultaneously influence attitude towards using and behavioural intention to use (Davis *et al.*, 1989; Lee *et al.*, 2003; Koh *et al.*, 2010). In streaming service adoption, PU and PEOU are considered to be the strongest predictors of intention to use (Debajyoti & Triason, 2017). According to Delikan's study (2010), PU of a streaming service has influence on users' behavioural intention to use the service.

2.4.2 Subjective norms (SN)

Subjective norms (SN) refer to an individual's perception of whether people in their social network think they should perform the behaviour in question (Rouibah & Abbas, 2010). The behaviour of an individual is influenced by social media, family members, and friends (Lu *et al.*, 2008:55). In other words, actions taken by individuals can be a result of social pressures (Teo *et al.*, 2012:583).

An individual's behavioural intention is influenced by subjective norms which, in turn, affect the individual's decision to use the product or service (Koeder, *et al.*, 2011:7). Previous research studies suggest that social influence plays an important role in an individual's decision-making process. This is most evident when the individual has limited or no knowledge of the product because it is perceived as high risk; this causes one to lose interest in making a decision (Harn *et al.*, 2014). Subjective norms also have an influence on the individual's perception relating to the complexity of performing an activity as well as the quality of the service (Kim & Karpova, 2010:83; Garg & Garg, 2013:48).

In the current world of digital trends, customers tend to heed the opinions of other customers and rely on these while making their own decisions (Kimmel, 2010:94-95). Companies are starting to use influencer marketing on social media channels (Claessaon, 2018), as social media platforms are rapidly growing amongst all age groups (Barker, 2016). According to Statista (2018C), *Facebook* is the most popular social media platform with 2.27 billion monthly active users; and

Instagram (ranked 6th) has one billion active users (Statista, 2018D). Influencers (also known as opinion leaders) are used to endorse specific brand products to a small community of followers on their social media platform (De Veirman *et al.*, 2017:799) Individuals trust the content and recommendations of influencers (Rogers, 2016).

According to previous research studies, subjective norms are a powerful indicator of a user's intention to use a particular service (Park & Smith, 2007:203; Dörr *et al.* 2013, Helkkula, 2016).

2.4.3 Diffusion of Innovation

Theory, one of the oldest and most influential social science theories, was developed by E.M. Rogers in 1962 (Rogers, 1983:22). This theory is used to explain the timeframe of how an innovation is spread by the use of communication from the first introduction, through an increase in usage until gaining popularity amongst a specific population or social group (Schiffman & Kanuk, 2014:373). Although there are many definitions of innovation, it is commonly characterised as something new and different that has an impact on the society (Fagerberg, 2016:107). This theory can also serve as an effective tool to help one predict the likelihood of success or failure of an innovation.

2.4.3.1 Consumer adoption categories

The market can be divided into five segments based on likelihood of adopting an innovation: innovators, early adopters, early majority, late majority and laggards (Burton, 2012:221). Figure 2.5 illustrate the diffusion of an innovation process.

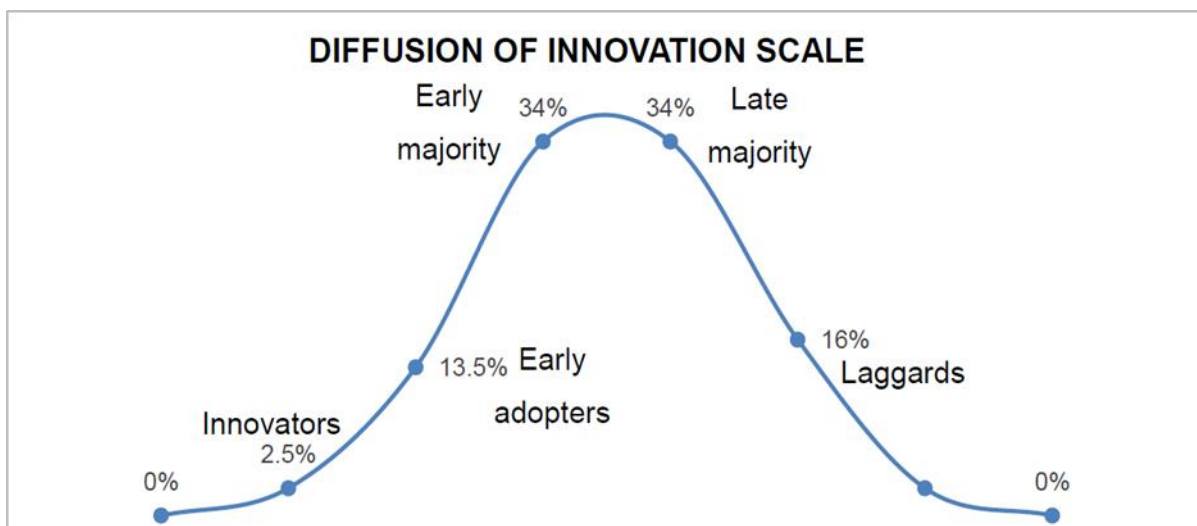


Figure 2-5: Diffusion of innovation scale (Rogers, 2003:11; Burton, 2012:221)

2.4.3.1.1 Innovators

Innovators make up a small portion (2.5%) of the market (Gardner, 2010:164). This group of individuals tends to be the first to invest in new products (Iacobucci, 2013:100). Innovators are natural risk takers and are comfortable with the risk that some of the innovations they try will not deliver the benefits as promised or may fail to be adopted by the mass market (Nawal, 2018). These individuals tend to be educated and confident in doing their own research and evaluation regarding information about the innovation (Iacobucci, 2013:100).

The success or failure of an innovation is determined by the ability of marketers to identify and reach the innovators, as their main role is to be gatekeepers to the early adopters (Schiffman & Kanuk, 2014:372).

2.4.3.1.2 Early adopters

The early adopters segment comprises 13.5% of the market and tends to adopt innovations within the beginning phase of the product life cycle (Gardner, 2010:164). The main motivation for early adopters to try new products is their risk-taking nature coupled with their social status or curiosity (Nawal, 2018). These individuals do not go out of their way to research the innovation; however, they find it easy to appreciate and adapt to new innovations (Soroba, 2017). Notably, their risk-taking abilities are not as high as innovators, but they still have a significant effect on the market (Nawal, 2018) as they tend to be the most influential individuals within the market, being opinion leaders who enjoy leadership roles (Iacobucci, 2013:100).

This group is known to write reviews on websites, post comments about products on social media, and share their experiences with the mass market (Nawal, 2018). They could be the factor in an innovation getting adopted or rejected by the market. If the early adopters reject the innovation, the brand could be damaged. Conversely, if they give a positive review on the innovation, the company's brand value could increase more than if a standard marketing strategy were implemented (Nawal, 2018). The Generation Y cohort is seen as early adopters, as they understand the benefits of integrating technology in the world (Thompson, 2018).

2.4.3.1.3 Early majority

The early majority is the third segment to adopt an innovation. This vast segment comprises 34% of the market (Gardner, 2010:164). These individuals are driven by the sense of practicality which causes them to adopt an innovation only after seeing its successfulness (Iacobucci, 2013:100; Soroba, 2017). Individuals within this segment are risk averse and will not buy an innovation without reference from a trusted source (Mohr *et al.*, 2010:241).

2.4.3.1.4 Late majority

The individuals in the late majority segment tend to be more conservative and traditional (Iacobucci, 2013:100). They will only purchase an innovation once it becomes a well-known standard within the market (Soroba, 2017). This sceptical segment tends to do research on the innovation and prefers to purchase from large and well-established companies (EconomicTimes, 2016; Soroba, 2017). As this segment makes up 34% of the market, it could be beneficial for a company to gain their loyalty as it is an opportunity for growth and to profitability (Soroba, 2017).

2.4.3.1.5 Laggards

Laggards represent a small segment (16%) in the market (Gardner, 2010:164). These individuals are sceptical of new products and only tend to adopt the product once it is in the declining stage of the product life cycle (EconomicTimes, 2016). They do not like taking risks and consider adopting an innovation to be a high risk, as they are fixated on past methods for their daily living (Hayden, 2013; EconomicTimes, 2016). They will only adopt an innovation when it becomes a necessity in daily life (Sobora, 2017).

2.4.3.2 Factors influencing the diffusion process

The diffusion process and the adoption rate of innovations can be affected by five factors, namely, relative advantage, compatibility, complexity, trialability, and observability (Lu *et al.*, 2011:394).

2.4.3.2.1 Relative advantage

Relative advantage refers to the degree to which an innovation is perceived as better than the idea, product, or behaviour that it replaces (Schiffman & Kanuk, 2014:373). Innovations have a relative advantage if they offer better performance when compared to alternative products, such as offering immediate rewards and being more cost and time effective (Shimp, 2010:64). If the innovations offer any of these advantages, it would lead to immediate adoption, as potential users need to see how the innovation will improve their life (Straub, 2009; Yocco, 2015).

On-demand streaming services do have a relative advantage over the traditional mediums (Friedlander, 2017). Streaming services offer individuals a personalised streaming experience, whereas television offers only a one-size-fits-all experience (Friedlander, 2017). Instant gratification is an attribute of streaming services, as individuals have access to unlimited content anywhere and anytime (DesignRush, 2017). Streaming services also have an option for users to download content to use when they do not have access to the internet (Garcia, 2018). Traditional television confines individuals to programming schedules and limited content (Clancy, 2011).

2.4.3.2.2 Compatibility

Compatibility refers to the degree of perceived consistency of an innovation towards the potential adopter's values, beliefs, needs, and past experiences (Shimp, 2010:66). Therefore, if an innovation is not compatible with an individual's life, the individual will be hesitant to perceive the innovation as useful (Taros, 2015). The degree of perceived usefulness of the innovation is influenced by high levels of compatibility of the innovation (Taros, 2015).

The higher the level of compatibility, the quicker the adoption will take place, as it does not require the potential adopters to change their values, lifestyles, or culture (Shimp, 2010:67). If an individual is able to effortlessly transition from the current product they are using towards the innovation, the innovation will be successful (FulleStop, 2015).

Device compatibility plays an important role when choosing a streaming service (Hall, 2018). Music streaming services tend to offer both iOS and Android applications, which means that the service will be compatible with any device (Finder, 2018B). Subscribers can stream series and movies through most devices that have a display and an internet connection; from smartphones, tablets, *Playstations*, *MacBooks*, computers, to smart TVs (Finder, 2018A). Streaming services also adapt their service according to the user's movie and music preferences (De Benito, 2017). Streaming services recommend alternative songs, artists, movies, and TV series that the user might like which is based on their listening or viewing history (Walker, 2018; Schneck, 2018).

2.4.3.2.3 Complexity

Complexity refers to the degree of perceived difficulty to understand and use the innovation (Shimp, 2010:67). As complexity is closely related to PEOU in TAM, once an innovation is perceived as complex or difficult to understand, the innovation is less likely to be adopted by the public and the diffusion thereof will slow down (Moore & Benbasat, 1991; Pennings, 2012). Technological complexity could be a barrier to diffusion as potential adopters could resist using the innovation out of fear of complexity (Singer, 2016). However, steaming service platforms are practical and easy to use (DaCast, 2017). For the individuals that are not as tech-savvy, the fear of complexity is reduced by signing up for a free trial period, which is discussed next.

2.4.3.2.4 Trialability

Trialability refers to the level that the innovation can be tested for a limited period before an individual commit by accepting or rejecting the innovation (Rogers, 2003:25). Experiencing an innovation, although it is only for a limited period, increases the chance that potential adopters will adapt the innovation to better suit their needs (Tully, 2015:65).

On-demand streaming services offer potential adopters a free-trial period (Garcia, 2018). Within this period, individuals can use the service to determine if it meets their content and usability needs before committing by subscribing to the service (Haslam, 2018). Using the service for the trial period will reduce any uncertainties, such as a fear of complexity, that the potential adopters may have (Segal, 2018). Research studies show that 32% of free-trials transition into subscriptions to the service (Ariens, 2017).

2.4.3.2.5 Observability

According to research, observability has a highly significant effect on PU of an innovation (Shiau *et al.*, 2018). Observability refers to the degree to which the results of an innovation are visible, as it is more likely for an individual to adopt an innovation after they have seen the results (He *et al.*, 2006:50). Visibility stimulates peer discussion as information about the innovation is requested by the adopter's friends, colleagues, or neighbours (Roger, 2010:16).

The Generation Y cohort has an inherent distrust of traditional advertising (Fallon, 2014). These individuals seek opinions and validations from their peers and user-generated review sites regarding products and services (Fallon, 2014). Testimonials and online reviews of current subscribers can be used by service providers to attract new subscribers (Yocco, 2015).

Research has shown that 74 percent of Generation Y watch TV shows referred by their peers and 63 percent watch show that have been hyped by the public on social media (Wittmer, 2017). The next section will focus on Generation Y's characteristics and how it influences their behaviour.

2.5 GENERATION Y

Generational research aims to describe how the average individual differs from one generational cohort to another (Twenge & Cambell, 2008:863). Segmentation of markets is being done along generational lines based on the assumption that individuals from a generation share the same experiences while growing up, which influences their behaviour and differentiates them from other generations (Bevan-Dye, 2012; Napoli, 2014). Markert (2004:21) and Codrington (2008) advocate using 20-year increments to separate generational cohorts.

This study will make use of Markert's (2004:21) definition of Generation Y, stating that the cohort consist of individuals born between 1986 and 2005. This generational cohort is also known as Echo Boomers, Millennials, or Net Generation (Cudmore *et al.*, 2011:4; Schiffman *et al.*, 2010:410; Schlitzkus *et al.*, 2010:108).

Generation Y consists of approximately two billion people, which accounts for 27 percent of individuals, worldwide (Peterson *et al.*, a.s; Gobalmillennials.org, 2018) and 25 percent of the

estimate 57,73 million people living in South Africa (GFK, 2018; Stats SA, 2018). The Generation Y cohort is the most highly educated generation, as 27 percent has a bachelor's degree or higher qualification (Preisler, 2018). Tertiary qualification will translate into a higher earning potential as an individual with a bachelor's degree can earn up to 66 percent more during 40 years of labour than a typical high school graduate would earn during that same period (BusinessTech, 2017; Collegeboard, 2018). A higher earning potential will result in a higher social standing that will induce one to be an opinion leader and trend setter amongst their peers (Bevan-Dye, 2012:34; Kieselmann 2014). Generation Y is currently the most dominant generation in the workforce, and they hold approximately 20 percent of all leadership roles (Bennett, 2017; Alton, 2017).

The Generation Y cohort possesses characteristics that distinguish it from other generations, as they were raised not only within a different economic environment but also within a different culture (Levy, 2017; Codrington, 2008). This generation is known to be cause-driven, have more confidence and new behavioural standards, show technological superiority to previous generations, and is usually referred to as the connected generation (Wilder *et al.*, 2007:3).

Marketers find it challenging to capture the attention of the Generation Y cohort (Talay, 2015). However, once they understand the unique characteristics of this cohort, they will have a solid foundation for creating effective marketing and brand communication strategies (Howell, 2012). Generation Y individuals were raised in an over-advertised and brand-conscious environment, causing them to respond differently to marketing messages than the previous generations. Furthermore, their distinctive pattern of characteristics, motivators, and expectations also influences responsiveness to marketing strategies (Benckendorff & Moscardo, 2010:45; Hawkins & Mothersbaugh, 2010:132).

Generation Y individuals tend to respond more to digital marketing than to traditional media channels (Mcintosh, 2015). The application usage in terms of time spent by the Generation Y individuals is led by *Facebook Mobile* and then followed by *Instagram* and *Twitter* (Spencer, 2009; Patel, 2017). Marketers need to keep their strategies relevant and engaging across a variety of applications as Generation Y absorbs and interacts with information differently across various platforms (DesMarias, 2018). Furthermore, companies should focus on selling their purpose to the Generation Y cohort and not their product (DesMarias, 2018). This cohort is not focused on the features and benefits of a product as much as wanting to know how companies contribute to improving the world (Kulkarni, 2018). Approximately 37 percent of Generation Y individuals are willing to purchase a product that supports a cause that they believe in (Patel, 2017). Additionally, this generation values customer opinions rather than company generated content when it comes to marketing (Smith, 2012:86; KPMG, 2015:18). According to previous studies, 95

percent of millennials find their friends as the most credible source of product information (Patel, 2017).

Generation Y is the first to be born into the digitally connected world of the Internet, mobile telephones, virtual social networking, and 24/7 television access (Sox *et al.*, 2014:247; Weidauer, 2012:18; Schwalbe, 2009:53). Digital access and devices are regarded as necessary elements for their everyday life, which has led these individuals to thrive on technology and its innovations (Clarke, 2012; Smith, 2012:86; Weidauer, 2012:18; Thompson, 2018). According to research, nine out of ten individuals of Generation Y own a smartphone which represents 92 percent of the cohort, while 54 percent own a tablet (Jiang, 2018). Computer usage among Generation Y decreased since 2015 with the increase in mobile internet activity (Dixon, 2018).

Generation Y individuals are also known to be multi-taskers as they make use of multiple devices, simultaneously, 24 hours a day, 7 days a week (Kane, 2018). Research shows that these individuals switch their attention approximately 27 times an hour between smartphones, laptops, tablets, and TV (Kane, 2018). This happens because they typically perform three additional activities while watching TV, such as surfing the internet, emailing, texting, social networking, or online shopping (Deloitte, 2015; Friedman, 2017).

This generation is accustomed to getting what they want, when and where they want it (Pollak, 2014). Streaming services offer millennials the power to choose what they want to watch and listen to, at any time (Shilts, 2017). This is the reason that the cord to broadcasting and cable subscriptions is being severed. The motion nowadays is towards streaming services (Mcintosh, 2015), as 78 percent of the Generation Y cohort is subscribed to a video-on-demand service (Nielsen, 2016A). According to a report done by Adweek, Generation Y is responsible for 72 percent of weekly *Spotify* streams (Shilts, 2017).

2.6 SYNOPSIS

This chapter reviewed music and television as part of the entertainment industry by giving a brief description of the history and evolution thereof. On-demand streaming services were discussed as the modern method of entertainment. The history, landscape, and marketing of streaming services were explained. On-demand streaming services in South Africa were discussed according to their features, subscribers, and costs. Influencers of streaming services adoption were also investigated by means of several of the constructs used in the empirical portion of this study. The diffusion of innovation was investigated in accordance to streaming service adoption. Finally, Generation Y was brought into the spotlight by investigating how it is defined and how to reach that market. The next chapter focuses on research design, methodology, and collection and interpretation of data.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter explains the research methodology that was used in order to test the empirical objectives of this study which were formulated to research Generation Y students' attitudes towards on-demand streaming service.

The term marketing research is defined as a function that connects the marketer to the consumer, customer, and public through information (Burns & Bush, 2014:34-35). Relevant information regarding the marketing phenomena is objectively gathered and analysed by applying methodical methods (Zikmund & Babin, 2013:6). This information is then used to identify marketing opportunities and problems within the organisation (Kolb, 2008:7) which will ensure that calculated decisions are made within the marketplace (Feinberg *et al.*, 2013:6).

In correlation with the study's primary objective, the following empirical objectives were formulated:

- Determine Generation Y students' preferences towards on-demand streaming services
- Determine Generation Y students' attitudes towards music and video on-demand streaming services.
- Determine Generation Y students' perceived usefulness of streaming services.
- Determine Generation Y students' perceived ease of use of streaming services.
- Determine Generation Y students' subjective norms regarding on-demand streaming services in order to ascertain whether they influence their interest and intention to use these services.
- Determine Generation Y students' intentions to use on-demand streaming service
- Determine whether subjective norms, perceived usefulness, perceived ease of use and attitude influence Generation Y students' intention to use on-demand streaming services.
- Determine whether male and female Generation Y students differ in their subjective norms, perceived usefulness, perceived ease of use, attitude, and intention to use on-demand streaming services.

The following section discusses the research design of this study.

3.2 RESEARCH DESIGN

Research design is the plan of action that will be followed during the research project, which stipulates the methods and procedures to be used for collecting and analysing the relevant data (Malhotra, 2010:102; Babin & Zikmund, 2016:67). This will allow the researcher an opportunity to plan in advance, which could lead to the project being conducted in a shorter timeframe and in a more cost-effective manner (Burns & Bush, 2014:99). Research designs are categorised into three main groups; namely, causal research; exploratory research; and descriptive research (Hair *et al.*, 2013:36-37; Silver *et al.*, 2013:54).

The researcher will undertake causal research when the aim of the research is to identify a cause-and-effect relationship between variables (Zikmund & Babin, 2013:51). This method will indicate how an independent variable affects a dependent variable (Zikmund & Babin, 2013:51). Researchers use causal research as it yields a high level of information, yet it is not time- or cost-effective (Clow & James, 2014:35).

Exploratory research makes use of primary and secondary data sources to investigate the research problem (Smith & Albaum, 2010:21). The aim of exploratory research is to define terms and concepts, or to obtain background information that will lead the researcher to a better understanding of a phenomenon (Burns & Bush, 2014:101). Exploratory research does not deliver conclusive evidence from which one can create a course of action aimed at decision making (Shukla, 2008:32), as it is an unstructured and informal approach (Burns & Bush, 2014:101).

Descriptive research is commonly used to assist when making marketing decisions as the marketers already have a good understanding of the marketing phenomenon (Clow & James, 2014:28). This research design is used to describe characteristics of relevant groups such as customers, salespeople, organisations, and marketplaces (Malhotra, 2010:106); and it also address the who, what, when, where, why, and how questions (Burns & Bush, 2014:74). Descriptive research could assist the researcher to validate and quantify conclusive results derived from exploratory research findings (Shukla, 2010:35). As such, descriptive research is perceived as a pre-calculated and structured research method (Smith & Albaum, 2010:21-23).

Descriptive research can be categorized into two types, namely longitudinal design and cross-sectional design (Malhotra, 2010:108). Longitudinal design involves monitoring change over a period on a fixed population sample (Berndt & Petzer, 2011:133). Whereas, a cross-sectional study is only conducted once (Lacobucci & Churchill, 2010:93) and can be grouped into single and multiple cross-sectional designs (Malhotra, 2010:103). A single cross-sectional design refers to a researcher collecting data from a single sample of respondents only once; while a multiple

cross-sectional design involves collecting data once but from more than one sample (Shukla, 2010:38).

This study employed a descriptive research design using the single cross-sectional approach. The next section describes the research approach used in the study.

3.3 RESEARCH APPROACH

Research approach refers to a plan and procedure for research projects (Creswell, 2014:3). This plan incorporates the stages from the assumptions made to detailed methods of information collection, analysis, and interpretation (Creswell, 2013:3). There are three broad research approaches, namely, qualitative methods; quantitative methods; and mixed methods (Kumar, 2014).

Qualitative research refers to the collecting, analysing, and interpreting of information that cannot be counted or summarised in the form of numbers (Parasuraman *et al.*, 2007:178); rather, it focuses on discovering true inner meanings and new insights from the data (Zikmund & Babin, 2010:92). This approach focuses on collecting information from relatively small groups of respondents (Shukla, 2008:32). Qualitative research is mostly used during exploratory research (Clow and James, 2014:41).

Quantitative research addresses research objectives through empirical assessments that involve statistical measurement and analysis (Zikmund & Babin, 2010:92), and is mostly used in descriptive and causal research designs (Shukla, 2008:32). This approach collects information from large groups of respondents by means of questionnaires that consist of predetermined questions and response options (Hair *et al.*, 2013:77).

As for the mixed approach, it is located on the continuum as it includes elements of both the qualitative and quantitative approaches (Creswell, 2013:3). The mixed approach will provide a better understanding of the research problem than either qualitative or quantitative approach alone, as the approach provide multiple perspectives on the research issue. (Creswell & Plano, 2011; Waterman, 2012:159).

Quantitative research was used for this study, whereby questionnaires were distributed to a large group of respondents. It involved statistical measurement and analysis of information received. In addition, the questionnaire comprised scales validated in previous studies. The following section explains the sampling strategy used in this study.

3.4 SAMPLING STRATEGY

Sampling strategy comprises any method used to draw conclusions about a population, based on the results of measurements done on a sample of that population (Zikmund & Babin, 2013:312). This section will discuss the target population, sampling frame, sampling method and sample size.

3.4.1 Target population

The target population is a set of elements that hold a common set of characteristics or information with respect to a marketing research problem (Burns & Bush, 2014:75). Churchill *et al.* (2010:327) define the target population as the fragment of the entire population to which the study is focused. The reason behind sampling is to enable researchers to draw conclusions about the entire population by selecting only certain elements of that population (Cooper & Schindler, 2003:179). In order for the researchers to generalise their findings, they should use a representative sample of the population (Hair *et al.*, 2008:33).

With regard to this study, the target population is Generation Y students between the ages of 18 and 24 years, enrolled at a registered public South African HEI during the year 2018.

3.4.2 Sampling frame

The sampling frame is a representation of all the elements in the population from which the sample selection is made (Lacobucci & Churchill, 2010:31). Examples of a sample frame may include a list or set of directions such as the payroll of an organisation, class roster, telephone directory, or a map (Sekaran & Bougie, 2016:240).

Two HEIs were selected for this study – one traditional university and one university of technology - from the list of the 26 registered South African HEIs (Universities South Africa, 2018). Both universities are situated in Gauteng, as this province contains the largest share of South African population and is the main economic hub (Statistics South Africa, 2017).

3.4.3 Sample method

The sample method is described as the process a researcher uses to select or recruit sample units (Bradley, 2013:155). There are two types of sampling methods, namely, probability and non-probability sampling (Zikmund & Babin, 2010:311).

3.4.3.1 Probability sampling

Probability sampling is when each element in the population has a known and independent chance of being selected to take part in the study (Kumar, 2014:234). Within this sampling method the elements are selected objectively by a specific process, which allows an objective assessment of the findings reliability and validity (Churchill, 1995:584; Shukla, 2008:58). Probability samples comprise simple random sampling, systematic sampling, stratified sampling, and cluster sampling (Wiid & Diggines, 2013:189).

Simple random sampling refers to a procedure that guarantees each element in the population of having an equal chance of being selected for the sample (Zakmund & Babin, 2013:325). Systematic sampling is a procedure where the researcher uses a complete list of the entire population to systematically draw sample elements (Brendt & Petzer, 2011:175). The starting point is selected randomly (Hair *et al.*, 2008:132), followed by the selection of sample elements at regular intervals (Wiid & Diggines, 2013:195). With stratified sampling, the target population is segmented into smaller homogenous subgroups and a simple random sample is then selected from each subgroup (Hair *et al.*, 2008:133). Cluster sampling is used when a list of individual names is impossible to compile (Babbie, 2013:153); the researcher then makes use of geographical clusters by dividing the population into groups using pre-existing boundaries, like countries or cities (Jensen & Laurie, 2016:95).

3.4.3.2 Non-probability sampling

In contrast, non-probability sampling is when the probability of any specific element of the population being chosen is unknown and cannot be estimated (Tustin *et al.*, 2005:344; Zikmund & Babin, 2010:322). Non-probability sampling is used under two conditions: either when the number of elements in a population is indefinite, or when the elements cannot be individually identified (Kumar, 2014:242). Non-probability samples are based on personal judgement; therefore, the selected sample cannot be seen as an objective representation of the entire population (Iacobucci & Churchill, 2010:285). Non-probability sampling techniques include convenience sampling, judgement sampling, quota sampling, and snowball sampling (Wiid & Diggines, 2013:189).

Convenience sampling refers to a technique where the elements of a population which are the easiest for the researcher to reach get selected (Clow & James, 2014:231). This method is cost effective and requires minimal effort (Jensen & Laurie, 2016:97). In judgement sampling, the sample is selected based on the purpose of the study (Babbie, 2013:128), as well as on the personal judgement of the researcher regarding appropriate characteristics that are

representative of the population of interest (Malhotra, 2010:379; Zikmund & Babin, 2013:323). With quota sampling, the researcher divides the target population into subgroups, such as demographics or specific behaviours, and then selects quotas for each subgroup (Hair *et al.*, 2008: 136). This ensures that all the pre-specified subgroups of the target population are represented (Hair *et al.*, 2013:146). Snowball sampling is where the selected group of respondents help the researcher to identify additional respondents that have the same characteristics as the population of interest (Lacobucci & Churchill, 2010:287; Burns & Bush, 2014:256).

This study made use of a non-probability convenience sample of full-time Generation Y students from two HEIs based in the Gauteng province, aged between 18 and 24 years.

3.4.4 Sample size

The sample size refers to the number of elements that must be involved in the study to ensure appropriate representation of the defined target population (Hair *et al.*, 2008:352; Malhotra, 2015:274). The sample size selection process is influenced by various factors such as limited budgets, time limitations, similar-study sample sizes, and the accessibility to population elements (Zikmund & Babin, 2010:301-303).

A sample size of 500 full-time students was selected to take part in this study. The sample size of this study is larger than other studies of a similar nature. Helkkula (2016:23) used a sample size of 136, Pal and Triyason (2017:6) used a sample size of 349, and Ho and Yang (2015:8) used a sample size of 347. Considering the proposed statistical analysis techniques, this sample size was deemed sufficient to meet the 200 to 400 cases rule for structural equation modelling (SEM) (Malhotra, 2010:731). SEM is known to be a large-sample technique; it requires large sample sizes to analyse data sufficiently (Kline, 2011:11; Babin & Svensson, 2012:329). In addition, as there were 25 scaled-response items in the questionnaire, it was also deemed sufficient to meet the 5 to 10 responses per scale item rule for factor analysis (Pallant, 2010:183).

The sample size of 500 full-time students will be split between the two selected HEIs, thereby allowing a sample size of 250 students per HEI. The following section will describe the data collection methods used.

3.5 DATA COLLECTION METHOD

Data collection is a process of collecting information from all the respondents, to find answers that are considered as relevant to the research problem and the hypothesis. (Berndt & Petzer,

2011:202; Grove *et al.*, 2014:47). The two frequently used data collection methods in quantitative studies are the observation and survey methods (Malhotra, 2015:149).

The observation method is the process where the researcher, physically or mechanically and without any communication between the researcher and the participant, observes or records the participant's behaviour (Silver *et al.*, 2013:137; Clow & James, 2014:35). Surveys are the most extensively used method by researchers to collect primary marketing information (Wiid & Diggines, 2013:110). The survey method is described as a technique used for collecting data from respondents by means of asking a series of questions about the topic under study (Clow & James, 2014:35). The questionnaires can be categorised into four groups: self-administered questionnaires, interviewer-administered questionnaires, computer-assisted self-administered questionnaires, and hybrid questionnaires (Berndt & Petzer, 2011:135).

Self-administered questionnaires are distributed to a large number of respondents who then read and answer the questions themselves; this allows for anonymity (Zikmund & Babin, 2010:166; Mitchell & Jolley, 2012:286). As for the interviewer-administered questionnaires, the interviewer records each respondent's answers (Shukla, 2008:48). Computer-assisted self-administered questionnaires are where the respondent answers a questionnaire on a computer by means of a keyboard or mouse (Malhotra, 2010:216). The hybrid method combines elements from both interviewer- and self-administered questionnaire methods, and incorporates technology in order to collect the data (Berndt & Petzer, 2011:146).

For this study, self-administered questionnaires were used to gather the needed information via the mall-intercept method and by means of fieldworkers.

3.5.1 Questionnaire format

A questionnaire is the resource that researchers use to gather data from respondents by presenting a set of specific questions designed in accordance with the study's research objectives (Brace, 2008:4; Sciglimpaglia, 2010:106; Babbie, 2011:255). If a questionnaire design is poor, it will result in insufficient data collection (Matthews & Ross, 2010:206).

In a questionnaire, there are two types of questions which can be used; namely, unstructured and structured (Pallant, 2013:7). Unstructured questions (open-ended) are used to explore qualitative and in-depth aspects with regards to a certain topic or issue (Nicholas, 2009:27). By using unstructured questions, the respondents must formulate the answer in their own words (Shukla, 2008:88). By contrast, structured questions are used when the researcher requires specific information to solve the research question (Berndt & Petzer, 2011:187). Therefore, with structured questions, a set of response alternatives are provided to respondents from which they select the

response closest to their own viewpoint (Zikmund & Babin, 2013:282). Iacobucci and Churchill (2010:214) state that structured questions often make use of scaled questions, which are statements on a continuum, such as a Likert scale.

3.5.2 Questionnaire content and layout

A self-administered questionnaire should be accompanied by a cover letter which will give the respondent clear instructions on how to complete the questionnaire (Iacobucci & Churchill, 2010:221; Zikmund & Babin, 2013:174). The cover letter could also be a motivator that will influence the respondent to partake in the study (Salkind, 2012:149). For this study, a cover page was used to introduce the researcher, explain the study, and convey that participation was voluntary. The cover page also supplied the relevant contact information, as well as the institute that the researcher originated from.

The questionnaire should be structured in a logical format and the questions should be presented in a manner that is direct, concise, unambiguous, and easy to understand (Berndt & Petzer, 2011:186; Bryman & Bell, 2011:240). For the purpose of this study, the questionnaire consists of three sections. Section A was designed to gather demographic data. Section B determined the respondents' hobbies, preferred on-demand streaming service, and internet usage. Section C focused on the respondents' attitudes (Shin, 2008), intention to use on-demand streaming services (Nysveen, 2005; Shin, 2008), perceived usefulness (Nysveen, 2005; Wang, 2014) and perceived ease towards the services (Cha, 2013; Wang, 2014), as well as subjective norms (Jin, 2014; Yoon, 2015) that may influence the use of these services.

The responses for Sections B and C were measured using a six-point Likert scale, where the respondents had to indicate their degree of agreement or disagreement according to a series of scale items (Bradley, 2010:511; Wilson & MacLean, 2011:262). The Likert scale is the most commonly used scale for measuring attitudes or perceptions (Schiffman *et al.*, 2010:61; Maree *et al.*, 2011:167). This scale offers several advantages, such as being easy to compile, complete, administer, and interpret (Malhotra, 2010:309; Schiffman *et al.*, 2010:61).

For this study, structured questions were used in the form of a six-point Likert scale. All the questions used within this study were modified from existing verified scales which had been used in previous studies. The questionnaire was kept as short as possible and simple terminology was used to ensure a clear understanding of the questions.

3.5.3 Pre-testing and pilot testing of the questionnaire

A pre-test is a small-scale research project which the researcher can use to see how the questionnaire performs under actual conditions of data collection (Zikmund & Babin, 2006:62; Kumar, 2014:191).

The purpose of pre-testing a questionnaire is to identify problems that the respondents might encounter with understanding or interpreting questions, and it provides an opportunity to identify any ambiguous or biased questions (Zikmund & Babin, 2013:302; Kumar, 2014:191). For a pre-test, a small representative group of respondents fill out the questionnaire and provide feedback regarding to words, phrases, instructions, and the question sequence used in the questionnaire (Hair *et al.*, 2008:180). Pre-tests should be conducted by personal interviews, as the interviewers can observe the respondents' reactions and attitudes while completing the questionnaire (Iacobucci & Churchill, 2010:224). Two commonly used procedures used in pre-testing are protocol analysis and debriefing (Malthora, 2010:354).

Once the pre-testing is completed the researcher conducts a pilot test. Pilot testing refers to a small-scale test where the researcher collects data from respondents in the same manner proposed for the full research project, but only as a dry run (Babin & Zikmund, 2016:64). The pilot testing procedure is used to determine whether the questionnaire will collect the necessary data as expected (Bradley, 2013:216).

For the pre-test, the questionnaire was examined by two experts in the research field. The feedback received from the pre-test was used to rephrase and refine some questions, and some questions were discarded because they served no purpose. After all the changes had been made, the questionnaire was pilot tested on a sample of 55 students. The students who took part in the pilot test were excluded from the main study. The main purposes of the pilot test were to determine the viability of all the constructs, if the language was easy to understand, and whether the time allocated to complete the questionnaire was sufficient.

3.6 ADMINISTRATION OF THE QUESTIONNAIRE

The questionnaire for this study was conducted in July 2018, using a sample of 500 students.

Two HEIs in Gauteng were approached to gain permission to hand out questionnaires to willing respondents after lectures, to ensure no academic learning was interrupted. A self-administered questionnaire, which included a cover letter explaining the nature and purpose of the study, was utilised to gather data from the respondents. All students were informed that their participation was strictly voluntary.

The next section will explain the data preparation process that was followed.

3.7 DATA PREPARATION

According to McDaniel and Gates (2013:326), data have to be converted into a format suitable for interpretation and analysis. Data preparation includes editing, coding, and tabulation (Iacobucci & Churchill, 2010:350).

3.7.1 Editing

Editing is the first step within the data preparation process (Kumar, 2011:255). It refers to a quality control check that is performed while the data is still raw (Parasuraman *et al.*, 2007:372). The questionnaires are scanned to ensure that they are complete and consistent, and that the respondents followed all the instructions (Zikmund & Babin, 2013:64). This process simplifies the data capturing process, as it ensures that the questionnaires are complete and free from inconsistencies (Kumar, 2011:255).

For the purpose of this study, all questionnaires underwent the editing process to ensure that they were viable. Questionnaires that exceeded the ten percent error margin were discarded from the study. However, the questionnaires which had less than 10 percent missing responses were not discarded; the missing responses were substituted by using the mode values of the particular items concerned.

3.7.2 Coding

Coding is a procedure where raw material is transformed into symbols (Churchill, 2010:351). Coding entails creating and assigning meaningful categories and character symbols to each individual response for each question within the questionnaire, in order for the results to be analysed. (Zikmund & Babin, 2010:59).

The data regarding this study were coded according to the different constructs as presented in Table 3.1.

Table 3-1: Coding information

Type of Data	Variable	Question Number
Demographic data	A1-A9	Section A, Question A1-A9
Hobbies	B1-B6	Section B, Question B1-B6
Preference towards on-demand streaming service	B7-B19	Section B, Question B7-B19
Internet usage	B20-B24	Section B, Question B20-B24
Attitude towards on-demand streaming service	C1-C4	Section C, Question C1-C4
Subjective Norms	C5-C8	Section C, Question C5-C8
Perceived Ease of Use	C9-C14	Section C, Question C9-C14
Intention to use	C15-C19	Section C, Question C15-C19
Perceived usefulness	C20-C25	Section C, Question C20-C25

3.7.3 Tabulation

Tabulation is the final step within the data preparation process (Lacobucci & Churchill, 2010:32). It refers to the calculated number of responses allocated for each question that are being presented orderly in a table or other summary format (Zikmund & Babin, 2013:365). There are three tabulation methods that can be used; namely, bivariate tabulation, univariate tabulation, and multivariate tabulation (Struwig & Stead, 2011:152).

For the purpose of this study univariate tabulation was used. That is, the number of responses under each variable is tallied and can be demonstrated in a type of frequency table (Sarstedt & Mooi, 2014:99-100). The next section will outline the statistical methods that were applied in this study.

3.8 STATISTICAL ANALYSIS

The captured data were analysed using the Statistical Package for Social Sciences (SPSS) and Analysis of Moment Structures (AMOS), Version 25.0 for Microsoft Windows.

3.8.1 Descriptive statistics

Descriptive statistics refers to mathematical methods that are used to summarise and transform data with the goal of orderly presentation for easier interpretation (Burns, 2000:43; Holcomb, 2016:14; Jensen & Laurie, 2016:335). The transformed data are usually illustrated through bar charts, histograms, box plots, pie charts and frequency tables (Sarstedt & Mooi, 2014:100;

Pietersen & Maree, 2016:204). The three descriptive statistics techniques used in this study are measures of location, measures of variability, and measures of shape (Malhotra, 2010:486).

3.8.1.1 Measures of location

The term measure of location is also known as measure of central tendency, and is defined as the statistic that describes the centre of the distribution of data (Malhotra, 2010:486). The goal of measures of central tendency is to report the most typical or frequent response to a question (Burns & Bush, 2014:319). There are three measures used to locate centre of distribution; namely the mean, median, and mode (Hair *et al.*, 2008:246). The mean is the most commonly used measure; it is calculated by adding all the values of the responses and dividing the result by the total number of responses (Jensen & Laurie, 2016:310). The mode is the value that occurs most often within the data set (Zikmund & Babin, 2013:340); and the median is described as the value in the middle of a data set, when the data set is ordered from smallest to the largest value (Jensen & Laurie, 2016:310).

This study made use of the mean and mode as measures of location.

3.8.1.2 Measures of variability

Measures of variability, also known as measures of dispersion, refer to sample statistics that enable a researcher to report the variability of collected data. It describes how the values are spread around the central value in a given data set (Hair *et al.*, 2008:154). This includes measures like range, variance, and standard deviation (McDaniel & Gates, 2010:407).

The simplest measure of variability is range (Zikmund & Babin, 2013:341); it represents the distance between the highest value and the lowest value in a data set (Burns & Bush, 2014:321). Variance refers to the average squared distance that values deviate from their mean (Privitera, 2012:678). Standard deviation is the most important measure of variability (Burns, 2000:49). It refers to a standardised measure of the variability in the sample that indicates the degree of diversity in the values (Burns & Bush, 2014:321; Jensen & Laurie, 2016:335). The smaller the standard deviation, the more closely the values are grouped around the mean; if the standard deviation is high; the values are widely spread out (Babbie, 2013:425).

This study made use of standard deviation as a measure of variability.

3.8.1.3 Measures of shape

The measures of shape define the nature and normality of the distribution of the data set (Malhotra, 2010:488). Two numerical measures utilised to describe the shape or normality of a

distribution are the degree of skewness and the degree of kurtosis (Pietersen & Maree, 2016:210). The distribution of the data values is represented by means of a graph; a normal distribution will be indicated by an upside bell that is relatively symmetric in shape (Malhotra, 2010:488-489). In order for data to be classified as normally distributed, the skewness and kurtosis values need to be zero (Pallant, 2013:59). Chan (2003:282) states that normality lies between -1 and 1, for both skewness and kurtosis. However, it is still acceptable for skewness and kurtosis values to be between -2 and 2 (Van der Pool, 2008:70).

Skewness is an indication of the symmetry of the data distribution which may have a positive, negative, or symmetrical presentation (Malhotra, 2010:488; Wiid & Diggines, 2013:249). When the skewness value is less than zero, which indicates a negative distribution, the data are skewed to the right side. A skewness value greater than one indicates a positive distribution and the data are skewed to the left (Shukla, 2008:101).

Kurtosis measures the degree of how flat or peaked a data distribution is according to the frequency distribution (Malhotra, 2010:488). Positive kurtosis values result in the data distribution to be peaked, while negative kurtosis values are an indication of a flat data distribution (Pallant, 2013:59).

This study made use of both skewness and kurtosis as measures of shape. The next section focuses on the reliability of the study.

3.9 FACTORY ANALYSIS

Factors or constructs are determined by examining the relationships between the numerous sets of interrelated variables (Malhotra, 2010:636). There are two types of factor analysis, namely confirmatory factor analysis (CFA) and exploratory factor analysis (EFA) (Pallant, 2010:181).

Confirmatory factor analysis (CFA) is used on a set of variables to test specific hypotheses or theories of the study (Pallant, 2013:188). Byrne (2010:5-6) states that CFA tests the hypothesis that a relationship exists between the observed variables and underlying factors based on theoretical knowledge or on empirical research, or both.

In contrast, exploratory factor analysis (EFA) is defined as an analysis that is used to determine the interrelationships among dependent or independent variables in the primary stages of the study (Struwig & Stead, 2010:142; Pallant, 2013:188). Malhotra (2010:739) defines EFA as the procedure that is used to identify the underlying dimensions or factors which explain the correlations between a set of variables.

There are three main steps involved when conducting an EFA; namely, assessment of the suitability of the data for factor analysis, extraction of factors, and factor rotation and interpretation (Pallant, 2013:189).

3.9.1 Step 1: Assessment of the suitability of the data for factor analysis

Before running a factor analysis, it is essential to check the sampling adequacy. Here, the ratio of respondents to items is taken into consideration (Pallant, 2013:190). As a rule of thumb, a five to one ratio is recommended, which suggests that there should be five observations for each item which will be factor analysed (Hair *et al.*, 2010:102). The inter-correlations among the items should be determined by examining the correlation matrix (Pallant, 2013:190). Malhotra (2010:640) asserts that the correlations should be greater than 0.3 for factor analysis to be suitable. Furthermore, the two measures utilised to evaluate the factorability of the data set are the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, and the Bartlett's test of sphericity (Yong & Pearce, 2013:85). A minimum value of 0.6 is recommended for the KMO test, and Bartlett's test of sphericity value should be significant ($p < 0.05$) for the sample to be considered adequate (Pallant, 2013:190).

3.9.2 Step 2: Extraction of factors

The next step is to determine the minimum number of factors that can be extracted to fully present the interrelationships among the set of variables (Pallant, 2013:190). This can be done by studying the correlation or covariation between variables and extracting the dormant variables (Osborne & Banjanovic, 2016:5). In factor analysis, there are two basic extraction approaches; namely, common factor analysis and principle component analysis (Malhotra, 2010:643).

Common factor analysis, also known as principal axis factoring, extracts as many latent variables as possible in order to explain common variance amongst these items (Reise *et al.*, 2000:294; Malhotra, 2010:643). The primary objective of principle component analysis is to alter a set of interrelated variables into a set of uncorrelated linear groupings (Iacobucci & Churchill, 2010:496). This method extracts the maximum number of measures that can be combined and condensed down to a single measure (Iacobucci & Churchill, 2010:496).

The following procedures are used to assist the decision-making process concerning the number of factors that should be retained: the eigenvalue technique, the scree plot technique, and the priori criterion technique (Malhotra, 2010:643).

The eigenvalue rule refers to a process where all factors with an eigenvalue of one or greater than one is retained, and the factors with an eigenvalue smaller than one are discarded (Malhotra,

2010:643). The scree plot method involves plotting the number of factors on the x-axis and the corresponding eigenvalues on the y-axis to determine the point where the curve changes direction and becomes horizontal (Wiid & Diggins, 2013:242). The factors above the point where the curve becomes horizontal should be retained, as these factors contribute to the reason for variance in the data set (Palant, 2013:191). The priori criterion technique is based on the researcher's existing knowledge and the literature of the question under study. This enables the researcher to gauge how many factors to extract in advance (Malhotra, 2010:643). When the configuration of interrelationships among the constructs under study is specified on an underlying theory, SEM is considered as a valuable procedure to use for hypothesis testing (Hoe, 2008:76).

3.9.3 Step 3: Factor rotation and interpretation

The following step is to decide on a method of rotation (Osborne & Banjanovic, 2016:6). Rotation presents the direction of the factors in a way which make the factors more interpretable (Pallant, 2013:192). There are two main approaches to rotation methods: oblique and orthogonal (SAS Institute, 2013:73-74). In the oblique approach, the factors are able to correlate as the independence of the factors is excluded; this makes the interpreting and reporting thereof difficult (Maroof, 2012:31). However, with orthogonal rotation, the researcher is required to assume that the underlying constructs do not correlate; this makes the interpretation and reporting easier (Pallant, 2013:192). The most commonly used orthogonal method is the varimax rotation method (Malhotra, 2010:645). The varimax rotation aims to minimise the number of variables that have high loadings on each factor by reorienting the original loadings as close to -1, 0, or 1 as possible (Feinberg *et al.*, 2012:492). An aid for interpretation is to plot the variables using the factor loadings as coordinates. The researcher will look at the following (Malhotra, 2010:645):

- Variables located at the end of the axis have high loadings on only one of the factors.
- Variables located near the origin have small loadings on both factors.
- Variables that are not located near any of the axes are associated to both factors.

For the purpose of this study, an EFA was conducted by means of a principle component analysis, using a varimax rotation. The purpose of the EFA in this study was to check for any items that cross-loaded.

3.10 STRUCTURAL EQUATION MODELLING

Structural equation modelling (SEM) is used to explore the inter-relationships between measured and latent variables, together with relationships between two or more latent variables, either independent or dependent (Ullman, 2006:35; Anglim, 2007:1; Reisinger & Mavondo, 2007:42).

SEM consists of two procedures: a casual procedure that is presented through structural equations by using regression to answer formulated hypotheses, and the graphical representation of those structural equations (Malhotra, 2010:724; Byrne, 2010:3). The process followed includes defining the constructs, specifying the measurement model, assessing the reliability and validity of the model, specifying the structural model, and lastly, assessing the goodness-of-fit indices (Hair *et al.*, 2014:565). The structural modelling process is outlined below.

3.10.1 Stage 1: Defining the constructs

SEM is used to assess both measurement and structural theory. Measurement theory specifies how the constructs are being presented, and structural theory specifies how the constructs are related (Malhotra, 2010:729).

Measures used for SEM should be valid, reliable, and defined by existing theory in order to obtain optimal results (Kline, 2011:6; Hair *et al.*, 2014:567). Characteristically, SEM is based on comprehensive theoretical roots. The latter is based on findings in literature and existing knowledge in the field or from causes and effects among variables (Lei & Wu, 2007:35; Kline, 2016:10). As such, this study made use of existing academic research scales that have been previously validated and considered as reliable.

3.10.2 Stage 2: Measurement model specification

The measurement model is used to describe relationships between the measurement variables and the hypothesised constructs (Weston & Gore, 2006:724; Malhotra, 2010:729). The aim of the measurement model is to establish if there are any valid, previously implicit relationships between the observed and latent (unobserved) variables (In'namie & Koizumi, 2013:25).

This process is represented by a diagram where arrows are used to graphically represent the path of each construct to the measured variables allocated to that specific construct (Malhotra, 2010:730). Factor loadings are used to display the degree to which each latent variable is related to their allocated construct (Kline, 2011:95; Teo, Tsai & Yang, 2013:6). By using the standardised factor loadings, an assessment of the measurement model follows in order to ensure that there are no problematic estimates (Lei & Wu, 2007:37) such as Heywood cases, which refer to negative error variances or any standardised factor loadings that are above 1.0 or below -1.0 (Hair *et al.*, 2010:706). Any problematic estimates that occur may result in the corresponding indicator being deleted, unless there are comprehensive theoretical reasons for retaining it (Malhotra, 2010:735).

Hair *et al.* (2014:569) state that several considerations relating to sample size or model estimation techniques are required before the validity of the measurement model can be assessed. Byrne (2010:76) suggests that careful deliberation should be given to a study's sample size, as small sample sizes (≤ 100) generally produce unreliable results. For a more complex model which has multiple constructs or constructs with less than three measured variables, a sample size in the range of 200 to 400 respondents is recommended (Malhotra, 2010:731). As for this study, 500 respondents were used as the study consisted out of five constructs with a minimum of four variables each.

3.10.3 Stage 3: Reliability and validity of a measurement model

Reliability and validity are two important features in the evaluation of any measurement instrument which ensure high quality research (Mohajan, 2017). When evaluating the appropriateness of a multi-item scale, its reliability should be assessed prior to assessing its validity (Hair *et al.*, 2010:125). Reliability is referred to as the stability of findings, whereas validity represents the truthfulness of findings (Altheide & Johnson, 1994:485-499).

3.10.3.1 Reliability

Reliability refers to the degree to which a measure delivers consistent or stable results when repeated measurements are taken (Malhotra, 2010:319; Kumar, 2011:181). Therefore, are free from random error (Pallant, 2013:6). Methods used to measure reliability are test-retest reliability, alternative-forms of reliability, and internal consistency reliability (Malhotra, 2010:318).

The test-retest reliability method is used to test stability by administering a test to the same sample at two different times, under similar conditions each time (Zikmund & Babin, 2013:257). With the alternative-forms reliability method, two equivalent tests are constructed against which the same respondents are measured twice, at different times (Shukla, 2008:84). The internal consistency method assesses the degree to which the items within a scale measure the same primary element (Aaker *et al.*, 2011:270). Internal consistency can be measured by means of two techniques, namely split-half reliability, and the Cronbach alpha coefficient (Iacobucci & Churchill, 2010:259).

Split-half reliability divides the scale items into two halves and the scores from each half are correlated. If there is a high correlation between the two halves, it indicates a high internal consistency (Malhotra, 2010:319; Rovai *et al.*, 2014:578). This technique is designed to measure attitudes towards a phenomenon (Kumar, 2011:184).

The coefficient alpha, also known as the Cronbach's alpha technique, is the most popular measure of internal consistency (Malhotra, 2010:319; Zikmund & Babin, 2013:257). Cronbach's

alpha involves segmenting the number of items in a scale by calculating the correlation coefficient between pairs of items, and then calculating mean of the total score (Malhotra, 2010:319; McDaniel & Gates, 2010:253; Zikmund & Babin, 2013:257). It is normally used when you have Likert scale questions in a questionnaire and you wish to determine inter-item reliability (Gliner *et al.*, 2011:159). The Cronbach's alpha ranges from 0 to 1 (Andrew *et al.*, 2011:202). If there is perfect correlation then Cronbach's alpha will be one; and when there is no correlation between the scale items, the Cronbach's alpha will be equal to zero (Zikmund & Babin, 2013:257). Cronbach's alpha will be used to test the reliability of the data for this study. All values above 0.7 will be accepted, as it is considered to represent good reliability (Zikmund & Babin, 2013:257).

Additionally, Afari (2013:101) recommends that for the purpose of SEM, when assessing reliability, composite reliability (CR) should be used. Malhotra (2010:733) defines CR as the relationship between true score variance and total score variance. When the calculated CR value is 0.70 and above, the model is deemed reliable. CR values ranging between 0.60 and 0.70 are also considered to be acceptable if the average variance extracted AVE values are acceptable (Hair *et al.*, 2014:619). The next section discusses the validity section of the study.

3.10.3.2 Validity

Validity refers to the accuracy of a measurement (Burns & Bush, 2014:214), which means that it assesses whether a scale measures what it is supposed to measure (Hair *et al.*, 2013:151). Validity is a measurement method that ensures scales are free from both random and systematic errors (Feinberg *et al.*, 2013:128). A scale can be characterised as having perfect validity if it has zero measurement errors (Shukla, 2008:82). When a scale lacks validity, any conclusions made on that measure are also likely to be defective (Zikmund & Babin, 2013:258). There are three methods that may be used to assess validity: content validity, criterion validity, and construct validity as illustrated in Figure 3.1 (Lissitz, 2009:1; Malhorta, 2010:317).

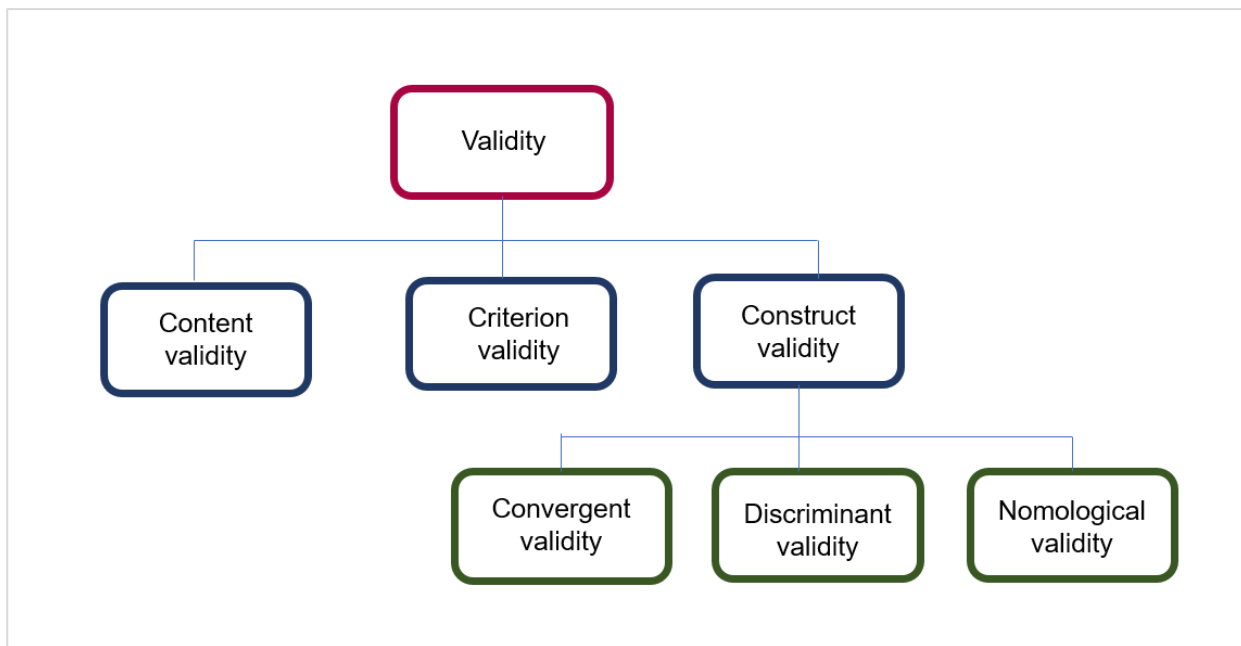


Figure 3-1: Different types of validity (Malhorta, 2010:317)

3.10.3.2.1 Content validity

Content validity is the extent to which a scale's content appears to reflect logically what was planned to be measured (Zikmund & Babin, 2010:250). This is judged by a subject expert or the researcher (Malhotra, 2010:320).

3.10.3.2.2 Criterion validity

Criterion validity examines whether the measurement scale performs as expected in relation to constructs of similar measuring instruments or standard measures (Shukla, 2008:82).

3.10.3.2.3 Construct validity

Construct validity is a measure that evaluates whether the measuring instrument logically represents and links the underlying theory (McDaniel & Gates, 2010:256). It establishes the link between the theory and the scales (Shukla, 2008: 82). Construct validity includes three measures: convergent, discriminant, and nomological validity as illustrated in Figure 3.1 (Sarstedt & Mooi, 2014:57).

Convergent validity is used to calculate the degree of association amongst different measures which were developed to measure identical or similar constructs (Clow & James, 2014:271). Convergent validity can be measured by the size of the factor loadings and by estimating the average variance extracted (AVE) (Malhotra, 2010:734). AVE values of 0.50 or higher are deemed acceptable, while factor loadings values above 0.50 are acceptable but should preferably

be above 0.70 (Hair *et al.*, 2014:618-619). Additionally, Afari (2013:101) suggests that when SEM is utilised, AVE should be used when assessing validity.

In contrast, discriminant validity identifies the uniqueness of a measure and consequently assesses the lack of correlation amongst different constructs or measures that are not developed to measure the same concept (Zikmund & Babin, 2010:251). With SEM, discriminant validity is identified by the comparison between the correlation coefficients of the measurement model and the square root of the constructs AVE values (Byrne, 2010:290-291). Discriminant validity exists when the square root of the AVE value is greater than the correlation coefficients (Hair *et al.*, 2014:620).

Lastly, nomological validity is the degree to which unique but related constructs correlate in a theoretically predicted way (Malhotra, 2010:321; Remler & Van Ryzin, 2011:113). A Pearson's Product-Moment correlation analysis is usually utilised to determine the nomological validity of the measurement model in structural equation modelling (Malhotra, 2010:562; Hair *et al.*, 2010:710). The Pearson's Product-Movement correlation coefficient (r) method is most commonly used to determine the strength of association between two metric variables (Malhotra, 2010:562). It ranges from -1 to +1, with -1 representing a perfect negative relationship between two variables and +1 representing a perfect positive relationship between two variables (Hair *et al.*, 2008:286). A correlation coefficient of zero indicates that there is no relationship between two variables (Berndt & Petzer, 2011:239). Pallant (2013:139) explains that the strength of the relationship between the two variables depends on the size of the correlation value.

Content and construct validity (by means of nomological validity) were used in this study. Two experienced researchers examined the questionnaire to ensure content validity. Constructs were examined to ensure that they measured what they were designed to measure. The nomological validity was tested through a correlation analysis method known as Pearson's Product-Movement correlation coefficient.

3.10.4 Stage 4: Structural model specification

While the measurement model concentrated on the relationship between latent (unobserved) factors and observed indicators, the structural model focused on the nature and strength of the relationship between the latent factors (Malhotra, 2010:735). The structural model illustrates paths with arrows from one construct to another, thus showing the interrelationships between different constructs (Hair *et al.*, 2014:585). This is known as path analysis. These patterns indicate direct or indirect effects of independent constructs on other dependant constructs within the model (Seker, 2013:159), and the effects are identified by using either the correlation estimates or

covariance between the constructs in question (Malhotra, 2010:749). The relationships found between constructs are based on existing hypothesised literature, as a hypothesised relationship is represented by each path (Hair *et al.*, 2014:585).

3.10.5 Stage 5: Assessing model fit

SEM is utilized to establish the relationship among different variables in addition to testing the overall fit of the model (Pallant, 2013:109). Hair *et al.*, (2014:576) suggest that measurement models should be evaluated for acceptable levels of goodness-of-fit indices. There are three forms of goodness-of-fit measures; namely absolute fit indices, incremental fit indices, and parsimony fit indices (Hair *et al.*, 2014:576).

Absolute fit indices measure how well a measurement model recreates observed data, which comprise chi-square, degrees of freedom, the root mean square error of approximation (RMSEA), and standardised root mean residual (SRMR) (Kline, 2011:195).

Incremental fit indices are used to evaluate the degree to which the estimated model fits a baseline model (Malhotra, 2010:731; Kline, 2011:196). For this study, the following incremental fit indices were used: the comparative fit index (CFI), incremental fit index (IFI), and Tucker-Lewis index (TLI).

Lastly, parsimony fit indices are used for comparison of models with different complexities (Teo *et al.*, 2013:14). When a researcher compares two or more models, the Akaike's information criterion (AIC) and Bozdogan's consistent version of the AIC (CAIC) are taken into account, as smaller values between the models advocate a better fit (Kline,2011:220). For this study parsimony fit indices where not applicable.

Table 3.2 indicates the fit indices and their recommended cut-off points (Malhotra, 2010:732; Hair *et al.*, 2014:631).

Table 3-2: Fit indices and cut-off points

Fit indices	Recommended cut-off points
Chi-square/degrees of freedom	≤ 0.05
RMSEA	≤ 0.08
CFI	≥ 0.90
IFI	≥ 0.90
TLI	≥ 0.90

3.11 HYPOTHESES TESTING

Hypothesis testing refers to a process in which a conclusion regarding the truth of the hypothesis is drawn (Poletiek, 2001:30; Frost, 2015).

Hypothesis testing enables the researcher to determine whether the phenomenon can be supported by empirical evidence (Zikmund & Babin, 2013:373). However, the researcher first has to formulate a null hypothesis (H_0), as well as the accompanying alternative hypothesis (H_a) (Taeger & Kuhnt, 2014:2). The null hypothesis indicates that there is no variance between the occurrence, whereas the alternative hypothesis indicates that there is indeed a variance between the occurrence (Maree *et al.*, 2011:203).

Once the null- and alternative hypotheses are formulated, the researcher has to select the appropriate statistical procedure to be carried out as well as the corresponding test statistic and level of significance. Followed by determining the sample size to use and then collecting the required data. The test's statistical probability is then compared with the specified significance level in order to evaluate whether the null hypothesis should be accepted or rejected (Malhotra, 2010:489).

Hypothesis acceptance and rejection is guided by the following:

If $p\text{-value} < \alpha$, then H_a

If $p\text{-value} \geq \alpha$, then H_0

The next section of this study focuses on the two-independent sample t-test.

3.12 TWO INDEPENDENT-SAMPLE T-TEST

Two independent samples t-test is defined as a statistical method used to compare differences between two population means where the variance is unknown but expected to be equal (Privitera, 2011:677; Boslaugh, 2012:160). The p-value shows the probability that the difference in the means occurred by chance. If the p-value is 0.05 or less, there are significant differences in the dependent variable between two populations (Salvendy, 2012:1151).

The two independent-samples t-test was used in this study, to determine whether there were any statistically significant differences between male and female respondents. The following section will cover the practical significance part of the study.

3.13 PRACTICAL SIGNIFICANCE

Practical significance is described as a statistical test based on the researcher's judgement. It is recommended that inference on a study should be based on both statistical and practical significance (Schlotzhauer, 2007:168). Practical significance is used in order to analyse the size of the effect that is measured (Vito & Higgins, 2014:123). Cohen's D-statistic is used to determine the size of statistically significant differences, which are calculated after the t-test is conducted (Pallant, 2013:218). This measurement compares the influence one variable has on another variable (Rubin, 2012:91).

Guidelines, as suggested by Pallant, (2010:208) as well as Gravetter and Wallnau (2011:233), for interpreting this effect size is as follows:

- $0.20 \leq d < 0.50$: signifies a small, practically non-significant effect.
- $0.50 \leq d < 0.80$: signifies a medium-sized effect moving towards practical significance.
- $0.80 \leq d$: signifies a large effect that has reached practical significance.

3.14 SYNOPSIS

This chapter outlined the research methodology that was utilised in this study: it followed the descriptive research design, using the cross-sectional approach. By using the non-probability convenience sampling method, 500 Generation Y students registered at two HEIs in Gauteng were selected as the target population for this study. The self-administered questionnaire method was chosen to collect the data for this study. The distribution and administration methods regarding the questionnaires were discussed. Finally, this chapter concluded with an outline on statistical procedures employed in the study.

CHAPTER 4: DATA ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

This chapter are utilized to report and interpret the empirical findings of the study. Chapter 4 presents the pilot test results in Section 4.2; the process in which data was gathered in Section 4.3; and outlines the preliminary data analysis which involves coding, data cleaning, and tabulation in Section 4.4. The samples demographic characteristics are outlined in Section 4.5. Followed, by the exploratory factor analysis results in Section 4.6, descriptive statistics in Section 4.7, preferences towards streaming services in Section 4.8, and a detailed correlation analysis in Section 4.9. Section 4.10 and Section 4.11, focus on hypotheses testing and SEM. Followed by a two independent-samples t-test in Section 4.12.

The SPSS and AMOS versions 25.0 for Windows were used to perform the data analysis for this study. Which was conducted in two stages, the first stage being the analysing of the questionnaires pilot test results and the second stage reporting on the findings from the main questionnaire. In the following section, the questionnaires pilot test findings are discussed.

4.2 PILOT TESTING OF QUESTIONNAIRE

Pre-testing of the questionnaire was done on two experienced academics to ensure the face validity of the content. After the pre-testing, a pilot study was conducted on a sample of 55 Generation Y students registered at a South African HEI. The students who participated in the pilot study was not included in the main study. Once the questionnaires were screened for errors, 44 questionnaires were deemed viable and were used for analysis.

Table 4.1 indicate the internal consistency reliability results of the pilot study.

Table 4-1 Pilot test results

Items	Number of variables	Mean	Std. deviation	N	Cronbach's alpha
Section C:					
C1 - C4	4	4.8864	1.10687	44	0.928
C5 - C8	4	4.2727	1.13201	44	0.852
C9 - C14	6	4.7083	0.87687	44	0.849
C15 - C19	5	4.7409	1.17934	44	0.921
C20 - C25	6	4.7311	1.05545	44	0.894

All the scales proposed for inclusion in the main sample measured acceptable Cronbach's alpha values, being greater than 0.70 (George & Mallery, 2016:240). The results in Table 4.1 thus suggest satisfactory internal-consistency reliability. Therefore, all the dimensions in the measurement instrument was considered suitable to include in the main study.

The data gathering process along with the layout of the questionnaire will be discussed in the following section.

4.3 DATA GATHERING PROCESS

The aim of the data gathering process was to measure Generation Y students' attitudes towards on-demand subscription streaming services. The empirical objectives (refer to Chapter 1, Section 1.3.3) were used to formulate the measurement instrument. The final questionnaire (see Annexure A) contained 58 items that were grouped into three sections. Section A contained nine items which focused on the respondents' demographics. Section B contained 24 items which were designed to indicate the respondents' streaming behaviours and preferences. Section C contained 25 items which were designed to determine Generation Y students' attitudes (Shin, 2008), perceived usefulness (Nysveen, 2005; Wang, 2014), perceived ease of use (Cha, 2013; Wang, 2014), subjective norms (Jin, 2014; Yoon, 2015), as well as their intention to use (Nysveen, 2005; Shin, 2008) on-demand streaming services.

The data were gathered by means of 500 self-administered questionnaires, which were distributed evenly between two HEIs located in the Gauteng province. Permission to distribute the questionnaires among students was solicited from both institutes. All respondents were informed that participation in the questionnaire was strictly on a voluntary basis and that the data provided would be kept confidential.

The following section focus on the preliminary data analysis.

4.4 PRELIMINARY DATA ANALYSIS

A preliminary data analysis includes coding, data cleaning, and the tabulation of data, which are discussed below.

4.4.1 Coding

Numerical values were allocated to all the responses within in the measuring instrument (Malhotra, 2010:454). All respondents in the sample received the same questionnaire. The variable codes and assigned values are presented in Table 4.2.

Table 4-2: Coding information

Section A: Demographical data			
Question	Code	Variable	Value assigned to responses
Question 1	A1	Province of origin	Eastern Cape (1), Free State (2), Gauteng (3), KwaZulu-Natal (4), Limpopo (5), Mpumalanga (6), Northern Cape (7), North West (8), Western Cape (9)
Question 2	A2	Name of institution	Traditional University (1), University of Technology (2)
Question 3	A3	Year of Study	1 st (1), 2 nd (2), 3 rd (3), 4 th (4), Post Graduate (5)
Question 4	A4	Gender	Female (1), Male (2)
Question 5	A5	Ethnicity	African/Black (1), Coloured (2), Indian/Asian (3), White (4)
Question 6	A6	Home Language	Afrikaans (1), English (2), IsiNdebele (3), IsiXhosa (4), IsiZulu (5), Sepedi (6), Sesotho (7), Setswana (8), SiSwati (9), Tshivenda (10), Xitsonga (11), Other (12)
Question 7	A7	Age	18 year (2), 19 year (3), 20 year (4), 21 year (5)22 year (6), 23 year (7), 24 year (8)

Table 4 2: Coding information (continued...)

Section A: Demographical data			
Question	Code	Variable	Value assigned to responses
Question 8	A8	Income	Parents/Guardian (1), Sponsor/Corporate (2), Government (3), Employment (4), Bursary (5), Other (6)
Question 9	A9	Accommodation	RESS (1), Own flat/House (2), Parent/Guardian (3), Student Home (4), Other (5)
Section B: Preferences towards on-demand streaming services			
Item	Code	Construct	Value assigned to responses
Item 1	B1	Hobbies	Strongly disagree (1), Disagree (2), Slightly disagree (3), Slightly agree (4), Agree (5), Strongly agree (6)
Item 2	B2		
Item 3	B3		
Item 4	B4		
Item 5	B5		
Item 6	B6		
Item 7	B7	Video Streaming Services	Strongly disagree (1), Disagree (2), Slightly disagree (3), Slightly agree (4), Agree (5), Strongly agree (6)
Item 8	B8		
Item 9	B9		
Item 10	B10		
Item 11	B11		
Item 12	B12		
Item 13	B13		
Item 14	B14	Music Streaming Services	Strongly disagree (1), Disagree (2), Slightly disagree (3), Slightly agree (4), Agree (5), Strongly agree (6)
Item 15	B15		
Item 16	B16		
Item 17	B17		
Item 18	B18		
Item 19	B19		

Table 4 2: Coding information (continued...)

Section B: Preferences towards on-demand streaming services			
Item	Code	Construct	Value assigned to responses
Item 20	B20	Data Usage	Strongly disagree (1), Disagree (2), Slightly disagree (3), Slightly agree (4), Agree (5), Strongly agree (6)
Item 21	B21		
Item 22	B22		
Item 23	B23		
Item 24	B24		
Section C: Influencers of on-demand streaming service adoption			
Item	Code	Construct	Value assigned to responses
Item 1	C1	Attitude towards	Strongly disagree (1), Disagree (2), Slightly disagree (3), Slightly agree (4), Agree (5), Strongly agree (6)
Item 2	C2		
Item 3	C3		
Item 4	C4		
Item 5	C5	Subjective Norms	Strongly disagree (1), Disagree (2), Slightly disagree (3), Slightly agree (4), Agree (5), Strongly agree (6)
Item 6	C6		
Item 7	C7		
Item 8	C8		
Item 9	C9	Perceived Ease of Use	Strongly disagree (1), Disagree (2), Slightly disagree (3), Slightly agree (4), Agree (5), Strongly agree (6)
Item 10	C10		
Item 11	C11		
Item 12	C12		
Item 13	C13		
Item 14	C14		
Item 15	C15	Intention to use	Strongly disagree (1), Disagree (2), Slightly disagree (3), Slightly agree (4), Agree (5), Strongly agree (6)
Item 16	C16		
Item 17	C17		
Item 18	C18		
Item 19	C19		
Item 20	C20	Perceived Usefulness	Strongly disagree (1), Disagree (2), Slightly disagree (3), Slightly agree (4), Agree (5), Strongly agree (6)
Item 21	C21		
Item 22	C22		
Item 23	C23		
Item 24	C24		
Item 25	C25		

4.4.2 Data cleaning

During this process, questionnaires were discarded if it had more than 10 percent of missing responses (32 were discarded) as well as the questionnaires that were completed by respondents who did not form part of the required age group of 18 to 24 (23 were discarded). However, the questionnaires which had below 10 percent missing responses were not discarded; instead the mode of the particular item were used to substitute these missing responses.

For this study, 500 questionnaires were distributed, of which 480 were completed. However, only 425 questionnaires were usable after the data cleaning, which provides a response rate of 85 percent.

4.4.3 Tabulation of variables

Once the coding and cleaning of the data have been completed, the data were tabulated.

Table 4.3 presents the frequency of responses of the scaled items observed in the study.

Table 4-3: Frequency of responses

Section B: Preferences towards on-demand streaming services						
Scale Item	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
	1	2	3	4	5	6
B1	54	30	22	69	125	125
B2	27	16	19	82	129	150
B3	18	4	9	43	90	261
B4	51	35	58	95	118	68
B5	83	71	70	76	68	57
B6	30	8	6	12	15	49
B7	229	102	28	36	24	6
B8	245	104	38	27	8	0
B9	198	97	44	37	26	15
B10	89	30	16	62	107	116
B11	83	40	20	64	112	101
B12	93	44	28	62	97	93

Table 4 3: Frequency of responses (continued...)

Section B: Preferences towards on-demand streaming services						
Scale Item	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
	1	2	3	4	5	6
B13	28	7	3	8	14	54
B14	178	98	38	43	42	25
B15	140	66	28	46	58	85
B16	134	68	47	59	60	55
B17	53	6	6	41	140	178
B18	120	73	36	58	63	71
B19	37	12	3	9	16	47
B20	33	14	12	65	109	191
B21	60	29	16	42	82	195
B22	148	66	17	29	35	127
B23	15	6	9	28	71	294
B24	43	9	3	11	6	23
Section C: Influencers of on-demand streaming service adoption						
Scale Item	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
	1	2	3	4	5	6
C1	13	16	25	87	172	112
C2	12	13	34	104	154	108
C3	9	16	34	86	162	118
C4	10	10	19	67	166	153
C5	39	63	73	96	91	63
C6	15	29	57	116	137	71
C7	19	25	64	102	134	81
C8	29	35	70	99	130	62
C9	9	19	36	100	166	95
C10	8	11	39	85	174	107
C11	11	17	42	105	154	96
C12	8	8	38	85	171	115
C13	9	12	30	93	165	116
C14	13	12	42	117	149	92

Table 4 3: Frequency of responses (continued...)

Section C: Influencers of on-demand streaming service adoption						
Scale Item	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
	1	2	3	4	5	6
C15	9	12	24	56	156	168
C16	12	9	34	62	168	140
C17	8	16	18	63	182	138
C18	22	16	50	112	128	97
C19	13	25	42	105	148	92
C20	11	9	30	62	156	157
C21	11	14	28	64	173	135
C22	16	20	41	76	156	116
C23	11	16	32	75	172	119
C24	8	10	31	82	173	121
C25	8	10	15	65	143	184

The following section analysis of the demographic data obtained from the respondents.

4.5 DEMOGRAPHIC ANALYSIS

This section is based on Section A of the questionnaire which are used to describe the target population characteristics in terms of their HEI, current year of study, gender, ethnicity, age, province of origin, home language, source of income and their accommodation. The percentages displayed in the charts were rounded off.

To ensure that the data obtained and used for the study are from Generation Y students, a screening question pertaining to the age of the participant was used. The data obtained from respondents outside of the Generation Y student parameter were discarded.

As illustrated in Figure 4.1, 56 percent of respondents were registered at a traditional university, followed by 44 percent at a University of Technology.

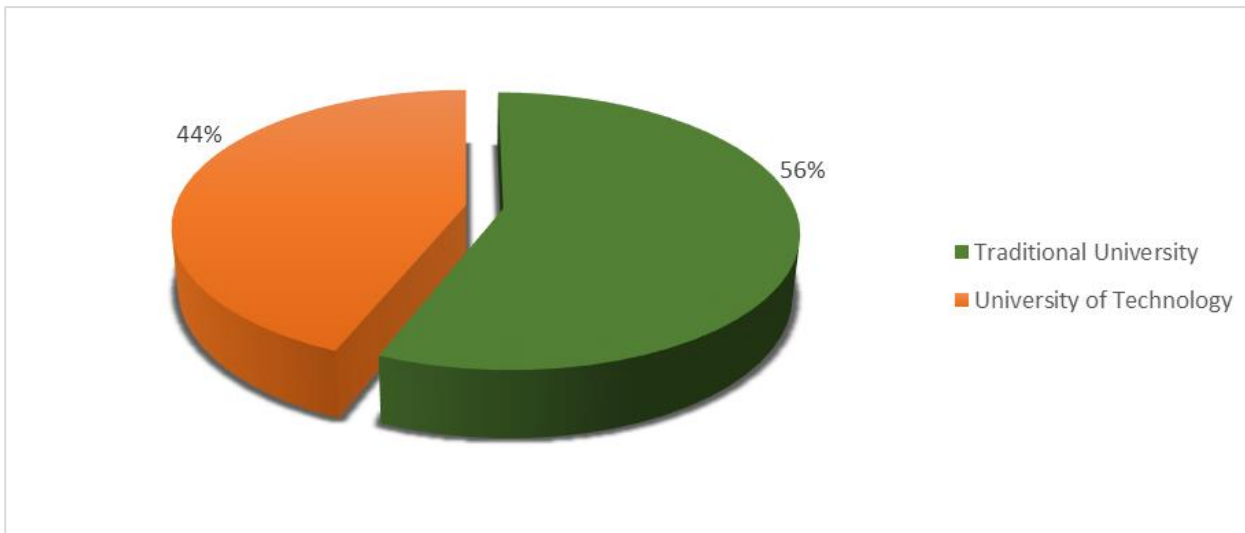


Figure 4-1: Response rate of Institutions

Figure 4.2 exhibits the respondents' current year of study. The sample constituted an equal representation of first and second year students (33 percent), followed by 24 percent of third year students. Furthermore, the sample consist 9 percent fourth year students and 1 percent post-graduate respondents.

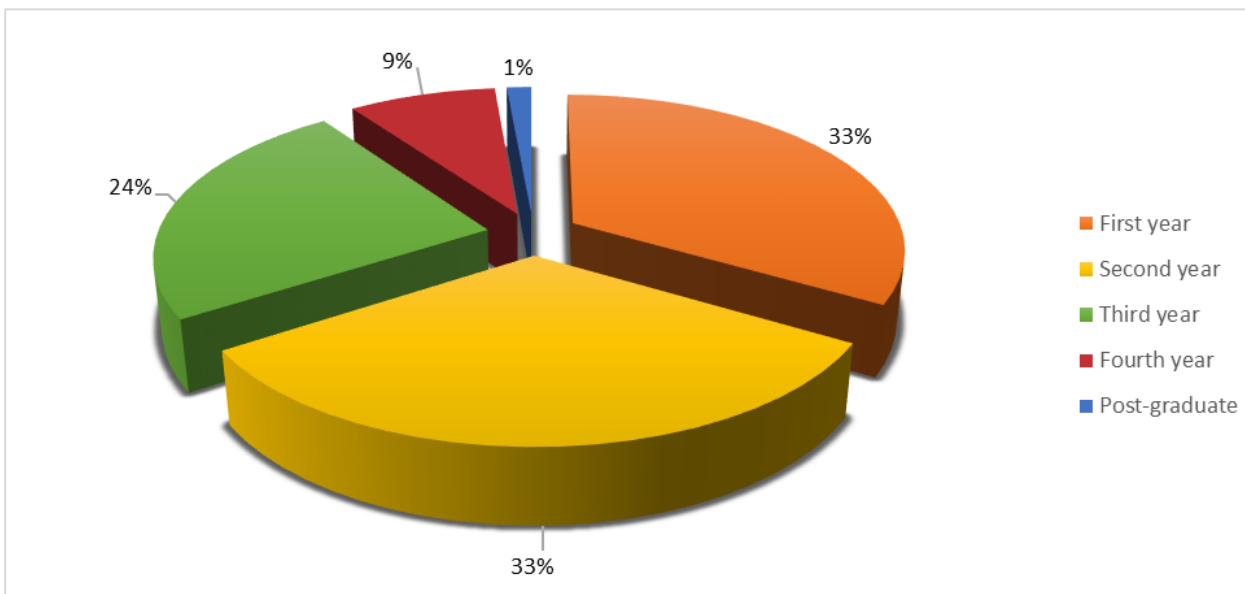


Figure 4-2: Respondents' current year of study

According to the illustration in Figure 4.3, more female respondents (58%) than male respondents (42%) took part in the study.

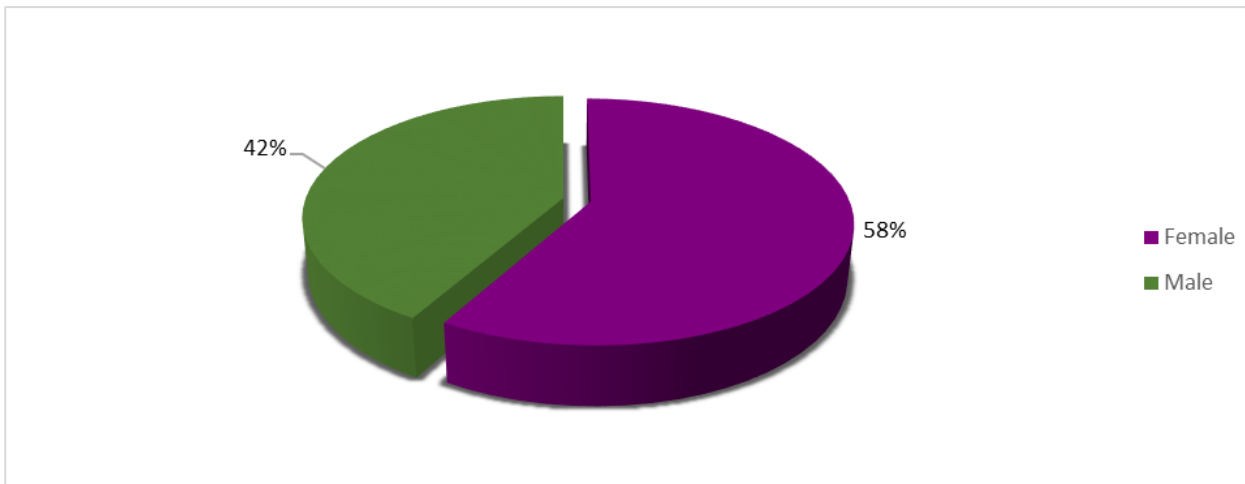


Figure 4-3: Gender profile of respondents

Figure 4.4 portrays the ethnic groups represented by the respondents in the sample. Respondents indicated their cultural group as being African (90%), White (7%), Indian/Asian (2%), followed by Coloured (1%).

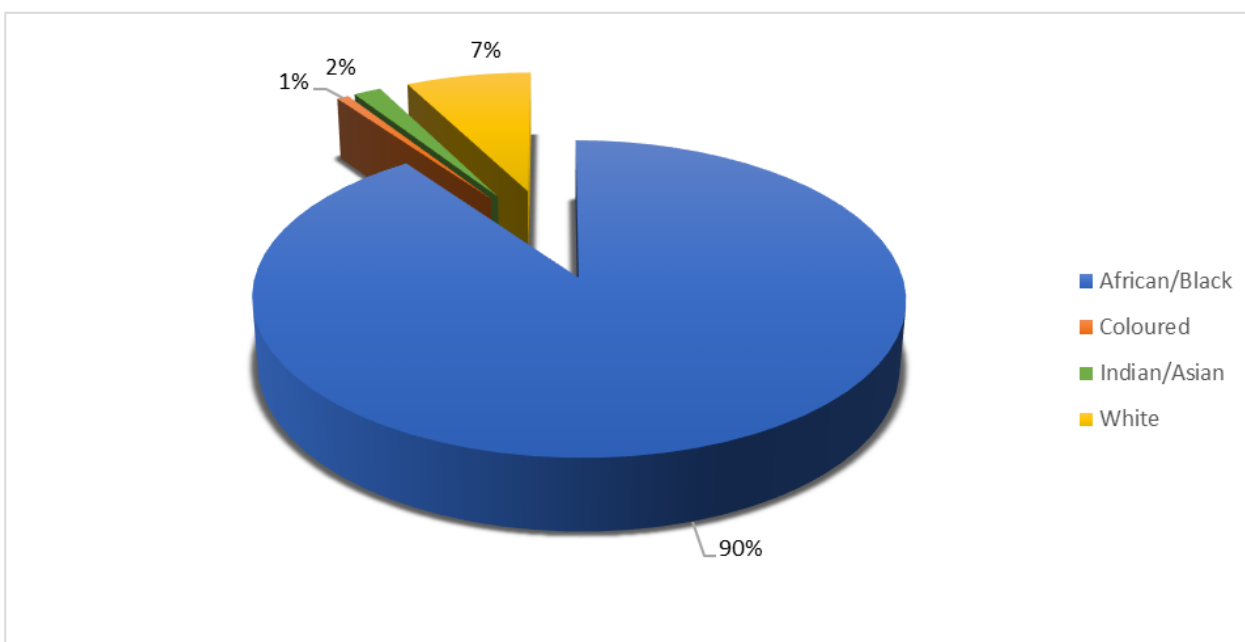


Figure 4-4: Race distribution of respondents

The study was conducted in Gauteng, as HEIs situated in this province are known to have students who originate from different provinces in the country. Figure 4.5 illustrate that seven provinces were represented by the respondents in this study. Most of the respondents originate from Gauteng (55%), followed by Limpopo (15%), Free State (10%), Kwa-Zulu Natal (6%), Mpumalanga (6%), North-West (5%), and Eastern Cape (3%). Western Cape and Northern Cape

was not represented by the sample as there were no respondents who originated from these provinces.

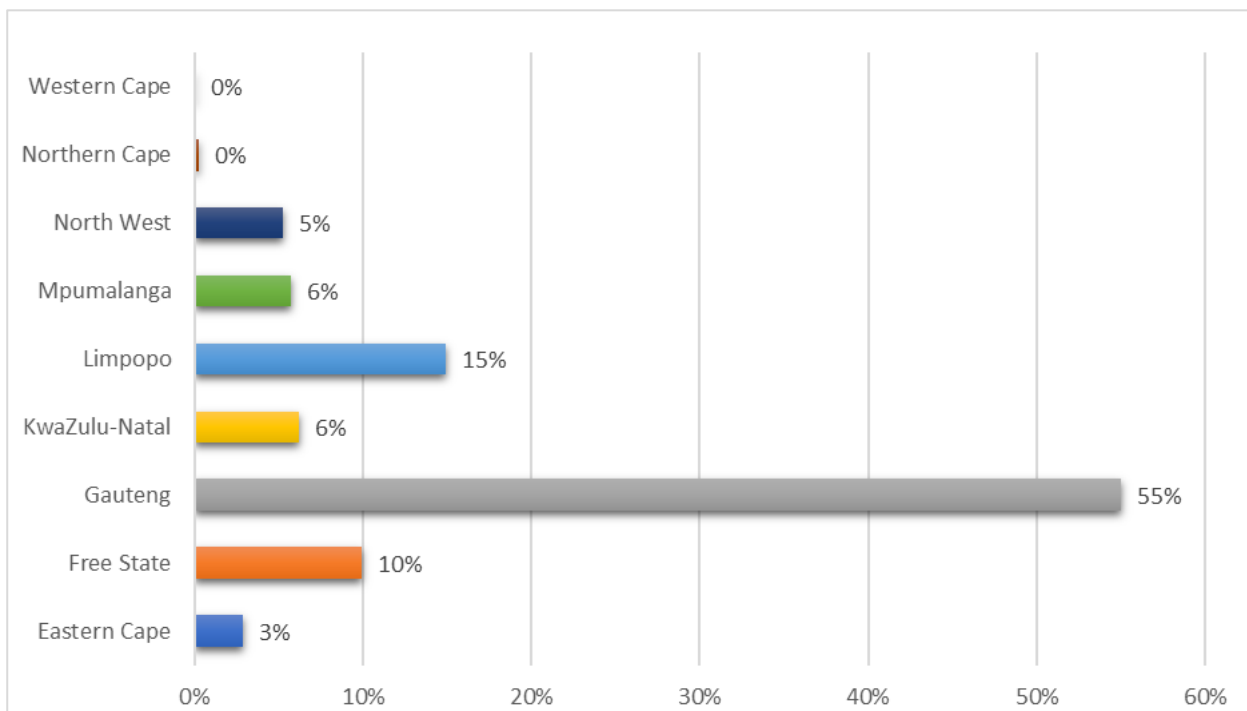


Figure 4-5: Respondents' province of origin

Figure 4.6 illustrates the respondents' home language. 27 percent of respondents indicated Sesotho as their home language, followed by Zulu (18%), Setswana (11%), Xitsonga (8%), IsiXhosa (7%), English (7%), Sepedi (7%), Afrikaans (5%), SiSwati (4%), Tshivenda (4%), and other languages (1%). As such, only ten of South Africa's eleven official languages were represented by the sample, as there were no respondent representing the IsiNdebele language.

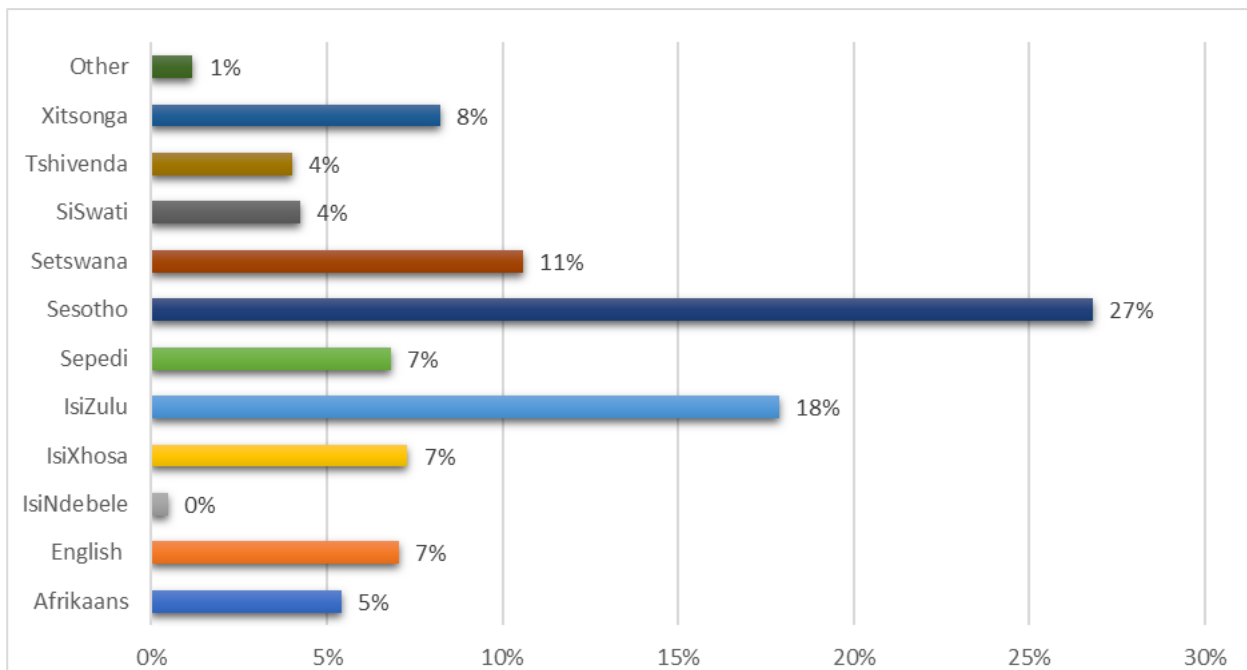


Figure 4-6: Respondents' home language

Figure 4.7 shows that the respondents' age ranged from 18 to 24. The majority of respondents aged between 20 (27%), 21 (20%), 19 (19%) years, followed by respondents of the age of 18 (11%), 22 (12%), 23 (6%), and 24 years old (5%).

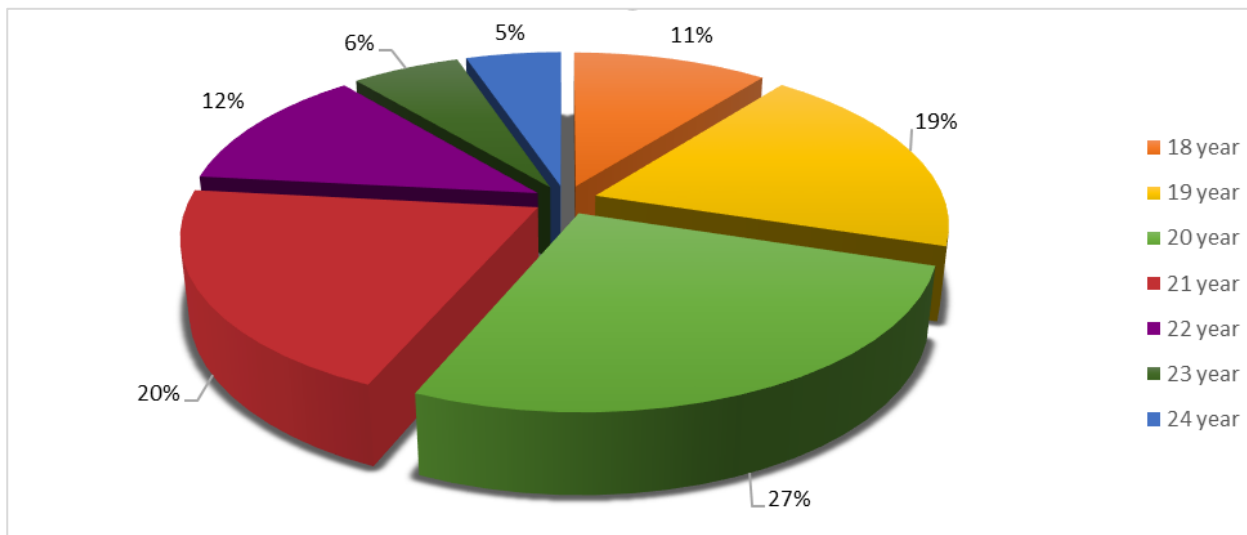


Figure 4-7: Age distribution of respondents

Figure 4.8 portrays the income sources of respondents in the sample. The majority of respondents specified their primary source of income to be a bursary (45%), followed by their parents/guardians (41%), government (11%), other (2%) and lastly, employment (1%).

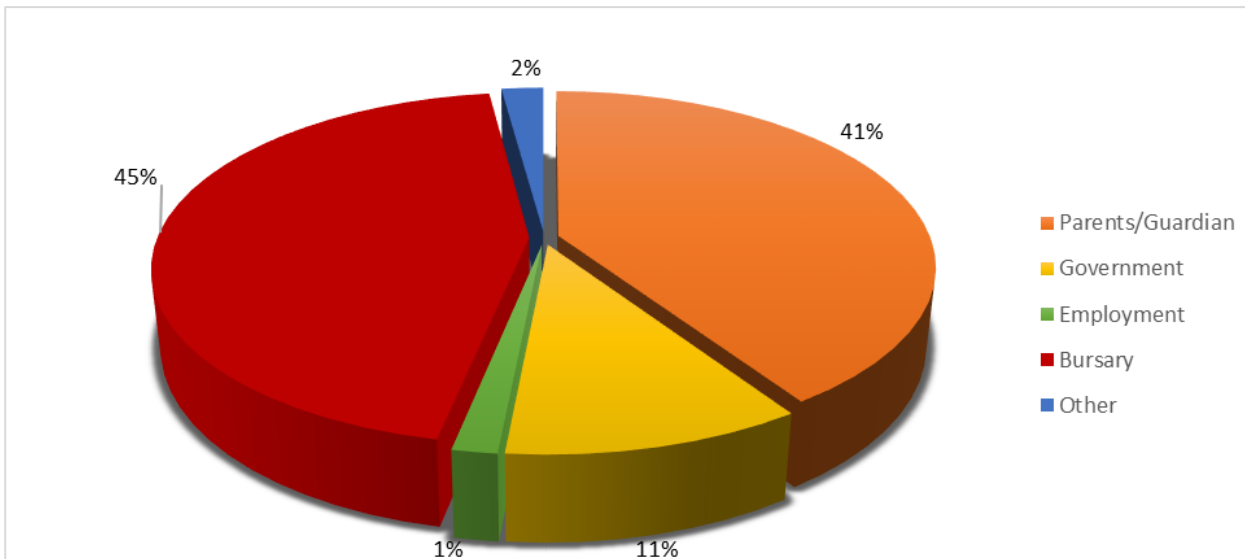


Figure 4-8: Source of income of respondents

Figure 4.9 indicates the type of accommodation of respondents. Results show 54 percent of respondents indicated that they stay in a hostel, followed by student homes (19%), parents/guardian (16%), own flat/house (10%), and other (1%).

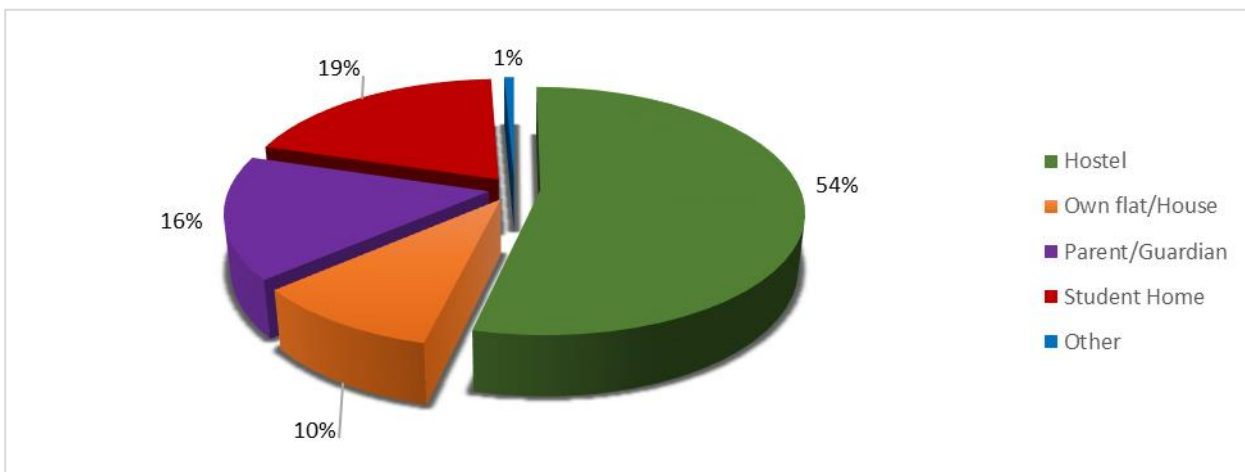


Figure 4-9: Accommodation of respondents

The proceeding section outlines the exploratory factor analysis conducted.

4.6 EXPLORATORY FACTOR ANALYSIS

Exploratory factor analysis (EFA) using a principle component analysis and varimax rotation were used to analyse the constructs in Section C. In order to determine the validity of the EFA, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy test and the Bartlett's Test of Sphericity were performed. According to Hair *et al.* (2014:116), values of 0.50 and above for a KMO test and a significant Barlett's Test of Sphericity are an indication that the EFA may be conducted.

The EFA was loaded and it produced the following results: the KMO ($KMO = 0.947 > 0.5$) confirmed that the size of the was sufficient for a factor analysis to be conducted. The Bartlett's test results (Bartlett's test = 6964.673; $df = 300$; and $p = 0.000 < 0.01$) suggest that the factors were significant and that a factor analysis could be performed. Additionally, minor difficulties were observed in the loadings of the items, as three items (C9, C10, and C15) cross loaded or loaded on the incorrect factor and, as a result, these items were deleted. However, prior to the deletion, the items were carefully examined to ensure that the elimination of C9, C10, and C15 would not alter the intended purpose of the original constructs in any way. As a result, both Perceived ease of use and Intention to use becomes a four-item scale.

After the items were deleted, the re-run of the EFA produced the following results: the KMO ($KMO = 0.942 > 0.5$) and the The Bartlett's test (Bartlett's test = 6335.321; $df = 231$; and $p = 0.000 < 0.01$) both returned satisfactory results. All commonalities scored higher than 0.5, and were satisfactory, while four factors had Eigenvalues above 1. Explaining 71.52 percent of total variance. All the items correlated and grouped as expected.

Five factors were identified by using priori criterion (Nysveen, 2005; Shin, 2008; Cha, 2013; Wang, 2014; Jin, 2014; Yoon, 2015). Table 4.4 presents the rotated factors as follows: C 20 – C25 as factor 1 (perceived usefulness); C11 – C14 as factor 2 (perceived ease of use); C1 – C4 as factor 3 (attitude); C5 – C8 as factor 4 (subjective norms) and C16 – C19 as factor 5 (intention to use). All the factor loadings presented values that were above 0.5 which are satisfactory.

Table 4-4: Rotated factors for Section C

Items	Factors					Comm*
	1	2	3	4	5	
C1			0.827			0.853
C2			0.766			0.798
C3			0.734			0.772
C4			0.611			0.667
C5				0.688		0.579
C6				0.757		0.696
C7				0.689		0.624
C8				0.755		0.680
C11		0.685				0.624
C12		0.775				0.741

Table 4 4: Rotated factors for Section C (continue...)

Items	Factors					Comm*
	1	2	3	4	5	
C13		0.780				0.788
C14		0.714				0.634
C16					0.693	0.761
C17					0.726	0.785
C18					0.670	0.682
C19					0.592	0.696
C20	0.673					0.656
C21	0.765					0.727
C22	0.789					0.706
C23	0.820					0.807
C24	0.719					0.741
C25	0.660					0.715
Eigen values	10.667	1.693	1.370	1.151	0.853	
% of variance	48.487	7.696	6.227	5.233	3.876	
*Communalities						

The following section details the descriptive statistics derived from the data.

4.7 DESCRIPTIVE STATISTICS

The descriptive statistics were derived from the questionnaire that was distributed amongst the sampled Generation Y students. Means, standard deviations, skewness, and kurtosis were computed for Section B and Section C. The data was gathered by using a six-point Likert scale which ranged from ‘strongly disagree’ (1) to ‘strongly agree’ (6). Positive attitudes or behaviour intentions towards a statement are associated with higher mean values. Table 4.5 presents the interpreted data.

Table 4-5: Descriptive statistics

Items	Valid N	Mean	Standard deviation	Skewness	Kurtosis
Hobbies					
Overall Construct	425	4,314	0,825	-0,917	1,141
B1	425	4,308	1,691	-0,847	-0,554
B2	425	4,708	1,416	-1,242	0,892
B3	425	5,273	1,221	-2,134	4,385
B4	425	3,936	1,570	-0,523	-0,773
B5	425	3,344	1,692	0,076	-1,241
Video Streaming services					
Overall Construct	425	2,905	1,003	0,021	-0,326
B7	425	1,922	1,294	1,404	0,972
B8	425	1,689	1,001	1,489	1,501
B9	425	2,118	1,429	1,209	0,427
B10	425	4,014	1,898	-0,571	-1,209
B11	425	3,929	1,847	-0,508	-1,233
B12	425	3,755	1,876	-0,337	-1,400
Music Streaming Services					
Overall construct	425	3,301	1,122	0,181	-0,627
B14	425	2,402	1,609	0,900	-0,497
B15	425	3,158	1,982	0,247	-1,560
B16	425	3,009	1,821	0,325	-1,349
B17	425	4,755	1,626	-1,453	0,878
B18	425	3,179	1,884	0,214	-1,472
Internet usage					
Overall construct	425	4,505	0,903	-0,638	0,418
B20	425	4,833	1,495	-1,407	1,076
B21	425	4,518	1,833	-0,958	-0,606
B22	425	3,264	2,146	0,219	-1,715
B23	425	5,405	1,174	-2,436	5,669
Attitude towards					
Overall Construct	425	4.7541	1.02869	-1.185	1.678
C1	425	4.7059	1.20361	-1.204	1.377
C2	425	4.6447	1.19289	-1.012	0.980
C3	425	4.7176	1.18373	-1.050	0.915
C4	425	4.9482	1.13360	-1.450	2.339

Table 4 5: Descriptive statistics (continue...)

Subjective Norms					
Overall Construct	425	4.1012	1.10400	-0.493	-0.027
C5	425	3.7671	1.53262	-0,220	-0,982
C6	425	4,2800	1,281	-0,657	-0,061
C7	425	4,294	1,336	-0,670	-0,142
C8	425	4,064	1,414	-0,561	-0,475
Perceived Ease of Use					
Overall construct	425	4.6494	0.96887	-1.029	1.662
C11	425	4,558	1,204	0,889	0,583
C12	425	4,7600	1,115	-1,052	1,195
C13	425	4,744	1,142	-1,089	1,257
C14	425	4,537	1,191	-0,894	0,783
Intention to use					
Overall construct	425	4.6582	1.03568	-1.039	1.175
C16	425	4,847	1,191	-1,302	1,615
C17	425	4,904	1,130	-1,407	2,080
C18	425	4,409	1,336	-0,822	0,244
C19	425	4,473	1,266	-0,839	0,272
Perceived usefulness					
Overall construct	425	4.8263	1.00227	-1.354	2.260
C20	425	4,915	1,183	-1,348	1,748
C21	425	4,833	1,191	-1,308	1,588
C22	425	4,609	1,310	-1,028	0,529
C23	425	4,737	1,202	-1,168	1,173
C24	425	4,8000	1,116	-1,144	1,441
C25	425	5,064	1,113	-1,518	2,525

A six-point Likert scale was used for both Section B and Section C. The values 1 – 3 indicate that the respondents disagreed with the statements, and the values 4 – 6 indicate that the respondents agreed with the statements. The results for Section B will be discussed in Section 4.8.

In Section C, all the constructs measured a mean value above 3.0: Attitude (mean=4.75), subjective norms (mean=4.10), perceived ease of use (mean=4.65), intention to use (mean=4.66), and perceived usefulness (mean=4.83).

The Generation Y students displayed positive attitudes and intentions to use towards on-demand streaming services. This also indicated that perceived usefulness of the streaming services can

influence the adoption process of on-demand streaming services by Generation Y students. Additionally, the respondents displayed a positive perception towards on-demand streaming services that are easy to use and subscribe to. Contrastingly, the lowest mean (mean=4.10) was for Subjective norms which indicates that the opinions of the family and friends of the Generation Y students only have a slight influence on their choice of which on-demand streaming service to use or subscribe to.

Table 4.5 indicates that there is no indication of irregularity in the kurtosis values and all the skewness values fall within the -2 or +2 range which are deemed as acceptable, therefore the items are considered to be distributed normally (Berndt & Petzer, 2011:243- 244).

4.8 PREFERENCES TOWARDS STREAMING SERVICES

Section B of this study measured respondents' hobbies, preferences towards video and music on-demand streaming services consecutively as well as the source they use to access the Internet.

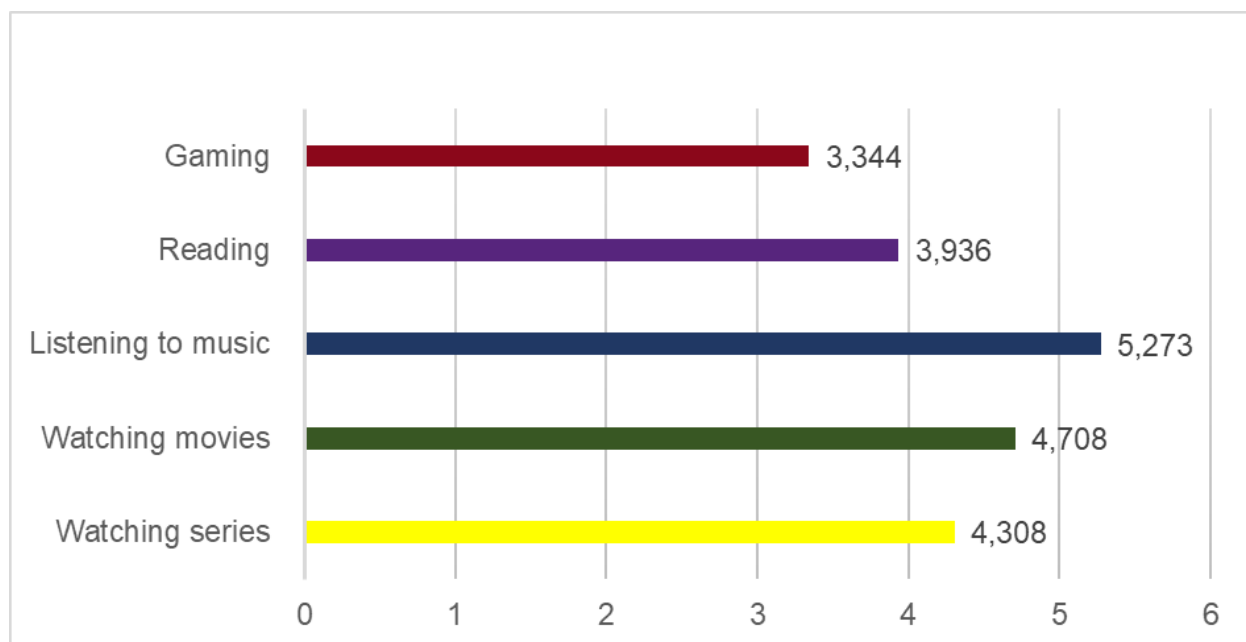


Figure 4-10: Generation Y students' hobbies

In Figure 4.10 the mean for each activity is presented which reports on Section B, Question 1 to 5. The results exhibited that Generation Y students hobbies include listening to music and watching movies and series. As these activities items measured the highest mean value (mean=5.273), followed by watching movies (mean=4.708), and then watching series (mean=4.308). Reading (mean=3.936) and gaming (mean=3.344) is the two activity items that measured the lowest mean values, indicating that they rarely to occasionally do this activity.

Figure 4.11 reports on Section B, Question 7 to 12, which focused on Generation Y students' preferred VoD service.

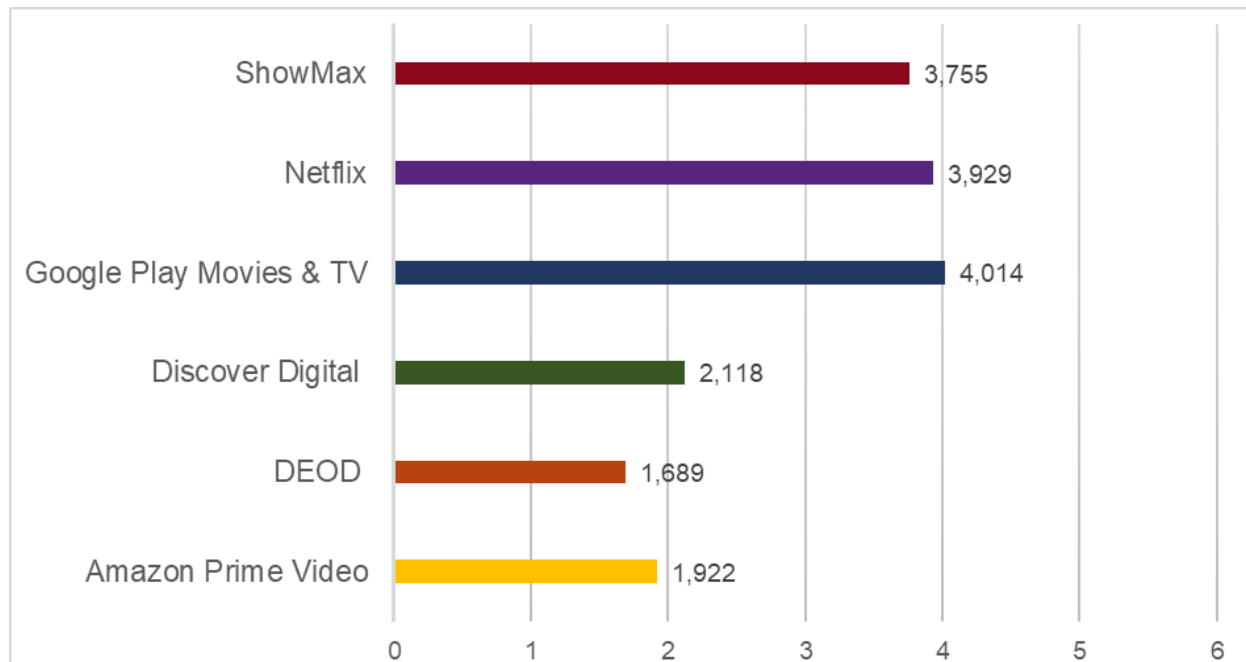


Figure 4-11: Preferred Video on-demand streaming service

Figure 4.11 illustrates the means for the respondents' preferences towards the different VoD streaming service providers. The results indicated that they preferred *Google Play Movies and TV* (mean=4.014) then *Netflix* (mean=3.929) which is followed by *ShowMax* (mean=3.755). *Discover Digital* (mean=2.118), *Amazon Prime Video* (mean=1.922) and *DEOD* (mean=1.689) are the three VoD streaming providers that are less preferred by the respondents.

Figure 4.12 reports on Section B, Question 14 to 18, which focused on Generation Y students' preferred Music on-demand streaming service.

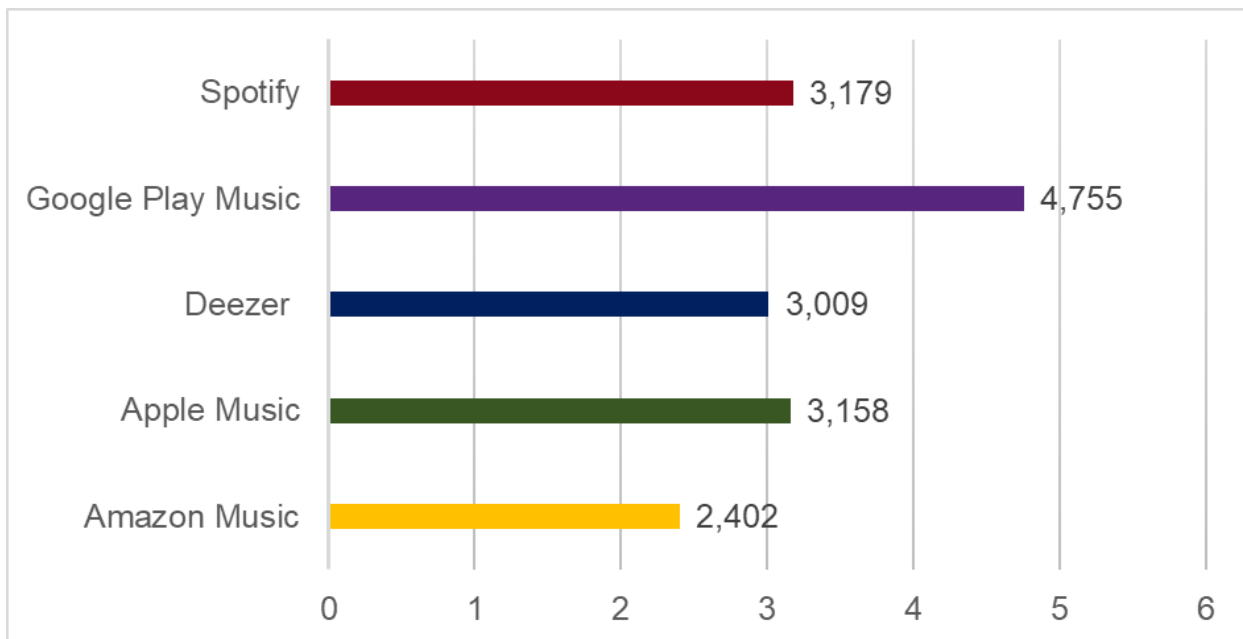


Figure 4-12: Preferred Music on-demand streaming service

Figure 4.12 illustrates the means for the respondents' preferences towards the different Music on-demand streaming service providers. The results indicated that they preferred *Google Play Movies Music* (mean=4.755) then *Spotify* (mean=3.179) which is followed by *Apple Music* (mean=3.158). *Deezer* (mean=3.009) and *Amazon Music* (mean=2.402) are the two music streaming providers that are less preferred by the respondents.

Figure 4.13 address Section B, Question 20 to 23 which focused the sources the Generation Y students' use to access the Internet.

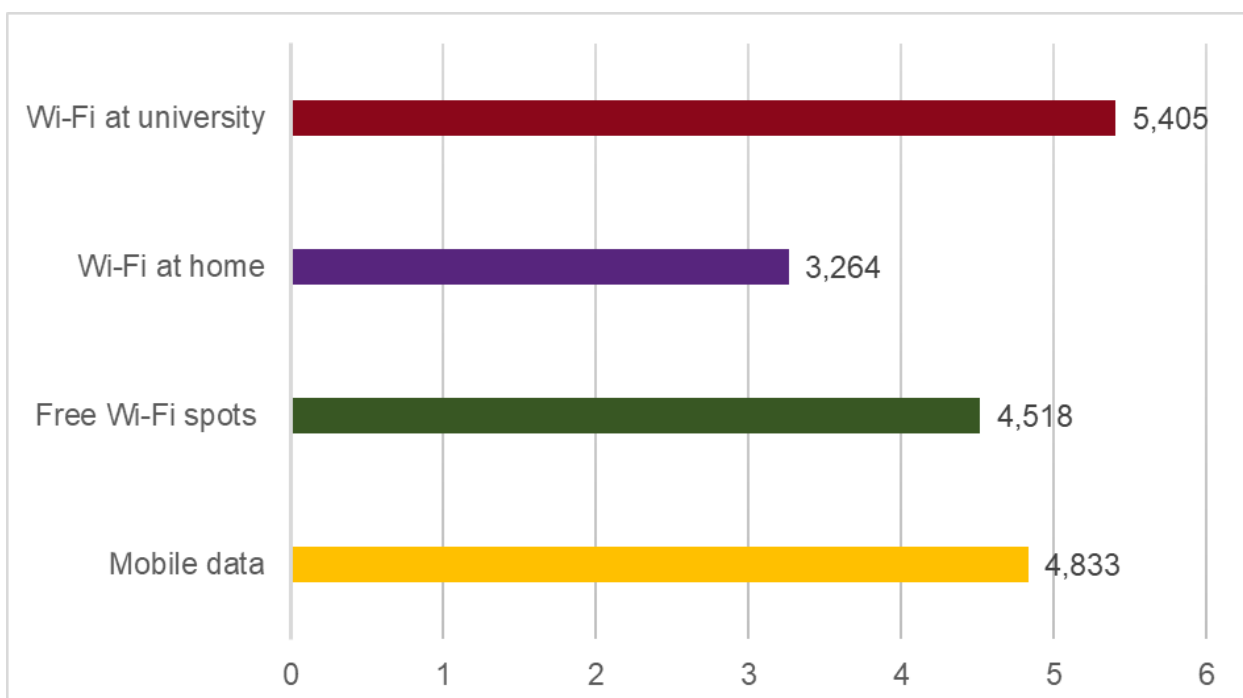


Figure 4-13: Sources use to access the Internet

Figure 4.13 shows the mean for each of the sources used to access the Internet. Respondents indicated that they use the Wi-Fi at the university the most (mean=5.405) followed by mobile data (mean=4.833) and free Wi-Fi spots (mean=4.518). Wi-Fi at home (mean=3.264) is the source which is used less.

The following section discusses the correlation analysis that was performed to establish if the relationships between the hypothesised constructs of on-demand streaming services adoption were significant.

4.9 CORRELATION ANALYSIS

According to Malhotra (2010:321,565), a correlation matrix is a practical method to use for asserting nomological validity of a proposed structural model. For this study, the Pearson's Product-Movement correlation coefficient was used to construct the correlation matrix.

Table 4.6 reports on the correlation between the different constructs used within the model

Table 4-6: Correlation matrix

Constructs	1	2	3	4	5
1. Attitude towards	1				
2. Subjective Norms	0.573**	1			
3. Perceived Ease of Use	0.615**	0.508**	1		
4. Intention to use	0.649**	0.562**	0.550**	1	
5. Perceived usefulness	0.618**	0.506**	0.605**	0.733**	1

**Correlation is significant at the 0.01 level (2-tailed)

Table 4.6 exhibits significant positive correlation between each construct, at a significance level of $\alpha=0.01$. Nomological validity of the proposed model is proven; therefore, it is fit for structural equation modelling (SEM).

The following section consists of hypotheses being tested using structural equation modelling and a two independent-samples t-test.

4.10 HYPOTHESIS TESTING

The hypothesis testing in this study, was applied in correlation with the empirical objectives outlined (Chapter1), the literature reviewed (Chapter 2), and the observed significant positive

relationships calculated in Chapter 4. A significance level of $\alpha=0.01$ was used. The following hypotheses were formulated:

- H₀₁ - Drivers of on-demand subscription streaming service adoption is not a five-factor structure comprising perceived usefulness, perceived ease of use, subjective norms, attitude, and intention to use.
- H_{a1} - Drivers of on-demand subscription streaming service adoption is a five-factor structure comprising perceived usefulness, perceived ease of use, subjective norms, attitude, and intention to use.
- H₀₂ - Perceived usefulness does not positively influence Generation Y students' attitude towards on-demand subscription streaming service.
- H_{a2} - Perceived usefulness does positively influence Generation Y students' attitude towards on-demand subscription streaming service.
- H₀₃ - Perceived ease of use does not positively influence Generation Y students' attitude towards on-demand subscription streaming service.
- H_{a3} - Perceived ease of use does positively influence Generation Y students' attitude towards on-demand subscription streaming service.
- H₀₄ - Subjective norms do not positively influence Generation Y students' attitude towards on-demand subscription streaming service.
- H_{a4} - Subjective norms do positively influence Generation Y students' attitude towards on-demand subscription streaming service.
- H₀₅ - Attitude does not positively influence intentions to use of Generation Y students towards on-demand subscription streaming service.
- H_{a5} - Attitude does positively influence intention to use intentions of Generation Y students towards on-demand subscription streaming service.
- H₀₆ - There is no difference between male and female Generation Y students' perceived usefulness, perceived ease of use, subjective norms, attitude, and intention to use concerning on-demand subscription streaming service

H_{a6} - There is a difference between male and female Generation Y students' perceived usefulness, perceived ease of use, subjective norms, attitude, and intention to use concerning on-demand subscription streaming service.

The following section (Section 4.11) explains the structural equation modelling used within this study.

4.11 STRUCTURAL EQUATION MODELLING (SEM)

This section explains the process followed to conduct SEM in order to test the formulated hypotheses, H_{o1} to H_{o5}.

4.11.1 Measurement model specification

The hypothesised measurement model to be tested in correlation with the literature review is a five-factor structure which includes the following latent variables: perceived usefulness (F1) (six indicators), perceived ease of use (F2) (four indicators), attitude (F3) (four indicators), subjective norms (F4) (four indicators), behaviour intention (F5) (four indicators).

The hypothesised measurement model is specified in Figure 4.14.

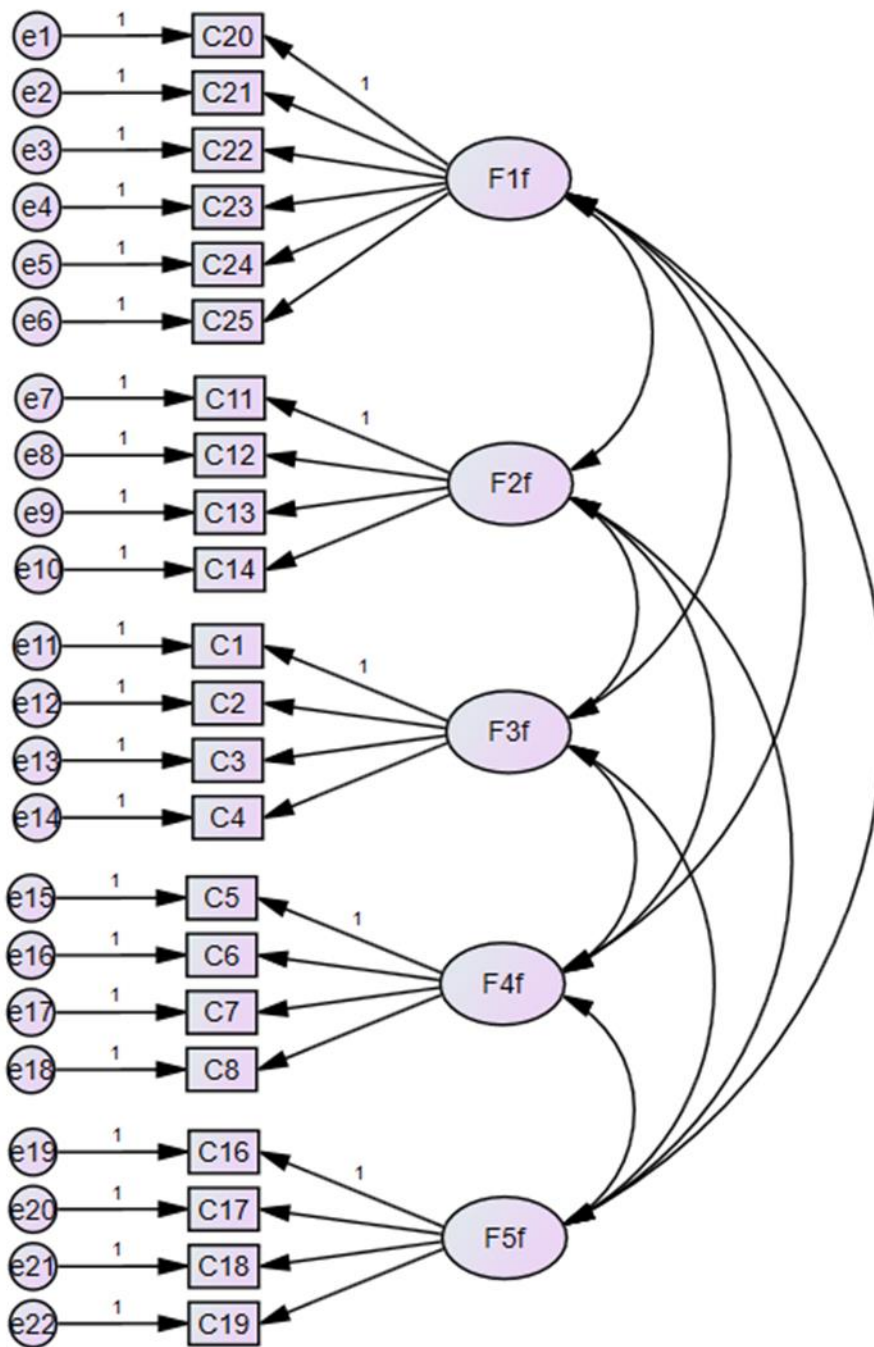


Figure 4-14: Specified measurement model

F1 = Perceived usefulness; F2 = Perceived ease of use; F3 = Attitude towards; F4 = Subjective Norms; F5 = Intention to use.

For model identification purposes, the first loading of all five factors was fixed at 1.0. There are 253 distinct sample moments and 54 parameters to estimate, which leave 199 degrees of freedom (df) based on the over-identified model, and a chi-square value of 577.539 with a probability level equal to $p=0.000<0.01$. The measurement model was evaluated for any problematic estimates

by looking at the standardised factor loadings and error variance estimates. Hair *et al.* (2014:618) suggest that negative error variances must be avoided. Factors loadings should be above 0.50, whereas values below -1.0 or above 1.0 should be avoided. The standardised coefficients of the measurement model are presented in Table 4.7.

Table 4-7: Standardised coefficients of the measurement model

Latent factors	Constructs	Indicators	Factor loadings		Error variance
F1	Perceived usefulness	C20	0.772	+	0.596
		C21	0.807	+	0.652
		C22	0.751	+	0.563
		C23	0.864	+	0.747
		C24	0.849	+	0.721
		C25	0.829	+	0.687
F2	Perceived ease of use	C11	0.708	+	0.502
		C12	0.816	+	0.666
		C13	0.870	+	0.758
		C14	0.696	+	0.485
F3	Attitude	C1	0.895	+	0.802
		C2	0.869	+	0.755
		C3	0.824	+	0.680
		C4	0.726	+	0.527
F4	Subjective Norms	C5	0.615	+	0.378
		C6	0.784	+	0.615
		C7	0.749	+	0.561
		C8	0.716	+	0.513
F5	Intention to use	C16	0.809	+	0.654
		C17	0.832	+	0.693
		C18	0.721	+	0.520
		C19	0.767	+	0.588

Table 4.7 indicates that all the item loadings were above the 0.5 level, with no factor loadings above 1.0 or below -1.0. Furthermore, there is no evidence of any negative error variances.

Within this study, the model fit was measured by using absolute fit indices of the chi-square, the standardised root mean residual (SRMR), the root mean square of approximation (RMSEA), the incremental fit index (IFI), the comparative fit index (CFI), and the Tucker-Lewis index (TLI). The model presented an acceptable chi-square value of 577.539 with 199 degrees of freedom.

Furthermore, SRMR=0.0442, RMSEA=0.067, IFI=0.940, CFI=0.939, and TLI=0.929 the presented an acceptable degree of fit between the measurement model and the data.

The following section asses the reliability and validity of the measurement model.

4.11.2 Reliability and validity of the measurement model

It is important to determine the reliability and validity of the scales used to formulate the drivers of the measurement model for on-demand streaming subscription service adoption. Hence, CR, AVE, Cronbach's alpha coefficient, average inter-item correlation, and the correlation coefficients were calculated to establish the reliability and validity of the scales. Table 4.8 exhibits the results of the CR, AVE, the square root of the AVE, Cronbach's alpha coefficient, average inter-item correlation and the correlation coefficients.

Table 4-8: Measurement model: construct reliability, average variance extracted and correlation matrix

	CR	AVE	$\sqrt{\text{AVE}}$	Cronbach's Alpha <i>a</i>	Average inter-item correlation	1	2	3	4
Subjective Norms	0.81	0.52	0.72	0.802	0.510				
Perceived usefulness	0.92	0.66	0.81	0.919	0.659	0.58			
Perceived ease of use	0.86	0.60	0.78	0.852	0.594	0.60	0.67		
Attitude	0.90	0.69	0.83	0.896	0.681	0.65	0.66	0.68	
Intention to use	0.86	0.61	0.78	0.861	0.612	0.66	0.82	0.64	0.72

As shown in Table 4.8, all CR values of the factors are above the recommended cut-off level of 0.70; thus, demonstrating the reliability of the constructs. Furthermore, all AVE values calculated were above the 0.50 level, which is an indication of convergent validity (Hair *et al.*, 2014:632-633). The correlation coefficients of all the constructs were smaller than the square root of the AVE, thus indicating discriminant validity. (Hair *et al.*, 2014:633).

Additionally, all the factors' Cronbach's alpha values ranged from 0.802 to 0.919, exceeding the recommended level of 0.70 (George & Mallery, 2016:240), thus demonstrating satisfactory internal-consistency reliability. For an average inter-item correlation value to be considered as valid, the value must be above 0.3 (Aluko & Odularu, 2013:17). Albeit that the average inter-item correlation for this study varies from 0.510 to 0.681, the constructs were considered reliable grounded on the Cronbach's alpha values and an average inter-item correlation of ~0.6, which is still considered acceptable as advocated by several authors (Myburgh *et al.*, 2014:124; Katamba, 2010:22; Llego-Canceko *et al.*, 2009:65). As mentioned by Felton (2008:40), when items measure the same concepts, high average inter-item correlation values suggests a strong relationship among the items (Pallant, 2013:104).

In brief, the specified measurement model demonstrates acceptable levels of reliability, convergent validity, discriminant validity, and exhibits an acceptable model fit. Based on this evidence, the null hypothesis, H_{o1} , should be rejected and the alternate hypothesis, H_{a1} , be accepted. This suggests that the drivers of on-demand subscription streaming service adoption can be considered to be a five-factor structure.

The hypothesised structural model will be presented in the next section.

4.11.3 Structural model

The structural model was utilised to test the hypotheses H_{o2} to H_{o5} . It was hypothesised that perceived usefulness (F1), perceived ease of use (F2), and subjective norms (F4) have a direct positive influence on attitude (F3). Lastly, it was hypothesised that attitude (F3) has a direct positive influence on intention to use (F5).

Figure 4.15 illustrates the structural model's regression path estimates. The complete diagram is in Annexure B.

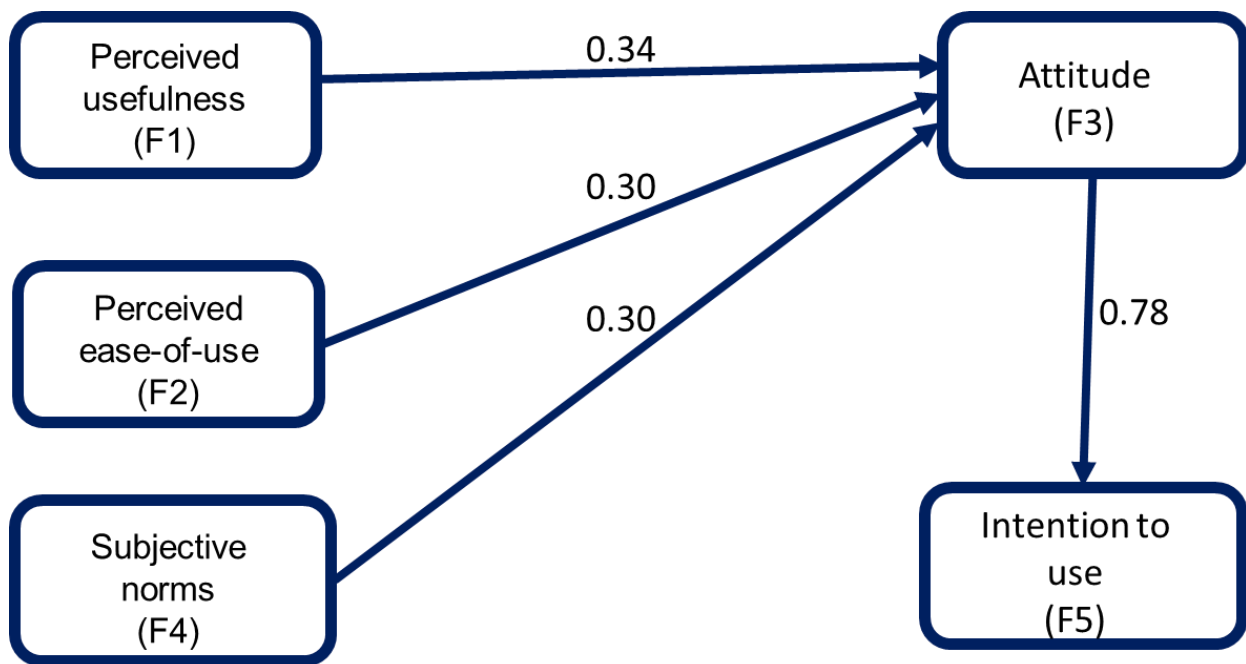


Figure 4-15: Structural Model

The structural model presented a problematic chi-square value of 712.163 with 202 degrees of freedom at a probability level of $p=0.000<0.01$. This could be expected based on the large sample size. Although, the model computed acceptable model fit indices of $SRMR=0.0721$, $RMSEA=0.077$, $IFI=0.918$, $CFI=0.918$, and $TLI=0.906$.

The outcomes from the structural model revealed that perceived usefulness (F1) ($p=0.000<0.01$), perceived ease of use (F2) ($p=0.000<0.01$), and subjective norms (F4) ($p=0.000<0.01$) showed a direct positive significant influence towards attitude (F3). As such, null hypotheses H_{02} , H_{03} , and H_{04} may be rejected and their alternate hypotheses concluded. Similarly, attitude (F3) ($p=0.000<0.01$) has a significant positive impact on intention to use (F5). This infers that null hypothesis H_{05} can be rejected and the alternate hypothesis H_{a5} concluded. In summation, Generation Y students' attitudes towards on-demand streaming services are being influenced by the perceived usefulness, perceived ease of use of the services, and by subjective norms. In turn, their attitudes towards this service have a direct influence on the intention to use these services.

The following section discuss the outcome of the two independent-samples t-test.

4.12 TWO INDEPENDENT-SAMPLE T-TEST

This study utilised a two independent-samples t-test to establish if there are any significant differences between the male and female respondents. The significance level was set at 0.01 to test the magnitude of the differences.

Table 4.9 present the mean, standard deviation, t-statistic, and p-value for the genders regarding all five factors.

Table 4-9: Gender Difference

	Female Mean N= 248	Female Std. Dev	Male Mean N= 177	Male Std. Dev	t-value	p-value	Cohen's D
Attitude towards	4,7712	1,00772	4,7302	1,0598	0.404	0.274	****
Subjective norms	4,1361	1,10592	4,0523	1,10256	0.771	0.901	****
Perceived ease of use	4,6683	0.99855	4,6229	0.92784	0.476	0.991	****
Intention to use	4,626	1,07605	4,7034	0.97753	-0.759	0.494	****
Perceived usefulness	4,8488	1,05264	4,7947	0.92911	0.548	0.103	****

**** Cohen's D-statistic not calculated as the variable was not statistically significant

As indicated in Table 4.9, there was no statistically significant difference between male and female respondents considering their attitudes and intentions to use, subjective norms, perceived ease of use, and perceived usefulness to on-demand streaming services. Therefore, the null hypothesis H_{06} is rejected and the alternate hypothesis H_{a6} accepted.

The following section conclude with a brief synopsis of this chapter.

4.13 SYNOPSIS

This chapter analysed the empirical findings of the study. The pilot testing results (Section 4.2) explained the results from the pilot test as well as the interpretation thereof. Section 4.3 outlined how and from whom the data were gathered. Followed by a summary of the preliminary data analysis which comprises the coding, data cleaning, and the tabulation of variables in Section 4.4. Demographic analysis (Section 4.5) was used to explain and illustrate demographic attributes of the sample used.

Section 4.6 showed the exploratory factor analysis, while Section 4.7 provides a summary of the descriptive statistics of the data set in which skewness and kurtosis were measured. Section 4.8 focused the preference of Generation Y students towards streaming services. Section 4.9 present

a correlation matrix with the results of nomological validity of the measuring scales by using Pearson's Product-Movement correlation coefficients.

Hypotheses were specified in Section 4.10 and tested through SEM in Section 4.11. The two independent-samples t-test in Section 4.12 showed that there were no significant differences between male and female students' who participated in the study.

Chapter 5, presents the findings, recommendations, and concluding remarks of this study.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The entertainment industry has started to shift towards digital media, causing individuals to move away from the traditional mediums (cable television and CDs) and towards streaming services which offer unlimited entertainment. Streaming services provide users with music and movies anywhere, anytime, through internet connection or streaming applications. These services provide innovative opportunities for marketers to advertise within these service applications, which enables them to reach their target markets in new and creative ways.

Streaming is one of the fastest-growing media markets in South Africa, disrupting the traditional broadcasting model (Cornwell, 2018). The streaming industry offers flexibility and comfort at more affordable prices that cannot be offered by traditional television providers. These factors contribute to the motion of South Africans cancelling their television subscriptions in favour of subscribing to a streaming service (ITNews Africa, 2018). It is evident that streaming in South Africa is a lucrative industry, as the current revenue for 2018 in the video-on-demand segment amounts to US\$22 million and for the music on-demand streaming segment it amounts to US\$18 million in 2018 (Statista, 2018).

Generation Y makes up a sizable portion of the world's population. Generation Y accounts for 25 percent of South Africa's population, with 78 percent of this cohort being subscribed to a video-on-demand streaming service as well as being responsible for 72 percent of weekly *Spotify* streams (Nielsen, 2016A; Shilts, 2017). The likelihood of Generation Y to adopt technological innovations at a fast pace makes them preferable for technological studies.

The primary objective of this study was to determine South African Generation Y students' attitude and intention to use on-demand streaming services. Understanding the drivers of on-demand streaming service adoption of this generation could help marketers to better aim future marketing strategies at this cohort.

The aim of this chapter is to give a brief overview of the study. The main findings of the empirical portion of the study will be analysed followed by its contributions. The recommendations, limitations, and future research opportunities will be outlined. Lastly, the chapter will conclude with brief remarks of the study.

5.2 OVERVIEW OF STUDY

This section will briefly address the previous four chapters to form a broad overview.

Chapter 1 introduced the topic of on-demand streaming services and outlined the current driving factors influencing the adoption of these services (Section 1.1). The problem statement, in Section 1.2, emphasises the need for undertaking this study within the South African context which culminated in the formulation of the primary objective as outlined in Section 1.3.1. Subsequently, the primary objective was fragmented into six theoretical (Section 1.3.2) and eight empirical objectives (Section 1.3.3). The hypotheses formulated for the study was comprised in Section 1.4. The proposed research design and methodology was summarized in Section 1.5, followed by Section 1.6 explaining the ethical considerations. Lastly, Section 1.7 outlined the chapter classifications.

Chapter 2 comprised a literature review on on-demand streaming services. Accordingly, this chapter started by defining entertainment (Section 2.2) and gave a brief overview of the origin thereof (Section 2.2.1), focusing on the origin of music (Section 2.2.2) and television (Section 2.2.3) as part of the entertainment industry. Section 2.3 contained a comprehensive review on on-demand streaming service. The definition of streaming services was presented in Section 2.3.1, followed by the origin of those services in Section 2.3.2. Section 2.3.3 provided an overview of the current landscape of streaming services. Furthermore, the streaming services trending within South Africa were discussed in Section 2.3.4 with their origin, features, and prices highlighted. The two different options within streaming services were explained in Section 2.4; namely, ad-supported and subscription-based on-demand streaming services in relation to marketing potential.

Factors that influence the use of on-demand streaming services were discussed in Section 2.4. The continuous technological advancements encouraged researchers to study various theories of consumer adoption to obtain comprehensive understanding of consumers' attitude and behavioural intentions. Section 2.4.1 discussed the technology acceptance model theory followed by the influence of subjective norms in Section 2.4.2. The diffusion of innovation was explained in Section 2.4.3, followed by consumer adoption categories in Section 2.4.3.1. In Section 2.4.3.2, the factors that influence the diffusion process of streaming services were discussed. Finally, Section 2.5 reviewed the literature on the Generation Y cohort, and provided insight to marketing for this generation.

Chapter 3 focus on the research design and methodology followed in the empirical portion of this study. In Section 3.2 research design was discussed, whereby a descriptive single cross-sectional

research design was undertaken. Section 3.3 outlined the research approach employed, namely, quantitative research. The sampling strategy was discussed in Section 3.4 and comprised the following items: A non- probability convenience sample of 500 full-time Generation Y students registered at two South African HEIs was selected (Section 3.4.1 and Section 3.4.3); the two universities selected were in Gauteng - one traditional university and one university of technology (Section 3.4.2); the sample size of similar studies previously conducted (Section 3.4.4). The sample size of this study fell within the perimeter required to conduct SEM. The data collection method was detailed in Section 3.5. Structured questions using a six-point Likert scale was used as the questionnaire format (Section 3.5.1). Section 3.5.2 addressed the questionnaire's content and layout, and Section 3.5.3 described the pre-testing and pilot testing. This was followed by a discussion on the administration of the questionnaire (Section 3.6). A review of the data preparation was done in Section 3.7 and the statistical analysis utilised in the study was addressed in Section 3.8. Consequently, factor analysis (Section 3.9), reliability (Section 3.10), and validity (Section 3.11) were discussed. Furthermore, the correlation analysis (Section 3.12), structural equation modelling (Section 3.13), two independent-sample t-test (Section 3.14) were covered and the chapter concluded with Section 3.15 discussing the practical significance.

The empirical findings of the study are presented in Chapter 4. The pilot test results were presented in Section 4.2. The data gathering process was discussed in Section 4.3, the summary of the preliminary data analysis followed which involves coding, data cleaning, and tabulation (Section 4.4). The sample demographic characteristics were outlined in Section 4.5, followed by the EFA results in Section 4.6, descriptive statistics in Section 4.7, and preferences towards streaming services in Section 4.8. Furthermore, Section 4.9 presented a detailed the correlation analysis. Section 4.10 focused on hypotheses and Section 4.11 on SEM. Lastly, the two independent-samples t-test results were presented in Section 4.12.

5.3 MAIN FINDINGS OF THE STUDY

This section services to highlight the main findings of the study in accordance with the empirical objectives set out in Chapter 1, Section 1.3.

In accordance with the literature, an EFA was conducted in Section 4.6 which specified five-factors for extraction, namely, perceived usefulness, perceived ease of use, attitude, subjective norms, and intention to use. These five factors explained 71.52 percent of total variance.

The first empirical objective was to determine Generation Y students' preferences towards music and video-on-demand streaming services. Section 4.8 showed that students preferred listening

to music and watching movies and TV series. The most preferred streaming services amongst the students was *Google Play Movies and TV* as well as *Google Play Music*.

The second empirical objective was to determine Generation Y students' attitudes towards music and video-on-demand streaming services. Section 4.7 showed that Generation Y students had a positive attitude towards streaming services and perceived these services fun, therefore they were more inclined to use them. Additionally, Section 4.11 indicates that Generation Y students' attitudes towards on-demand streaming services are being influenced by their perception of effortlessness and benefits of the systems, as well as the opinions and recommendations of their family and friends.

The third empirical objective determined Generation Y students' perceived usefulness of on-demand streaming services. Section 4.7 indicated that Generation Y students perceived streaming services to be useful because they keep them informed about the latest movie and music releases. Section 4.11 presented that the individuals' perception of the usefulness of the services has a significant influence on their attitude towards the streaming services.

The fourth empirical objective determined Generation Y students' perceived ease of use of on-demand streaming services. Section 4.7 showed that Generation Y students perceive streaming services as easy to use as they are easy to master.

The fifth empirical objective determined whether Generation Y students' subjective norms influence their attitude and intention to use the services. Section 4.7 indicates that the mean value (mean=4.10) for subjective norms are the lowest amongst the other four constructs, which suggest that the opinions of family, friends or social media are not the make-or-break factor influencing their attitude towards streaming services. Although, in the responses, they did indicate that their family and friends are using streaming services.

The sixth empirical objective determined Generation Y students' intentions to use on-demand streaming services. Section 4.7 showed that Generation Y students portray a positive intention to use on-demand streaming services, especially for watching video content in the future.

The seventh empirical objective was to determine whether subjective norms, perceived usefulness, perceived ease of use, and attitude influence Generation Y students' intention to use on-demand streaming services. Section 4.10.2 indicated a satisfactory internal-consistency reliability as the Cronbach's alpha values computed greater than 0.70. In Section 4.8 correlation analysis was performed to determine the nomological validity. The results showed positive significant correlations between each of the corresponding constructs, set at a significance level of $\alpha=0.01$, providing sufficient evidence of nomological validity. As such, SEM was deemed

appropriate. SEM was conducted to determine a proposed model of Generation Y students' drivers to adopt on-demand streaming services. The measurement model comprised five factors namely subjective norms, perceived usefulness, perceived ease of use, attitude, and intention to use. In Section 4.10.1 the model fit was assessed using the chi-square, RMSEA, GFI, IFI, CFI and TLI and was found to be fit. Furthermore, composite reliability, convergent validity, and discriminant validity indicated satisfactory results in the measurement model (Section 4.10.2). In Section 4.10.3 a structural model was built from the measurement model in order to test the hypothesis set out in Section 4.10. The Structural Model (Section 4.10.3) showed that perceived usefulness (F1), perceived ease of use (F2), and subjective norms (F4), all displayed a direct influence towards attitude (F3). Thereafter, attitude (F3) had a direct positive impact on intention to use (F5). The findings are in accordance with previous studies (Park & Smith, 2007:203; Dörr *et al.* 2013; Ho & Yang, 2015; Pal & Triyason, 2017; Helkkula, 2016).

Figure 5.1 present the proposed model derived from the results mentioned above. This model explains the factors influencing on-demand streaming services adoption amongst Generation Y students in South Africa.

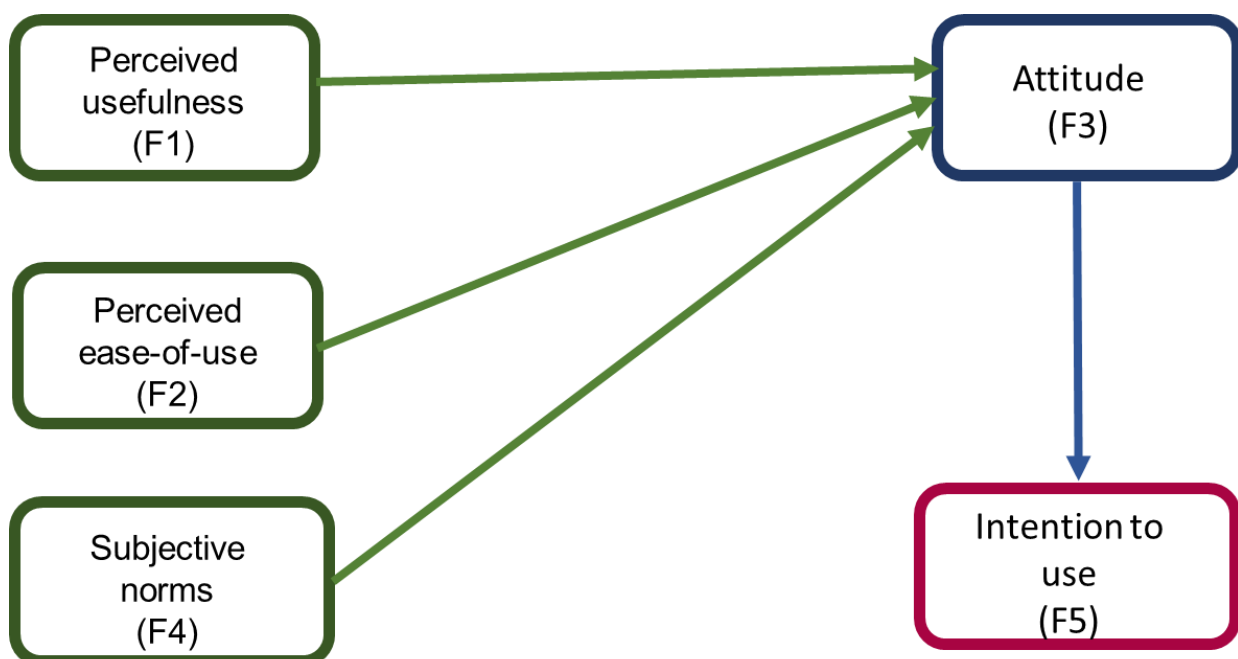


Figure 4-1: Drivers of on-demand streaming service adoption amongst Generation Y students in South Africa

The last empirical objective was to determine whether male and female Generation Y students differ in on-demand streaming services adoption. A two independent-samples t-test was conducted and the significance level was set at 0.01 ($\alpha=0.01$) (Section 4.12). The results indicated that there is no statistically significant difference between male and female Generation Y students

with regards to subjective norms, perceived usefulness, perceived ease of use, attitude, and intention to use on-demand streaming services.

5.4 CONTRIBUTIONS OF THE STUDY

This study examined Generation Y students' attitudes towards on-demand streaming services and the adoption thereof, as there is an absence of available literature focusing on understanding consumer attitude and behaviour towards on-demand streaming in the South African context. Since it is still a relatively new service within the South African market, insight gained from this study contributes data to the South African streaming services sphere, specifically Generation Y students' behaviour and attitudes towards on-demand streaming services. These findings will help the streaming service industry to successfully govern the current transition from traditional to digital, as well as gain market share amongst the considerably large Generation Y market segment in South Africa.

The recommendations made in the following section may facilitate marketers and streaming service providers, improving their product offerings and marketing campaigns.

5.5 RECOMMENDATIONS

The recommendations made in this section are based on the literature review and the empirical findings of this study to determine whether Generation Y students were adopting on-demand streaming services.

Generation Y students presented positive attitudes and intention to use towards on-demand streaming services. This cohort is a good target market for the marketers of streaming services to pursue, as this generational is tech-savvy, tend to be early adopters of technological advancements, and account for a significant portion of the South African population.

Respondents in this study displayed a positive attitude towards on-demand streaming services and were inclined to listen to music, watch movies and television series. Additionally, the results of this study presented that *Google Play Music* and *Google Play Movies and TV* are the preferred streaming service. These services provide content from 28 different streaming companies integrated into their library and individuals do not have to pay monthly subscription fees; instead, they pay for each item they watch or play. Other service providers should consider taking a similar approach to attract consumers from this cohort.

Respondents indicated that they tend to use the Wi-Fi at the university or their mobile data. With no concrete evidence, but a conclusion drawn from this study, it seems that not having internet access and high data rates are factors which influence the users' ability to use the service to full

capacity. Research has shown that the internet penetration in South Africa recorded in January 2018 is 54 percent, and 51 percent is comprised by internet access through mobile devices (Matangira, 2018). With the data rates in South Africa being notoriously expensive, streaming service providers could focus on a strategy to collaborate with telecommunication service providers and offer a combined service in a way that appeals to Generation Y students. As data and internet connection are crucial for streaming services, individuals need to have access to the Internet to be able to use these services or to download content to the platform's application for offline usage.

Recommendation 1: Marketers and streaming service providers could actively pursue this cohort by using digital marketing methods, as Generation Y is known to be apprehensive towards traditional marketing methods. Marketers could market streaming services by making use of interactive campaigns. Streaming services can promote their relative advantage compared to cable television by making comparisons especially with the fact that cable television is a one-size-fits all experience. They could illustrate the simplicity of their products with "how-to" guides via interactive video clips and the usefulness by focusing on the personalised playlist and movies to watch next based on the user's preference.

Recommendation 2: If marketers target the Generation Y students, the probability of influencing a bigger portion of the Generation Y segment is increased. The behaviour of the individuals in the Generation Y cohort is influenced by subjective norms (family, friends & social media). As such, marketers can make use of influencer marketing on social media channels, where they could approach already existing customers, bloggers, and trendsetters within different communities to act as opinion leaders for their service.

Recommendation 3: Once students get their degree, they are more likely to become trendsetters and opinion leaders within their communities. These influencers should be granted full access to the platform and get notified on any new features or content as it becomes available. This will allow them to create content and make recommendations to their followers regarding the new content or feature. Individuals tend to trust influencers as they only give their honest opinion.

Recommendation 4: Marketers can also incorporate family and friends into their marketing strategies. Streaming service providers could make use of a reward system: If a user writes a review or refers a friend or family member to subscribe or to use the free trial period offered by the service, then a certain percentage discount or access to a special feature on the service can be granted. This will increase word-of-mouth communication that will persuade individuals to try the product.

Within the study, only differences between gender were investigated and no differences between male and female respondents were found. Therefore, streaming services marketing strategies should appeal to both genders equally.

5.6 LIMITATIONS AND FUTURE RESEARCH OPPORTUNITIES

This study determined Generation Y students' attitude towards on-demand streaming services. This study had certain limitations that may lay the groundwork for future research opportunities.

Within this study the non-probability technique, convenience sampling, was utilized due to budget constraints. The study was conducted on Generation Y students in Gauteng. Although the results indicated that the sample represented seven of the nine provinces in South Africa, caution should be taken in generalising the results to the entire target population. Further studies might consider performing a wider scale study across all the provinces or larger samples, to obtain a more comprehensive understanding of the Generation Y students' attitudes and behaviours towards on-demand streaming services. Furthermore, opportunities exist to study non-student members who are a part of other generational cohorts, concerning their attitude and behaviour intention towards on-demand streaming services.

Additionally, a single cross-sectional research design was used for this study. By contrast, a longitudinal is a recommended approach for future research as the antecedents that influence these dimensions may change over time and in response to situational factors.

As this study only concentrated on constructs such as attitude, intention to use, perceive usefulness, ease of use, and subjective norms, further research studies could include different constructs of on-demand streaming services adoption which were not covered in this study. Additionally, determining what influences Generation Y's attitude towards on-demand streaming services. Further studies can focus on attitude and behaviour intention towards ad-supported streaming services.

Lastly, this study did only investigate differences based on the sample's gender. Future research studies could explore differences based on the sample's ethnic group, income, age, and level of education. Podcasting as on-demand streaming service, can also be included in further studies.

5.7 CONCLUSION

The literature within this study is a clear indication that streaming services are taking over the entertainment industry. The growth in the streaming service industry increases competitiveness between the different streaming service providers. Consequently, for the service providers to be successful, they should attract subscribers through distinguishing factors such as competitive

advantages in their marketing strategies. To obtain a competitive advantage, marketers and service providers should know what their potential target market's wants, and needs are and then develop their marketing strategies accordingly.

The youth are considered to be the current trendsetters within the market, influencing not only consumer behaviour within their generational cohort but consumer behaviour in general. Therefore, it is important for marketers to know the factors influencing Generation Y consumers' attitude and intention to use on-demand streaming services

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ANNEXURE A: QUESTIONNAIRE



South African Generation Y students' attitude towards on-demand streaming services.

Dear Student,

My name is Marinda van der Merwe I am currently registered as a full-time student, pursuing a Master's degree in Marketing Management at the North-West University (Vaal Triangle Campus), and I am currently working towards my dissertation under the supervision of Dr. R Müller and Prof. A.L. Bevan-Dye.

The purpose of this study is to investigate the attitude of Generation Y students towards on-demand streaming services such as Netflix, Showmax, Apple music, Spotify and Google play music.

Please assist me by completing the attached questionnaire. The questionnaire is user-friendly and should take approximately 10 minutes to complete. All responses are confidential, and the results will only be used for research purposes, outlined in the form of statistical data.

Thank you for your important contribution towards this study.

Marinda van der Merwe
North-West University
082 042 5206
marinda.debeer@yahoo.com

Streaming Services

The term is described as a service where the subscriber requests information such as a song or video, and the server delivers the requested information in real time as it is based on streaming technology. Streaming services are a more convenient version of the physical video and music stores. Examples include Netflix, Showmax, Apple music, Spotify and Google play music.

Questionnaire

Section A: Demographical information

Please mark each question with a cross (X) in the appropriate box.

A1.	Province of origin:	Eastern Cape	Free State	Gauteng	KwaZulu-Natal
		Limpopo	Mpumalanga	Northern Cape	North West
					Western Cape

A2.	Name of institution:	Traditional University	University of Technology
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A3.	Current year of study:	1st year	2nd year	3rd year	4th year	Post graduate
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A4.	Gender:	Female	Male
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A5.	Race:	African/black	Coloured	Indian/Asian	White
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A6.	First language:			Afrikaans	English	IsiNdebele
	IsiXhosa	IsiZulu	Sepedi	Sesotho	Setswana	SiSwati
	Tshivenda	Xitsonga	Other (Please specify):			

A7.	Age at your last birthday:								
	<18	18	19	20	21	22	23	24	24<

A8.	Source of income:	Parents/Guardian	Sponsor/Corporate	Government
	Other (Please specify):		Employment	Bursary

A9.	Place of accommodation:	RESS	Own flat/house	Parents/Guardian
	Other (Please specify):			Student Home

SECTION B:

Please mark the appropriate box with a cross (X).

My hobbies include:		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
B1.	Watching series	1	2	3	4	5	6
B2.	Watching movies	1	2	3	4	5	6
B3.	Listening to music	1	2	3	4	5	6
B4.	Reading	1	2	3	4	5	6
B5.	Gaming	1	2	3	4	5	6
B6.	Other (Please specify):	1	2	3	4	5	6

I prefer to use the following video streaming service:		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
B7.	Amazon Prime Video	1	2	3	4	5	6
B8.	DEOD	1	2	3	4	5	6
B9.	Discover Digital	1	2	3	4	5	6
B10.	Google play movies & TV	1	2	3	4	5	6
B11.	Netflix	1	2	3	4	5	6
B12.	Showmax	1	2	3	4	5	6
B13.	Other (Please specify):	1	2	3	4	5	6

I would prefer to use this music streaming services:		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
B14.	Amazon Music	1	2	3	4	5	6
B15.	Apple Music	1	2	3	4	5	6
B16.	Deezer	1	2	3	4	5	6
B17.	Google play music	1	2	3	4	5	6
B18.	Spotify	1	2	3	4	5	6
B19.	Other (Please specify):	1	2	3	4	5	6

I access the Internet through:		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
B20.	Mobile Data	1	2	3	4	5	6
B21.	Free WIFI spots	1	2	3	4	5	6
B22.	WIFI at home	1	2	3	4	5	6
B23.	WIFI at university	1	2	3	4	5	6
B24.	Other (Please specify):	1	2	3	4	5	6

SECTION C:

Please mark the appropriate box with a cross (X)

		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
C1.	Using streaming services would be a good idea.	1	2	3	4	5	6
C2.	Using streaming services would be beneficial to me.	1	2	3	4	5	6
C3.	Using streaming services would be fun.	1	2	3	4	5	6
C4.	I would like streaming music and video.	1	2	3	4	5	6
C5.	People who influence me use streaming services.	1	2	3	4	5	6
C6.	People in my social group feel positive about streaming services.	1	2	3	4	5	6
C7.	People around me use streaming services.	1	2	3	4	5	6
C8.	People important to me think it is a good idea to use streaming services.	1	2	3	4	5	6
C9.	It will be convenient to use streaming services.	1	2	3	4	5	6
C10.	Streaming services will be easy to use.	1	2	3	4	5	6
C11.	Streaming services are easy to personalise to my preferences.	1	2	3	4	5	6
C12.	It will be easy for me to become skilled at using streaming services.	1	2	3	4	5	6
C13.	It will be easy for me to learn how to operate streaming services.	1	2	3	4	5	6
C14.	Subscribing with streaming services would be clear and understandable.	1	2	3	4	5	6
C15.	I want to experience streaming services.	1	2	3	4	5	6

Please mark the appropriate box with a cross (X)

		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
C16.	I intend to use streaming services to listen music in the future.	1	2	3	4	5	6
C17.	I intend to use streaming services to watch video content in the future.	1	2	3	4	5	6
C18.	Within the next month, I will consider start using streaming services.	1	2	3	4	5	6
C19.	Within the next six months, I intend to use streaming services frequently.	1	2	3	4	5	6
C20.	Streaming services would allow me to be better informed about newly released movies/music.	1	2	3	4	5	6
C21.	Streaming services would help me to decide more easily what I want to watch/listen to.	1	2	3	4	5	6
C22.	Streaming services would save me time.	1	2	3	4	5	6
C23.	Streaming services would be more efficient.	1	2	3	4	5	6
C24.	Streaming services would be more convenient.	1	2	3	4	5	6
C25.	Overall, I think streaming services would be useful.	1	2	3	4	5	6

Thank you!

Ethical clearance number is: ECONIT-2018-09

ANNEXURE B: STRUCTURAL MODEL

