# Understanding Generation Y; An investigation of how Hilton College can use technology for communication.

A half thesis submitted in partial fulfillment of

the requirements for the degree of

MASTER OF BUSINESS ADMINISTRATION

in the

RHODES BUSINESS SCHOOL

By

Richard Clive Wyngaard

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**Integrative Summary.**

## 1. Background to the academic research.

Hilton College is an all boys private school in the Kwa-Zulu Natal Midlands. Since the beginning of 2012 boys have been permitted to carry their phones during the school day,(Thomson, 2012). Wireless internet access was also extended across the campus to allow boys and staff to bring their own devices to class and have access to the internet (Machlachlan, 2012).

In the past, communication between staff and boys was either verbal or through the use of a daily notice, called the Daily Routine Order (DRO). The DRO is placed at the dining room tables each day and boys are expected to check for any notices that may pertain to them. These notices are emailed to a secretary who prints them out and places them in the dining room each day at lunch.

## 2. Objectives to the research.

This research sought to establish whether current communication methods were effective or whether the prevalence of mobile phones and wireless devices had presented the school with a more effective method. It was important therefore, to investigate what devices were on campus, how those devices were used and when they were used. In addition to this, the research sought to establish communication preference among staff and boys.

## 3. Research Methodology.

The research was conducted through the use of a qualitative survey that was conducted among both staff and boys. Staff and boys were surveyed to establish generation, device prevalence, device usage and device preference. This data was collected using an anonymous qualitative survey that was administered through the use of Google docs in the school labs. 187 Boys in

grades 8 and 9 participated in the survey along with 18 staff members. The data was then analysed and compared to data from similar research that had been conducted elsewhere in the world.

Because of significant age differences between boys and staff it was critical to establish whether device usage among staff and boys was tied to their generation. Of particular interest were the device behaviours associated with the Millennial generation, who were born between 1982-2002 (Strauss 2005:10).

This generational 'benchmark' allowed the researcher to compare the Hilton College cohort to those whose device behaviours and usage had occurred and been discussed in generational research elsewhere. It also allowed for certain assumptions to be made about staff and boys based on their generational profile.

## 4. Findings

It was found that staff and boys exhibited communication traits that were consistent with their generation and consistent with other research in this field. It was also found that staff and boys preferred mobile and digital forms of communication over verbal announcements and the DRO system.

For this reason, it was recommended that the Hilton College establish a system that took advantage of technology to improve on communication. Various recommendations were given by the researcher that took advantage of current technologies. These included the use of SMS, Instant Messaging, Social Networks and email. It was also recommended that the school consider prescribing devices that allow for communication between staff and boys.

## 5. Structure of Dissertation

The dissertation contains 3 sections:

Section 1: Academic Paper

The academic paper encapsulates the findings and discussion of the researcher on this topic. It also contains truncated forms of the Literature review and the Research methodology. This section stands alone and presents the requirements of the Rhodes Business School MBA dissertation.

Section 2: Literature review

The literature review sought to establish current research that had taken place within the fields of communications and mobile device usage. The review also investigated generational research and the extent to which age group affected device usage and preference of communication method.

Section 3: Research Methodology

The research methodology outlines the approach taken by the researcher in the design, data collection and method used in the analysis of the data. This section also describes the ethics process followed in conducting research among minors in a high school context.

## 6. References:

GUTHRIE, P. Director of Marketing at Hilton College. **Interview May** 2012.

MACLACHLAN, B, Director of Academic Administration. **Interview May** 2012

THOMSON, G, Headmaster. **Interview June** 2012

STRAUSS, W, 2005 'Talking About Their Generations' **The School Administrator** August 2005.

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*And now to Him who is able to do immeasurably more than we could ask or imagine….' Ephesians 3:20.* `

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## Section 1. – ACADEMIC PAPER

### 1.1 Abstract / Executive Summary

Definitions:

**Generations-** Due to the fact that different authors use different names for the generations; Generation Y, Net Generation and Millennials are used interchangeably and refer to the current generation born between 1982 and 2000. Hilton College boys in the sample born from 1997-1999 would therefore fall into this generation.

**BBM** – Refers to Blackberry Messenger a subscription service available on all blackberry phones enabling 'free' text covered by a monthly subscription.

**WhatsAPP** – Refers to a subscription service available on all smartphones that enables 'free' text covered by an annual subscription.

This study investigates the role that technology has played in the lives of young people at Hilton College in particular, it focuses on the influence that technology has had on communication at a Hilton College in Kwa-Zulu Natal, South Africa.

The study will take into consideration the role cellular phones and tablet devices have had on both student and staff communication in an all-boys private school context. In addition to this, Generational Theory, which assigns certain traits to successive generations, will be used to investigate the way in which different generations communicate. It will focus on how these generations use technology and in what context it is used.

The introduction of Nokia's 9000 *communicator* as well as BlackBerry's first *smartphones* in 1999 gave rise to a new era in portable communication. At

first this had a major impact on business, but in more recent times this technology has become available to teenagers and young adults. Almost a decade later Apple's *iPhone (2007)* and Samsung's *Galaxy (2010)* brought total portability to technology that was only available in desktops in the 1990's.

The release of *Blackberry Messenger* (BBM) in 2006 as well as *MXit* in 2007 then led to a revolution in instant messaging. This was followed by the release of *WhatsApp* in 2009. Of course desktop computers had long featured instant messaging systems through the use of *Skype, Gchat, MSN* chat and others, but what they did not offer was true portability.

Later the development of Tablet computing became prevalent after the release of Apple's first *iPad* in 2010. Tablets and modern smartphones allowed for portability as well as connectivity across multiple platforms such as email, instant messaging and social networks.

The rise of these 'always on' and 'always connected' devices spawned an entire generation of social networkers, now able to communicate with millions through smartphones and tablets. Networking sites such as MySpace (2003), Facebook (2004) and Twitter (2006) now became highly portable.

Based on a qualitative survey of students and staff, the study reveals the amount of time boys and staff spend on their devices, who they are communicating with, why and when. It also indicates the platform they use to communicate such as email, Instant Message, SMS, email or social network. The role of students' and staff's generation and whether that influences the communication preference and platform is also examined. Finally recommendations are made regarding the use of these technologies by Hilton College based on a best fit having taken the above into consideration.

## 1.2 Introduction

The result of the research will be a survey indicating preference of staff and student choice of communication on a daily basis and the degree and choice of content they use. It also indicates the degree to which Hilton College is tracking international trends in terms of Generation Y communications findings. This enabled the researcher to establish whether Generation Y communication traits are present and also enabled one to make conclusions about the methods of communication advisable for the current generation at Hilton College. Further study may be conceivable across similar schools in order to enable one to generalise about the current communications behaviour of teenagers.

## 1.3 Literature Review

This literature review give a brief review of current communications research and a more in depth look at recent digital communications literature. Research into generational theory will also be mentioned with reference to communication. Communications theory, which is sourced from publications going back to the 1940's, informs much of what we see in this field. It forms the basis of understanding the nature of the communicated message.

Beyond the Literature reviews initial focus on communication, sources were limited to publications later than 2005. This is because prior to 2005, many of the technologies in reference here were still in their infancy.

### 1.3.1 Communication Models

This next section will look at how communication models developed and what the basic theories of communication are.

Shannon (1948) states that "The fundamental problem of communication is

that of reproducing at one point either exactly or approximately a message selected at another point" (Shannon, 1948:3). Shannon's work began the foundation of what was to become communications theory. This was the fundamental problem of communication: What is communicated from one end is not always received in the same manner on the other end.

Contemporaries of Shannon such as Laswell (1948) suggested that the communication process could be defined as "Who (says) What (to) Whom (in) What Channel (with) What Effect." (Laswell, 1948:2). Here, the message, once received, merely had an effect on the receiver, it did not contain the concept of interference.

According to Schramm (1997), effective communication requires common ground to take place. The greater degree of overlap of this common ground, the more significant the communication event. (Schramm, 1997:54),

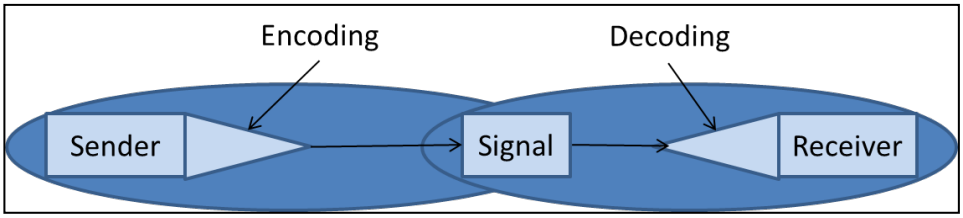


**Figure 1.3-1: Schramms Model of Communication (Croft, 2004:5)**

In reference to Figure 1.3-1 "if the circles have only a small area in common, then it is going to be very difficult to get an intended meaning across" It is critical therefore for "the source to encode in such a way as to make it easy for the destination to tune into the message" (Schramm, 1997:54).

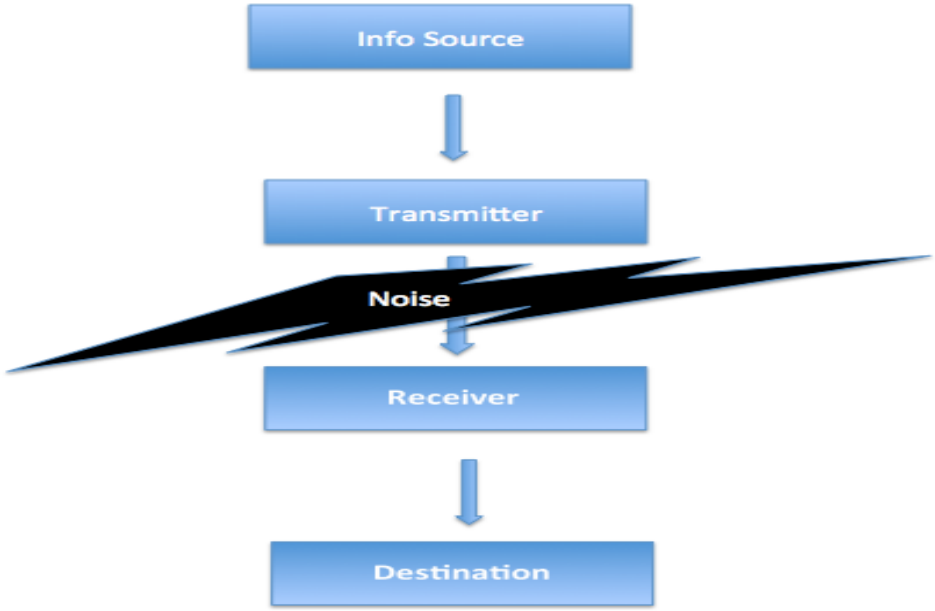


**Figure 1.3-2: Shannon and Weavers model (Croft 2004:5)**

Figure 1.3-2 shows the communication model taken from Shannon and Weaver (1948). In this case the information source, being a natural person, transmits a message through some form of transmitter. This could be through the spoken word, written word, a digital method such as SMS or email. Following the transmission the message is subject to interference, which could be things like cultural difference, age difference and so forth. The message is then put through a receiver such as a computer or cellular phone and arrives at its destination.

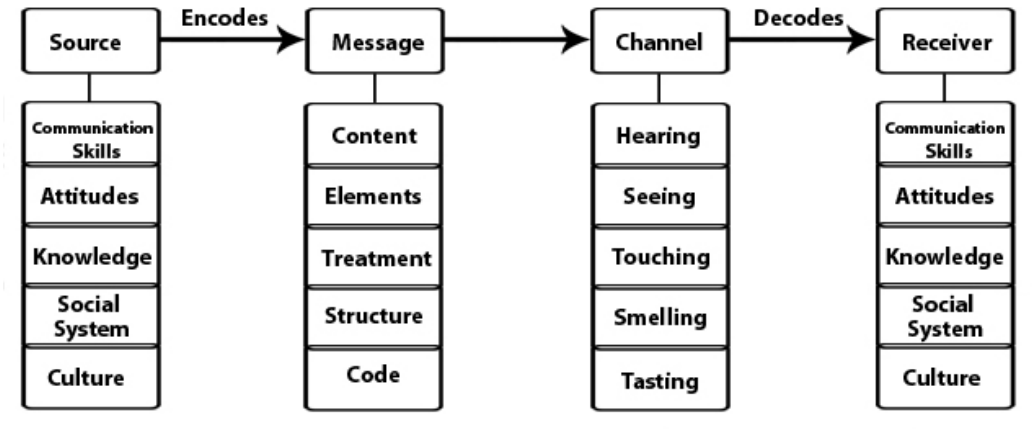


**Figure 1.3-3: Berlo's SMCR Model (1960:21)**

Berlo's view in Figure 1.3-3: Berlo's SMCR Model (1960:21) was that both the source and receiver of communication had various forces exerting influence up them. These forces were things like knowledge, attitude, social system and culture. Each of these forces had an impact on the choice of content, the elements within a message, how that message was treated, the structure of the message and the 'code'; be it language or nuance that affected the message. The receiver in turn decoded the message through various channels, hearing, seeing, touching, smelling and tasting and each of these were influenced by the aforementioned forces. This model explains how Shannon's 'problem of communication' is understood and how it may be resolved. It also accounts for the noise or interference in Shannon and Weavers' model.

What all these models tell us is that the communication event is influenced by external factors, internal factors, noise and the choice of communication medium. The decoding of the message is also similarly influenced. It is important for this study because students and staff may have different forces exerting influence upon them, they come from different generations, have different exposure to technology and may use communication differently. All of these things potentially have an enormous impact on the communication event.

### 1.3.2 Interpersonal Communication.

Interpersonal communication is a field of study that covers the interactions between individuals. It extrapolates the concept of communication to a personal level. It focuses on things that interfere with effective communication such as environmental distractors.

In a study published by Gibson (2009), it was indicated that ”Intergenerational communication between teacher and student is especially important today, because of the gaps of time and understanding that exist among four active generations — Traditionalist, Baby Boomers, Generation X, and Millennials. (Generation Y) Faculty have opportunities to be successful by learning the values, learning styles, past generational experiences, and current expectations of today’s highly technologically competent students” (Gibson, 2009:37).

It is interesting that she found that technology was an enormous factor in improving the communication particularly to younger generations. Her conclusion was that teachers needed to start ”building skills for coaching technology-driven students, helping them solve problems and develop critical thinking skills in a web-based modality” (Gibson, 2009:37).

Another relevant study was that by Dailey, Giles & Makoni, which looked at the perceptions of intergenerational communication. Their study focused on ”374 participants, who were comprised of university undergraduate students from three nations: United States, South Africa, and Ghana” (Dailey et al., 2006:195).

Dailey et al found that ”While avoidance of older people was predictive of communicative enjoyment and satisfaction for all three groups, respect as a communicative strategy was uniquely, and relatively more predictive of, enjoyment for both African samples” (Dailey et al., 2006:206).

### 1.3.3 Digital communication.

The field of digital communication is tremendously varied and modern advancements are regularly leading to newer systems and platforms through which to communicate.

1.3.3.1 Email.

According to Hachman (2012) "In the fall of 1971, Tomlinson sent the first network email" (Hachman, 2012:1). Since then email has become a standard method for transferring announcements, documents and media between people in organisations.

In a study conducted by Adams, Brunner and Yates (2009) it was stated that "The impact of technology is certainly not limited to primary and secondary education across the globe; its effect is evident in higher education as well. In the USA, specifically, since the 1990s, universities across the country have tried to acclimate to the internet's ubiquitous presence on their campuses" (Adams et al., 2009:307).

Their study in particular looked at the preferred use of email by faculty staff and "Specifically, it examines the content of email sent by faculty to students, faculty's perceptions of email's effectiveness, and email's effect on student learning. Comparisons are made based on the 695 US mass communication and journalism faculty members who participated in the study" (Adams et al., 2009:308).

It was found that "students and professors use email for classroom management tasks. A majority (82%) of college students in the Pew Center study said their professors sent them assignment information via email and another 89% have received class announcements in email messages" (Adams et al., 2009:316)

The question remains as to whether this was an effective form of communication and whether it superseded prior 'analogue' forms of communication such as oral announcements, notice boards and letters. It was found that after examining 635 responses to their survey that "Faculty clearly

find favour with email communication and its effectiveness as a tool of teaching" and it was suggested that "faculty ought to embrace the technology and develop positive ways to incorporate email, as well as other technology, into the educational process" (Adams et al., 2009:318).

#### 1.3.3.2 Instant Messaging (IM).

According to Huang and Leung (2009) "Instant messaging (IM) is a computer application that allows synchronous text communication between two or more people through the Internet" (2009:675).

Generally IM can be broken down into two distinct fields, mobile and static. Mobile IM is comprised of cheap instant messaging that is available on a mobile handset and can include: Blackberry Messenger (BBM), WhatsApp (WA), and other similar applications.

Static IM is an instant messaging service that is primarily operated from a fixed position such as operated on a desktop PC. Applications such as Windows Messenger (WM), Skype and Google Chat (GC) are commonly used.

The research around IM currently questions the effect it has on productivity in the workplace as well as its apparent addictiveness. Huang and Leung's (2009) study focussed in around the effect IM has on teenagers. Their control group was "Students in grades 7 through 12 (ages 12–19), who were randomly selected" (Huang and Leung, 2009:676).

They found that the majority of participants (95.8%) indicated regular IM use. Of the group researched it was found that "9.7% of the teenagers in our sample were classified as IM addicts" (Huang and Leung, 2009:677). This indicated usage of in excess of 2.5 hours every time they logged on to chat.

They also found that this addiction had an impact on academic performance

as "teenage addicts were less self-disciplined, could not control the time spent on IM, and neglected their homework or duties, resulting in academic performance decrement" (Huang and Leung, 2009:678).

Botazzo (2005) states that "the flow of information or efficient organizational communication is an essential condition for the successfulness of every organization" (Botazzo, 2005:77).

Efficient and effective internal communications systems are imperative for organizations to function properly. He suggests in his study that "The Intranet or Intranet portal, properly designed and arranged, can serve quite different organization needs. The purpose of the implementation of internet technologies is to raise the efficiency of the organization with minimum financial and time inputs" (Botazzo, 2005:79). Whilst this is a valid point, the technology he refers to is now fairly dated.

1.3.3.3 Social Networks.

"Millions of people are using social network sites to connect, meet, and share. The users of the most popular sites on the Internet, MySpace.com, Facebook.com, Bebo.com, and Orkut.com, are predominantly young-twenties, college students, and teenagers" (Brownholtz et al., 2008:711). The use of social networking has thus become incredibly relevant to young people's lives. These networks are available now on portable handheld devices.

The extent to which these networks are affecting the world is surely significant however as Kleinberg states "Collecting social-network data has traditionally been hard work, requiring extensive contact with the group of people being studied; and, given the practical considerations, research efforts have generally been limited to groups of tens to hundreds of individuals" (Kleinberg, 2008:66).

However he states that the proliferation of social networks in past years has

led to the opening up of entirely new realms for research, and that because humans are now communicating in large public forums such as Facebook, it is possible to see links to the spread of information in new ways. He says that "A rumor, a political message, or a link to an online video—these are all examples of information that can spread from person to person, contagiously, in the style of an epidemic" (Kleinberg, 2008:69).

Chaher and Spellman (2012) quote PricewaterhouseCoopers in saying, "Firms that embrace Web 2.0 (social technologies) and social media are more likely to be market leaders, have their market share increase, and use management practices that lead to higher margins." (Chaher and Spellman, 2012:3).

Chaher and Spellman (2012) also quote Barry Liebert who says "for years, astute corporate directors believed the tools that companies like Facebook and Twitter offered weren't essential. In their view, these new means of communications were for kids, had little, if any, business value, and created minimal strategic, operational or financial risks… they were wrong!" (Chaher and Spellman, 2012:6).

The implication seems to be that organisations that ignore the power of social media do so at their own peril. These tools enable companies to control the flow of information out of their organization rather than allowing the public to do so without their control.

### 1.3.4 Mobile Communication

Castells et al. (2007) state that "mobile communication is pervasive and reaches all domains of human activity, its mediating effects can be observed in different dimensions" (Castells et al, 2007:77) The mobility of communication has changed the way human beings interact and people in modern society are seen and expected to be available at all times

Castells et al.(2007) add that "as elements of daily routine, wireless

technologies, especially the mobile phone, are perceived as essential instruments of contemporary life" (Castells et al.2007:77)

Stald (2008) extends the concept of the mobile phone being more than simply a form of communication to being a channel for social exchange. "One quality is the communicative function, which is facilitated by the technological device: it is about the mobile as a tool and a channel for the exchange of information. The other quality is the social meaning, which develops from the communication" (Stald, 2008:143).

Stald (2006) also says that "multiple functions change the role of the mobile from being only a medium for interpersonal communication to incorporate multiple forms of information exchange at a user level as well as at a technological level: peer (mobile) to peer (mobile/Internet/Messenger), citizen to institution and vice versa, mobile to PC/Internet and vice versa, employer to workplace and vice versa" (Stald, 2006:145).

### 1.3.5 Generational Theory

Generational Theory is the conceptual idea that successive generations exhibit certain traits that can be classified. The concept of generational theory was originally suggested by Strauss and Howe (1991) in their seminal book 'Generations: the history of America's future'.

Five distinct generations have subsequently been indentified:

- G.I. Generation: Born 1901-1924
- Silent Generation: Born 1925-1942
- Boom Generation: Born 1943-1960
- Generation X: Born 1961-1981
- Millennial Generation: Born 1982 – 2000

**Figure 1.3-4: Strauss Generations (2005:10)**

The focus of this thesis will be on the Millennial generation, also termed 'Generation Y' or the 'Net generation'. As Strauss observes above this generation is under the age of 23 and this means they are currently in high school and university.

Geck (2006) has an interesting perspective here in that she motivates for a *Generation Z*; she says "the term is sometimes used to describe the already-existing net generation of teenagers born in or after 1990 in technologically advanced countries. Today's Generation Z currently comprises 14-year-olds or those approaching their early teens; these youths were born into a totally different technological world than what their immediate predecessors were, Generation Y" (Geck, 2006:2). Further references to Generation Z were unavailable and this appears to be a relatively new field.

Specific traits associated within this generation and their prevalence within the context of Hilton College will be examined. In particular the role technology and communication has played on this generation will be in focus.

According to Monaco (2007), students have instant access to their information though the use of the instant messaging and the internet. The result of this is that young people have become accustomed to instant response. Email is therefore considered outdated due to the significant lag time involved in responding. Monaco says that "They are mobile nomads, connected by cell phones, wireless PDAs, and laptops. They have been technologically stimulated throughout their childhood and demand this connectivity as they matriculate through college" (Monaco, 2007:2)

1.3.6 Generation Y and communication.

"Perhaps the most recognized trait (of *Generation Y*) is the integration of technology into their social lives. Seventy-five percent report having a social networking profile and more than 80 percent keep their cellular phones

nearby while sleeping" (Crappell, 2012:2). In addition to this, Keegan says that "Millennials are the first truly-wired generation, they are comfortable with constant, real-time communication" (Keegan, 2011:1).

Stald (2007) found that in Sweden "seven out of ten young people rated the importance of their mobile between eight and ten on a scale from zero to ten" (Stald, 2007:147). Their ability to connect and be in contact is seen as being of paramount importance.

In another context, Rosen's (2010) research found that "Net Geners and older teens spend more than 20 hours per day using media and technology followed by younger teens who spend slightly more than 15 hours per day" (Rosen, 2010:25). Rosen's (2010) research indicates that "its in the Net Generation that different communication approaches emerge, including social networks, instant messaging, skyping and texting" (Rosen, 2010:26).

In a separate study Oblinger (2006) found that "74% of teenagers use IM (instant messaging) as a major communication tool" (Oblinger, 2006:9) and Morrisson and Sanders (2007) found that they are "active in social networking and they are highly connected with their peer group, especially by the use of mobile phones" (Morrisson and Sanders, 2007:85). In addition to this Castells et al (2004) state that "Handsets are personal objects adhered to the body, like watches, whose main feature is the communicational function...in this sense, being elements of our routine, mobile telephones are perceived, nowadays, as essential instruments" (Castells et al, 2004:66).

According to Brownholtz et al. (2008), the users of the most popular sites on the Internet, namely, MySpace.com, Facebook.com, Bebo.com, and Orkut.com, are predominantly adults in their early twenties, college students, and teenagers. This is specifically relevant to the study of teenagers at the school (Brownholtz, 2008:711).

Nielsen's study (2009) shed further light on the subject revealing that 83% of

US teenagers use text messaging and that the average teenager sends 2,899 texts per month. Furthermore 66% of teenagers in Nielsens study indicated that texting was their preference over other methods such as phone calls. (Nielsen, 2009:9). One can see from the graph below that text messaging outnumbers all other uses for a mobile device.

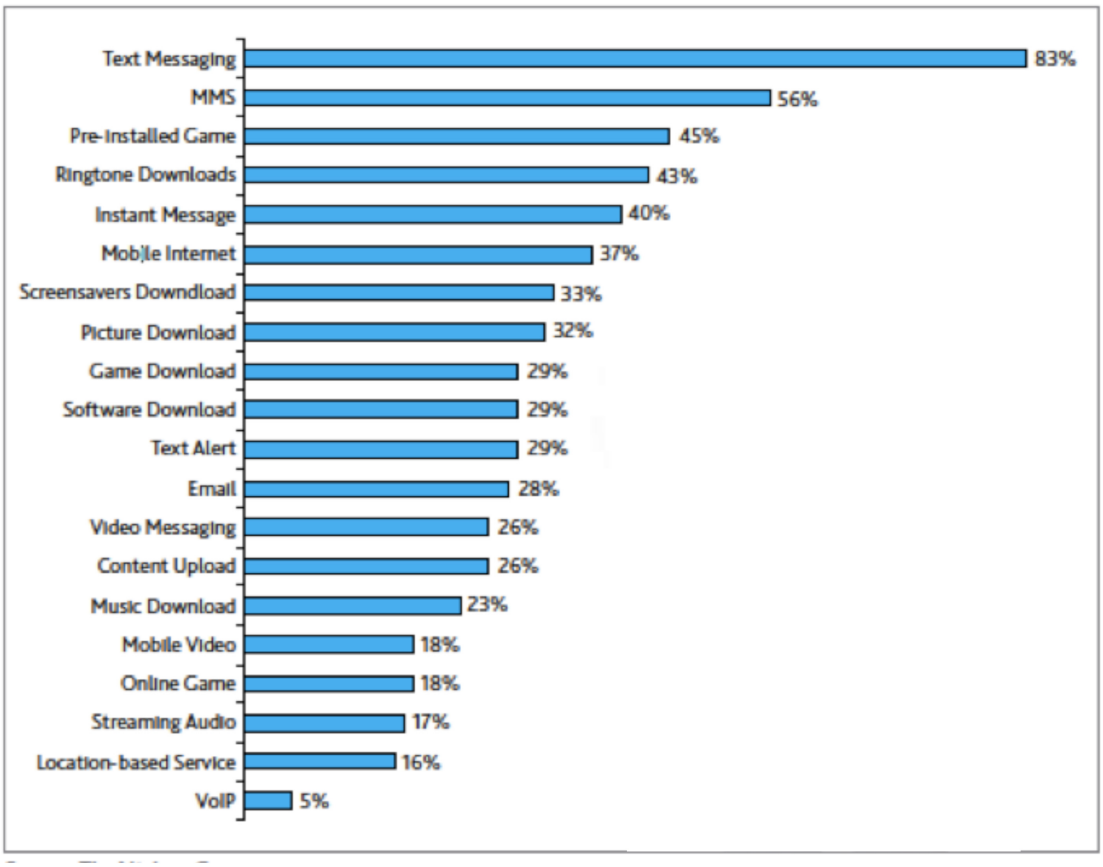


**Figure 1.3-5: Mobile Media use by US teenagers Nielsen (2009)**

These are astounding statistics and ones which will be scrutinized along with others to determine whether that trend is extant within both the South African context and within Hilton College. In order to be consistent with these behaviours a survey conducted in the South African context would need to produce similar results. Here teenagers would need to exhibit similar usage, with the prevalence of phone activity being on texting, 83% (Nielsen Company) and 88% (Pew Research Centre). See Figure 1.3-6

| | |
|---|---|
| Text messaging | 88% |
| Take pictures | 83% |
| Exchange pictures | 64% |
| Play music | 60% |
| Record video | 54% |
| Play games | 46% |
| Exchange video | 32% |

**Figure 1.3-6: % of teen cell users by function Pew Research (2010:2)**

### 1.3.7 Conclusions

In conclusion one can see that modern generations are fully immersed in technology and the use of mobile technology in particular. This is significant because it has bearing on how one communicates with people of a different generation. Communication effectiveness may be measured by the format or platform one chooses for communication.

As "McLuhan argued that the nature, or format, of the media by which individuals communicate is as important in regard to communications efficiency as the content of the message conveyed through a particular format" (Short and Reeves, 2009:5).

## 1.4 Research Method

Field of Research: Generation Theory, Mobile Communications, Personal communication, Information Technology.
Title: 'Understanding Generation Y; An investigation of how Hilton College can use technology for communication'**.**

### 1.4.1 Context of Research

This research will be based within the domain of digital communication and interpersonal communication. The aim will be to evaluate 'Generation Y' communication theory and research and then to assess whether this is consistent with Hilton College's student population. A model derived from the Pew Research Centre will be used as the basis for the research, their basic model is listed on their website and is called 'how millenial are you?' (2012). The college academic staff will also be surveyed to determine how they compare to Generation Y communication traits and their results will be compared to the students. Finally recommendations will be made to the school regarding its own use of communication and technology given the findings.

According to Willsky (2010) the technological divide between Baby Boomers, Generation X and Generation Y will continue to challenge organizations over the next decade (Willsky, 2010:22). This is of particular importance in a school where all of these generations are thought to be present.

Hilton College currently has 556 boys enrolled and 60 Academic Staff (Guthrie, 2012). McCrindle (2002) states that Generation Y accounts for people born after 1982, (McCrindle, 2002:1) which means that all 556 boys fall into the Generation Y category. This generation have been dubbed as "native speakers of the digital language of computers and the Internet" (Morrison and Sanders, 2007:85). It is expected that only a small percentage of staff speak this native tongue, making them 'digital immigrants' and this may account for significant communication challenges, such as delays in communication from sender to receiver and misunderstandings around

specific tasks.

## 1.5 Results

All charts were taken from the survey data.

### 1.5.1 Boys

Of the Grade 8 and 9 year groups 187 boys completed the survey of which in figure 1.5-1: 73% where White, 21% Black and the remaining 6% Coloured and Indian. The average age of boys surveyed was 14.4 years and their average Pew Research score was 77.5.

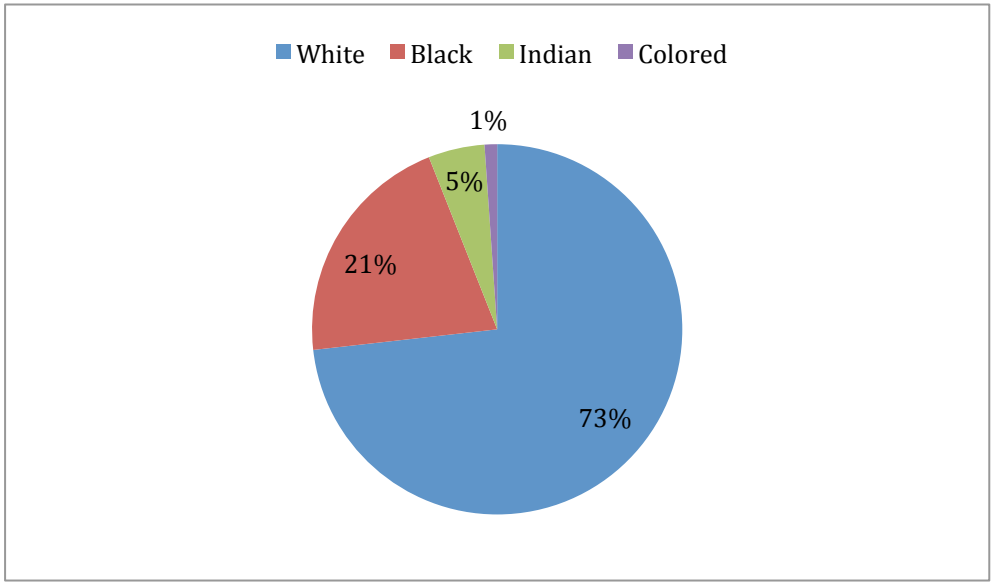


**Figure 1.5-1: Boys Demographics**

### 1.5.2 Staff

20 staff completed the survey of which 100% of which were white in figure 1.5-1 The average age of staff was 41.2 and their average Pew Research score was 48.5.

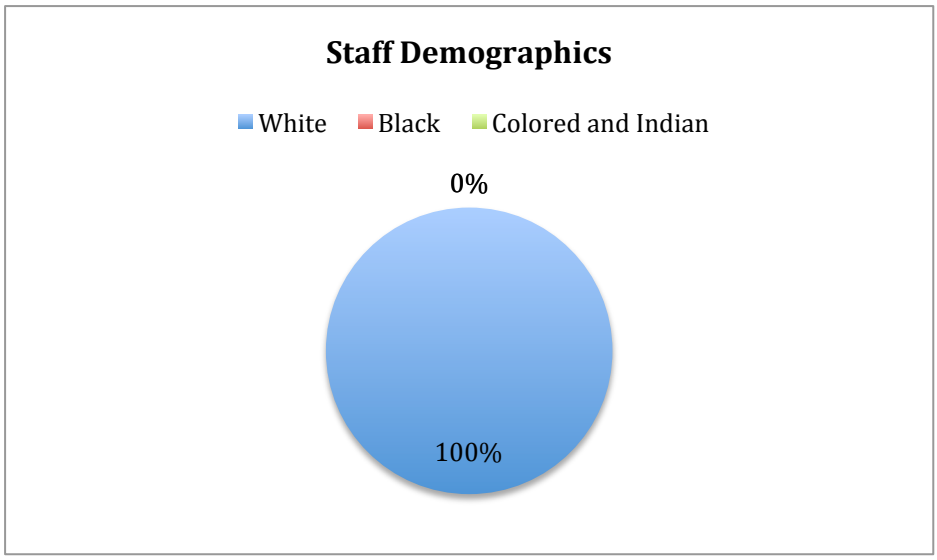


**Figure 1.5-2: Staff Demographics**

### 1.5.3 Devices

#### 1.5.3a Boys Devices

In terms of devices the majority of boys possess smartphones capable of email, web browsing and instant messaging across platforms at 96%. Of the surveys completed only 3% of boys did not possess a phone and 1% did not possess a smartphone. The vast majority of smartphone owners had BlackBerrys at 93%, with 7% owning other smartphone brands.

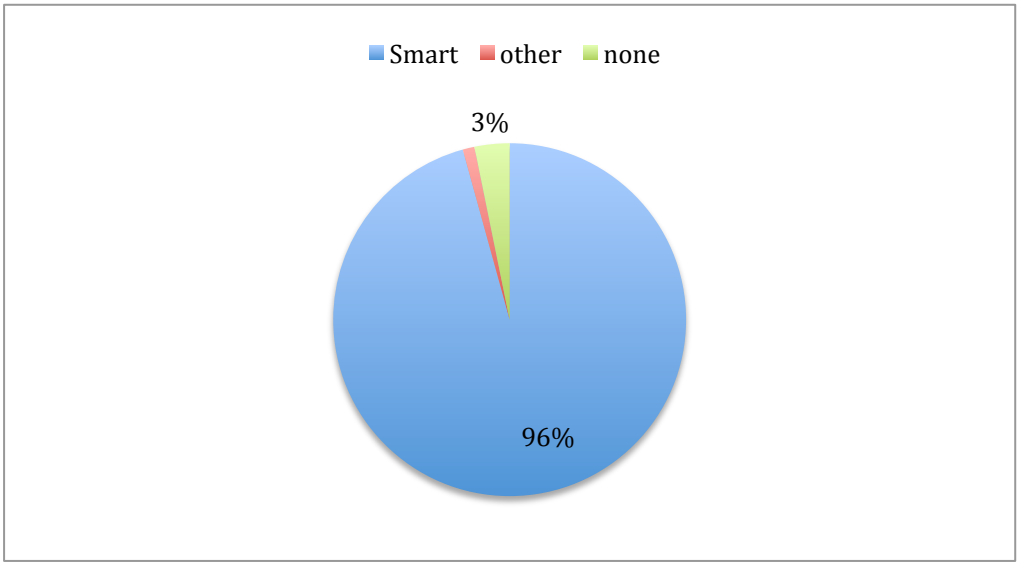


**Figure 1.5-3: Boys Phones**

Less than half of the Boys owned tablet PC's 38% with the vast majority being iPads 30%. In contrast 70% boys possessed laptops.

1.5.3b Staff Devices:

All Staff indicated that they owned a mobile phone. Staff indicated that they owned a lower ratio of smartphones than boys with only 78% owning smartphones. Of the smartphones, 71% were BlackBerrys with 29% being other brands.

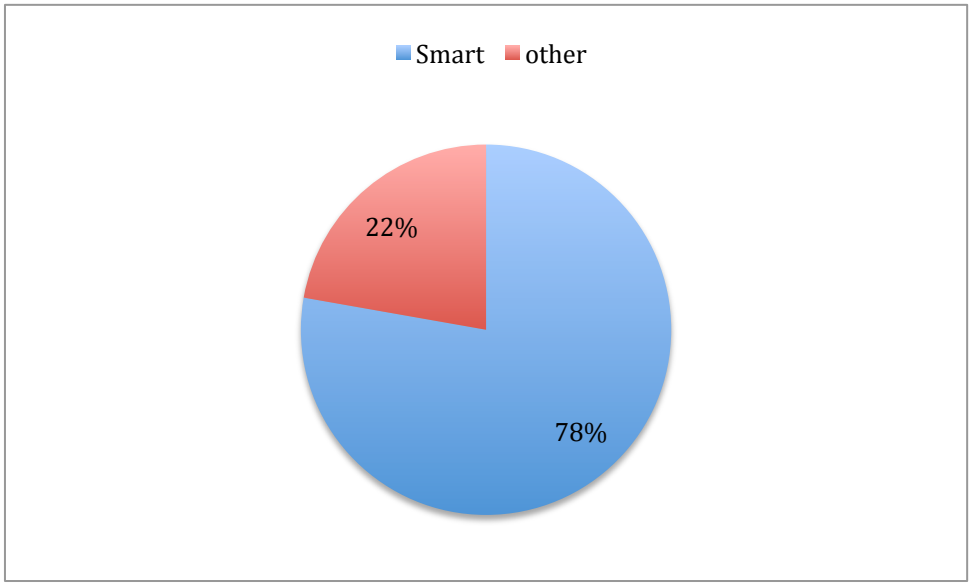


**Figure 1.5-4: Staff Phones**

In terms of tablet PC's, 61% of staff said they did not own a tablet, with 22% owning iPads and 17% with other brands. 100% of staff have a laptop.

1.5.4 Boys Device usage

1.5.4a Mobile Phones:

It was found that 37% of boys were sending up to 50 texts per day, 30% sending up to 100 and 33% sending in excess of 150 with 7% of those exceeding 250 per day. The send receive ratio was fairly close to 1:1.

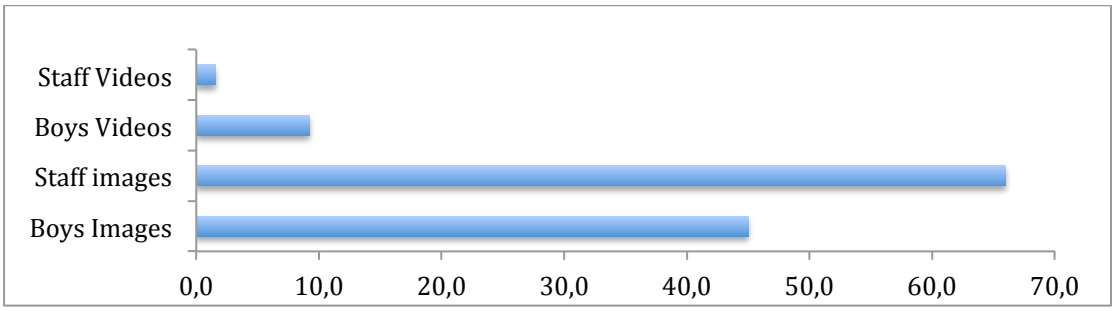


**Figure 1.5-5: Monthly use Multimedia**

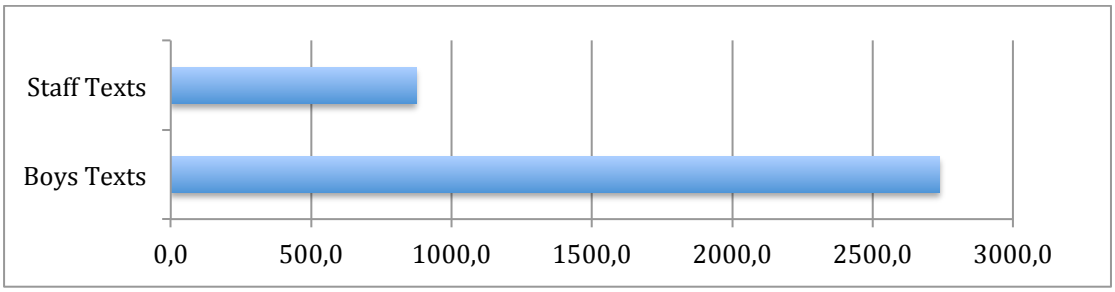


**Figure 1.5-6: Monthly phone use Text**

Boys were sending significantly less images and videos than texts, with the majority of boys 63% sending none and 34% of boys sending between 1 and 5 images per day, with 3% of boys sending more than 10 images a day. Of the sample 11% of boys regularly send videos from their phones, with the rest 89% sending none.

1.5.4b Tablet Usage:

Of the 71 boys tablets in use on campus; usage is split 4 ways fairly evenly between email, chat features, facebook and twitter. Of these the majority of boys used their tablets for facebook more than any other communication feature.

1.5.5 Staff Device usage

1.5.5a Staff Mobile phones:

In terms of texts, 88% of staff said they send up to 50 texts per day, with only 12% saying they sent as many as 100 texts. The majority of staff, 65% indicated that they did not send images from their phones with only 35%

saying they sent 1-5 images per day. Only one staff member indicated that they occasionally send a video from their phone.

1.5.5b Staff Tablet usage:

Of the staff who own tablets, the majority 45% use them for email with 33% using them for Facebook and 11% using them for media and apps.

1.5.6 Social Network preference

1.5.6a Boys:

Boys were asked which device they primarily used for social networking, of the sample, 48% boys said their phones were their primary device followed by 33% citing tablets and 19% their laptops. See figure 1.5-7.

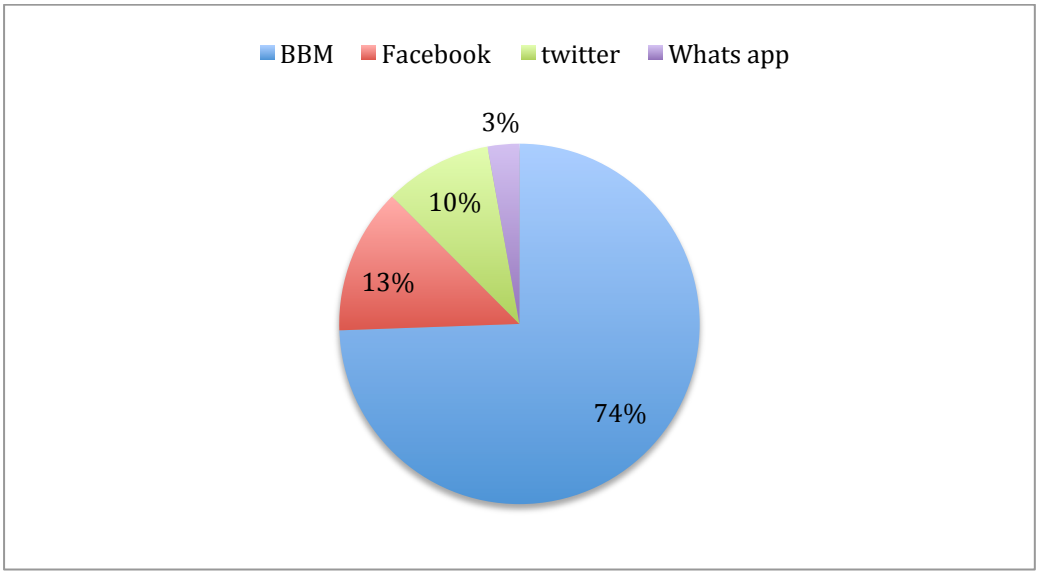


**Figure 1.5-7: Boys Social Network Preference**

Across devices the social network used most by boys was the blackberry chat feature on blackberry phones with 74% boys electing it as the most used social network feature. Facebook was second with 13% boys citing it as their most used social network, Twitter and WhatsApp followed with 10% and 3% citing it as their most preferred social network.

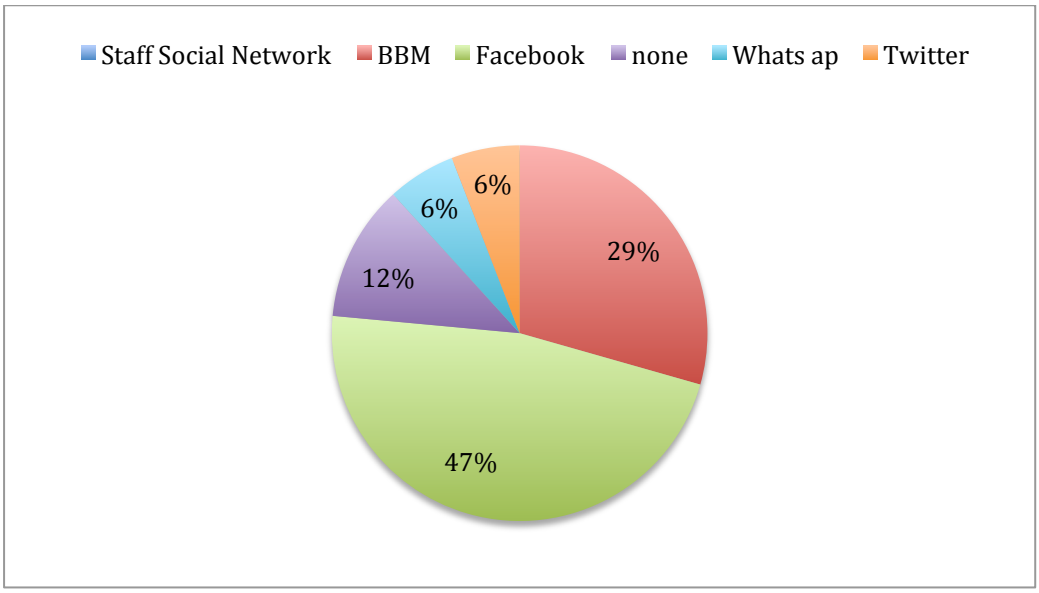


**Figure 1.5-8: Staff Social Network Preference**

1.5.6b Staff:

Most staff opted for Facebook as their primary social network , figure 1.5-8, with 47%, closely followed by BBM with 29%. 12% said they did not use a social network with 6% saying they used twitter and WhatsApp.

Staff's primary device for social networking was their laptop with 50% saying they used it most and 29% saying they used their tablets and only 21% their phones.

1.5.7 Actual Communication times

1.5.7a Boys:

In terms of the times that boys are communicating on the property the boys were asked to rank the times they most communicated with their phones. Figure 9: 46% stated that they communicated most late at night, with 31% saying they used central hour most and 18% using the early evening most. The remaining 5% chose other times of the day as their preference.

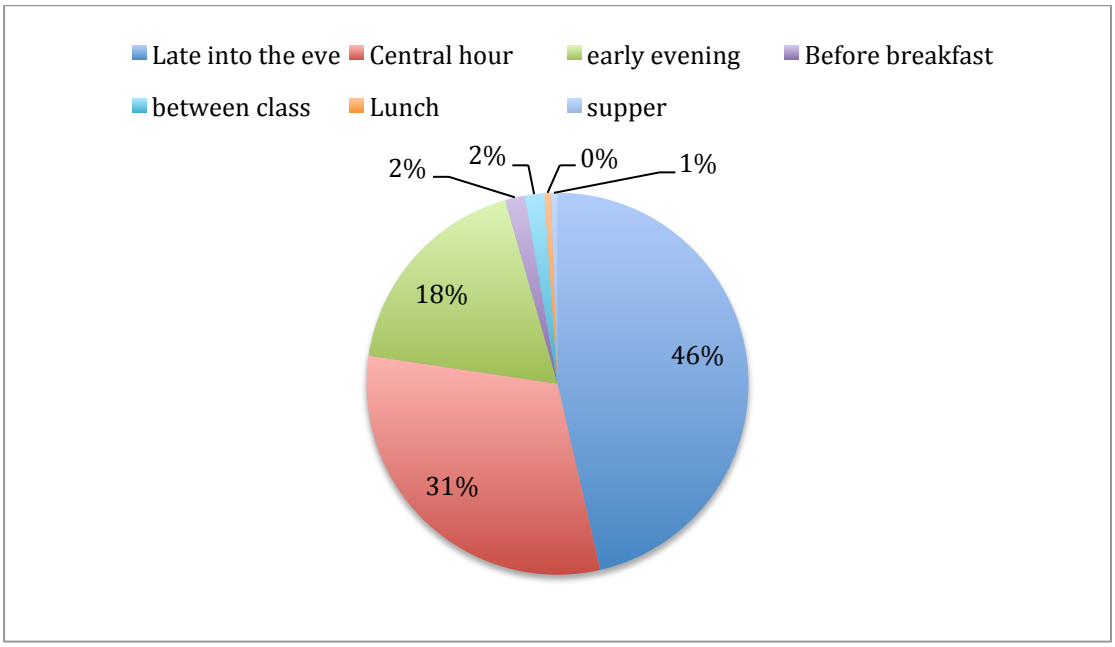


**Figure 1.5-9: Boys Communication times**

By comparison the ranking of communication times saw 'late into the evening' ranked by 42% of boys as the time they communicated most, with 22% ranking it as second and third and 29% of boys saying that they communicated least at that time. 23% of boys ranked 'central hour' as the time they communicated most with 40% ranking it as second and third and 31% ranking it as least.  20% Ranked 'early evening' as their highest communication time, although tellingly 46% ranked it second and third and 24% ranked it as least.

Of the other times available 12% of boys said they use their phones most 'before breakfast', 11% opted for 'between class', 10% at 'lunch', 9% at 'supper' and 7% at 'tea'.

1.5.7b Staff : Figure 1.5-10

Staff indicated that 31% communicated most between class with 19% saying they texted most before breakfast and during central hour with 13% opting for early evening, 12% late into the evening and just 6% saying they used their phones most at tea.

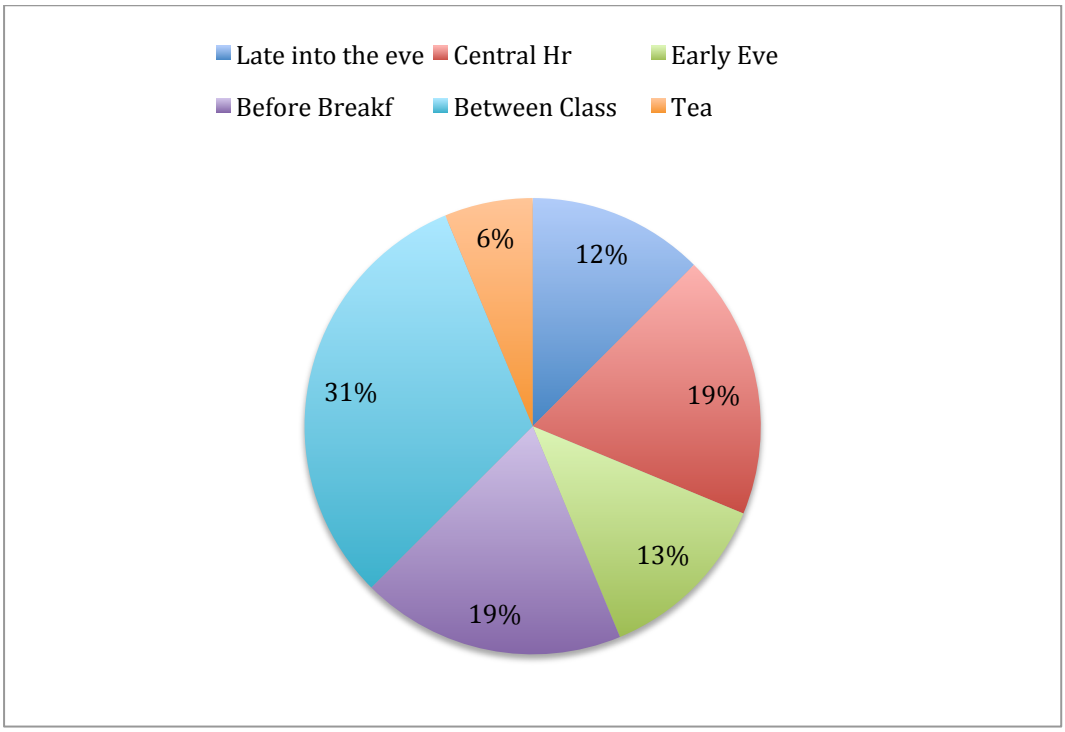


**Figure 1.5-10: Staff Communication times**

The ranking painted a different picture however with 'before breakfast' ranked as the time phones were used most at 33%, with only 6% ranking it as second and third and 28% ranking it last. In second place 'central hour' was ranked by 22% as the time they used their phones most, with 39% ranking it as 2nd and 3rd with 17% ranking it as least. Then 'between class' was ranked by 11% as their highest communication time, with 50% ranking it second and third and 28% ranking it least. 'Staff Tea' only received 11% as saying it was highest ranked but nearly 45% said it was their second and third most utilised time for cell phone communication. 11% said they hardly ever used their phones at tea.

Of the remaining times available 11% of staff said they used their phones most at these times.

1.5.8 Communication Preferences

1.5.8a Boys:

In terms of communication preferences, boys were asked to select their preference across different forms of communication; figure 1.5-11, 73% of

boys said they preferred WhatsApp and BBM, 21% said a phone call, only 2% of Boys said face to face, 2% said twitter, and 1% of Boys said facebook and email.

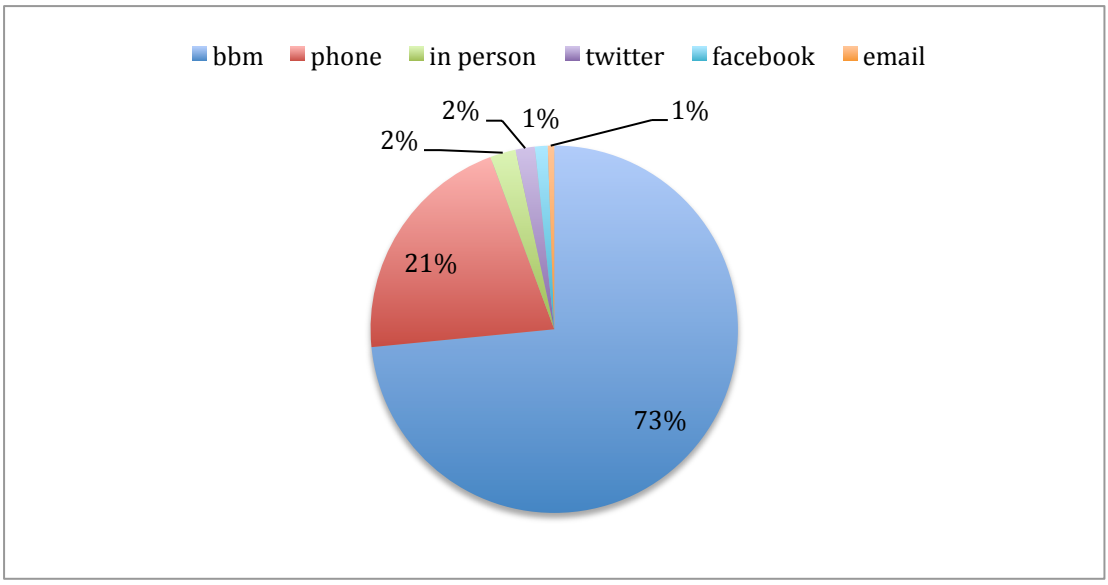


**Figure 1.5-11: Boys communication preferences**

1.5.8b Staff:

Staff answered that 47% preferred email, 24% opted for a phone call, 23% said BBM and 6% said SMS. Figure 1.5-12.

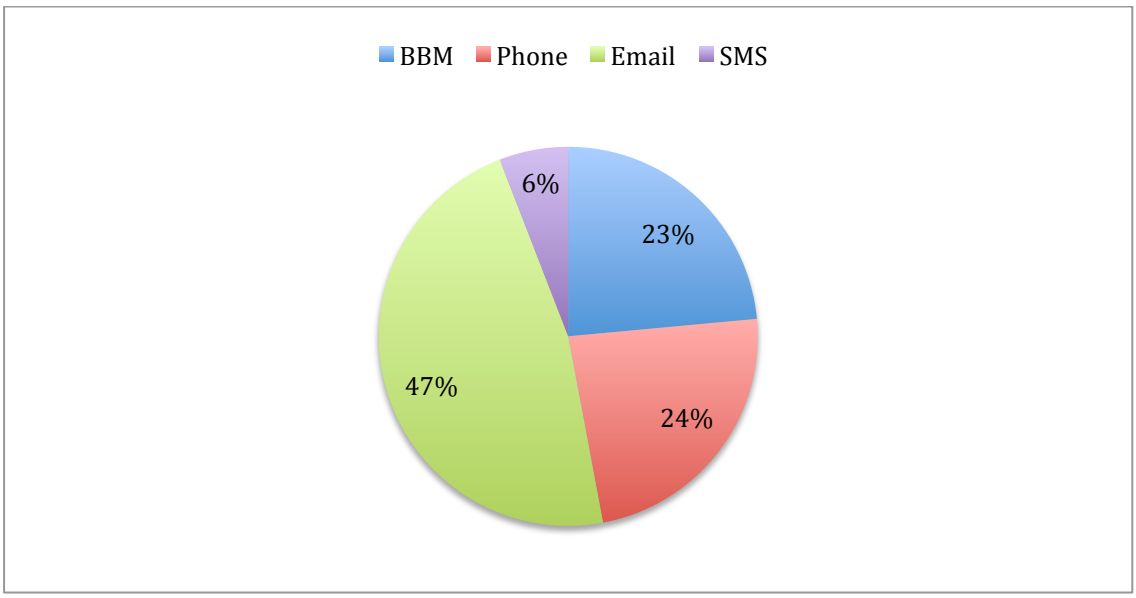


**Figure 1.5-12: Staff Communication preferences**

1.5.9 Hours spent per day by application

In this section the graphs represent the percentages based on those who answered the question. There are however a number of respondents in the population who left the question blank.

1.5.9a Boys

BBM – 18% of boys spent 1 hour per day on BBM, 23% 2 hours, 20% 3hrs and 39% more than 4 hours. (13% of total population unanswered)

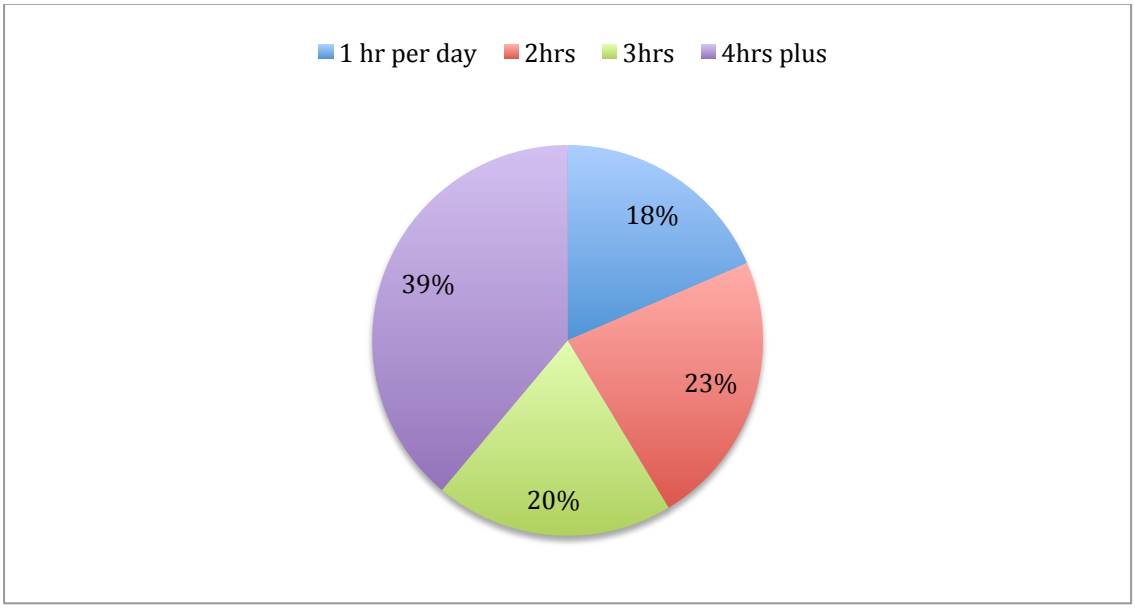


**Figure 1.5-13: Boys hours on BBM**

Facebook – 76% of boys responding spent an hour per day on Facebook, 17% spent 2 hours, 4% 3 hours, 3% 4 hours. (45% of total population unanswered)

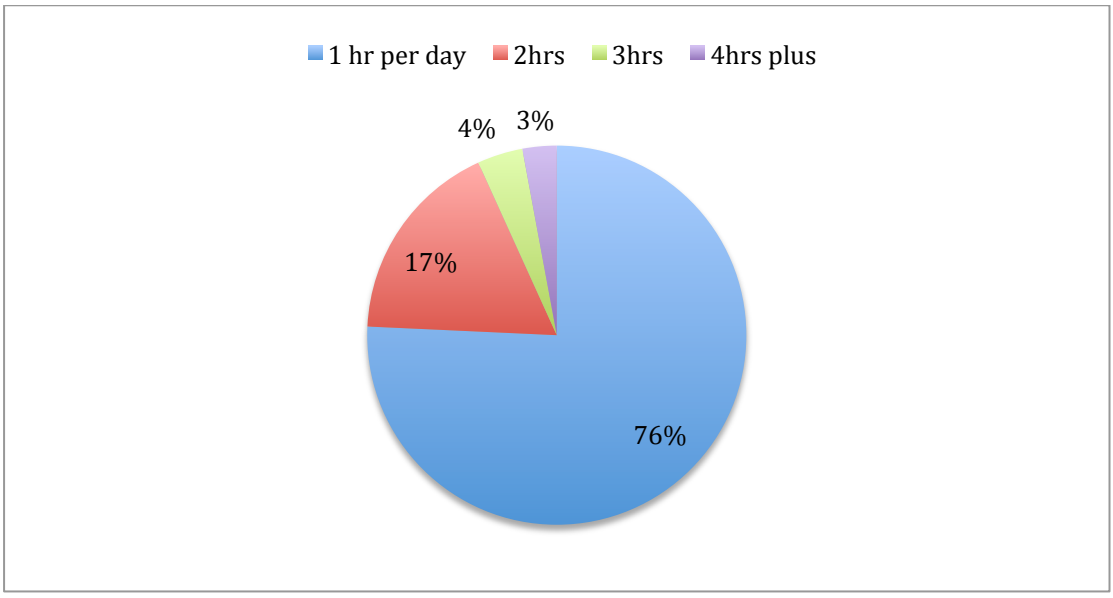


**Figure 1.5-4: Boys hours on Facebook**

Twitter - 61% of boys spent an hour per day on twitter, 31% spent 2 hours, 2% 3 hours and 6% more than 4 hours. (49% of the population did not choose this option)

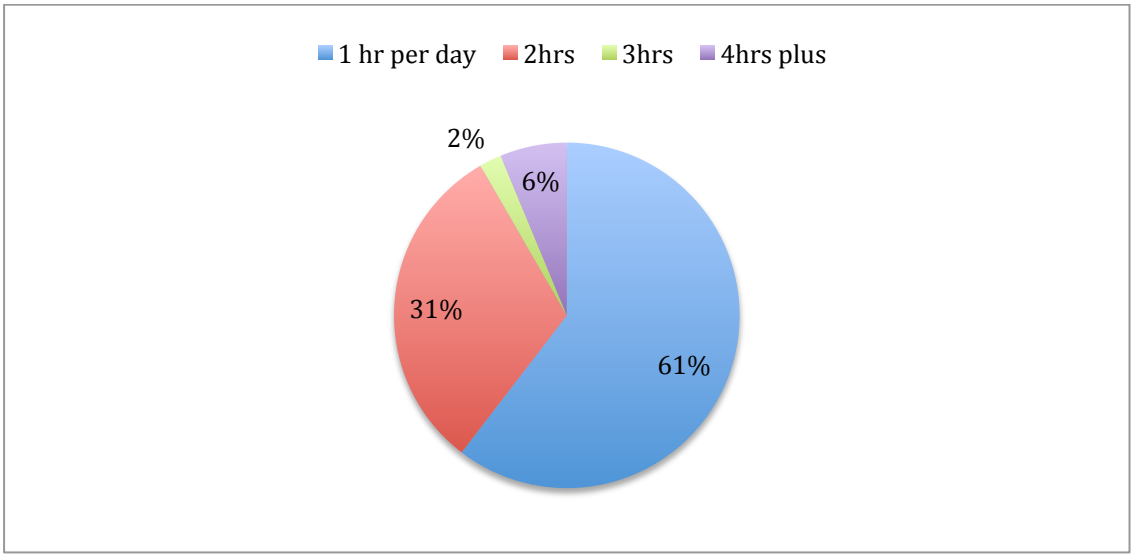


**Figure 1.5-15: Boys hours on Twitter**

WhatsApp – 63% of boys responding spent an hour a day on WhatsApp, 23% 2 hours, 11% 3 hours and 3% more than 4 hours. (57% of total population did not choose this option)

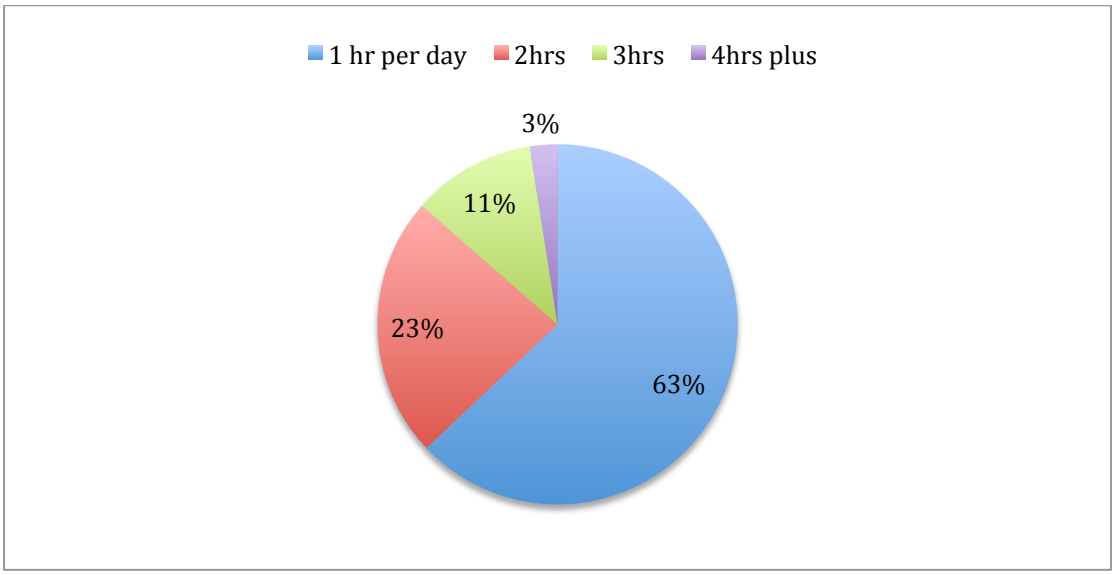


**Figure 1.5-16: Boys hours on WhatsApp**

1.5.9b Staff

BBM – 86% of staff spent 1 hour per day on bbm and 14%, 3 hours. (61% of the total population did not choose this option)

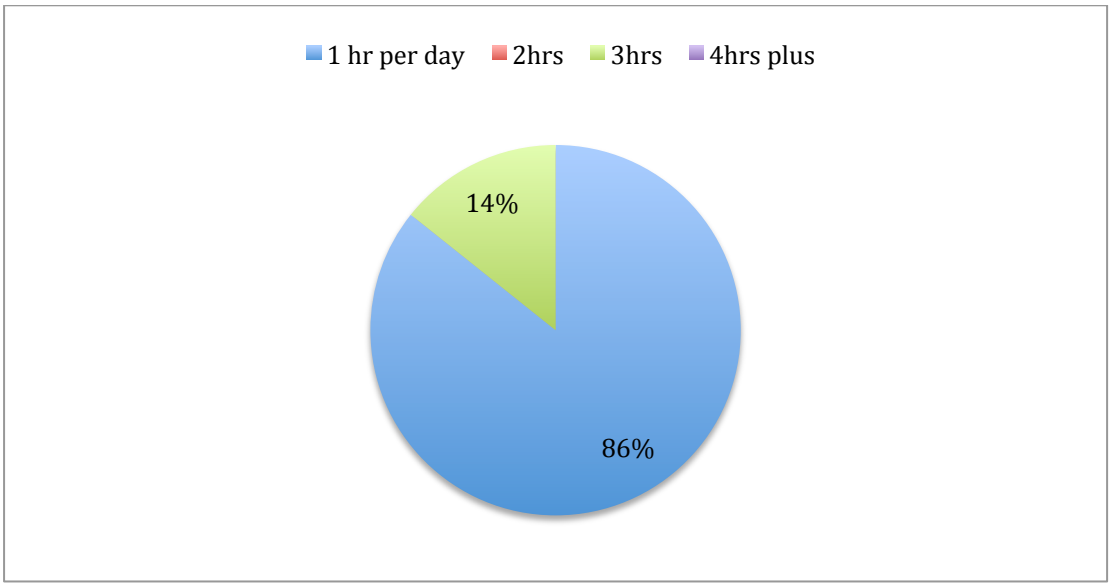


**Figure 1.5-17: Staff hours on BBM**

Facebook – 87% of staff spent an hour per day on Facebook, with 13% spending 3 hours a day. (56% of the population did not choose this option)

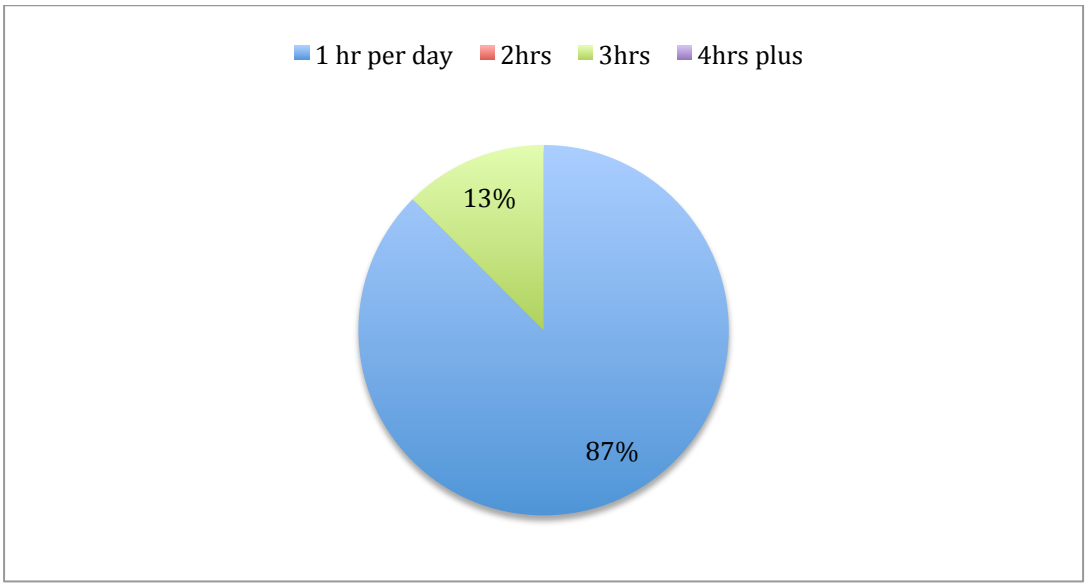


**Figure 1.5-18: Staff hours on Facebook**

Twitter - 33% of staff respondents spent an hour per day on twitter, with 67% more than 4 hours. (83% of the population did not choose this option)

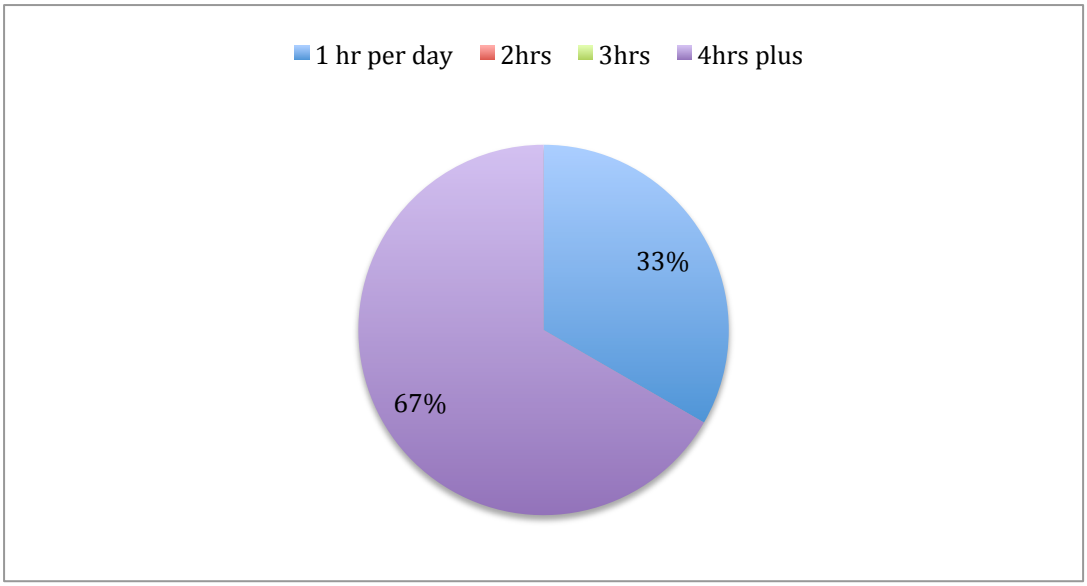


**Figure 1.5-19: Staff hours on Twitter**

WhatsApp – 57% of staff respondents spent an hour a day on WhatsApp, 15% 2 hours, 14% 3 hours and 14% more than 4 hours. (61% of the population did not choose this option)

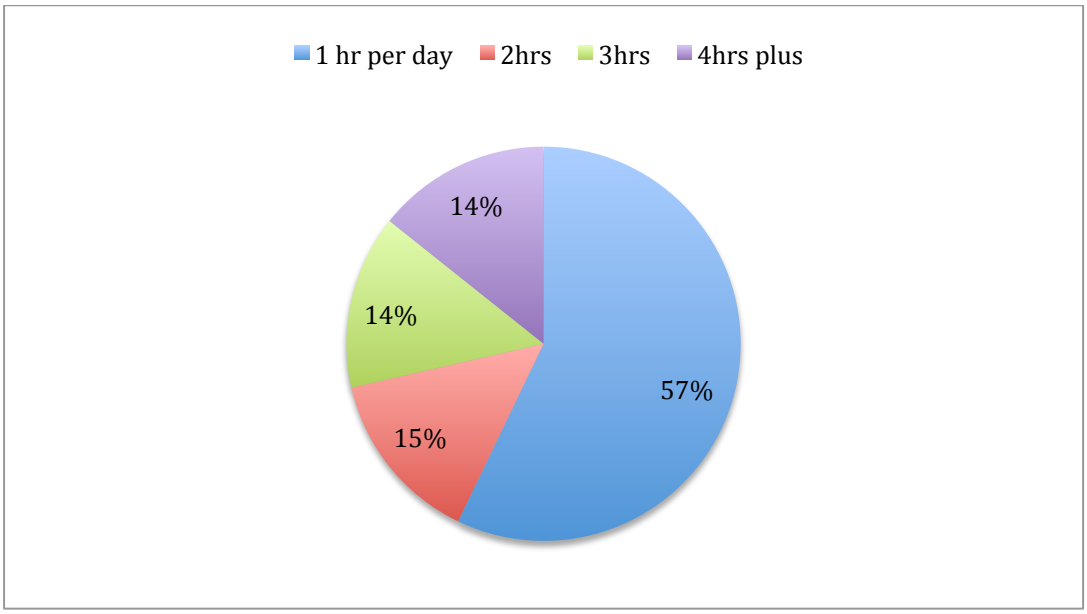


**Figure 1.5-20: Staff on WhatsApp**

1.5.10 Mobile phone primary use

Boys and staff were asked to indicate what they most used their mobile phones for by function.

1.5.10a Boys

Boys indicated that 83% primarily used their phones for texting and 10% used them for phone calls, 5% for social networking and 2% for email

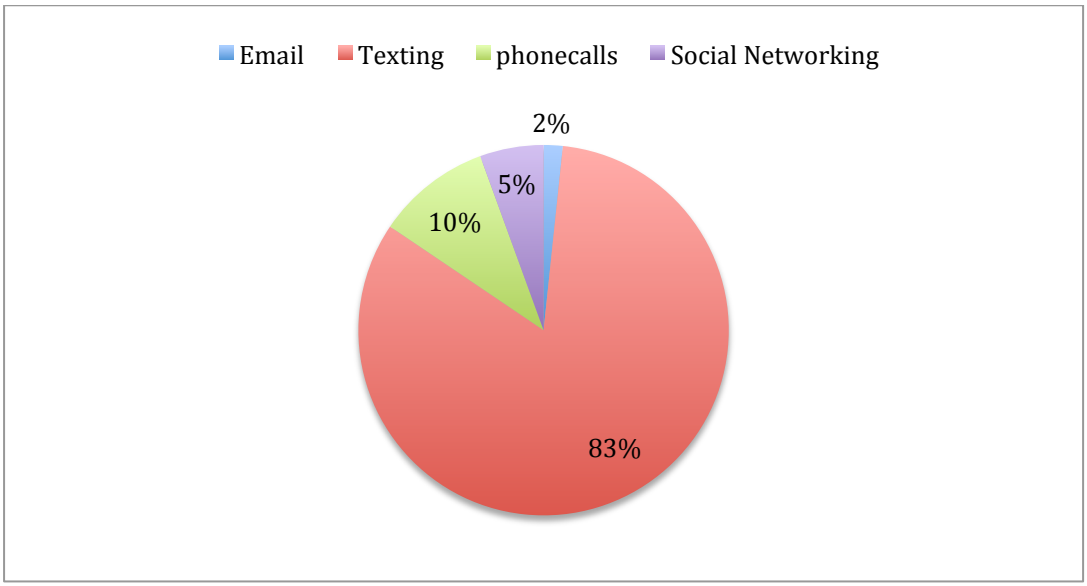


**Figure 1.5-21: Boys mobile phone primary use**

1.5.10b Staff

Staff indicated that 41% used their phones for texting, 35% for phone calls and 24% for email.

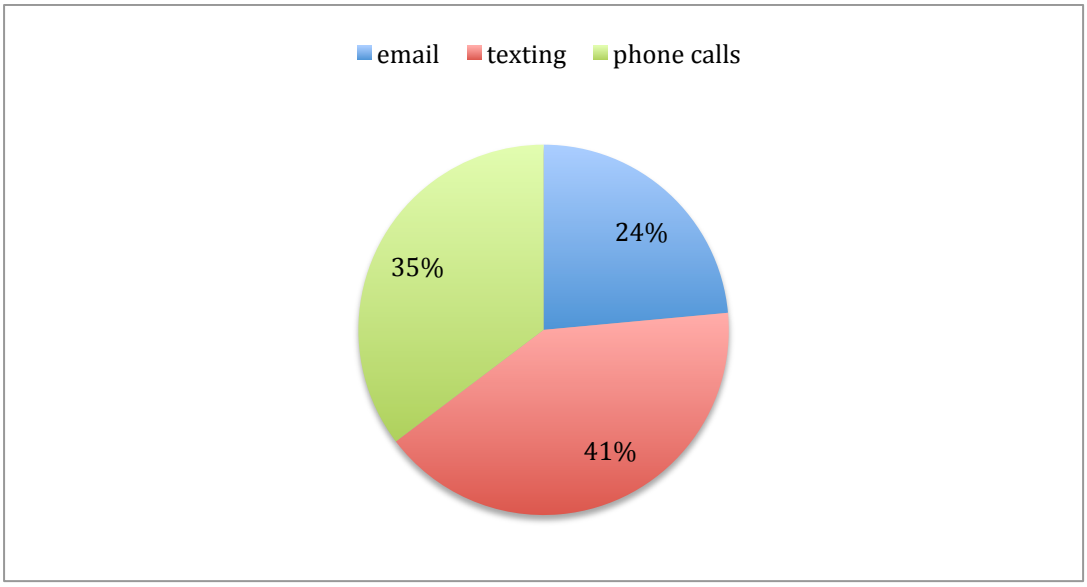


**Figure 1.5-22 Staff primary mobile phone use**

## 1.6 Discussion

The first and most important aspect of this research was to determine whether or not teenagers at Hilton College exhibited behaviour consistent with the Millenial generation. In order to do this they were asked to complete Pew Research's' 'How Millenial are you?' questionnaire, Pew research (2012). If one looks at figure 1.6.1, you can see that the younger you are the higher you are expected to score on the questionnaire. 18 year olds, who are only slightly older than the Hilton College sample according to Pew Research data, (2010) scored an average of above 80 on their quiz scores. The average score of the Hilton College boys in the sample was 77.4 (figure 1.6.2). We can therefore classify the Hilton cohort as 'Millenials' as they fall in this range.

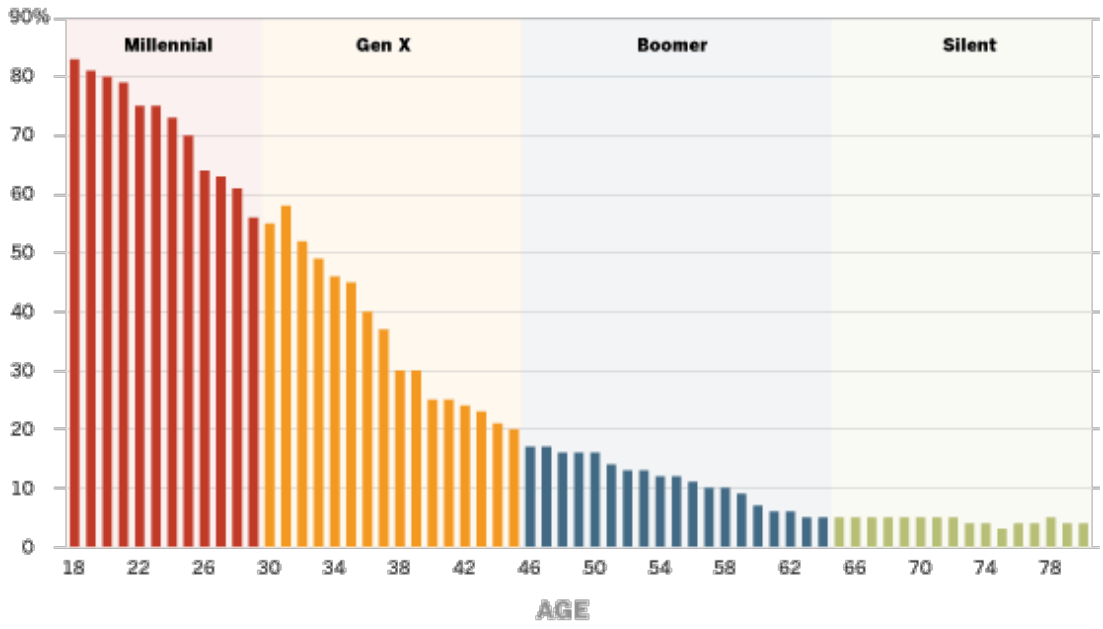


**Figure 1.6.1: Average Millenial score Pew Research (2010)**

This is important because it means that we can attach certain expectations to the sample group in terms of their behaviour and device usage. Therefore it is expected that Hilton College's teenagers use of devices will be similar to teenagers in other studies elswhere in the world.

For the sake of comparison staff were also surveyed to determine which generation they fell into. This enables a comparison between staff and boys in

terms of device usage and behaviour as well as other traits associated with their generation. According to the survey, figure 1.6-2, the average age of staff was 41.2 and their average Pew Research score was 48.5. According to Pew Research data in Figure 1.6-1, 41 year olds are expected to score an average of about 30 on the questionnaire. Of course presumably this may be the effect of the younger members of staff pulling up the average. It may also denote that working in an environment with teenagers influences your generational behaviour. Despite this the majority of staff by average fell into Generation X.

| Comparison | BOYS | | | STAFF | | | |
|---|---|---|---|---|---|---|---|
| Quiz | | Age | | Quiz | | Age | |
| | | | | | | | |
| Mean | 77,46583851 | Mean | 14,39459459 | Mean | 48,5 | Mean | 41,23529412 |

**Figure 1.6-2: Boys and Staff Pew Score comparison**

Of course simply averaging the staff age does not give us an accurate picture as, unlike the boys, the age of adult respondents vary enormously. The staff were therefore grouped together to get a better picture for the sake comparison. Respondents in their 20's received an average of 81.5 for their pew scores. According to figure 1.6-1, this is at the upper end of expected scores for this age group. In their 30's pew research scores drop to 39.5 which is as expected in figure 1.6-2. Staff in their 40's average pew scores jump to 47.5, which is significantly higher than expected scores. What is interesting about this is that one possible outcome is that the longer staff members are at the school the more they adopt 'millenial' behaviours. It may also denote that these staff, who may have teenage children are influenced by their behaviour. Older staff 50 and above exhibit an average pew score of 35.5, which is also higher than expected. It would be useful to compare these results to those of people in different professions to see if teachers receive

high pew scores in general. The result of the data appears to indicate that on pew scores alone staff 'age' and behaviours are consistent with Generation X and Millenials regardless of their birth date. This could bode well for the implementation of technology for communication.

The next thing that needed to be determined was what device behaviours were prevalent in the sample and then to compare them with device behaviours occurring in other studies. Of all the studies looked at there was a high prevalence of mobile phone usage among teenagers and this was heavily weighted towards texting. (Morrison and Sanders, 2006:9) said it was 74%, (Nielsen, 2009:9) said 83% with the average teenager sending 2,899 texts per month. The (Pew Research centre, 2010) found that 88% of teenagers were using texts most frequently.

The Hilton College study found in figure 24 that 81% of teenagers used WhatsApp and BBM (Free text) and 2% used SMS. This indicates that 83% of teenagers used texting as their primary function on their mobile phones. This is remarkably consistent with the above studies. The average number of texts sent per boy per day was 91, which means the Hilton College cohort was sending 2735 texts per month. Again this was remarkably close to Nielsen's 2,899. The difference only amounts to 1 text per day per boy.

In comparison figure 25, only 41% of staff used their phones primarily for texting. The remainder used their phone for email and phone calls (35%, 24%). Staff only sent an average of 29 texts per day with a monthly average of 875 texts. This means the ratio of staff to boy texts is 1:3. In a 14 hour day staff would therefore send 2 texts per hour and boys would send 6.5 texts per hour. One presumes that this means boys are more likely to notice a message on their phone than staff are and it does stand to reason that if they are checking their phone for a text as often as 6 times every hour, that they will pick up messages more often. This is significant because it means that boys may be highly likely to be checking their phones on a regular basis, and also highly likely to pick up messages sent to them throughout the day.

The question of course is which time is the most optimal? In order to establish this one needs to look at specific device behaviours, to determine when boys check their phone most. The survey was used to rank the top 5 times that boys use their phones as well as directly asking them what their top time of the day was. What emerged was that boys tend to use their phones most late into the evening after lights out. The second most used time was central hour and early evening. More than 60% of the boys were on their phones during those times of the day. What this seems to indicate is that these are the most optimal times for contacting boys. Part of the question though, is whether there is overlap between boys' times and staff times.

As mentioned above staff check their phones less often on average per hour, and their top usage time was before school. Having said this 61% of staff ranked central hour as 1st, 2nd or 3rd. This means that both boys and staff are on their phones during this time, with 23% of staff and 22% of boys ranking it as their most used time. What this means is that there is a significant overlap in times and that potentially this is a good time for staff and boys to communicate with one another.

In terms of device and communication preferences it would appear as though boys favour mobile phones over other devices. The saturation of device per user is higher in mobile phones than any other device. Of all the devices on the campus 47% are mobile phones with 97% of boys in possession of a phone and 100% of staff. Whist 73% of boys indicated that they preferred text based communication on a cellular phone only 29% of staff concurred. Staff indicated that they preferred email with 47% of staff rating this as their preference. Interestingly only 1% of boys opted for email as their communication preference. In order to address this staff may need to switch to using a communication medium that suits boys or one might need to make use of a programme that could convert an email to text.

In the survey no staff opted for a social network as a primary method of communication, although many staff indicated using social networks. 3% of boys indicated that social networks were their primary method of communication. Secondary methods of communication were not asked on the survey. Despite this the average Hilton boy is spending 1.5 hours a day social networking, this excludes the 2 hours a day they are texting. This means they actually appear to be social networking for almost as many hours as they are texting. Social Networking is therefore as valid a method of contacting boys as texting.  Usage of social networks among boys is weighted towards twitter, with Facebook receiving only slightly less attention (3 minutes less) per day.

The question is whether staff are also using social networks as much as boys do? It was established that staff spent an hour a day on social networks and that their preference was weighted towards Facebook. Staff interestingly spent 3 minutes less on twitter per day than Facebook. Therefore there is a chance that staff and boys can connect through social networks during the day.

Since social networks are multi-platform, in the sense that they can be accessed from tablet, computer or mobile phone, it makes sense that they be used as a communication medium. Regardless of the device preference these networks are available to all. The risk here is that boys and staff would need to be on the same network in order for communication to take place. Another advantage is that the public nature of social networks ensure that communication does not necessarily need to be repeated to multiple users. An entire class could view the response to an individual query and therefore ensure transmission of messages is more efficient.

In addition to device preference and communication preference respondents were also asked directly what method they felt was the most effective for communicating with students, regardless of their preference. Hilton College uses a system called the DRO, which stands for 'Daily Routine Order' Guthrie (2012) in which staff email announcements which are collated and printed.

Each day a printed page is placed on the boys dining room table with said announcements. In figure 23 it is notable that no staff indicated that they felt the DRO was an effective method of communication. By comparison only 17% of school boys felt it was effective. The majority of staff and boys feel that it is an entirely ineffective method for transmitting school announcements. The highest rated method for communication by both staff and boys was text messages, all respondents who indicated SMS or BBM or WhatsApp were lumped together as 'text' but the picture that emerged was that 71% of boys thought that this was the best method and so did 48% of staff. Email was the next highest rated by staff with 17% of staff and 9% of boys indicating that they felt it was effective.

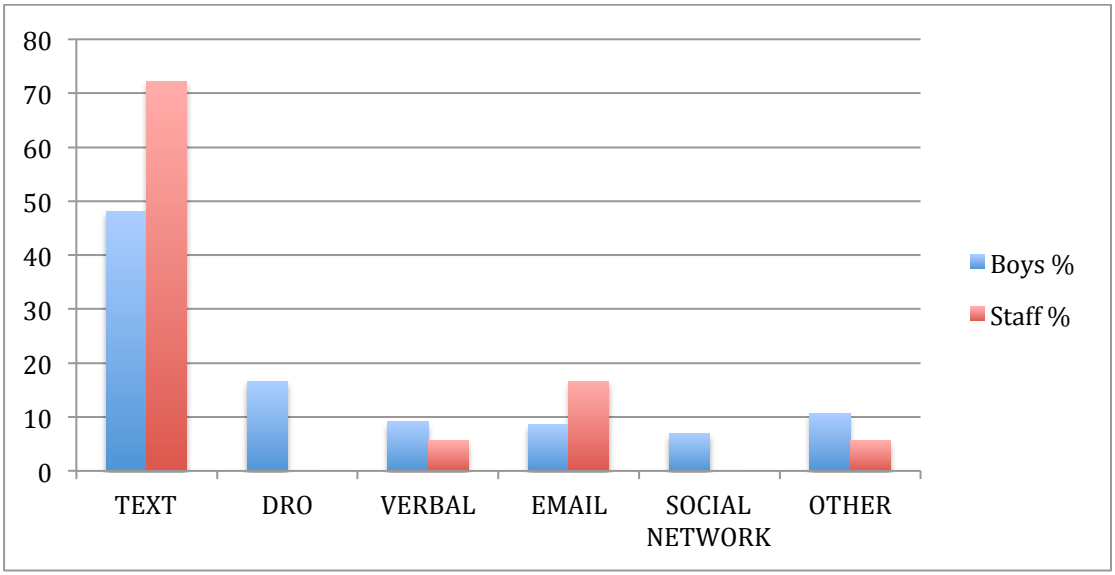


**Figure 1.6-3: Staff and Boys Social network comparison**

## 1.7 Recommendations

1.7.1 BBM Server, linked to laptops.

Given that a large number of staff and boys possess blackberrys 93% / 71% one possibility is the establishment of a BlackBerry server on campus. This would allow the school to push notifications to all BlackBerrys on campus and enable free communication between staff and boys. The challenge with this option is that in order to be fully effective 100% of boys and staff would need

to be in possession of a BlackBerry device. Cross platform communications would require significantly less financial outlay on the part of the school. The challenge here is that BlackBerry is showing signs of decline globally.

According to Clabaugh (2012) Blackberry's market share in the US, 'fell to 9.5 percent in July, down from 11.6 percent in April' (Clabaugh, 2012:1). In addition to this he says that 'three years ago RIM's share of the market was nearly 43 percent' (Clabaugh, 2012:1)

1.7.2 Use Social Networks (possibly a Facebook page or twitter account for each department)

As has been established social networks are used extensively by staff and boys, and thus they would be a good option. In order to work effectively a system involving a specific social network would need to be initiated. Either Facebook or Twitter act as an effective communications system that work across platforms. Another advantage of using such a system would be that it would not be limited to the functionality of an internal network. Regardless of the status of the school's internet connection it could be accessed from a mobile device.

The current DRO system could simply be replaced and the staff member responsible for typing and printing these messages could batch send messages to a social network.

1.7.3 Use an email to text converter

Since such a large number of staff use email and such a large number of students use text, a system that forwarded emails to boys phones in some way could be used. The problem here would be that it would be limited to the availability of an internet connection. There would also be a cost implication for each message sent, which may not be favourable.

1.7.4 Issue staff and boys with tablets.

Many tablets such as the iPad and the Blackberry Playbook have inter-tablet communications built in. The Playbook can connect to the BBM network and this enables tariff free chat between tablets and BlackBerry phones. BlackBerry (2012). The iPad has iMessage enabled on all devices, which similarly enables chat to any other iPad connected to the internet, Apple (2012). This method would work for communication between iPads regardless of whether they were connected to the internet. A Wifi connection to the schools intranet would enable chat even if the external internet connection was down.

**Conclusion**

What emerged through this study was that a large proportion of both staff and boys in the survey group at Hilton College were not only in possession of smartphones and devices, but were also regularly using them throughout the day. In addition to this staff and boys were in favor of using technology for school announcements and for the passing on of information. A concern for the school is that the majority of people in the study were not in favor of or particularly supportive of the current methods of communcation in use at the college. Therefore it would appear that Hilton College would benefit from some intervention with regards to their communication system. The technology is available and for the most part, is already in the hands of the end user. It is also evident that many of the staff and boys at the school are already using this technology for other non-academic purposes. Adopting a digital communciation system would seem to be a viable way to improve communcation at the college.

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## Section 2 - LITERATURE REVIEW

### 2.1 Introduction

This literature review give a brief review of current communications research and a more in depth look at recent digital communications literature. Research into generational theory will also be mentioned with reference to communication. Communications theory, which is sourced from publications going back to the 1940's, informs much of what we see in this field. It forms the basis of understanding the nature of the communicated message.

Beyond the Literature reviews initial focus on communication, sources were limited to publications later than 2005. This is because prior to 2005, many of the technologies in reference here were still in their infancy.

### 2.2 Communication Models

This next section will look at how communication models developed and what the basic theories of communication are.

Shannon (1948) states "The fundamental problem of communication is that of reproducing at one point either exactly or approximately a message selected at another point" (Shannon, 3:1948). Shannon's (1948) work began the foundation of what was to become communications theory. This was the fundamental problem of communication: What is communicated from one end is not always received in the same manner on the other end.

Contemporaries of Shannon such as Laswell (1948) suggested that the communication process could be defined as "Who (says) What (to) Whom (in) What Channel (with) What Effect." (Laswell, 1948:2). Here, the message, once received, merely had an effect on the receiver, it did not contain the concept of interference.

According to Schramm (1997), effective communication requires common ground to take place. The greater degree of overlap of this common ground, the more significant the communication event.

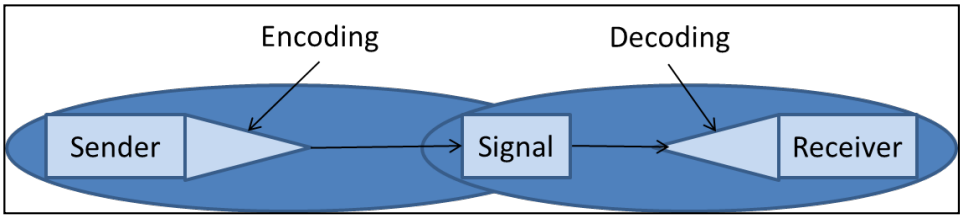


**Figure 2-1 Schramm's Model, Croft (2004:5)**

In reference to Figure 2-1 "if the circles have only a small area in common, then it is going to be very difficult to get an intended meaning across" (Schramm, 1997:54). It is critical therefore for "the source to encode in such a way as to make it easy for the destination to tune into the message" (Schramm, 1997:54).

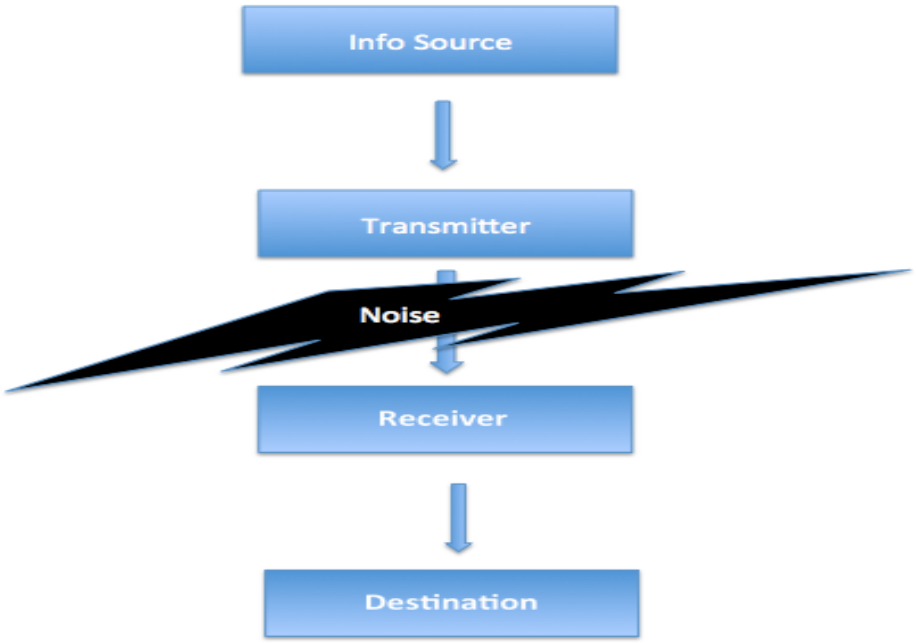


**Figure 2-2 Shannon and Weavers Model, Croft (2004:5)**

Figure 2-2 shows the communication model taken from Shannon and Weaver. In this case the information source, being a natural person, transmits a message through some form of transmitter. This could be through the spoken word, written word, a digital method such as SMS or email. Following the transmission the message is subject to interference, which could be things like cultural difference, age difference and so forth. The message is then put through a receiver such as a computer or cellular phone and arrives at its destination.

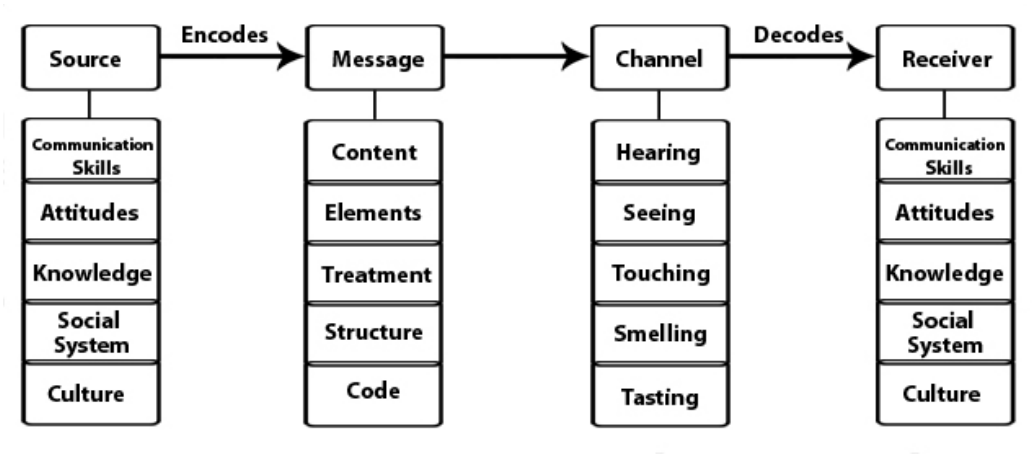


**Figure 2-3 Berlo's SMCR Model (1960:21)**

Berlo's view in figure 2-3 was that both the source and receiver of communication had various forces exerting influence up them. These forces were things like knowledge, attitude, social system and culture. Each of these forces had an impact on the choice of content, the elements within a message, how that message was treated, the structure of the message and the 'code'; be it language or nuance that affected the message. The receiver in turn decoded the message through various channels, hearing, seeing, touching, smelling and tasting and each of these were influenced by the aforementioned forces. This model explains how Shannon's 'problem of communication' is understood and how it may be resolved. It also accounts for the noise or interference in Shannon and Weavers' model.

In reference to a further model known as the Riley theory, Lee states that "The model indicates the communicator (A) emerges as part of a larger pattern, sending messages in accordance with the expectations and actions of other persons and groups within the same social structure. This also is true of the receiver (B) in the communications process" (Lee, 1993:1).

The Riley model takes into consideration social and environmental influences such as age, upbringing, culture and so forth. In theory the sender and receiver are both subject to these influences when conveying a message and these environmental influences create a degree of noise which affect the quality of their communication.

What all these models tell us is that the communication event is influenced by external factors, internal factors, noise and the choice of communication medium. The decoding of the message is also similarly influenced. It is important for this study because students and staff may have different forces exerting influence upon them, they come from different generations, have different exposure to technology and may use communication differently. All of these things potentially have an enormous impact on the communication event.

The underlying theory behind this study is important to this report; If effective communication improves the perceived quality and performance of an organization, then an effective communication strategy using an appropriate communication platform will be of value.

## 2.3 Interpersonal Communication

Interpersonal communication is a field of study that covers the interactions between individuals. It extrapolates the concept of communication to a personal level. It focuses on things that interfere with effective communication such as environmental distractors.

In a study published by Gibson (2009), it was indicated that "Intergenerational communication between teacher and student is especially important today, because of the gaps of time and understanding that exist among four active generations — Traditionalist, Baby Boomers, Generation X, and Millennials. Generation Y faculty have opportunities to be successful by learning the values, learning styles, past generational experiences, and current expectations of today's highly technologically competent students" (Gibson, 2009:37).

It is interesting that she found that technology was an enormous factor in improving the communication particularly to younger generations. Her conclusion was that teachers needed to start "building skills for coaching technology-driven students, helping them solve problems and develop critical thinking skills in a web-based modality" (Gibson, 2009:37).

Another relevant study was that by Dailey, Giles, Makoni (2006), which looked at the perceptions of intergenerational communication. Their study focused on "374 participants, who were comprised of university undergraduate students from three nations: United States, South Africa, and Ghana" (Dailey et al, 2006:195).

Dailey et al found that "While avoidance of older people was predictive of communicative enjoyment and satisfaction for all three groups, respect as a communicative strategy was uniquely, and relatively more predictive of, enjoyment for both African samples" (Dailey, 2006:206).

What their research indicated was that there was often difficulty in communication between people of different generations. Another helpful finding was that there appeared to be 'social norms' that predicted certain behaviors between the age groups. This meant that adolescents as an example often responded to adults in a way that was predetermined due to their expectations of things like respect and so forth.

## 2.4 Digital communication:

The field of digital communication is tremendously varied and modern advancements are regularly leading to newer systems and platforms through which to communicate.

### 2.4.1 Email

According to Hachman "In the fall of 1971, Tomlinson sent the first network email" (Hachman, 2012:1). Since then email has become a standard method for transferring announcements, documents and media between people in organisations.

In a study conducted by Adams and Brunner and Yates (2009) it was stated that "The impact of technology is certainly not limited to primary and secondary education across the globe; its effect is evident in higher education as well. In the USA, specifically, since the 1990s, universities across the country have tried to acclimate to the internet's ubiquitous presence on their campuses" (Adams et al, 2009:307).

Their study in particular looked at the preferred use of email by faculty staff and "Specifically, it examines the content of email sent by faculty to students, faculty's perceptions of email's effectiveness, and email's effect on student learning. Comparisons are made based on the 695 US mass communication and journalism faculty members who participated in the study" (Adams et al, 2009:308).

It was also found that "students and professors use email for classroom management tasks. A majority (82%) of college students in the Pew Center (2009) study said their professors sent them assignment information via email and another 89% have received class announcements in email messages" (Pew Centre, 2009: 316).

The question remains as to whether this was an effective form of communication and whether it superseded prior 'analogue' forms of communication such as oral announcements, notice boards and letters. It was found that after examining 635 responses to their survey that "Faculty clearly find favor with email communication and its effectiveness as a tool of teaching" and it was suggested that "faculty ought to embrace the technology and develop positive ways to incorporate email, as well as other technology, into the educational process" (Pew Centre, 2009:318).

### 2.4.2 ICT

In addition to this there have been a number of studies into the adoption of Information Communications Technology (ICT) in schools. This has relevance because a digital communication strategy has at its core the use of a comprehensive ICT framework. One in particular by Tondeur, Cooper & Newhouse (2010) noted that "ICT in education reveals that although teachers are gradually starting to integrate ICT into their teaching strategies, significant differences are observed in the way ICT is integrated in the classroom" (Tondeur et al. 2010:296).

Tondeur et al's (2010) approach was an interesting one, they focused on the concept that ICT interventions would improve the school as a whole. They state that "a school improvement approach to educational change embodies the long-term goal of establishing a self-renewing school" (Tondeur et al, 2010:296) Thus the teachers involved in the change would see the focus not so much on their personal shortcomings, from a technological standpoint, but rather that these interventions were something that everyone was doing for the benefit of the whole organization.

Tondeur et al (2010) findings were that "the results confirmed that the support of ICT integration was dependent on the ICT coordinator role. This is in line with research findings suggesting that ICT coordinators are in the best position to provide ongoing ICT support" (Tondeur et al, 2010:304).

Their research thus indicates that the roll out of an organizational change such as that of an ICT strategy requires a support structure to make it viable. The absence of such a strategy creates confusion and the space for dissatisfaction among staff.

One of the hypothesized states currently is that communication is not effective and this is partly due to the behaviour of adolescents and their communication method. Staff thus assume that students will communicate in the same ways that have always been used, those of oral and paper announcements. In 2005 a study by Van der Hoof "Communications technologies, specifically, can lead to rapid and substantial social and behavioral changes in organizations" (Van der Hoof, 2005:131).

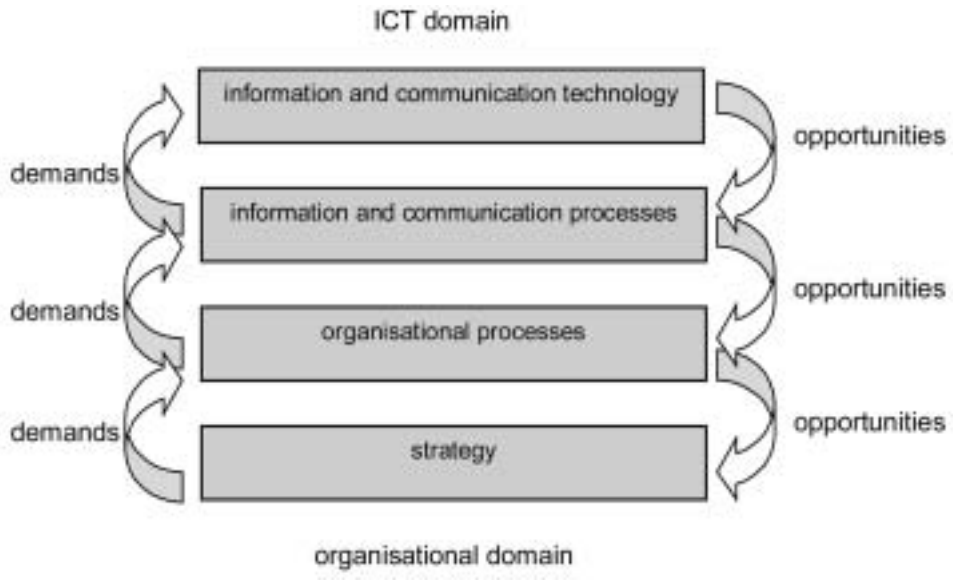


**Figure 2-4: ICT Domain Van der Hoof (2005:132)**

Van der Hoof (2005) provides a useful diagram at figure 2-4; What this diagram depicts is that the growth and improvement of an organization demands certain improvements in ICT on the one hand. However the improvement of ICT in turn creates opportunities for the streamlining of an organization as a whole.

## 2.5 Mobile Communication

Castells (2007) et al state that "mobile communication is pervasive and reaches all domains of human activity, its mediating effects can be observed in different dimensions" (Castells, 2007:77). The mobility of communication has changed the way human beings interact and people in modern society are seen and expected to be available at all times

Castells et al (2007) add that "as elements of daily routine, wireless technologies, especially the mobile phone, are perceived as essential instruments of contemporary life" (Castells, 2007:77).

Stald (2008) extends the concept of the mobile phone being more than simply a form of communication to being a channel for social exchange. "One quality is the communicative function, which is facilitated by the technological device: it is about the mobile phone as a tool and a channel for the exchange of information. The other quality is the social meaning, which develops from the communication" (Stald, 2008:143).

Stald (2006) goes on to say that "multiple functions change the role of the mobile phone from being only a medium for interpersonal communication to incorporate multiple forms of information exchange at a user level as well as at a technological level: peer (mobile) to peer (mobile/Internet/Messenger), citizen to institution and vice versa, mobile to PC/Internet and vice versa, employer to workplace and vice versa" (Stald, 2006:145).

### 2.5.1 Mobile Advertising

Following on from voice calls Short Message Service (SMS) and Media Message Service (MMS). These had been used extensively and were the subject of many studies particularly in the field of mobile marketing. Whilst

marketing and administrative communication, which is the field of study at Hilton College, are very separate fields, there are limited studies into the use of SMS as an administrative communication tool. For this reason literature based on the effectiveness of advertising was used as the closest 'relative'. Advertising, whilst having a completely different motive, still performs the function of communicating a message from one party to another and is thus partially relevant here.

An effectiveness study by Drossos, Giaglis, Lekakos, Kokkinaki and Stavraki was conducted in 2007. Their study found that SMS advertisement effectiveness was determined by a number of factors. "Location, time and relevance" (Drossos et al, 2007:3) were indicated to be the most effective factors determining an advertisements communication. These were interesting findings because one can surmise that should the location of the person receiving the message, the time it is sent and the relevance to the person be correctly determined, then the message would likely be more effective.

Drossos et al (2007) state that "consumers have generally negative attitudes toward mobile advertising unless they have specifically consented to receive the advertising messages" (Drossos, 2007:6). This was confirmed by a study in the same year by Barwise and Shintaro (2007) who stated that "consumers generally had negative attitudes toward mobile advertising because it was seen as irritating, unless the consumers had opted into the digital offering" (Barwise and Shintaro, 2007:62).

## 2.6 Instant Messaging (IM)

According to Huang and Leung (2009) "Instant messaging (IM) is a computer application that allows synchronous text communication between two or more people through the Internet" (Huang and Leung, 2009:675).

Generally IM can be broken down into two distinct fields, mobile and static.

Mobile IM is comprised of cheap instant messaging that is available on a mobile handset and can include: Blackberry Messenger (BBM), WhatsApp (WA), and other similar applications.

Static IM is an instant messaging service that is primarily operated from a fixed position such as operated on a desktop PC. Applications such as Windows Messenger (WM), Skype and Google Chat (GC) are commonly used.

The research around IM currently questions the effect it has on productivity in the workplace as well as its apparent addictiveness. Hanyun and Leung's study focussed in around the effect IM has on teenagers. Their control group was "Students in grades 7 through 12 (ages 12–19), who were randomly selected" (Huang and Leung, 2009:676).

They found that the majority of participants (95.8%) indicated regular IM use. Of the group researched it was found that "9.7% of the teenagers in our sample were classified as IM addicts" (Huang and Leung, 2009:677). This indicated usage of in excess of 2.5 hours every time they logged on to chat.

They also found that this addiction had an impact on academic performance as "teenage addicts were less self-disciplined, could not control the time spent on IM, and neglected their homework or duties, resulting in academic performance decrement" (Huang and Leung, 2009:678).

On the opposite end of the spectrum however, Danziger et al (2008) state that "IM provides a means of obtaining task-relevant information rapidly and with minimal disruption, allowing a worker to ask clarifying questions without the expectation of engaging in a longer conversation. Alternatively, it can be used to participate in a sustained form of low intensity collaboration" (Danziger et al, 2008:8). What this means is that there appears to be a definite move towards the regular use of IM in the workplace and some indication, though not conclusively studied, that IM can improve

communication and productivity.

Botazzo (2005) states that "the flow of information or efficient organizational communication is an essential condition for the successfulness of every organization" (Botazzo, 2005:77).

Efficient and effective internal communications systems are imperative for organizations to function properly. He suggests in his study that "The Intranet or Intranet portal, properly designed and arranged, can serve to quite different organization needs. The purpose of the implementation of internet technologies is to raise the efficiency of the organization with minimum financial and time inputs" (Botazzo, 2005:79). Whilst this is a valid point, the technology he refers to is now fairly dated.

In the most current research the focus on the effectiveness of mobile digital communication has been in the fields of advertising and marketing. Researchers have tried to measure effectiveness by looking at the response comparisons between different forms of advertising, such as comparing paper flyers to personal text messages. These studies are primarily of a quantitative nature and have looked at the percentage increase in mobile advertising as well as comparing their effectiveness to other forms such as flyers and print media.

In a study that was conducted by Parka, Shenoya and Salvendya (2008) comparing 53 case studies on the effectiveness of mobile advertising. They found that there had been "an increase of 1872.6%' in mobile advertising since 2002". (Parka et al, 2008:355). However they cited that due to the nature of the study and its use of case studies that it was "hard to get quantitatively meaningful results because they do not have enough information to measure the effectiveness precisely" (Parka et al. 2008:370).

Despite this they provide a helpful tool that may be adapted to measure the effectiveness of mobile announcements to teenagers in an institutional

context:

## 2.7 Social Networks:

"Millions of people are using social network sites to connect, meet, and share. The users of the most popular sites on the Internet, MySpace.com, Facebook.com, Bebo.com, and Orkut.com, are predominantly young-twenties, college students, and teenagers" (Brownholtz et al 2008:711). The use of social networking has thus become incredibly relevant to young people's lives. These networks are available now on portable handheld devices.

The extent to which these networks are affecting the world is surely significant however as Kleinberg (2008) states "Collecting social-network data has traditionally been hard work, requiring extensive contact with the group of people being studied; and, given the practical considerations, research efforts have generally been limited to groups of tens to hundreds of individuals" (Kleinberg, 2008:66).

However he states that the proliferation of social networks in past years has led to the opening up of entirely new realms for research, and that because humans are now communicating in large public forums such as Facebook, it is possible to see links to the spread of information in new ways. He says that "A rumor, a political message, or a link to an online video—these are all examples of information that can spread from person to person, contagiously, in the style of an epidemic" (Kleinberg, 2008:69).

Chaher and Spellman (2012) quote PricewaterhouseCoopers in saying, "Firms that embrace Web 2.0 (social technologies) and social media are more likely to be market leaders, have their market share increase, and use management practices that lead to higher margins." (Chaher and Spellman, 2012:3).

Caher and Spellman (2012) also quote Barry Liebert who says "for years, astute corporate directors believed the tools that companies like Facebook

and Twitter offered weren't essential. In their view, these new means of communications were for kids, had little, if any, business value, and created minimal strategic, operational or financial risks… they were wrong!" (Chaher and Spellman, 2012:6).

The implication seems to be that organisations that ignore the power of social media do so at their own peril. These tools enable companies to control the flow of information out of their organization rather than allowing the public to do so without their control.

## 2.8 Generational Theory

Generational Theory is the conceptual idea that successive generations exhibit certain traits that can be classified. The concept of generational theory was originally suggested by Strauss and Howe in 1991 in their seminal book 'Generations: the history of America's future'.

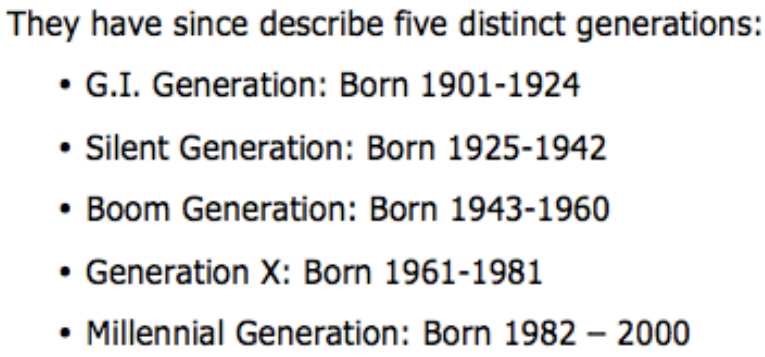


**Figure 2-5 Generations Strauss (2005:10)**

The focus of this thesis will be on the Millennial generation, also termed 'Generation Y' or the 'Net generation'. As Strauss (2005) observes this generation is under the age of 23 and this means they are currently in high school and university.

Geck (2006) has an interesting perspective here in that she motivates for a

*Generation Z*; she says "the term is sometimes used to describe the already-existing net generation of teenagers born in or after 1990 in technologically advanced countries. Today's Generation Z currently comprises 14-year-olds or those approaching their early teens; these youths were born into a totally different technological world than what their immediate predecessors were, Generation Y" (Geck, 2006:2). Further references to Generation Z were unavailable and this appears to be a relatively new field.

Specific traits associated within this generation and their prevalence within the context of Hilton College will be examined. In particular the role technology and communication has played on this generation will be in focus.

According to Monaco (2007), students have instant access to their information though the use of the instant messaging and the internet. The result of this is that young people have become accustomed to instant response. Email is therefore considered outdated due to the significant lag time involved in responding. Monaco says that "They are mobile nomads, connected by cell phones, wireless PDAs, and laptops. They have been technologically stimulated throughout their childhood and demand this connectivity as they matriculate through college" (Monaco, 2007:2)

### 2.8.1 Generation Y and communication

"Perhaps the most recognized trait (of *Generation Y*) is the integration of technology into their social lives. Seventy-five percent report having a social networking profile and more than 80 percent keep their cellular phones nearby while sleeping" (Crappell, 2012:2). In addition to this, Keegan says that "Millennials are the first truly-wired generation, they are comfortable with constant, real-time communication" (Crappell, 2011:1).

Stald (2007) found that in Sweden "seven out of ten young people rated the importance of their mobile between eight and ten on a scale from zero to ten"

(Stald, 2007:147). Their ability to connect and be in contact is seen as being of paramount importance.

In another context, Rosen's research (2010) found that "Net Geners and older teens spend more than 20 hours per day using media and technology followed by younger teens who spend slightly more than 15 hours per day" (Rosen, 2010:25). Rosen's research (2010) indicates that "its in the Net Generation that different communication approaches emerge, including social networks, instant messaging, skyping and texting" (Rosen, 2010:26).

In a separate study Oblinger (2007) found that "74% of teenagers use IM (instant messaging) as a major communication tool" (Oblinger, 2006:9) and Morrisson and Sanders (2007) found that they are "active in social networking and they are highly connected with their peer group, especially by the use of mobile phones" (Morisson and Sanders, 2007:85). In addition to this Castells et al (2004) state that "Handsets are personal objects adhered to the body, like watches, whose main feature is the communicational function...in this sense, being elements of our routine, mobile telephones are perceived, nowadays, as essential instruments" (Castells et al, 2004:66).

According to Brownholtz et al. (2008), the users of the most popular sites on the Internet, namely, MySpace.com, Facebook.com, Bebo.com, and Orkut.com, are predominantly adults in their early twenties, college students, and teenagers. This is specifically relevant to the study of teenagers at the school. (Brownholtz, 2008:711)

Nielsen's study (2009) shed further light on the subject revealing that 83% of US teenagers use text messaging and that the average teenager sends 2,899 texts per month. Furthermore 66% of teenagers in Nielsens study indicated that texting was their preference over other methods such as phone calls. (Nielsen, 2009:9).

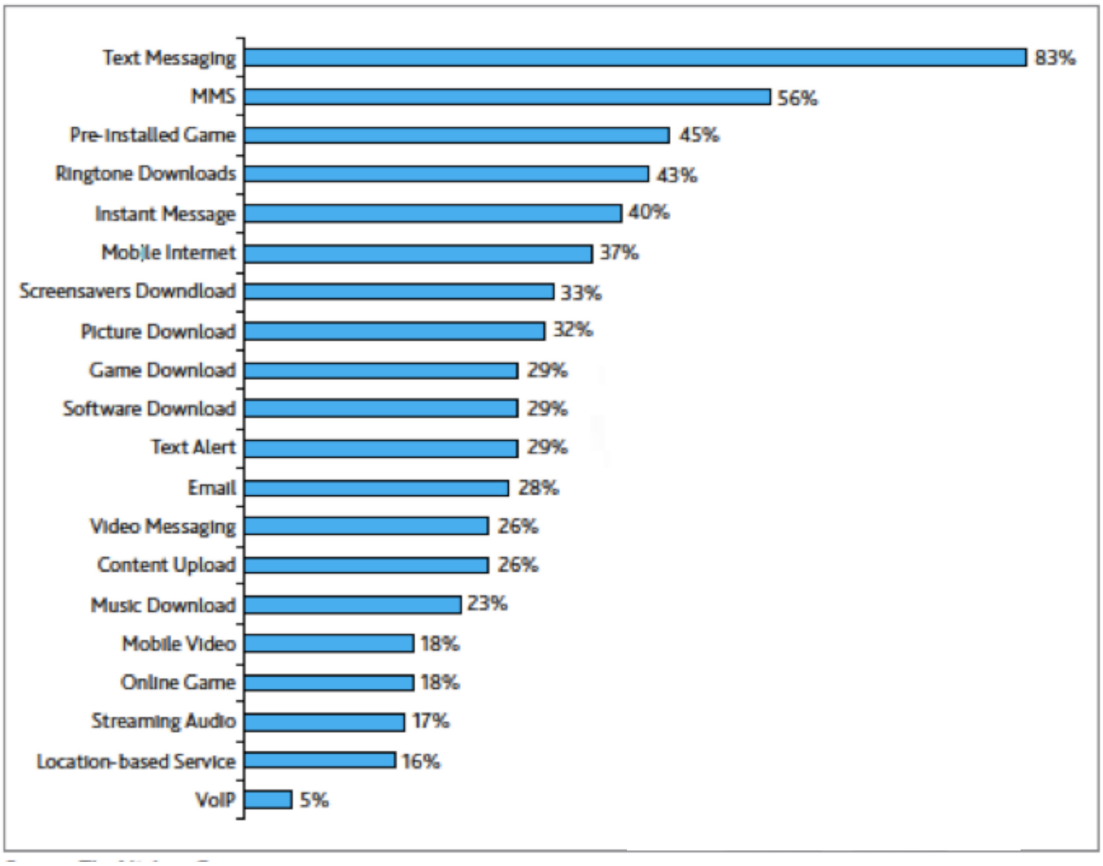


**Figure 2-6: Mobile Media use by US teenagers Nielsen (2009)**

These are astounding statistics and ones which will be scrutinized along with others to determine whether that trend is extant within both the South African context and within Hilton College. In order to be consistent with these behaviours a survey conducted in the South African context would need to produce similar results. Here teenagers would need to exhibit similar usage, with the prevalence of phone activity being on texting, 83% (Nielsen Company) and 88% (Pew Research Centre).

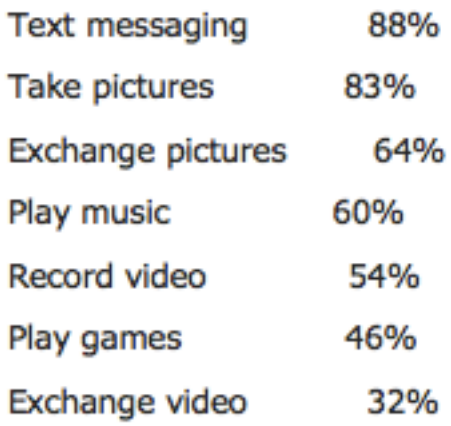


**Figure 2-7: Pew Research Internet and American Life (2010:2)**

## 2.9 Conclusions

What has emerged from this literature review is that economic incentives have been a primary driver into mobile communications research. Companies have wanted to know what the value is in mobile advertising and thus research has surrounded much of these areas. In addition to this, older technologies such as email and ICT have received wider attention in terms of their research and the underlying principles here will be used to inform the Hilton study. Due to the rapid advancement of mobile IM technologies in the past 18 months, few academic studies into their effectiveness have emerged. This adds credence to researching their use and effect on communication between staff and students at the school.

"McLuhan argued that the nature, or format, of the media by which individuals communicate is as important in regard to communications efficiency as the content of the message conveyed through a particular format" (Short and Reeves, 2009:5). This is significant because it has bearing on how one communicates with people of a different generation. Its effectiveness may be measurable by the format or platform one uses to communicate with.

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# 3 Section 3. – RESEARCH METHODOLGY

## 3.1 Introduction

The intention of this paper was to examine trends in technology usage among Generation Y in particular and to compare this to Hilton College. Survey research was used to obtain data from the population. According to Babbie (2011), survey research is the best method for obtaining information about a population that is too large to examine directly (Babbie, 2011:242). This section will cover the research methodology and outline the aims of the research.

## 3.2 Aims of the research

The intention was to establish the methods that teenage boys and academic staff from Hilton College used to communicate and which devices and platforms they communicated with at school. Hilton College is an all-boys private school in the Natal Midlands of South Africa. The purpose of the research was also to measure the exposure of different generations to technology; providing a rating based on various forms of daily activity.

A survey questionnaire (appendix 1) was derived from Generation Y theories and communication models identified in the literature review. The intention was to reveal whether Hilton College's digital communication behaviour was consistent with research conducted elsewhere.

The survey took the form of an option based, multiple choice questionnaire. It was administered through the school intranet and respondents followed an online link to the survey. Initially the survey began with demographic information and then moved on to questions specifically related to communication.

Factors measured in the survey were: why they use / don't use electronic communications, what devices staff and boys use, device capability, what type of communications they use them for (work, social, parents), what applications they use and how much time they spend per day communicating with others on these platforms. The usage of applications such as Facebook, Skype, Blackberry Messenger, WhatsApp, Twitter and others was also measured. This was intended to indicate what types of communication are preferred and for what purpose. The survey also measured the times of the day that both staff and boys were most using their devices according to the school day.

### 3.3 Research Questions

The key research questions to be answered by this paper were:

- What are the communications behaviours of Millennial according to theory and current research?

- What are the communication behaviours of Boys at Hilton College?

- What are the communication behaviours of staff at Hilton College?

- Are these behaviours consistent with Millennial Theory?

  What does this tell us about the methods staff use to communicate with boys at Hilton College?

- How might communication at Hilton College be improved as a result of better knowledge of theory and current trends?

## 3.4 Research Methodology:

The research is centred in a post-positivist paradigm. According to Guba and Lincoln the post positive paradigm uses a "modified dualist objectivist epistemology" (Guba and Lincoln, 1994:110) and the question raised is whether the "findings fit with pre-existant knowledge" (1994:110). For this reason it was important for the researcher to establish what the pre-existant knowledge in the field of Generational theory is and to establish what current global trends were. This acted as a foundation upon which to formulate the survey, which compared findings to the current knowledge base.

The intention was to remain as objective as possible, following an objective epistemology. According to Mittwede "ontological realism of post-positivism is critical, and knowledge acquisition is fallible" Mittwede (2012:26). For this reason it was important that researcher bias be excluded as much as possible to allow the data to speak for itself.

In reference to methodology, the survey represented a primarily qualitative approach. Basic quantitative elements were included although this was primarily to establish the presence of a behavioural trend in mobile usage rather than to prove or disprove a hypothesis.

### 3.4.1 Data Collection

Data Collection was administered through the use of an online survey hosted by Google Documents. This was completed by students in the computer labs at Hilton College and by staff from their personal computers.

### 3.4.2 Population

Hilton College has a total population of 556 boys with about 110 boys in each grade Guthrie (2012)  In order to ensure that the data was as accurate and as forward looking as possible all 200 junior boys (Grade 8 and 9's)

representing 40% of the school were sampled. These boys represent the current population of boys who will be at the school for the longest as they still have 3-4 years remaining before matriculation. Surveying all the grade 8 and 9 boys meant that actual data was being discussed rather than statistical inference. The intention of this was to allow for projections to be made based on current communication trends. In addition to this 30 school staff representing 50% of the population were surveyed.

### 3.4.3 Interpretation of Results

Results were downloaded from the Google server after completion and then analysed using Microsoft Excel. The primary objectives were to determine preference, behaviour and saturation levels of certain devices in the population. Beyond that major statistical analysis was unnecessary.

The survey population comprised of 187 grade 8 and grade 9 boys in attendance at the school and 18 academic staff. It was felt that these numbers would allow for significant responses to make deductions about the population. The intention was to survey 30 Academic staff but only 18 usable responses were received.

### 3.4.4 Ethics

Given that the primary research population was teenage boys one had to give due consideration to Ethics. Applications were made to the Rhodes business school ethics committee and the Rhodes university ethics committee. Permission was granted from both these bodies, and permission letters are included in Appendices 6 and 7.

All boys participating in the survey were between 13 and 15 years of age and because of this permission was required from the school and guardians proceed with the research. Letters were written to the Headmaster, Housemasters and parents requesting permission to proceed with the

research. These examples are included in the appendices 2 to 5. Permission was granted by the headmaster to proceed with the research and to survey both staff and boys at the school.

The next step was to obtain permission from the housemasters for individual boys to complete the survey. Hilton College is an all boys boarding school and has no day scholars (Guthrie, 2012). Because of this the school has a school contract that gives housemasters in particular parental rights whilst the boys are in their care. This includes being able to authorize medical procedures in the parents absence. 'At all times whilst the pupil is at school, or under its control, the Headmaster or the members of its staff act in *loco parentis'* Hilton College parents contract (2013). Because of this direct permission was requested from housemasters in particular. Permission was obtained from all housemasters for the boys to participate in the research, an example of this can be found in appendices 2 to 5.

In addition to this all parents were sent a letter containing the detail of the proposed research and asked to object in writing should they take issue with the process that was followed. (Appendices 2-5) The research received the full support of parents.

The survey was set up to run during a physical education period in computer labs during the school day. Boys were told that they could opt to take a free period and were under no obligation to complete the survey. The nature of the survey was explained to them in full before they began. They were also given a permission slip to sign, an example of which is contained in the appendices. In addition to this all questions were optional and the survey was completely anonymous.

Due consideration has therefore been given to ensuring that no minors were under any obligation or coercion to complete the survey. The information contained within the survey cannot be traced back to them and permission was granted from headmaster, legal guardians and parents.

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**Appendices:**

## Appendix 1: Thesis Survey

Please fill in the survey as accurately as possible. If you don't have a tablet or a cellphone, please skip to the next relevant question.

Gender

Race

Age

Please go to http://pewresearch.org/millennials/quiz/ and fill in the questionnaire
Post your score below

What devices do you use?
Please tick the box

- Cellphone
- Laptop
- Tablet computer

TABLET PC questions

If you use a tablet, what type is it?
please tick the box

- Blackberry playbook

Samsung

iPad

Asus

Acer

Other:

Don’t use one

What type of communication do you MOST use your tablet for?

Please indicate which is the MOST

Email

Twitter

Facebook

Chat programmes (Gchat, iMessage)

Other:

Please RANK the following in terms of your TABLET usage

1 is MOST and 5 is LEAST (indicate 0 if you do not use it for any of these)

| | 1 | 2 | 3 | 4 | 5 | 0 |
|---|---|---|---|---|---|---|
| Email | | | | | | |
| Twitter | | | | | | |
| Faceboo k | | | | | | |
| Chat | | | | | | |

MOBILE PHONE questions

If you use a cellphone, what type is it?

please tick the box

iPhone

Blackberry

Nokia 600, 700 or 800

Samsung Galaxy / Note

Other:

What type of communication do you MOST use your cellphone for?

Please indicate which one you use the MOST

WhatsApp / BBM

SMS

Social Networking (Facebook, Twitter)

Email

Phone calls

Other:

Please RANK the following in terms of your CELLPHONE usage

1 is the MOST and 5 is the LEAST

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| WhatsAPP/ BBM | | | | | |
| SMS | | | | | |
| Social Networking | | | | | |
| Email | | | | | |
| Phone Calls | | | | | |

How many texts do you send a day?

0-50

50-100

100-150

150-200

200-250

More than 250

How many texts do you RECEIVE a day?

0-50

50-100

100-150

150-200

200-250

More than 250

Do you currently receive texts from staff at the school?

YES

NO

IF you said yes answer: What reason do staff text you?

Sport

Academics

Pastoral Care

Cultural

Other:

Do you wish to receive texts from the school?

BBM, SMS, WhatsAPP

YES

NO

What times during the day do you MOST USE your phone?

- Before Breakfast
- Between class
- Tea
- Lunch
- Central hour
- Supper
- Before prep (early evening)
- After prep (late into the evening)

Please rank the top 5 times you MOST use your phone.
JUST the top 5!! (1 being the most and 5 being the least)

| | 1 | 2 | 3 |
|---|---|---|---|
| Before breakfast | | | |
| Between class | | | |
| Tea | | | |
| Lunch | | | |
| Central hour | | | |
| Supper | | | |
| Before prep (early evening) | | | |
| After prep (late into the evening) | | | |

How many images do you send from your phone per day?

- none
- 1-10
- 10-20

20-30

more than 30

How many videos do you send from your phone per day?

none

1-5

5-10

More than 10

Communication preferences

What type of communication do you prefer?

Phone call

BBM

WhatsApp

Email

Facebook

Twitter

Other:

Which 'free' texting systems do you use?

Select the ones you use on your phone.

BBM

WhatsApp

Gchat

Other:

What social network do you use the MOST

Indicate which is the MOST used

Facebook

Twitter

BBM

WhatsApp

Other:

How many hours a day do you spend on the following?

| | 0 | 1 | 2 | 3 | 4 or more |
|---|---|---|---|---|---|
| Facebook | | | | | |
| Twitter | | | | | |
| BBM | | | | | |
| WhatsApp | | | | | |

What device do you use most for social networking?

Please rank from greatest to least

| | 1 | 2 | 3 |
|---|---|---|---|
| Computer | | | |
| Phone | | | |
| Tablet | | | |

What do you think the most effective way for the school to communicate with pupils is?

BBM

WhatsApp

Email

Verbal announcement

DRO

Facebook

Twitter

SMS

Other:

How do you have most of your conversations with Friends?

BBM

Face to face / in person

WhatsApp

Facebook chat

Skype

Other:

How do you have most of your conversations with family

BBM

Face to face / in person

WhatsApp

Facebook chat

Skype

Other:

How do you have most of your conversations with teachers?

BBM

Face to face / in person

WhatsApp

Facebook chat

Skype

Other:

If you needed to announce something to your friends how would you do it?

By phone call

Facebook

WhatsApp

BBM

In person to a group

Email

What is your primary form of communication to friends and family?

Verbal

Text

Email

Social Networks

How do you find out about things going on in the world e.g. The News, weather?

The first place you would look...

Newspaper

TV

Tablet PC

Cellphone

Do you have a blog?

YES

NO

How often do you Blog?

Every Day
Once or twice a week
Never

How many times a day do you check your email?

Once a day
Twice a day
Three times a day
Throughout the day

Where do you check your email?

Tablet
Computer
Mobile Phone

## Appendix 2: Letter to headmaster

**Rhodes Business School**
*Leadership for Sustainability*

16th June 2011

Headmaster

Hilton College

Hilton

Dear Mr Thomson,

**Re: Permission to conduct research at your school**

Richard Wyngaard (under the supervision of Kevin Rafferty) is Business school post graduate student (Masters student) at Rhodes University. He is carrying out research on the use of technology as a medium of communication.

The aim of this research is to determine the methods that teenagers and staff use to communicate and what their communications preferences are. The study hopes to glean important information about the most effective methods of communication in particular from staff to students in a post computer and mobile age.

The research will be undertaken using questionnaires that will be completed by grade 8's and 9 scholars. The questions will cover some general information on participant demographics, mobile phone ownership and usage. Participants will also be required to rate the importance and usage of certain mobile phone and tablet features, such as Whats App, Facebook, email and text. The questionnaire should take about 30 minutes to complete.

It is our request that you allow your school to participate. If agreeable, we look to you for guidance in choosing teachers that would be amenable to allowing us to conduct this survey during one of their lessons (at a time and date that suites them).

Thanks you for your time and I hope that you will find our request favourable. Please feel free to address any further queries to Kevin Rafferty at the Business school.
k.rafferty@ru.ac.za

Yours Sincerely,

_____ _____

Richard Wyngaard Kevin Rafferty

## Appendix 3: Letter to the parents

**Rhodes Business School**
*Leadership for Sustainability*

18 September 2012

Dear Hilton College Parents,

The Hilton College Chaplain, Richard Wyngaard, under the supervision of Kevin Rafferty is a Business School post graduate student (Masters student) at Rhodes University. He is carrying out research on the use of technology as a medium of communication.

The aim of this research is to determine the methods that teenagers and staff use to communicate and what their communications preferences are. The study hopes to glean important information about the most effective methods of communication, in particular from staff to students in a post computer and mobile age.

The research will be undertaken using questionnaires that will be completed by Grade 8 and Grade 9 scholars. The questions will cover some general information on participant demographics, mobile phone ownership and usage. Participants will also be required to rate the importance and usage of certain mobile phone and tablet features, such as Whats App, Facebook, email and text. The questionnaire should take about 30 minutes to complete and will be administered on Monday and Tuesday on the 24th and 25th of September.

If for any reason you would not like your son to participate in this research, please will you send through your objection to rcw@hiltoncollege.com, and we will not allow him to participate in the study.

Yours sincerely,

Richard Wyngaard Kevin Rafferty (Supervisor: Rhodes Business School)

## Appendix 4: Letter to the respondents

**Rhodes Business School**

*Leadership for Sustainability*

**CONSENT FORM**
**Rhodes Business School**

**Project Title:**

***'Understanding Generation Y; An investigation of how Hilton College can improve communication through technology'***

**Researcher's names: Richard Wyngaard, Kevin Rafferty**

---

- I have received information about this research project.
- I understand the purpose of the research project and my involvement in it.
- I understand that I may withdraw from the research project at any stage.
- I understand that participation in this study is done on a voluntary basis.
- I understand that while information gained during the study may be published, I will not be identified and my personal results will remain confidential.
- I understand that I will receive no payment for participating in this study.

**Name:** .....

**Signed** ..... **Date** .....

I have provided information about the research and believe that participant understands what is involved.

**Researchers signature and Date**.....

## Appendix 5: Letter to the housemasters.

RHODES UNIVERSITY

**CONSENT FORM**
**Rhodes business School**

**Project Title:**

***'Understanding Generation Y; An investigation of how Hilton College can improve communication through technology'***

**Researcher's names:** Richard Wyngaard, Kevin Rafferty

---

- I have received information about this research project.
- I understand the purpose of the research project and my scholar's involvement in it.
- I understand that I may withdraw my scholars from the research project at any stage.
- I understand that my scholar's participation in this study is done on a voluntary basis.
- I understand that while information gained during the study may be published, my scholars will not be identified and their personal results will remain confidential.
- I understand that my scholars will receive no payment for participating in this study.

**Name of Housemaster:** .....

**Signed** ..... **Date** .....

I have provided information about the research to the parent/guardian and believe that he/she understands what is involved.

**Researchers signature and Date** .....

## Appendix 6: Rhodes Ethics Committee Approval

RHODES UNIVERSITY
*Where leaders learn*

Rhodes University Ethical Standards Committee, Rhodes University, P O Box 94, Grahamstown, 6140
Tel: +27 46 603 7566 • Fax: +27 46 603 8934 • email: M.Goebel@ru.ac.za

28 November 2012

**Ethics Clearance: 2012Q4-8**

Dear Mr Rafferty,

This letter confirms that the research proposal with tracking numbers 2012Q4-8 "Understanding Generation Y: An investigation how Hilton college can improve communication through technology" was approved by the Rhodes University Ethical Standards Committee.

Please ensure that the ethical standards committee is notified should any substantive change(s) be made, for whatever reason, during the research process. This includes changes in investigators. Please also ensure that a brief report is submitted to the ethics committee on completion of the research. The purpose of this report is to indicate whether or not the research was conducted successfully, if any aspects could not be completed, or if any problems arose that the ethical standards committee should be aware of. If a thesis or dissertation arising from this research is submitted to the library's electronic theses and dissertations (ETD) repository, please notify the committee of the date of submission and/or any reference or cataloguing number allocated.

Yours sincerely

Professor M. Göbel: Chairperson RUESC.

## Appendix 7: Departmental Ethics Approval

Tracking No:

**RHODES UNIVERSITY**

**ETHICAL STANDARDS : RESEARCH PROTOCOL**

Any project in which humans or animals are the subject of research requires completion of this form and submission, for approval, to the appropriate DEPARTMENTAL HUMAN RESEARCH ETHICS COMMITTEE or, where such committee does not exist or cannot unanimously approve the research protocol, to the University's ETHICAL STANDARDS COMMITTEE.

TITLE OF RESEARCH: Understanding generation Y; An investigation of how Hilton College can use Technology for communication

Initiating Department:

| | | Day | Mo | Yr |
|---|---|---|---|---|
| DEPARTMENTAL HUMAN RESEARCH ETHICS COMMITTEE REVIEW | Submitted | 9 | 8 | 2012 |
| | Approved | 10 | 8 | 2012 |
| | Authorized by: | MACDONALD KANYANGOLE (Phd) (Chairperson; Departmental Human Research Ethics Committee) | | |
| UNIVERSITY ETHICAL STANDARDS COMMITTEE REVIEW | Submitted | | | |
| | Approved | | | |
| | Authorized by: | (Chairperson; Ethical Standards Committee) | | |

Signature of Principal Investigator/Researcher:

Signatures of other Researchers involved in this Project:

Signature(s) of Project Supervisor(s)

Date: 2012-08-09