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THE EFFECT OF INTERNET USE POLICIES ON EMPLOYEE BEHAVIOUR AND JOB PRODUCTIVITY IN SOUTH AFRICA

Bekithemba Ncube

499545

A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Business Administration

Johannesburg, June 2012

ABSTRACT

The implementation of an organisational Internet use policy is a challenging and difficult task that must be based on empirical research rather than assumptions. A business must consider how to effectively implement and enforce an organisational Internet usage policy whilst attempting to promote good Internet use behaviour and maximise productivity. The purpose of this research paper was to analyse and evaluate the impact that Internet use policies have on employee cyberloafing behaviour and job productivity within South African organisations.

A quantitative research methodology was utilised where South African employees, mostly in the Information and Communication Technology industry were provided with a questionnaire to respond to. This research examined the impact that organisational internet use policies have on cyberloafing behaviour and productivity amongst 53 working adults. The research analysed if a relationship could be identified between the perceived levels of Internet use policy existence and enforcement within an organisation; as well as the cyberloafing behaviour and productivity levels disclosed by employees.

The results suggest that organisations can better control cyberloafing behaviour and improve productivity by properly enforcing Internet use Policies. This research also identified that cyberloafing activities do not necessarily result in a decrease in productivity, but rather the context in which cyberloafing activities are done can positively or negatively impact on productivity. No evidence was found to suggest that the prevalence of mobile devices (i.e. Tablets, Internet enabled mobile phones) would also increase cyberloafing and decrease productivity. A detailed analysis of these results was further discussed in this research report.

DECLARATION

I, Bekithemba Ncube declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Bekithemba Ncube

Signed at University of the Witwatersrand, Johannesburg

On the 28th Day of June 2012

DEDICATION

I dedicate this research to the core pillars in my life: God, my Wife, my parents and my twin boys.

To God: Through you I have learnt to have peace, confidence, hope and strength during my weakest of days but most of all I learnt who I am.

To my wife Linda: Thanks for being a loving and supporting 'Best Friend' and 'Life Partner'.

To my parents : There's no way I can ever pay you back for all you've done but Thank you for being the light in my life guiding me from the very beginning.

To my twin boys: Thanks for the sleepless nights and smiles but most importantly thanks for teaching me to be father.

ACKNOWLEDGEMENTS

To my supervisor - Antony Soicher: Thanks for the guidance and insight you have provided in helping me complete this research.

Thanks to everyone that took part and completed my questionnaire. Without your input this research would not have been possible.

My company EOH: Thanks for the support you've provided me from the beginning of my studies up until now.

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1 INTRODUCTION

1.1 Research Title

THE EFFECT OF INTERNET USE POLICIES ON EMPLOYEE BEHAVIOUR AND JOB PRODUCTIVITY IN SOUTH AFRICA.

1.2 Purpose of the study

The purpose of this research was to investigate the effect that Internet use policies have on employee cyberloafing behaviour and job productivity. This research report aims to improve our understanding of how, and to what extent Internet use policies (IUP) influence employee behaviour and what effect cyberloafing behaviour has on productivity.

1.3 Context of the study

Internet technology has become a double-edged sword that not only allows organisations to communicate, collaborate, research and manage information but also makes them susceptible to the risks associated with cyber loafing i.e. degraded system performance and an increase in legal liability (Henle, Kohut and Booth 2009).

The prevalence of internet at work and in homes is not only causing internet addiction in people's personal lives but also increasing organisational risk to threats of security of corporate data and loss of employee productivity (Chou, Sinha and Zhao 2010).

Most organisations will implement an Internet acceptable usage policy to reap the benefits of internet usage whilst mitigating internet risks. These policies, procedures, standards and management instructions are required to control employee behaviours and ensure internet services are used in an acceptable manner (Lichtenstein 1996). But only a few organisations manage to efficiently

balance policy enforcement and employee behaviour. One reason why organisations fail to balance policy enforcement and employee behaviour is that organisational policies must be perceived by employees to be fair especially when the outcome of a policy is negative.

Policies that are perceived to be unfair may not have the intended effect as employees have the ability to avoid monitoring (i.e. Using their personal mobile devices to access the Internet whilst at work) which will result in a false perception of organisational control (Henle et al. 2009).

Research by Whitty and Carr (2006) has shown that numerous employees in companies with internet use policies are unaware of these policies and even those that are , ignore and fail to adhere to these policies. The research went further to analyse the implementation of surveillance technology and filtering software finding that these methods are not always successful. Filtering software can inadvertently either block appropriate work related sites or block inappropriate internet sites affecting employee morale.

When organisations create Internet use policies they have a difficult task in understanding the impact that these policies will have on employee behaviour and job productivity especially when the policy does not take into account the diverse roles and responsibilities of employees.

The popularity of smartphones (i.e. Apple iPhone, Samsung Galaxy devices and Blackberry devices) allow South African's to easily access internet, this coupled with the fact that mobile operators are heavily investing in internet infrastructure means that the Internet is 'Coming of Age' in South Africa (SA) (Claasen 2011). Social networking sites i.e. Facebook, Twitter and Myspace are examples of websites habitually accessed by many South Africans to communicate and share their personal lives anywhere even in the office whilst at work. It is for the above reasons that SA provides the ideal context for this study.

1.4 Problem statement

1.4.1 *Main problem*

Analyse and assess the impact that organisational Internet use policy (IUP) existence and enforcement may have on employee cyberloafing behaviour and job productivity within South African organisations.

1.4.2 *Sub-problems*

The first sub-problem is to determine the relationship that exists between the perceived level of IUP existence and enforcement within South African organisations.

The second sub-problem is to analyse the impact that IUP existence and enforcement has on employee cyberloafing behaviour and productivity.

1.5 Significance of the study

The result of this study aims to fill a knowledge gap that exists of the impact that internet use policies have on employee cyberloafing behaviour and job productivity by taking into account behavioural attributes i.e. the culture of online social networking that exists amongst today's employees and the state of IUP implementation and enforcement within an organisation.

This study aimed to enlighten policy makers on the ramifications of implementing or not enforcing specific policies. Numerous studies of internet use policies (Henle et al. 2009; Young 2010) fail to account and differentiate which policies have a significant effect on employee productivity based on job profiles, job requirements and online social behaviour.

Adopting an acceptable internet use policy alone is an ineffective solution of dealing with unproductive computer use, companies must communicate and enforce these policies (Young 2010). The results of this study can be used as

guidance to management in the development, implementation and enforcement of policies regarding internet use.

Research by (Li, Zhang and Sarathy 2010) suggests that companies formulating an IUP must seek a balance between fair internet use and the risks of using the internet for personal purposes. This research will attempt to identify what levels of restrictions may be considered as unfair amongst employees and either contribute to job unproductiveness or demoralise employees.

1.6 Delimitations of the study

This study aims to address Internet use policies and enforcement as illustrated in the Framework for Internet management (Figure 1).

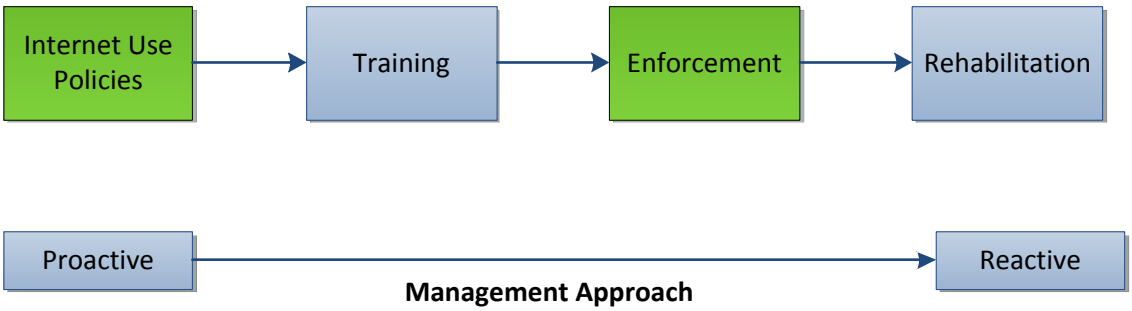


Figure 1: Framework for Internet management from proactive to reactive approaches (Young 2010).

This framework was developed to help deal with employee internet abuse. An organisation must be proactive by developing an Internet use policy to combat employee internet misuse so to improve job productivity and decrease the level of risk or corporate liability (Young 2010).

Enforcement of Internet use policies requires employers to constantly monitor employee internet usage using filtering software. Regulation should also occur in conjunction with communication so employees are aware of actions that are permissible and the ramifications of breaking any policy.

This research report centred on South African medium to large organisations who have either implemented an IUP or enforce Internet use restrictions (i.e. using filtering software) . The research was conducted amongst organisational employees that had access to the internet in their corresponding workplaces.

The identification and frequency of certain cyberloafing or cyberslacking behaviours as described in Kim and Byrne (2011) conceptual framework of personal web usage was applied in this research report.

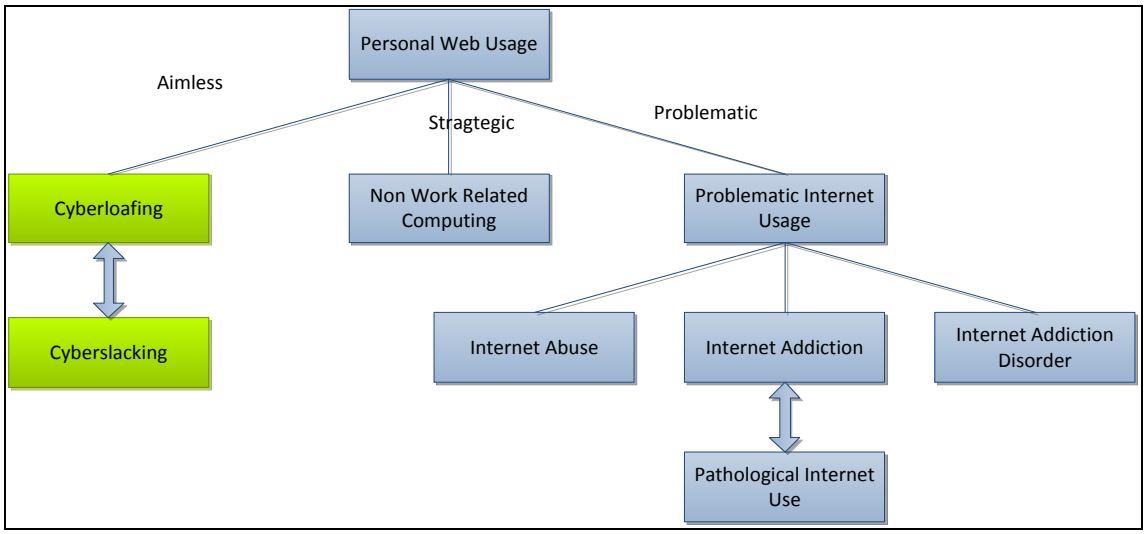


Figure 2 : A conceptual framework of personal web usage in work contexts.

The conceptual framework of personal web usage (Figure 2) was proposed by Kim and Byrne (2011) to address the multitude types of internet activities and behaviours employees could subscribe to. This research addressed cyberloafing and cyberslacking behaviours by firstly defining and researching such behaviours then lastly by analysing the research data to see how these behaviours can impact on productivity.

1.7 Definition of terms

Cyberloafing (also referred to as Cyberslacking, cyberbludging, on-line loafing, Personal Web Usage) – Behaviours that detract from production while at work e.g. sending and receiving e-mails to friends and family, posting updates on social networking sites i.e. Facebook and Twitter, going shopping online, visiting entertainment websites, and downloading software (e.g. videos, music, and games) (Liberman, Seidman, McKenna and Buffardi 2011). Cyberloafing also includes the personal use of mobile technology whilst at work (Vitak, Crouse and LaRose 2011).

Internet use policy (IUP) - A type of security policy adopted by most companies to reduce Internet use for non-work related purposes (Li et al. 2010).

Internet Abuse – Performing personal research, using personal banking activities, using chat rooms (e.g. Facebook, twitter) or career searching activities (Young 2010).

Internet Addiction – Compulsive and uncontrollable dependence on the Internet that often involves a loss of control even though volitional attempts to abstain are attempted (Kim and Byrne 2011).

Online Social Networking (OSN) - OSN has been heralded as the next stage in the evolution of the internet occasionally referred to as Web 2.0. This electronic dynamic environment consists of content that is interactive and highly user-driven (Smith and Kidder 2010). Examples include Skype, GoogleTalk, YouTube, MySpace, Facebook and LinkedIn.

Communities of Practice (COP) – (also known as communities of interest) are groups of people that share a common passion and regularly interact to learn how to improve it (Jean and Wenger 1991).

Cyber Incivility is communicative behaviour exhibited in computer mediated interactions that violate workplace norms of mutual respect (Lim and Teo 2009).

Social Networking Sites (SNS) – Online social networking websites i.e. Facebook, LinkedIn, Twitter and Google Plus.

1.8 Assumptions

The following assumptions have been made regarding this research;

a) An IUP has an influence on an employee's cyberloafing behaviour and levels of productivity in the workplace.
b) The sample of respondents actively uses the internet for either personal or work related activities.
c) Information obtained from respondents was considered to be truthful and accurately represents the respondent's opinion.

2 LITERATURE REVIEW

2.1 Introduction

This section outlines a detailed literature review of the sub-problems identified in this research. This literature review will analyse the role of Internet use policies in organisations and review literature that expands on cyberloafing behaviour and the impact it has on productivity. A study conducted amongst human resource managers on the effectiveness of organisation policies found that only 40% of these respondents considered their policies capable of reducing cyberloafing (Case and Young 2002). This research addresses this disparity by investigating if the implementation and enforcement of Internet use policies aimed at reducing cyberloafing behaviour or improving productivity.

2.2 Background Discussion

South Africa is unlike many other developed countries i.e. Iceland that has 92% of its households having an Internet connection and 98% owning one or more cellular phones (Heijstra and Rafnsdottir 2010). Limited access to internet by many households coupled with limited mobile internet affordability, results in many South African employees resorting to using their company's internet facilities for personal and work related affairs.

Organisations that provide internet access to their employees have to contend with the abuse of this tool meant to support the organisations mission and objectives, but is instead used for personal matters. Without any supervision or restriction, daily practices i.e. online shopping, stock trading, browsing pornographic sites result in lower employee productivity and eventually translate to an inability to meet consumer needs or deliver quality products (Young 2010).

Cyberloafing is known to be prevalent in organisations were employees use computers and it has been reported that employees spend at least 1 hour daily on activities that are not work related, with the largest portion of this time being

spent on the Internet (Vitak et al. 2011). Research by Garrett and Danziger (2008) has shown how cyber slacking can be predicted by taking into account an employee's perceived autonomy in the workplace, income, education and gender.

Young (2010) also states that iGeneration (technology inclined) workers that feel obliged to be online create hiring concerns as these employees are expected to misuse online technologies and cannot be monitored when they utilize their personal mobile devices. This new generation constantly communicate with people they know using platforms i.e. Facebook and Twitter and if management fail to embrace their culture both parties could get very frustrated.

Trim (2012) suggests that this new generation workers is not only capable of easily blending work and life because of their flexible approach but more importantly they expect to harness technology in the workplace. In the work environment they demand instant collaboration with colleagues, suppliers and customers. The organisational challenge now becomes how to balance the Internet requirements of both the old and young new entrants to the organisation.

To control and mitigate the associated risks of internet abuse, organisations create internet usage policies and these policies are then enforced using software packages and effective employee management. Figure 3 illustrates the complete list of internet risks that an organisation is exposed to. An Internet use policy addresses these risks and is a sub policy to the Internet security policy which in turn is a sub policy of the corporate information security policy.

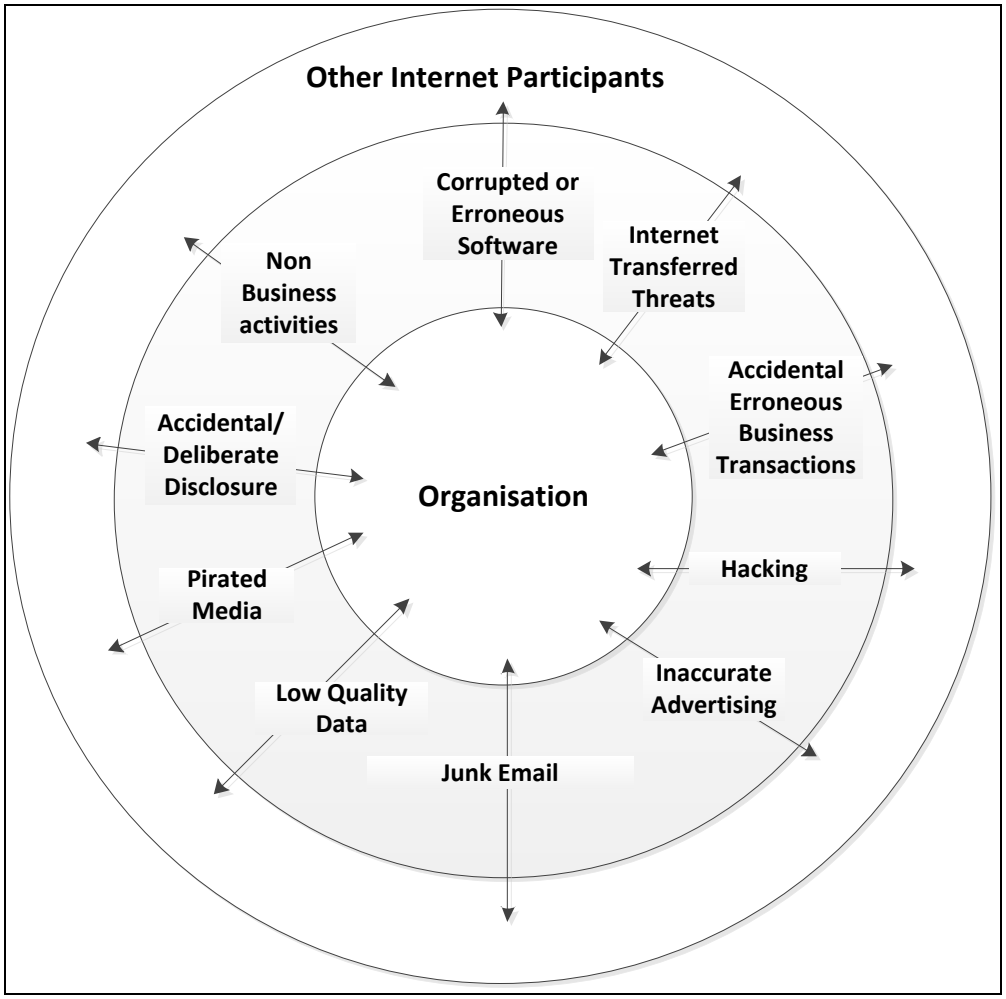


Figure 3 : Internet risks for an organization (Lichtenstein 1996)

A shortage of statistics exists regarding the proliferation of social networking and its impact in South African businesses. The majority of local peer reviewed articles (Zyl 2009; Chigona, Kamkwenda and Manjoo 2010) contribute in providing knowledge of social networking in organisations.

The dominant theme painted here is that social networks and software as a service (SaaS) have changed the business environment rapidly, organisations now have to contend with new vulnerabilities and more complex threats (PricewaterhouseCoopers 2010).

Research commissioned by Infosecurity Europe and conducted by PricewaterhouseCoopers (2010) across organisations in United Kingdom (UK) showed that;

- 32% of organisations consider the use of social networking sites to be important to their business
- 19% of large organisations monitor what their staff post on social networking sites.
- 80% and 75% of organisations suffered from the misuse of web and email access respectively.

Most research focuses on the drawbacks of cyberloafing (Young 2010; Ince and Gul 2011) whilst neglecting the positive effects that cyberloafing can have. Employees that do engage in cyberloafing behaviour for brief periods of time, can gain a positive effect and become happier employees by cyberloafing because they will;

1. Experience greater job satisfaction,
2. relieve stress from work place requirements and
3. improve their creativity and innovation (Vitak et al. 2011).

Garrett and Danziger (2008) support this proposition, in their research they found out that, cyberloafing employees that utilised the internet for personal matters derived some benefits to their levels of productivity and that this personal internet use has a positive relationship with productivity benefits.

Vitak et al (2011) sought to determine the integral factors that influence an employee's level of cyber slacking, they determined that employees that perceived the internet to be valuable for their job requirements and improve job performance were more likely to participate in cyberloafing than other employees. Employees that routinely used the internet at work were also more likely to engage in cyberloafing behaviour. Contrariwise, employees are less likely to engage in cyberloafing behaviour if they are committed to their jobs and understand that they would face disciplinary actions if caught engaging in deviant cyberloafing behaviour.

2.3 Implementation of Internet use Policies

The associated Internet risks highlighted in Figure 3 outline the importance of organisations having an IUP in place. The literature review below aims to reinforce that organisations should not just create and document rules regarding Internet usage but use a researched methodology to implement and more importantly enforce these policies.

2.3.1 *Implementing Internet use policies*

Before implementing an IUP it's important that organisations clearly understand the purpose of an IUP and what benefits will be realised through an effective implementation of this policy. Laughton (2010) states that the three main goals of developing IUPs are;

1. Educate users regarding activities that may pose a risk to the organisation.
2. Provide users with a legal notice specifying unacceptable behaviour and disciplinary action for improper conduct.
3. To protect the organisation against any liabilities that may arise as a result of Internet abuse.

To effectively create an IUP, a number of models and methodologies exist. Scott and Voss (1994) propose a 7 "P's" model which was developed by analysing more than 100 policies and identifying the factors that led to creating good policies. This model (Figure 4) is a formal method to guide management into developing computer use policies.

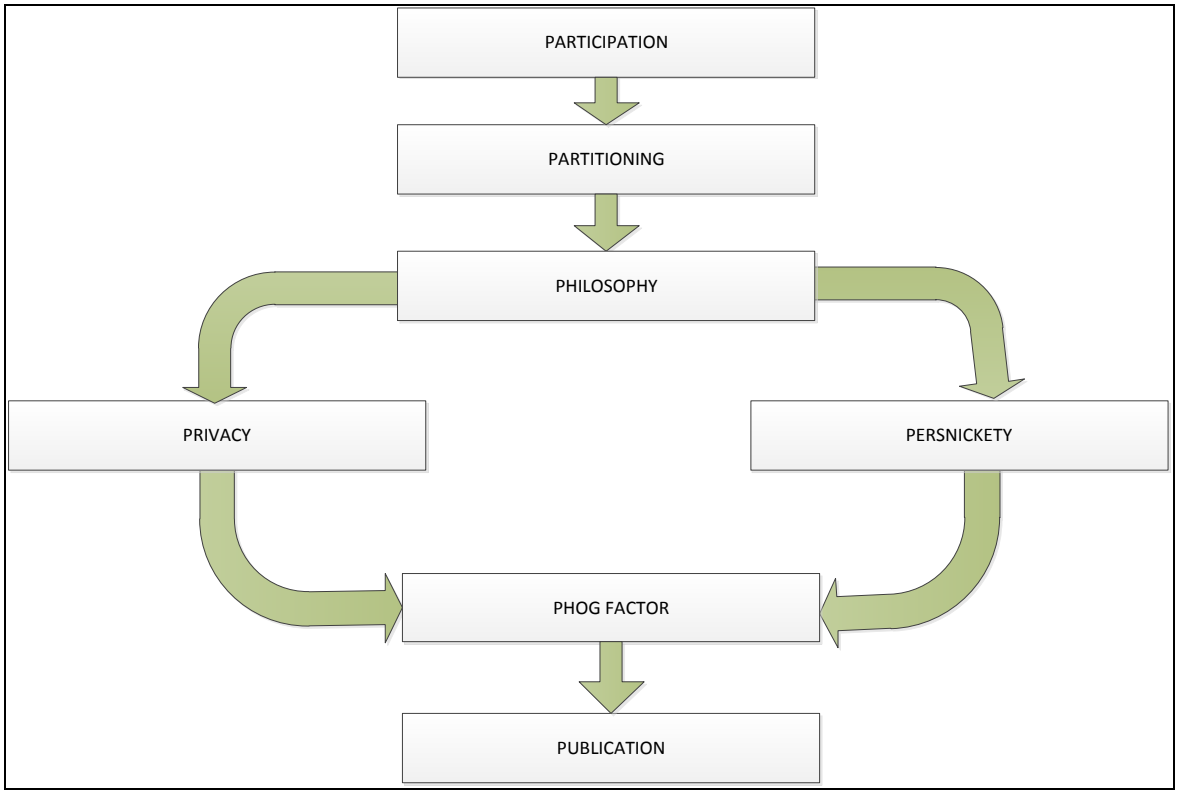


Figure 4: The 7 "P's" of Computer User Policies

The 7 P's model encourages participation amongst representatives of all the user groups. The shortcoming of this model is that it fails to focus on the creation of a policy that will enhance employee perceptions of fairness and ultimately reduce cyber loafing.

Siau, Nah and Teng (2002) suggest that an IUP should be developed as a guideline rather than as a method of controlling users. Such a policy should be comprehensive but should not be so restrictive that it hinders on the productivity of employees. These authors went on to suggest that it is imperative that an organisation states its values which may include profit, professionalism and cost saving endeavours. By stating these values employees must understand the boundaries of their internet activities.

The shortcomings of the above methodologies are that they focus on enforcing a broad policy that is applicable to all users. Creating a 'blanket policy' can work for most employees but will invariably affect others. It is important that an

effective web policy be extremely granular e.g. by forbidding web mail for the Research and Development Department (RDD) and also allowing the Information Technology (IT) department to access certain IT related blogs.

2.4 Enforcement of Internet use Policies

Organisations are faced with a challenge of balancing the rights of employees and the rights of the organisation when controlling and monitoring internet use (Singh 2004). Once an IUP has been developed organisations usually enforce these policies by using monitoring and filtering software to ensure compliance and identify any violations (Henle et al. 2009). However many employees perceive such enforcements to be unfair and intruding on their privacy (Genova 2009; Henle et al. 2009). Any organisation wishing to monitor the online activities of its employees must have a policy in place otherwise they are infringing upon the human rights of employees (SurfControl 2001).

Organisations should actively take proactive steps to monitor employee web usage instead of reacting to internet risks. Enforcement of an IUP is a necessity but can be costly especially among large companies meaning management must carefully evaluate data from monitoring systems and when they do identify policy infringement they must take proper disciplinary action (Young 2010).

2.4.1 *Research Hypothesis 1*

Employees who have had their organisation communicate IUP's to them will more likely, perceive Internet policy enforcement to exist than employees who have not been communicated to about IUP's.

2.5 Impact of Organisational Internet use policies

There can be no doubt that the Internet plays a pivotal role in assisting employees with their work responsibilities and this tool is also used by employees for their personal non-work related endeavours i.e. online social networking (OSN). OSN has been heralded as the next stage in the evolution of the internet occasionally referred to as Web 2.0.

This electronic dynamic environment consists of content that is interactive and highly user-driven (Smith and Kidder 2010). Many organisations address OSN in their IUP's and have implemented software systems to block its use without thoroughly investigating the opportunities that OSN could present to them (Ferreira and du Plessis 2010).

Organisations need to investigate and consider the impact that IUP may have on employees before implementing them. Table 1 outlines the benefits that organisations could potentially squander if they choose to mitigate all the potential risks listed.

Table 1: Benefits and potential risks of personal Internet usage (Mahatanankoon 2009)

Benefits	Potential Risks
Information Sharing	Cyberloafing
Team Collaboration	Productivity Loss
Stress Reduction	Social Disintegration
Work-life Balance	Wasted Network bandwidth

Empowerment and motivation	Possible legal liability
Social Networking	Information leakage
Relationship Building	Cyber – Workplace Deviance
Organisational Learning	
Job Satisfaction / Performance	

The consequences of personal internet usage have been argued to either lead to a productive work life or cyberloafing, however excessive use of the internet for personal usage is counterproductive (Mahatanankoon 2009).

2.5.1 *Job Satisfaction*

The internet has become an essential tool of trade among many organisational employees, whether it be used for research purposes or knowledge discovery this tool does aid 'blue collar' workers in completing their job requirements. Research is required on the degree to which an IUP impacts on job satisfaction. Anandarajan, Simmers and Igbaria (1998) suggest that individuals that perceive the internet to be useful and interact with it in a spontaneous and imaginative manner (internet playfulness) report a higher job satisfaction and greater productivity. The authors also noted that this internet playfulness can have negative consequences i.e. job inefficiency.

2.5.2 *Employee Behaviour*

Organisations can no longer ignore the role that online social networking has on shaping business culture. Smith and Kidder (2010) suggest that because social

networking has become commonplace, organisations need more formalised approaches in policies and guidelines regarding internet codes of conduct. These approaches are required to control employee behaviour i.e. cyberloafing, which can be significantly costly to employers and have negative ramifications for employees (Liberman et al. 2011).

In an attempt to predict cyberloafing Liberman et al. (2011) undertook research on cyberloafing behaviour by employees, and found that organisational characteristics such as managerial support regarding internet usage and employee attitudes on cyberloafing influence cyberloafing behaviour in the workplace. These authors suggested that managers must not only be trained to encourage and support internet usage but must also explain acceptable internet practices to employees. It is necessary for managers to communicate on the stance that organisation has towards cyberloafers. Since cyberloafers can disguise hard work for personal interests whilst at work and they pose a greater 'threat' to organisations than other types of loafers who can typically spend time by the water cooler chatting (Lim and Teo 2005).

Cyber incivility is a behaviour that is hardly addressed by organisations in their IUP and its impact tends to be overlooked by management. This communicative behaviour that takes place largely through email encounters in the work place can negatively affect job satisfaction and organisational commitment and can consequently affect an organisation and its employees (Lim and Teo 2009). In their research on this behaviour Lim and Teo (2009) found that, whilst incivility behaviour may be unknown to the perpetrator the effects are often underestimated. Victims of incivility can become less productive by decreasing their work efforts, experiencing a lack of commitment and increasing absenteeism at work. The authors recommend that organisations should have policies and intervention programs to limit and prevent cyber rudeness behaviour.

Organisations can no longer turn a blind eye to illegal activities taking place amongst employees in the workplace as they may be put at risk for legal liabilities. Employees use both the internet and the corporate network to

download and share illegal music files and pirated or unlicensed software. Such behaviour must be controlled and managed by an effective IUP.

2.5.3 *Research Hypothesis 2*

There is a significant difference in the productivity and cyberloafing behaviour of employees who have had their organisation communicate IUPs as opposed to those that have not.

2.6 Cyberloafing Activities in Organisations

Lim and Teo (2005) assessed the perceived seriousness of cyberloafing amongst employees and determined that not all cyberloafing activities were perceived to be equally serious. Their findings identified browsing pornographic websites and playing online games to be very serious, whilst sending / checking personal emails were perceived to be less serious. It is generally accepted that cyberloafing exists in most organisations but the extent to which organisations discipline offenders is relatively unknown and not well researched.

Most organisations will accept a certain level of cyberloafing without implementing disciplinary measures or warnings to offenders. Research does suggest that men are more likely to perceive cyberloafing as having a positive impact in their work activities as compared to women. The different types of cyberloafing can either positively or negatively impact employees' emotions (Lim and Chen 2009).

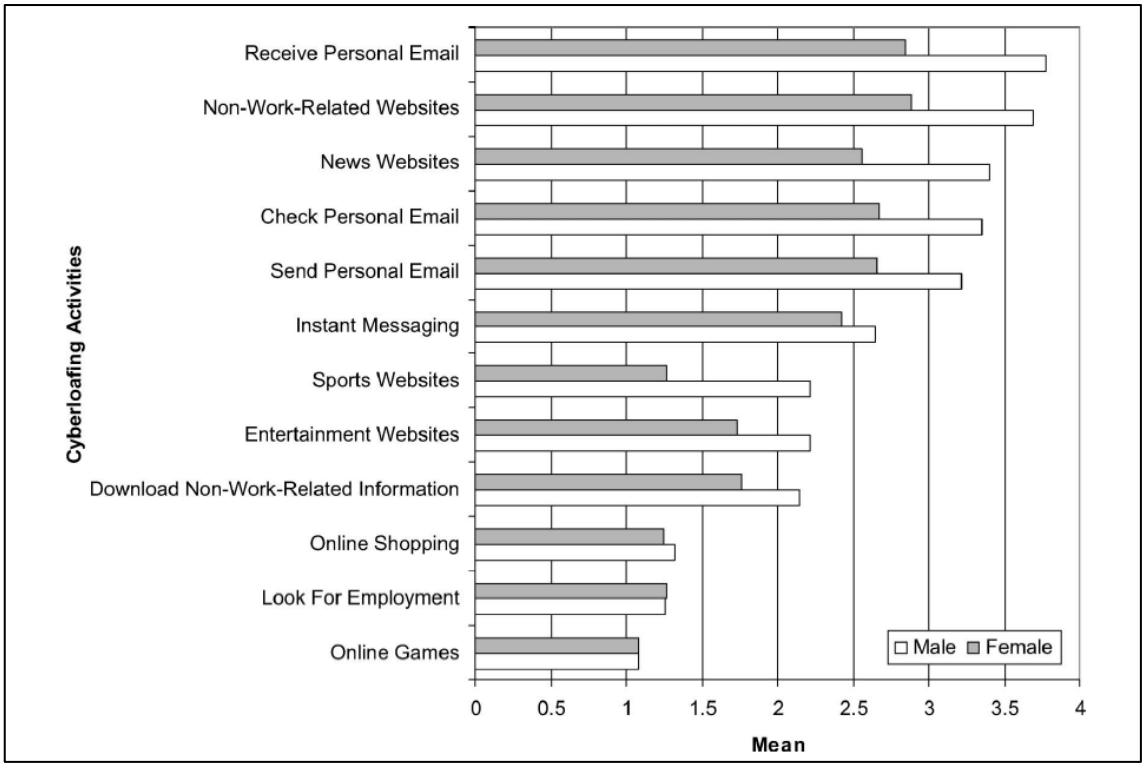


Figure 5: Gender differences in cyberloafing activities

Lim and Chen (2009) investigated the different types of cyberloafing activities performed by men and women (results shown in Figure 5 above). They found that both men and women were unlikely to play online games or look for employment. The downloading of non-work related information was also ranked lower amongst employees, however research seems to suggest that now more than ever South Africans (6.8 Million Internet Users) are utilising their mobile devices (i.e. tablets, smartphones) for a host of internet related activities (Claasen 2011) i.e. downloading applications (i.e. iTunes or Android applications, music, kindle books, podcasts) or to socially communicate.

Many South African organisations have chosen to implement monitoring software to record any web traffic generated by their employees. This software allows them to ensure employees abide by the implemented IUP. Through the use of monitoring software it is easily possible for management to identify policy violations and commence disciplinary actions against the offenders or alternatively improve their networking requirements. However many of these developed policies are not considered effective in reducing cyberloafing,

because they are developed and implemented using anecdotal advice rather than theoretically driven empirical research (Henle et al. 2009).

Even more so employees with mobile devices i.e. iPad's, iPhones can easily cyberloaf and have unrestricted or uncontrolled access to the internet. It is therefore important to identify the impact that cyberloafing using a mobile device has on productivity.

2.6.1 *Research Hypothesis 3*

There is a significant relationship between the different levels of cyberloafing using a mobile device and the level of productivity exhibited by employees.

2.7 Impact cyberloafing behaviour has on employee job productivity

2.7.1 *Overview*

Many organisations invest and implement in Information Technology (IT) to enhance employee productivity and competitiveness. Sánchez, Minguela Rata, Rodríguez Duarte and Sandulli (2006) conducted research to determine what role the Internet played in determining Information technology productivity. They found that Internet technology contributed positively to work related tasks but failed to adequately make a distinction between profitability and productivity.

A study by Lim and Chen (2009) suggested that the increase in Internet penetration and speed connectivity specifically broadband internet connections, was one of the reasons why employees cyberloafed and on average an employee was likely to spend 51 minutes per workday on cyberloafing activities.

2.7.2 *Reasons for Cyberloafing*

Table 2 below provides compelling reasons and explanations to why employees may choose to be cyberloafing at work (Griffiths 2003).

Table 2 : Reasons and Explanations for Cyberloafing (Griffiths 2003)

Reason	Explanation
Opportunity and Access	The internet has become easily accessible to employees in the workplace environment.
Affordability	Making use of the internet in a work environment is free of charge.
Anonymity	Anonymously access the internet without being caught by employer.
Convenience	Conveniently access online services i.e. online applications, email and newsgroups.
Escape	Pursue a mood-modifying experience (Emotional or environmental escape).
Disinhibition	Internet users are more likely to open up and emotional reveal themselves online.
Social Acceptability	Online interaction has become socially acceptable.
Longer Working	People are working longer hours and incorporating the

Hours	personal internet activities into the work environment.

2.7.3 *Employee Productivity*

Internet access in homes has encouraged many employees to complete work related activities at home thereby removing the fine boundary between work and non-work locations. It's no surprise that these types of employees would more likely cyberloaf in the work environment (Lim and Teo 2005), but this does not necessarily imply they are less productive. Such employees could spend most of their time in the work environment cyberloafing but manage to accomplish their work requirements at the end of the day. Measuring the level of productivity is further compounded by the fact that productivity levels can be defined measured and identified using a host of different methodologies or definitions. Despite the loss in productivity that technology can have there is no denying that the use of technology for work related tasks does statistically significantly affect and improve productivity levels (Sánchez et al. 2006).

Ferreira and du Plessis (2010) conducted research on the effect of OSN on employee productivity. The authors found that social networking is largely perceived to have a negative effect on employee productivity and not benefit an organisation. Contrary to that belief their research showed that OSN can lead to an increase in productivity by facilitating collaboration and knowledge sharing through the creation of COP's. They established that an organisation must however still establish strategies that address OSN issues whilst allowing employees the opportunity to benefit both professionally and personally from OSN.

Many organisations utilise internet based technologies such as electronic mail (e-mail) to communicate internally and externally with clients. E-mails hold significant and critical business knowledge resulting in organisations facing a variety of challenges including the productivity of employees based on the amount of time spent using e-mails (Burger and Rensleigh 2009).

Research conducted by Burger and Rensleigh (2009) showed that emails were used in a South African Bank more than the World Wide Web (WWW), instant messaging or peer-to-peer file sharing. Most employees in this bank felt overwhelmed by the number of emails received thereby affecting their productivity.

2.7.4 *Research Hypothesis 4*

An employee's cyberloafing behaviour has a negative significant impact on productivity.

2.8 Cyberloafing behaviour and productivity based on policy perceptions

The application of monitoring software to record employee activities as well as the application of filtering software to restrict online activities by blocking access to websites or blocking certain communication ports; are the most prevalent methods of enforcing IUP's amongst organisations.

2.8.1 *Monitoring Software*

Enforcing an IUP by monitoring all online web activities by employees has become the norm in many South African organisations as the cost of having the software and technical expertise required to do so drops. Siau (2002) states the main reasons why organisations monitor the online behaviour of employees;

1. Control the recreational activities of employees.
2. Reduce the abuse of internet bandwidth.
3. Eliminate the downloading of pirated software and media.
4. Improve network connectivity.

Many privacy groups contend that the monitoring of employees should only occur to identify excessive usage rather than infringe upon the private rights of individual i.e. seeking online medical help for chronic illnesses (Siau et al.

2002). Organisations could easily use such information against an employee without the employee necessarily knowing the real reason why an organisation chose certain actions e.g. retrenchment.

The level of self-control an employee has could determine how much they cyberloaf, in their research Restubog, Garcia, Toledano, Amarnani, Tolentino and Tang (2011) found that employees who had a high level of self-control were more likely to delay engaging in cyberloafing activities, they also determined that employees engage in certain cyberloafing behaviour because these acts will not result in disciplinary measures being taken against them.

A number of factors can be identified to explain the level of cyberloafing in organisations, the delimitation of this research is on Internet use policies and the research sample was analysed for any significant relationship between the perceived levels of IUP enforcement and employee cyberloafing behaviour as well productivity levels.

2.8.1 *Research Hypothesis 5*

Organisations perceived to enforce website restriction and monitoring of employee online activities will depict higher levels of productivity and better cyberloafing behavioural patterns than organisations that are not perceived to enforce these policies.

2.9 Conclusion of Literature Review

The literature review has outlined the importance of organisations having and enforcing an IUP as well as the ramifications it will have on employees. It becomes imperative for policy makers to understand how internet usage can affect employee cyberloafing behaviour and job productivity.

An organisation must also create a balance between behavioural controls and employee motivation with the goal of maintaining and improving employee satisfaction and organisational well-being (Mahatanankoon 2009). Creating

such a balance is a challenging task as the literature suggests that organisations narrowly consider employee behaviour and job productivity when creating internet usage policies, opting to heavily focus on organisational risks instead.

3 RESEARCH METHODOLOGY

3.1 Research methodology

A quantitative methodology was used to design this research. The aim of this research was to study a sample population and determine if and how IUP influences the cyberloafing behaviour of these respondents at a statistically significant level. By using a quantitative methodology data can be quickly collected from many more respondents as compared to a qualitative study (Welman and Kruger 1999). The anonymity of questionnaires gave respondents the freedom to truthfully respond to cyberloafing behavioural and productivity questions.

3.2 Research Strategy

To successfully complete this research report, an existing research process guideline (Figure 6) was used. This research process provided the author with a plan of action, enabling a systematic approach to managing and completing this research report.

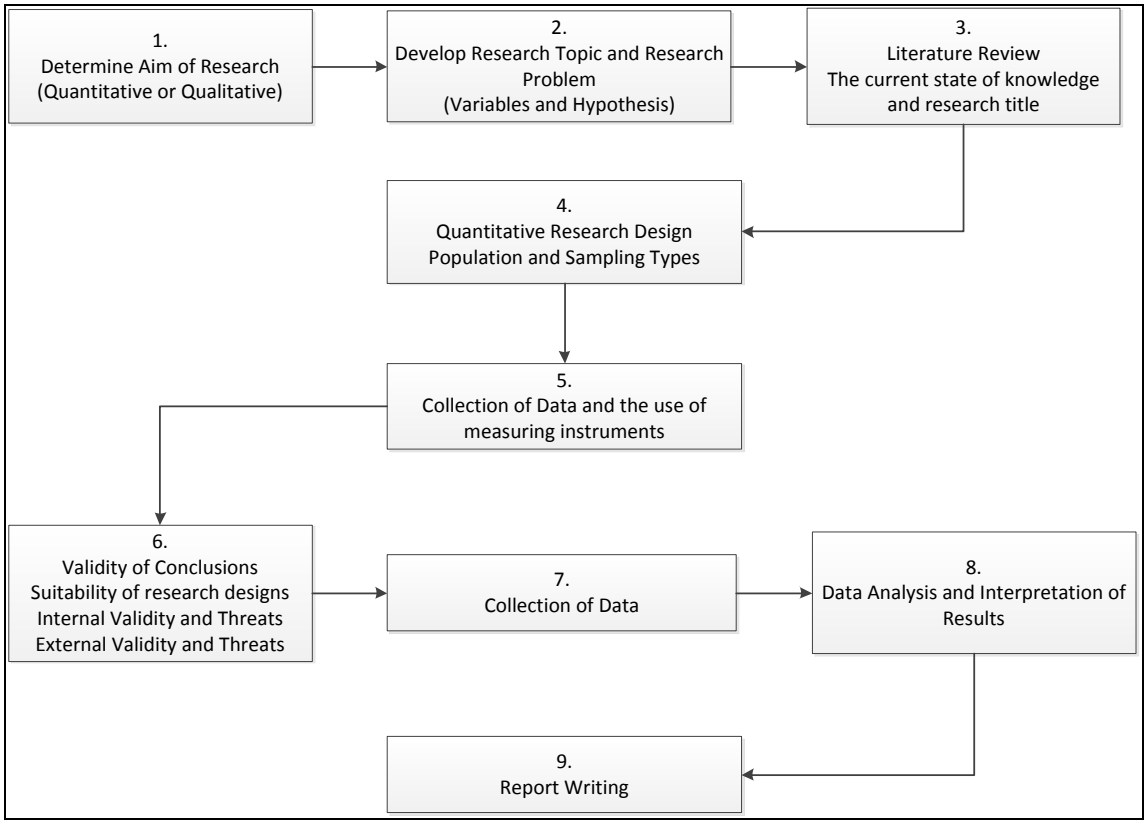


Figure 6: Research Process (Lim and Chen 2009)

3.3 Research Design

This report employed a survey research design and not an experimental research design because the participants in this research were not manipulated in order to investigate any influence of one variable with another, only a relationship between the variables was researched (Welman and Kruger 1999).

The benefits of conducting a survey for this research report were that it was less costly as compared with a census and could be quickly disseminated to respondents but most importantly allowed respondents to be more honest when answering sensitive issues (Welman and Kruger 1999).

The design of the questionnaire was based on the variables that were identified whilst reviewing existing literature on internet policies. The questionnaire was divided up into the following 4 sections;

3.3.1 *Respondent and Organisation Information*

The purpose of this section was to obtain nominal data about the characteristics of participants that completed the questionnaire. No uniquely identifying questions were asked guaranteeing anonymity. By guaranteeing anonymity respondents could honestly respond to the survey improving the validity of the research. The difficulty of having anonymous responses was that follow-up emails could not be sent to respondents who had not completed the questionnaire.

3.3.2 *Internet use Policies*

This section was included to gauge each respondent's perception of IUP implementation and enforcement in the organisation they work in. Research conducted by Henle et al (2009) was used to create questions regarding monitoring procedures, discipline regarding IUP's and the degree of IUP enforcement.

3.3.3 *Respondent Cyberloafing Behaviour*

Research conducted by Mastrangelo, Everton and Jolton (2006) outlined deviant computer behaviour that would be prevalent amongst internet users. This information was coalesced to create questions that would be suitable for the research and that cover all the possible types of cyberloafing behaviour outlined in the literature review.

3.3.4 *Employee Productivity*

The internet has been shown to greatly improve productivity amongst employees (Anandarajan et al. 1998). To assess overall productivity research conducted by Lim and Chen (2009) on cyberloafing and work processes proved beneficial in constructing questions to assess employee productivity.

3.4 The Pilot Study

On completion of a draft questionnaire a pilot study was conducted on a small group of 5 individuals who were required to test the survey questionnaires and provide feedback. The importance and purpose of completing a pilot study was to firstly identify any flaws i.e. ambiguous instructions, then identify unclear or ambiguously formulated items and lastly identify if any non-verbal behaviour by the participants causes discomfort or embarrassment (Welman and Kruger 1999). This pilot study resulted in minor changes being made to the questionnaire and 1 additional question being included to the questionnaire. A pre-test was conducted by an MBA student and the instrument was research instrument was regarded as ready for actual respondents.

3.5 Population and sample

3.5.1 *Population*

The applicable population for this research report was to all employees within organisations in the Information, Communication and Technology (ICT) South African sector.

3.5.2 *Sample and Sampling method*

Nonprobability (snowball) sampling of the population was conducted in this research report. Colleagues and friends of the author were approached and these individuals further identified employees in the same industry that could

partake in the research. The benefit of this approach was that it was economical and less complicated to conduct (Welman and Kruger 1999).

Welman and Kruger (1999) suggest that; regardless of the population size a sample size should not be bigger than 500 because this has little effect in decreasing the standard error of the mean. A total of 500 respondents was the desired sample size to conduct this research. The author sent well over 200 questionnaires to people working within the ICT industry and also requested certain individuals to electronically pass on the questionnaire (snowball sampling). A total of only 53 respondents completed the questionnaire.

The snowball sampling method gave the author no control of the experience and most importantly the industry that the 'referred to' respondents worked in. The original research delimitation was to specifically employees in the ICT sector but due to a lack of control in the sampling method respondents outside the ICT sector partook in the research. As a result this research changed the focus from considering only respondents only in the ICT to considering respondents working outside the ICT industry because their responses regarding internet behaviour and productivity would still be applicable to this research.

An experienced statistical expert was approached to give an indication on the minimum number of responses required for beneficial data analysis. Based on the questionnaire design the expert mentioned that at least 90 responses would be sufficient to conduct a 'Factor Analysis'.

3.6 The research instrument

A survey questionnaire was used to obtain information from respondents. The questionnaire was published online and links to the questionnaire were sent out to colleagues and friends who in turn redistributed the website link among other colleagues and friends. By using this referral approach respondents were more likely to have sufficient computer literacy to complete the questionnaire.

Appendix A has a design of the online questionnaire that was used as the chosen research instrument.

3.7 Designing the Research Instrument

Some of the existing measuring instruments used to design the existing research questionnaire are;

1. Lim and Chen (2009) cyberloafing and work processes questionnaire consisting of questions used to measure the impact that cyberloafing has on work outcomes.
2. Anandarajan (1998) demographic questionnaire used to identify the personal and organisational information so inferences about internet usage can be made.

3.8 Procedure for data collection

Data was collected using a questionnaire that was administered using an online survey. The data collected was then exported from the site database to a local file repository where data analysis was then performed.

3.9 Data analysis and interpretation

The non-metric data was gathered from the questionnaire (comprising of binary, nominal and ordinal data). The choice of the method of data analysis was made by considering;

1. Levels of Measurement (e.g. Nominal, Interval, Ratio Variable),
2. The variable distribution and
3. Total number of valid responses.

This report employed both the descriptive statistics technique and inferential statistics to form a conclusion about the research conducted.

Descriptive methods i.e. ‘multivariate analysis’ were used to describe correlations between multiple variables and a comparison of this descriptive data was conducted (Welman and Kruger 1999). Inferential methods i.e. ‘Testing difference of means’ was also employed in this research.

3.9.1 *Brief Outline of Statistical Tests employed*

A test of statistical significance indicates how confidently one can generalise to a larger (unmeasured) population from a measured sample of that population. This research makes claims about the sample of respondents and tests for statistical significance, so claims about the population can be generalised.

Various statistical tests were employed in the analysis between the independent variables, organisational internet use policies, cyberloafing behaviour and the dependant variable productivity.

The following statistical methods were employed in this research to test for normality and the confidence of data;

- Pearson chi – square
- T –Test for equality of means
- Cronbach alpha
- Kurtosis normality
- Linear regression
- One-way analysis of variance (Anova)

3.10 Profile of Respondents

Univariate analysis was accomplished on the profile data collected on respondents who took part in the research. Only a single variable was of interest and the results were graphically represented using;

- Pie Charts
- Bar Graphs

- Tables

3.11 Hypothesis 1

Employees who have had their organisation communicate IUP's to them will more likely, perceive Internet policy enforcement to exist than employees who have not been communicated to about IUP's.

Hypothesis 1 was tested using Bivariate Analysis cross-tabulation which is also known as contingency or a two-way table and allows the examination of frequencies of observations based on the specific categories of the variables (Singh 2007). Cross –tabulation tables and graphs were drawn to represent this information for analysis.

Pearson Chi-Square coefficient was calculated to assess the significance of the relationship between the two variables being considered. This coefficient is considered the most common coefficient of association and works on the assumption that the expected frequencies are not very small i.e. cell frequencies are less than 6 in the contingency table (Singh 2007).

3.12 Hypothesis 2

There is a significant difference in the productivity and cyberloafing behaviour of employees who have had their organisation communicate IUPs as opposed to those that have not.

To assess the differences between the samples of data collected, inferential statistics was employed. This mode of analysis tests the following (Singh 2007);

1. A difference of means and
2. Ascertaining statistical significance based on the distribution of population parameters.

3.13 Hypothesis 3

There is a significant relationship between different levels of cyberloafing using a mobile device and the level of productivity exhibited by employees.

To compare the groups of data for statistical significance parametric test methods were used. These tests assume that data is normally distributed and if it is not, then the variables must be transformed to look normal (Singh 2007). The test for significance used to compare the three unmatched groups for this hypothesis was the *One – Way Anova* test.

3.14 Hypothesis 4

An employee's Cyberloafing Behaviour has a negative significant impact on productivity.

Hypothesis 4 has been tested using a correlation analysis of the data gathered to compare the usage habits of the various age groups within the same group. The correlation coefficients and regression coefficient were calculated to indicate the direction and strength of the associated variables and to also measure the relationship of the variables (Singh 2007).

A regression graph was drawn to visually show the extent and direction of the association. The data was also tested for statistical significance to determine if there really is a correlation in the population. Considering that the sample size of the research report is greater than 50, Monte Carlo studies have shown that serious sampling bias is unlikely to occur (Singh 2007).

The regression analysis procedure used to finally make inferences about the relationship of variables is shown below in Figure 7.

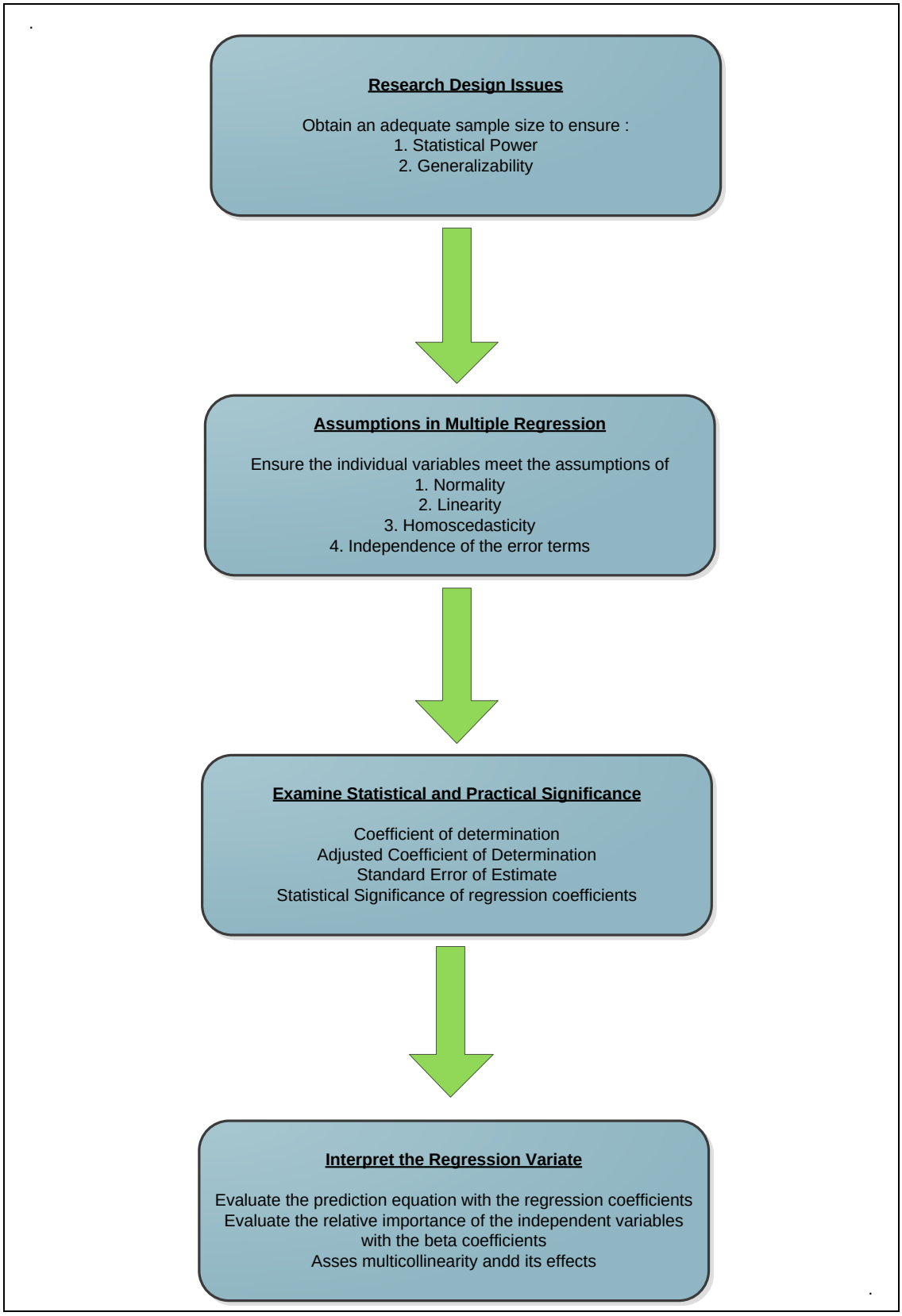


Figure 7 : Regression Analysis Procedure (Hair, Barry, Anderson and Black 2009)

3.15 Hypothesis 5

Organisations perceived to enforce website restriction and monitoring of employee online activities will depict higher levels of productivity and better behavioural patterns than organisations that are not perceived to enforce these policies.

Hypothesis was tested by firstly examining the levels of perceived website restriction and monitoring amongst the respondents. The different levels of website restriction and monitoring with their associated behavioural and productivity levels were then determined. To conclude the hypothesis, inferences about the sample were made and statistical significance tests were conducted.

3.16 Limitations of the study

The limitations of conducting this research were;

3.16.1 *Quantitative Research methodology*

1. It was not possible to further probe respondents on any trivial matters regarding the research.
2. This research had no control over nuisance variables but attempted to cater for these variables in the research design.
3. The conclusion of this research does not have a greater confidence as compared to experimental research (Welman and Kruger 1999).

3.16.2 *Limited Data*

This research report relies heavily on the data obtained from individual questionnaires. It would be greatly beneficial to obtain further data from other sources i.e. organisational monitoring data or through focus groups.

3.16.3 *Segmentation*

No segmentation of the profiles of respondents was performed in this research. It would have been insightful to apply segmentation to determine if the results may differ according to attributes i.e.

- Gender
- Age Group differentiation
- Occupation
- Race

(Akman and Mishra 2010)

3.16.4 *Generalisation*

This research focused in gathering the opinions of employees working within South African organisations. The results obtained should be carefully generalised for employees working outside South African organisations. Differences in internet network connectivity and culture should be carefully analysed before generalising the results of this study.

The questionnaire for this research was mostly distributed amongst employees working in Gauteng South Africa largely due the limitation imposed on the sampling method. Internet connectivity in Gauteng does differ marginally from other areas in South Africa. It could be argued that the results cannot necessarily be generalised to most South African organisations.

3.17 Validity and reliability

3.17.1 *External validity*

External validity can be split according to population and ecological validity. The population validity is determined according to the representation of the sample from a population, it is considered extremely important in non-experimental research (Welman and Kruger 1999). To improve the population validity this research attempted to randomly select participants but this would prove to be difficult because of the time and cost constraints required to list all the members of the population so random sampling can be carried out .

Ecological validity explains to what degree results can be generalised (Welman and Kruger 1999). This research cannot be generalised to all organisations but rather to South African organisations with employees who have free access to the internet.

3.17.2 *Internal validity*

This research report will not consider Internal validity because in a non-experimental research it is almost impossible to exercise control over the variables unlike an experimental research (Welman and Kruger 1999).

3.17.3 *Reliability*

Reliability refers to the extent to which the results of this research report can be generalised to mean something else if a similar study was conducted on a different occasion (Welman and Kruger 1999). To ensure the reliability of this research the following tasks were conducted;

1. The questionnaire had similar questions included to check for reliability.
2. The questionnaire was written clearly and without ambiguity.

3.18 Weaknesses of the research

Certain weaknesses in the research have been identified. The weaknesses focus on the design and methodology used for the research. These weaknesses identified are as follows;

3.18.1 *Non-personal interviews*

Personal interviews return a higher response rate than self-administered questionnaires (Zikmund 2003).

3.18.2 *Non-response error*

Errors due to non-response of invited respondents could lead to a failure because the sample may not be large enough to render statistically significant results (Zikmund 2003). A larger group of respondents would mitigate this.

3.18.3 *Questionnaire Length*

The length of the questionnaire could have caused some respondents to not complete or even start the questionnaire.

3.18.4 *Sample Frame Error*

Sample frame error occurs when the sample does not accurately reflect the population being sampled or when certain elements are excluded from the sample frame. In this case, the sample frame includes the attributes of the population being investigated, but due to the method of selection of the sample, this sample may not necessarily represent the population as a whole.

3.18.5 *Response Bias*

Respondents may incorrectly answer questions based on a particular feeling by answering a question based on morals and not reality or believe that they should please the author by answering questions that validate the proposition the author wishes to prove.

4 PRESENTATION OF RESULTS

4.1 Introduction

This chapter presents the key results obtained and compiled from an online questionnaire conducted from November 2011 to January 2012. The questionnaire mostly focused on respondents working in organisations in the ICT sector. Out of the 61 respondents who attempted the questionnaire a total of 53 respondents properly completed the questionnaire.

Data was exported from the online questionnaire into a format that could be read by statistical software for data and statistical analysis. The software package used to analyse the statistical data was NCSS 2007. The questionnaire data was exported to NCSS and automatically coded to ensure that it was in a format conducive for statistical analysis.

4.2 Incomplete Questionnaires

Eight of the respondents submitted questionnaires that were largely incomplete and could not be used in this research report. Considering that this questionnaire is anonymous, these individuals could not be contacted to complete the questionnaire and their results were discarded from the final sample.

4.3 Profile of respondents

This initial section of the questionnaire consisted of questions related to the profile of the respondents. Respondents were initially prompted to provide some personal information regarding the age group they belong to and their job level. Organisational information was then requested, which included the company name, industry and size of the organisation.

4.3.1 *Age groups of respondents*

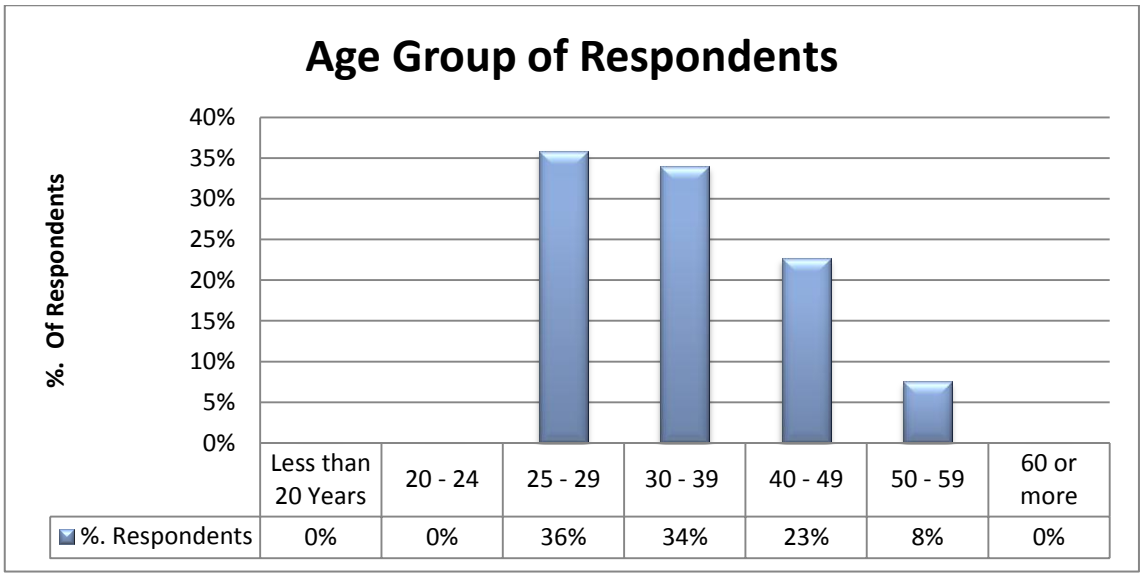


Figure 8: Age Profile of respondents

The majority of the respondents who partook in the survey were mostly between the ages 25 years and 29 years. This group was the youngest and represented 36% of all the respondents. The younger age groups are more likely going to be highly skilled and experienced in IT than the older age groups; they may also express themselves differently to the much older age groups (Rizzuto 2011). No respondents were over 60 years and none were younger than 25, possibly reinforcing the requirement for formal tertiary education or training before entering the workplace environment.

4.3.2 *Job Profiles of respondents*

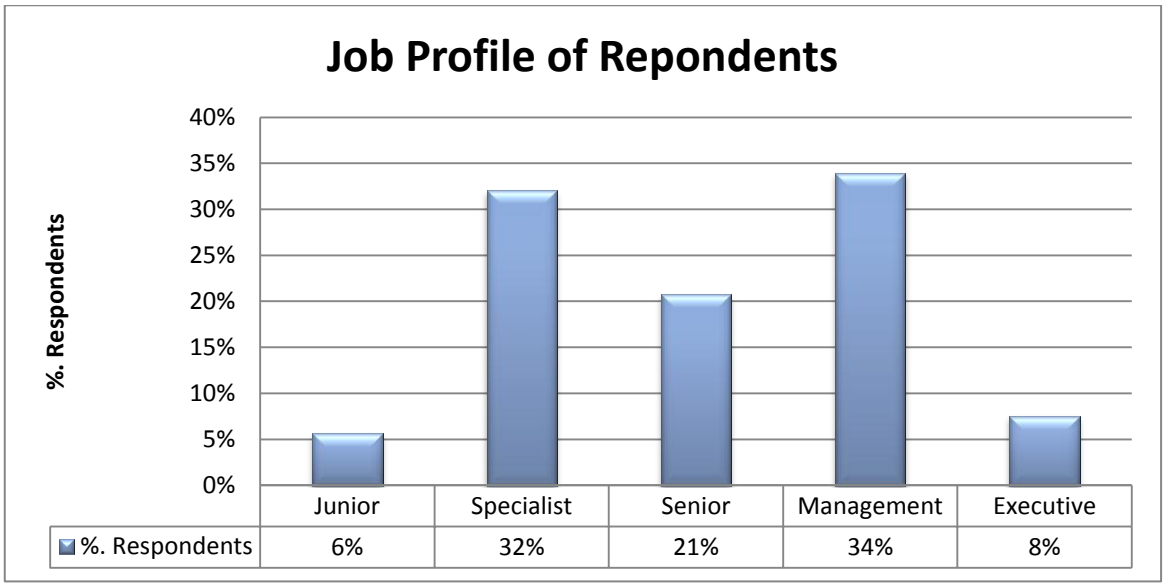


Figure 9: Job profiles of respondents

The majority of respondents who completed the questionnaire held specialist and managerial positions. The graph above shows that the majority of respondents held a management position (34%), followed by specialist (32%), senior (21%) and lastly executive and junior profiles combining for a total of (14%).

Taking into consideration that a large number of respondents (36%) are in the 25 – 30 years bracket it would be expected that the junior job profile role would be larger than 6%. A total of almost 60% of the respondents hold a combination of senior, management and executive profiles whilst the rest hold junior and specialist positions.

4.3.3 *Organisation's Online Social Networking Presence*

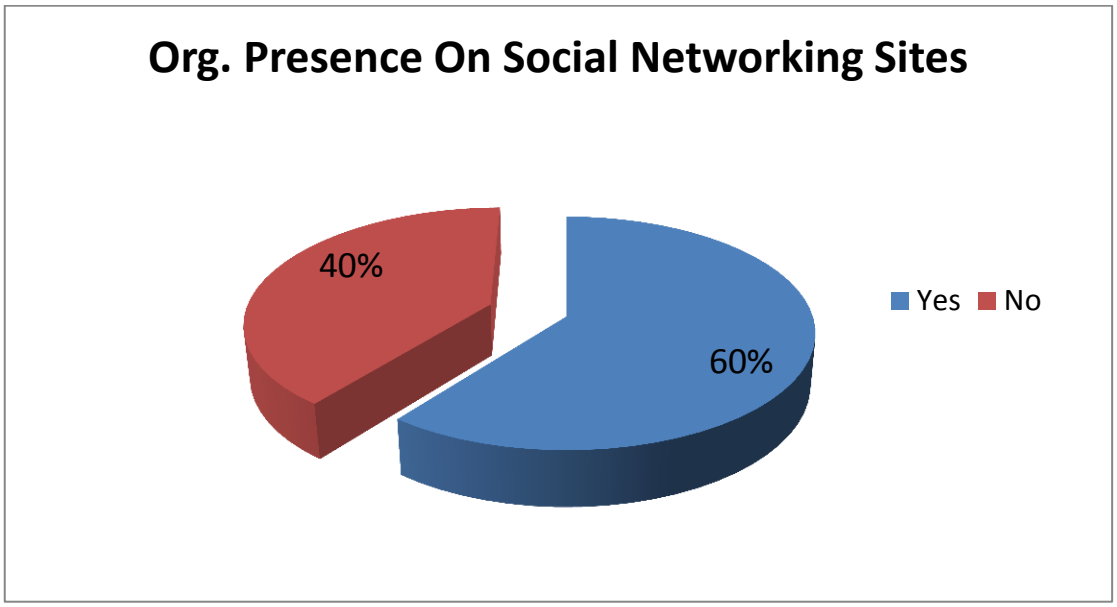


Figure 10 : Organisation presence on SNS.

The majority, 60 % of the respondents stated that their organisation has a profile on a social networking website i.e. Facebook, LinkedIn, Twitter. The other 40 % were either unsure about their organisation having a social networking presence or felt that their company did not make use of social networking websites.

4.3.4 *Organisational profile of respondents*

The respondents represented various industries in South Africa with the majority working in the Information Technology sector as shown in Figure 11.

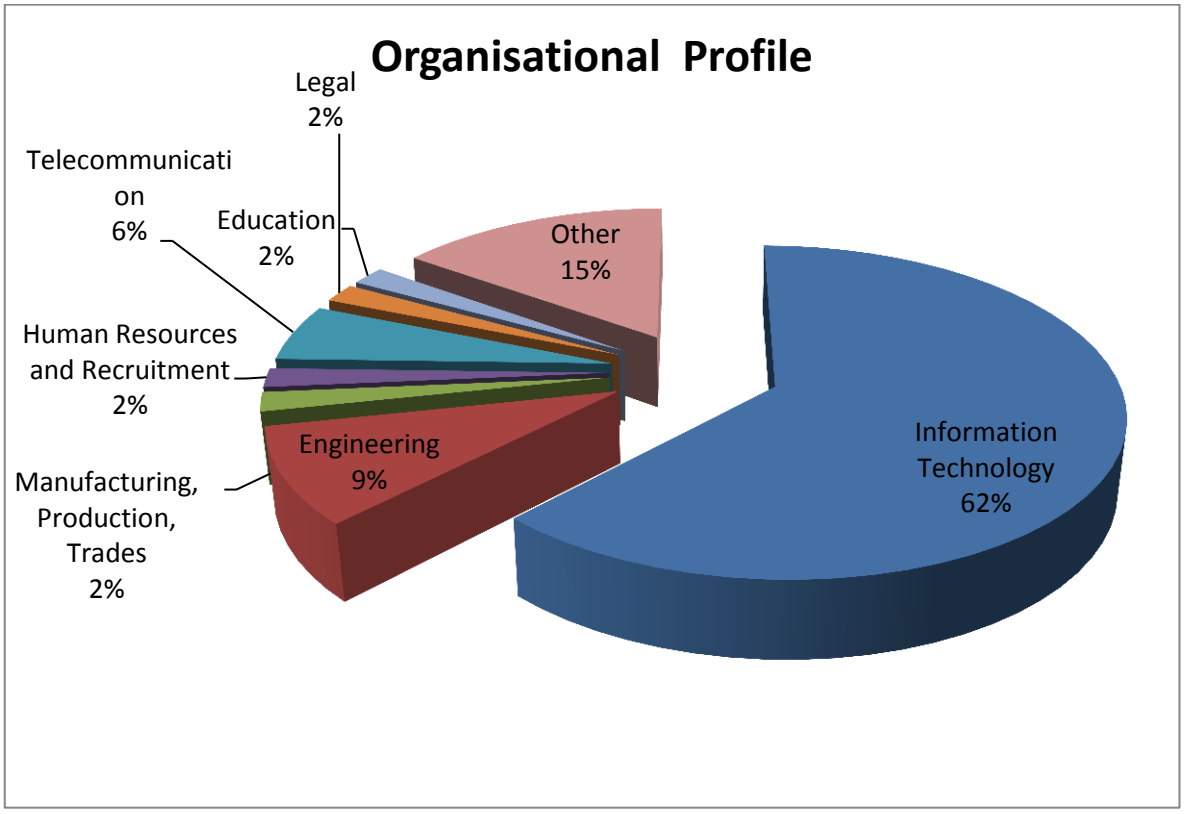


Figure 11: Organisation profile of respondents

The research was conducted using a snowball sampling method of employees working within South African ICT organisations. The intention was to solely focus on respondents working within the ICT industry but due to the nature of the sampling method and poor response rate the author decided to include results from other industries.

4.3.5 *Organisation Size*

81 % of the Respondents worked for a large enterprise whilst the rest worked for an equal number of small and medium sized enterprises. To categorise the

size of an organisation based on the number of employees, a definition by the South African Department of Trade and Industry (Small Enterprise Development Agency 2009) was used and is outlined in the description of Table 3: Organisations by Size.

Table 3: Organisations by Size

Category	Description	No. Respondents	Percentage
Small	Up to 49 Employees	5	9.4 %
Medium	50 - 199 Employees	5	9.4 %
Large	More than 200 Employees	43	81.1 %

4.3.6 *IUP Based on Organisation Size*

The results indicate that 78.8% of respondents work in large companies and perceive the organisation to have an Internet user policy in place. Of all the respondents who answered to working in a company with an IUP, 90% had read the company's IUP. 7.7 % of the respondents questioned did not think that their company had an Internet use policy in place.

Table 4: IUP based on Organisation Size

	Have Internet use policy	Does not have Internet use policy	Total
Small	5.8 %	3.8 %	**9.6 %**
Medium	7.7 %	1.9 %	**9.6 %**

Large	78.8 %	1.9 %	**80.8 %**
Total	**92.3** %	**7.7** %	**100** %

4.4 IUP Implementation and Enforcement

4.4.1 *Level of perceived IUP Implementation*

The results for the level of perceived IUP enforcement are presented in Table 5.

Table 5 : Level of IUP Implementation

Percentage Section			
	Values		
Respondent Variables	**Agree**	**Disagree**	**Total**
Internet use Policy Exists	92.45%	7.55%	100%
Respondent Forced to Read Policy	63.27%	36.73%	100%
Respondent finds IUP Acceptable	90.32%	9.68%	100%
Organisation Communicates IUP	30.19%	69.81%	100%

A high percentage of respondents (> 90%) believed that their company had implemented an IUP and that this policy was generally acceptable to them. However even though most respondents reported to having read their company's IUP it seems that these policies were not well communicated by their respective organisations.

Table 6 : Level of IUP enforcement

% of IUP Enforcement			
	Values		
Organisational Variables	Enforced	Non-Enforcement	Total
Website Restriction	83.02%	16.98%	100%
Internet Monitoring	64.15%	35.85%	100%
Internet Time Limitation	16.98%	83.02%	100%
Email Restrictions	69.81%	30.19%	100%
Awareness of Discipline against IUP Offenders	30.19%	69.81%	100%

83% of respondents reported to having some form of website restriction implemented. A fewer number of respondents reported that their company monitored internet usage and restricted email use.

64% of respondents felt that their organisation actively monitored Internet Usage and lower 36% of respondents perceived their organisation to not monitor their online activities. A low percentage of respondents reported that their company limits the amount of time spent on the internet.

The disciplining of offenders is fairly uncommon with only 30% of respondents reporting to having any knowledge of IUP infringement discipline.

4.5 Impact of IUP Communication on perceived enforcement

Hypothesis 1: *Employees who have had their organisation communicate IUP's to them will more likely, perceive Internet policy enforcement to exist than employees who have not been communicated to about IUP's.*

To analyse the above hypothesis, this section looks at the results of organisation to employee communication and the relationship it has on the following;

1. **Internet Usage Policy Enforcement:** Measured in the questionnaire by querying if the selected organisation restricts Internet usage using filtering software.
2. **Internet Usage Monitoring:** Measured in the questionnaire by querying if an organisation monitors website and email activities.

Research suggests that employees who perceive IUP to be fair are less likely to violate these polices by cyberloafing and their perception of fairness is associated with the levels of internet monitoring (Henle et al. 2009). Table 7 outlines a cross tabulation of the perceived level of monitoring based on IUP communication by the organisation.

Table 7 : Communication and Enforcement Cross Tabulation

		Enforcement		
Communication		**YES**	**NO**	**Total**
	YES	26.40%	3.80%	30.20%
	NO	56.60%	13.20%	69.80%

	Total	83%	17%	100%

The majority of employees 56.6% have had no IUP's communicated to them but widely perceive IUP enforcement to take place in the organisation. 26.4% of the respondents have had IUP's communicated to them and perceive their organisation to enforce Internet usage policies.

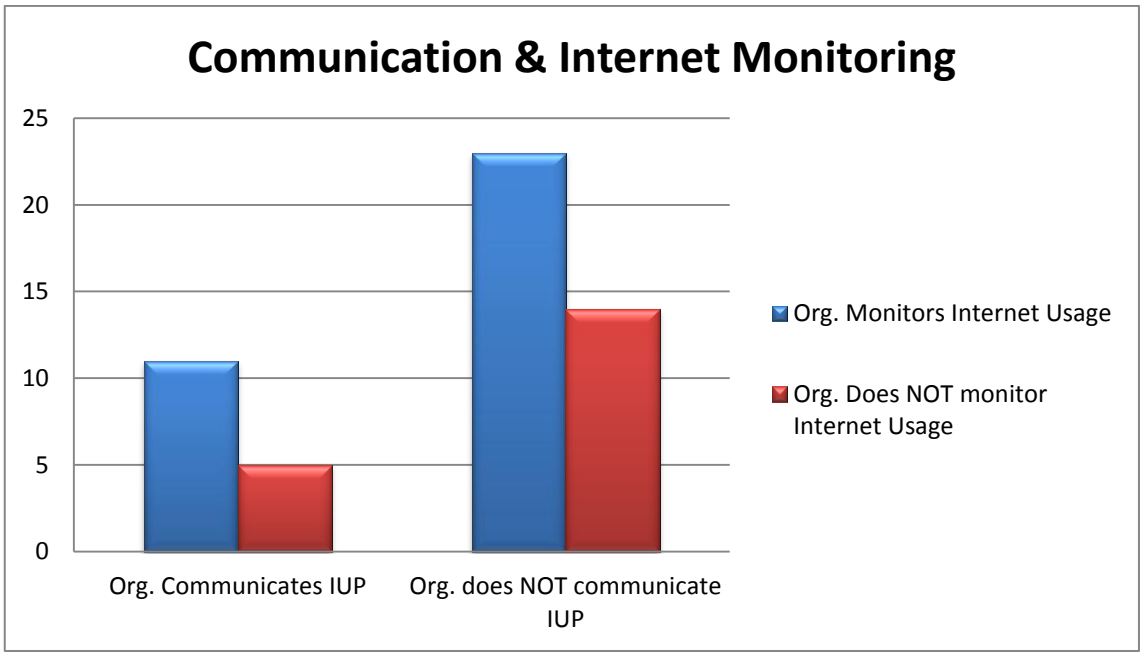


Figure 12 : No. respondents based on Communication & Internet Monitoring

Figure 12 displays a comparison of two groups of respondents according to the respondents who perceive their organisation to communicate IUP's and those that do not. Of the respondents who perceive their company to communicate IUP's, 11 respondents stated that their company does monitor Internet usage, whilst a total of 5 stated that their organisation does not monitor Internet usage.

The graph proportions of the two sets of groups looking at ‘monitoring’ and ‘no monitoring’ are almost similar in both groups. The Pearson chi-square coefficient would be applicable to assess the significance of the relationship between the two groups of data i.e. IUP communication and Internet usage monitoring.

(H0) Null Hypothesis: There is NO significant relationship between organisational Internet usage monitoring between employees working in organisations that communicate their IUP's and those that do not.

To assess if there is a significant relationship between communication and monitoring of IUP the Pearson Chi-Square test was used. The Pearson chi-square is considered the most common coefficient for association and tests the null hypothesis to determine if observations are independent of each other (Singh 2007).

Table 8 : Chi-Square Statistics

Chi-Square Statistics Section		
Chi-Square	**0.2108**	
Degrees of Freedom	1	
Probability Level	**0.6461**	**Accept H0**

These two variables were tested for association using the Chi-square test and this test only determines if the variables are dependent or related to each other but does not infer any analysis on the magnitude of dependency (HR Statistics 2011).

4.5.1 *Hypothesis Conclusion*

A calculation of the Chi-Square to determine if the two variables are dependent or related has been calculated and yields a p-value greater than 0.05 (p =0.64) Indicating that there is no significant association between these two groups and that the results are do not represent the population.

4.6 Impact of employee behaviour on productivity

Hypothesis 2: *There is a significant difference in the productivity and cyberloafing behaviour of employees who have had their organisation communicate IUPs as opposed to those that have not.*

4.6.1 *Reliability Testing for Dimensions in Questionnaire*

To assess the reliability of dimensions used in the questionnaire an Item analysis was performed to determine the Cronbach Coefficient Alpha. The Cronbach Coefficient Alpha is a consistency check that requires only a single test to estimate internal consistency, the higher the alpha is the more reliable the test and normally a value above 0.7 is considered acceptable (Nunnally 1978; Yu 2001).

4.6.2 *Employee Cyberloafing Behaviour*

The mean value in Table 9 represents an interval value between 0 and 7 where 0 represents no participation in that activity and 7 represents a very high participation in the respective behaviour. On average the respondents spent most of their time sending personal email (Mean; 6.32) and the least amount of time playing games (Mean; 1.28)

Table 9 : Employee Cyberloafing Behaviour

			Coef
Variable	**Question**	**Mean**	**Alpha**
Q3_1	How often do you receive personal email in your company's email address?	**5.191**	**0.802**
Q3_2	How often do you access non - work related websites during working hours?	**5.830**	**0.766**
Q3_3	How often do you read News Websites whilst at work?	**6.191**	**0.782**
Q3_4	How often do you check personal email at work?	**6.298**	**0.767**
Q3_5	How often do you send personal email at work?	**6.320**	**0.770**
Q3_6	How often do you instant message (Non job related e.g. with Friends or Family)?	**4.745**	**0.787**
Q3_7	How often do you access sports websites at work (e.g. Supersport, ESPN)?	**3.766**	**0.754**
Q3_8	How often do you access entertainment websites at work (e.g. YouTube, E! Online)?	**3.319**	**0.762**
Q3_9	How often do you download non work related information at work (e.g. Music, Magazines, and Software)?	**3.085**	**0.751**
Q3_10	How often do you shop online at work?	**2.723**	**0.771**
Q3_11	How often do you look for employment whilst at work?	**2.000**	**0.790**
Q3_12	How often do you play games online during work hours (e.g. Angry Birds, Chess)?	**1.277**	**0.787**
Q3_13	How often do you use your mobile device for online activities that are NOT work related	**4.915**	**0.789**

Total			**0.790**

Table 9 also outlines the Cronbach Alpha for Respondent Behaviour attributes, no Cronbach Alpha values were more than 2% higher than the overall Cronbach Alpha hence no individual questions were removed. The standard deviation for the results of the 'Respondent Behaviour' construct is 12.52.

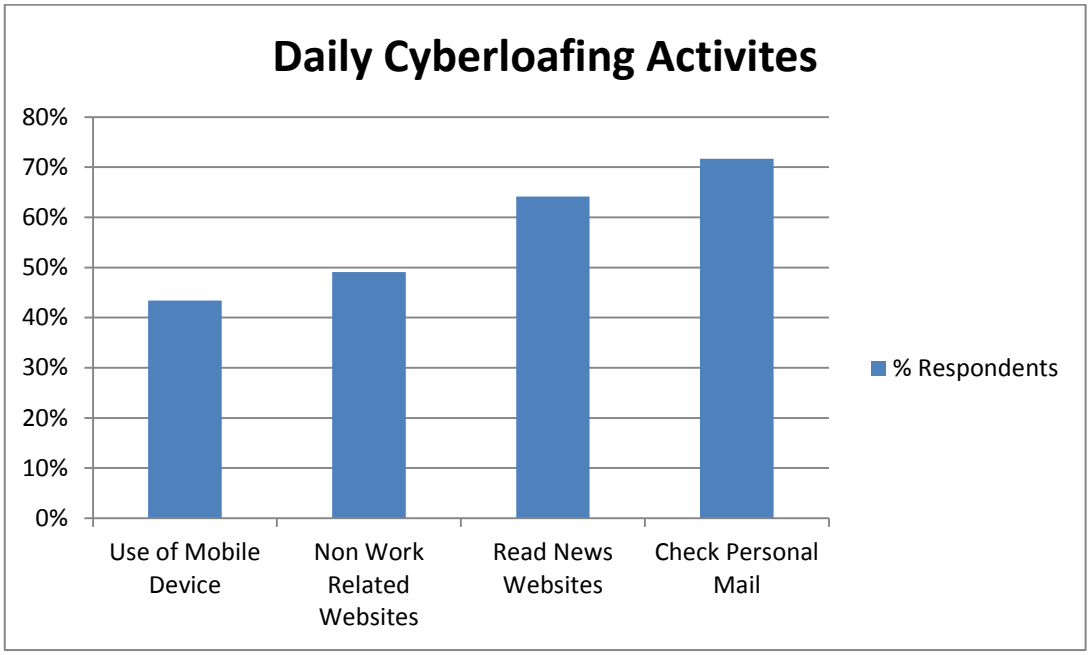


Figure 13: Daily Cyberloafing Activities

85 % of respondents admitted to either accessing or reading news related websites daily or checking personal mail on a daily basis. Both these cyberloafing activities were highest daily cyberloafing activities that respondents partook in, with 64 % of respondents stating that they read news websites daily and 72% of respondents stating that they access personal mail daily.

4.6.3 *Employee Productivity*

Table 10 : Employee Productivity

			Coef
Variable	**Question**	**Mean**	**Alpha**
Q4_1	Is your company's Internet use Policy (IUP) accommodating to your personal interests?	**5.176**	**0.735**
Q4_2	Does your company's IUP helps you deal with practical issues at work?	**5.804**	**0.726**
Q4_3	Does your company's IUP make you a better worker?	**5.373**	**0.739**
Q4_4	Does your company's IUP help you deal with problems at work?	**5.118**	**0.741**
Q4_5	Does your company's IUP provide you with the online freedom you deserve?	**5.510**	**0.738**
Q4_8	Does your company's IUP make you leave the office completing more work?	**4.039**	**0.745**
Q4_9	Does it make it difficult to fulfil your work obligations?	**5.039**	**0.744**
Q4_10	Does it make you spend less time doing work?	**4.588**	**0.772**
Q4_11	Does it take up time you would rather spend on work?	**4.784**	**0.749**
Q4_12	Do you end up using external internet devices (e.g. 3G Card) for work related purposes?	**4.902**	**0.783**
Total			**0.767**

Table 10 outlines the Cronbach Alpha for “Employee Productivity” attributes and Table 11 displays individual questions removed because the Cronbach Alpha values were more than 2% higher than the overall Cronbach Alpha. The standard deviation for the results of the ‘Employee Behaviour’ construct is 10.1.

Table 11 : Excluded Questions

Variable	Question	Mean
Q4_6	Does it somehow extend your work deadlines?	**3.941**
Q4_7	Does it help limit the time spent on sites that you would normally access after working hours?	**4.020**

Reliability estimates were 0.79 and 0.77 for responses to “Employee Behaviour” and “Employee Productivity”, respectively. According to HR Statistics (2011) these results indicated an acceptable reliability.”

4.6.4 *Impact of Communication on Productivity and Cyberloafing Behaviour*

The impact that the communication of IUP’s to employees had on productivity and behaviour is outlined in Figure 14 below. Employees that perceived IUP communication to take place had a higher cyberloafing behaviour mean of 0.38, meaning that they depicted worse IUP behaviour than those who perceived IUP communication to not take place.

The difference was also higher with the (Good) productivity variable, as mean of 5.04 was identified by respondents who perceived IUP communication to take place, whilst those that had perceived no communication to take place had a mean of 4. Meaning that communication of IUP was synonymous with an improvement in productivity.

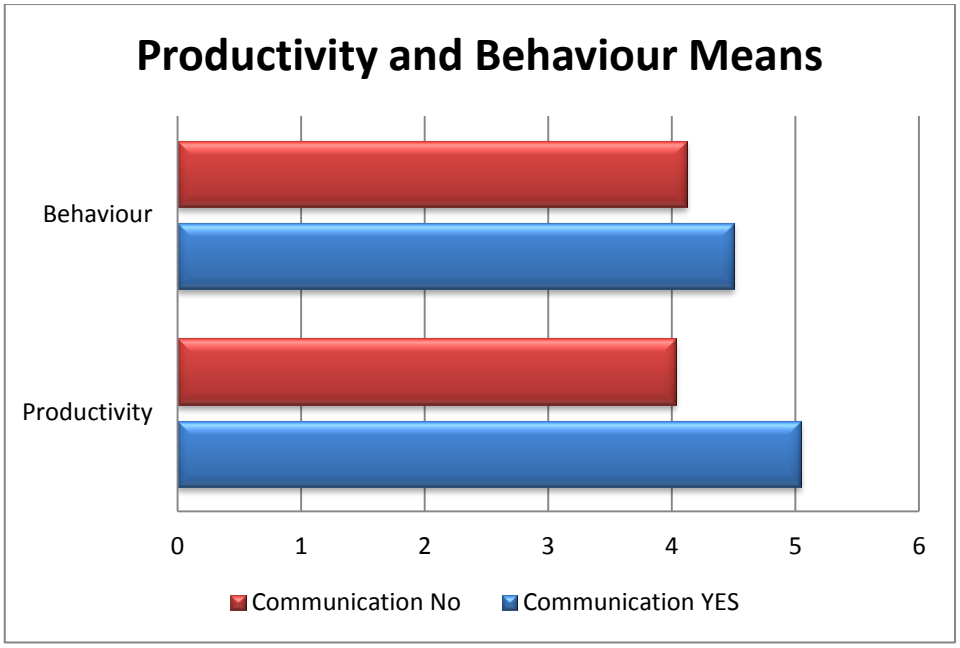


Figure 14 : Productivity and Behaviour Means

4.6.5 *Comparing differences between Productivity and Cyberloafing Behaviour mean scores with paired T-tests*

The paired T-Test was used to test if differences exist in productivity and cyberloafing behaviour if employees perceive IUP communication to take place in the organisation.

Table 12 : Paired T-Test Results

	Probability Level	
Test	**Behaviour**	**Productivity**
Equal Variance T-Test (Difference <> 0)	**0.21**	**0.99**
Aspin - Welch Unequal Variance (Difference <> 0)	**0.17**	0.99

The difference that employee IUP communication makes to the means of productivity and cyberloafing behaviour is clearly visible in Figure 14 above. However based on the p-value from the paired T-Test, both productivity and cyberloafing behavioural variables do not differ significantly at the 95% level of confidence.

4.6.1 *Hypothesis Conclusion*

The results of the above hypothesis were analysed and the findings indicate that productivity is higher amongst employee who had IUP communication. The communication of IUP did not impact on cyberloafing behaviour. There however was no significant difference in the productivity and cyberloafing behaviour amongst employees within organisations that communicated their IUP and those employees in organisations that did not communicate their IUP's. An interpretation of the results concludes that the null hypothesis specified must be accepted.

4.7 Different levels of productivity based on mobile cyberloafing

Hypothesis 3: *There is a significant relationship between different levels of cyberloafing using a mobile device and the level of productivity exhibited by employees.*

This study was conducted by collapsing the different levels of mobile cyberloafing into three categories highlighting low, medium and a high level of mobile cyberloafing. Collapsing the data was necessary so better analysis could be accomplished without necessarily excluding any data. Prior to collapsing the scales the data was assessed for reliability of scale using the Cronbach Alpha. A Cronbach Alpha value of 0.789 was considered to be an acceptable level of reliability.

The use of the mobile phone for cyberloafing purposes was one of the highest daily behavioural activities undertaken by respondents on a daily basis. To determine if the productivity means of the different levels of non-work related internet downloading differ significantly, the Analysis of Variance (ANOVA) was computed.

Table 13 : Means for One Way Anova

Level	Number of Respondents	Productivity Mean	Std Error
Low Level of Mobile Cyberloafing	14	4.9	0.24
Medium Level of Mobile Cyberloafing	7	5.5	0.33
High Level of Mobile Cyberloafing	32	5.1	0.15

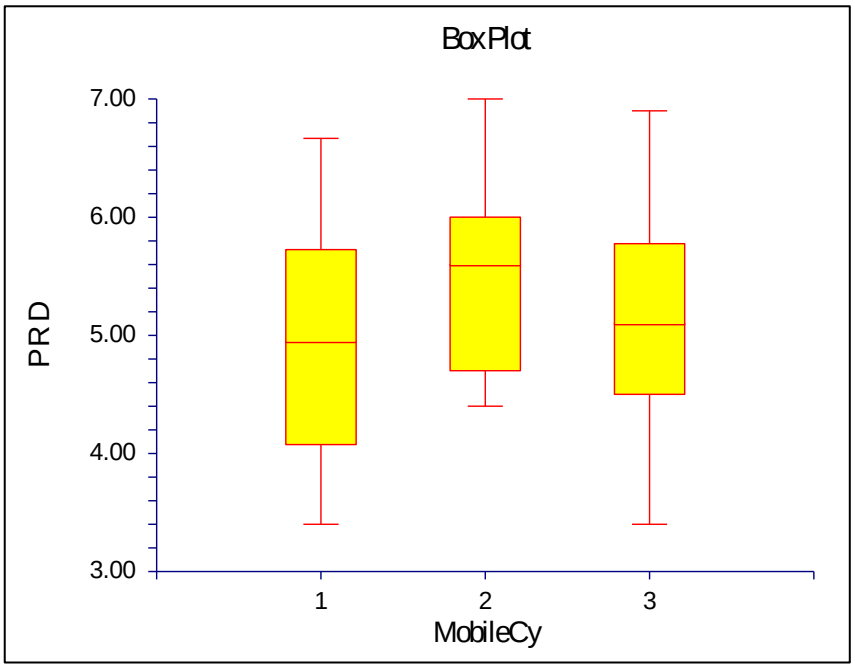


Figure 15: Box Plot for Mobile Cyberloafing levels and Productivity Means

Table 13 and Figure 15 depict the mean results and visual box plot of the 3 categories of mobile cyberloafing behaviour respectively. Analysing the Anova results for the different levels of mobile cyberloafing prevalent amongst the respondents, the results depict higher levels of productivity for respondents that have a medium level of mobile cyberloafing. To determine if the productivity means are statistically significant an F – test was conducted.

Table 14 : Analysis of Variance

Analysis of Variance Table					
Source		**Sum of**	**Mean**		**Probability**
Term	**DF**	**Squares**	**Square**	**F-Ratio**	**Level**
How often do you use your mobile phone for non-work related	2	1.747	0.874	1.08	0.347*

activities?					
Error	50	40.399	0.808		
Total (Adjusted)	52	42.147			
Total	**53**				

The p-value of the F-test is 0.347 (Table 14) which is not less than 0.05, indicating that there is not a significant difference between the productivity levels based on the different levels of 'cyberloafing behaviour' at a 95% level of confidence.

4.7.1 *Hypothesis Conclusion*

A statistical analysis was done to determine if the means of the three levels of mobile cyberloafing differed. An interpretation of the results concludes that the null hypothesis specified must be accepted. There is no significant relationship between the different levels of cyberloafing using a mobile phone and the levels of productivity exhibited by employees.

4.8 The Relationship between Productivity and Cyberloafing Behaviour

Hypothesis 4: *An employee's cyberloafing behaviour has a negative significant impact on productivity.*

Figure 7 outlined the regression analysis steps taken to analyse the relationship between productivity and cyberloafing behaviour. These steps were as follows;

Step 1: The variables were tested to ensure they meet the assumptions of Normality and Linearity.

Step 2: An outlier was identified in the initial regressions and this information was removed. The outlier was identified because the data row had a modulus RStudent greater than 3. Before the removal of the outlier the correlation coefficient was -0.205.

In order to test the strength of the relationship between productivity and cyberloafing behaviour, the correlation coefficient was calculated to be -0.16, a graphical representation of this correlation is shown in Figure 16. This value indicates a negative relationship between cyberloafing behaviour and productivity, correlation coefficient also indicates a weak relationship between cyberloafing behaviour and productivity (HR Statistics 2011).

Table 15: Descriptive Statistics

Parameter	**Dependent**	**Independent**
Variable	Productivity **(PRD)**	Cyberloafing Behaviour **(BEH)**
Count	53	53

Mean	5.106	4.242
Standard Deviation	0.9	0.997
Minimum	3.4	1.769
Maximum	7	6.154

The average, minimum and maximum values for both Productivity and Cyberloafing behaviour are outlined above in Table 15.

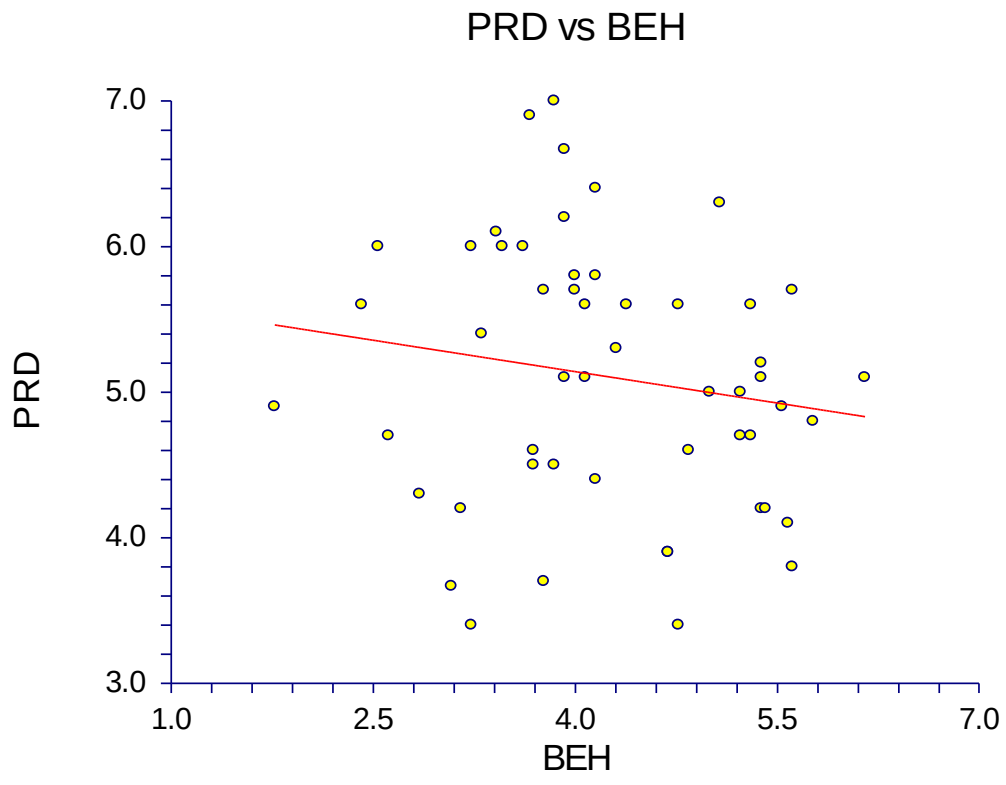


Figure 16 : Productivity and Cyberloafing Behaviour Correlation (Heteroscedasticity)

The straight line equation between productivity and cyberloafing behaviour is estimated to be; **PRD = (5.7157) + (-0.1437) BEH**. The estimated value of productivity when behaviour is 0 is 5.716 resulting in a standard error of 0.544. The straight line equation can be interpreted as follows; for every unit change in the cyberloafing behaviour of a respondent the productivity of that respondent changes by -0.144 with a standard error of 0.125. The proportion of the variation in productivity that can be explained for by a deviation in behaviour (R-Squared), is 0.025.

A probability value (p-value) must be calculated to statistically test if the correlation is significant. A t-value of -1.15 was yielded for a significance test if the slope was 0. The significance level of this t-test is 0.255 which is greater than 0.05 indicating that the relationship between behaviour and productivity is not statistically significant.

Table 16 below outlines the R-Squared and correlation outcomes of the relationship between behavioural constructs and productivity. Each behavioural construct represents the impact on productivity when an increase in that behaviour variable is observed. E.g. an increase in the 'use of Personal Email' would negatively impact productivity, but the correlation is very weak (-0.1).

Table 16 : Cyberloafing Behavioural Variables correlation to Productivity

	R Squared	Correlation	Result	
Use of Personal Email	**0.011**	**-0.104**	Negative	Weak
Use of Non Work Related Websites	**0.001**	-0.030	Negative	Weak
Reading News Websites	**0.086**	-0.292	Negative	Weak

Accessing Personal email	**0.003**	-0.056	Negative	Weak
Instant Messaging at Work	**0.002**	-0.043	Negative	Weak
Accessing Sports Webpages	**0.000**	-0.020	Negative	Weak
Accessing Entertainment Websites	**0.039**	-0.199	Negative	Weak
Downloading Non work related information	**0.104**	-0.322	Negative	Weak
Online shopping	**0.087**	-0.294	Negative	Weak
Looking for Employment	**0.010**	-0.098	Negative	Weak
Playing Games online	**0.002**	-0.047	Negative	Weak
Use of Mobile phone for online activities	**0.001**	0.034	**Positive**	Weak

4.8.1 *Hypothesis Conclusion*

The relationship between productivity and cyberloafing behaviour was analysed by utilising a Regression analysis procedure, the statistical examination for significance showed a negative weak correlation and no significant statistical correlation. The hypothesis that a relationship between productivity and cyberloafing behaviour exists is rejected.

4.9 Perceived IUP enforcement on behaviour and productivity

Hypothesis 5: Organisations perceived to enforce website restriction and monitoring of employee online activities will depict higher levels of productivity and better behavioural patterns than organisations that are not perceived to enforce these policies.

4.9.1 *Perceived Enforcement*

Figure 17 outlines the results of the perceived level of enforcement amongst the respondents. From the study undertaken, a high number of respondents (62%) perceived their organisation to

1. Not monitor website and email activities and
2. Not restrict websites they can access.

23 % of the respondents stated that their organisation either restricts access to websites or monitors email activities but not both. 15 % of the respondents stated that their organisation enforces both policies.

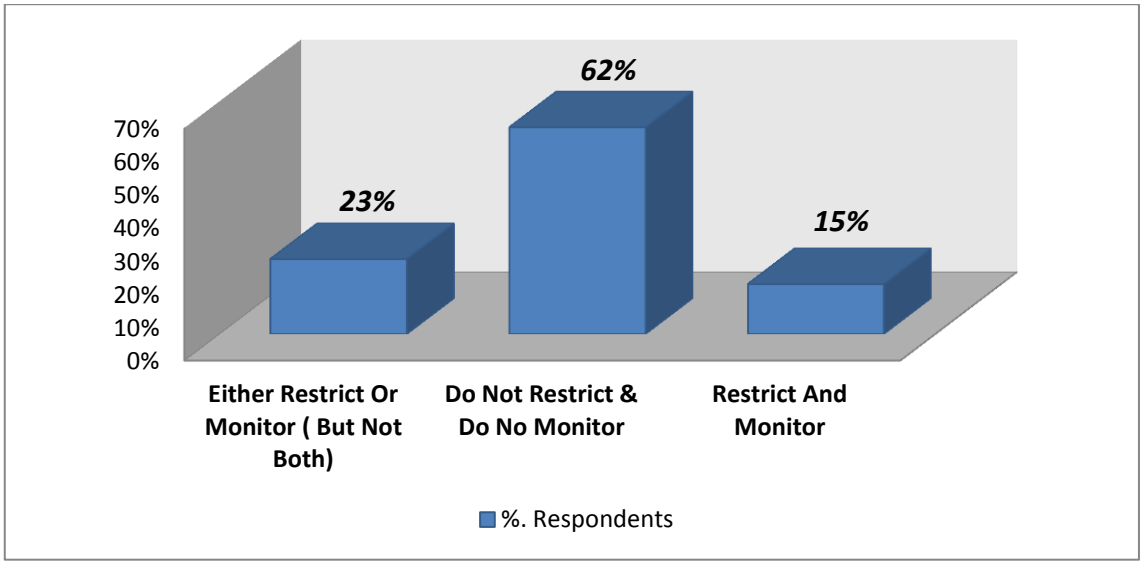


Figure 17 : Internet Monitoring & Restriction Respondent Graph

4.9.2 *Cyberloafing Behaviour and Productivity According to Perceived Enforcement*

The mean level of cyberloafing behaviour (a low score of behaviour indicating good behaviour and high score indicating bad behaviour) as well as productivity (a low score of productivity indicating less productivity and higher score improving productivity) was calculated and the results depicted in Figure 18.

Interestingly results from the study show that the highest level of productivity was scored by respondents who perceive their company to restrict webpage access and monitor internet activity, whilst the lowest level of productivity was by respondents who perceived their organisation to either restrict webpage access or monitor internet activities but their organisation did not apply both policies.

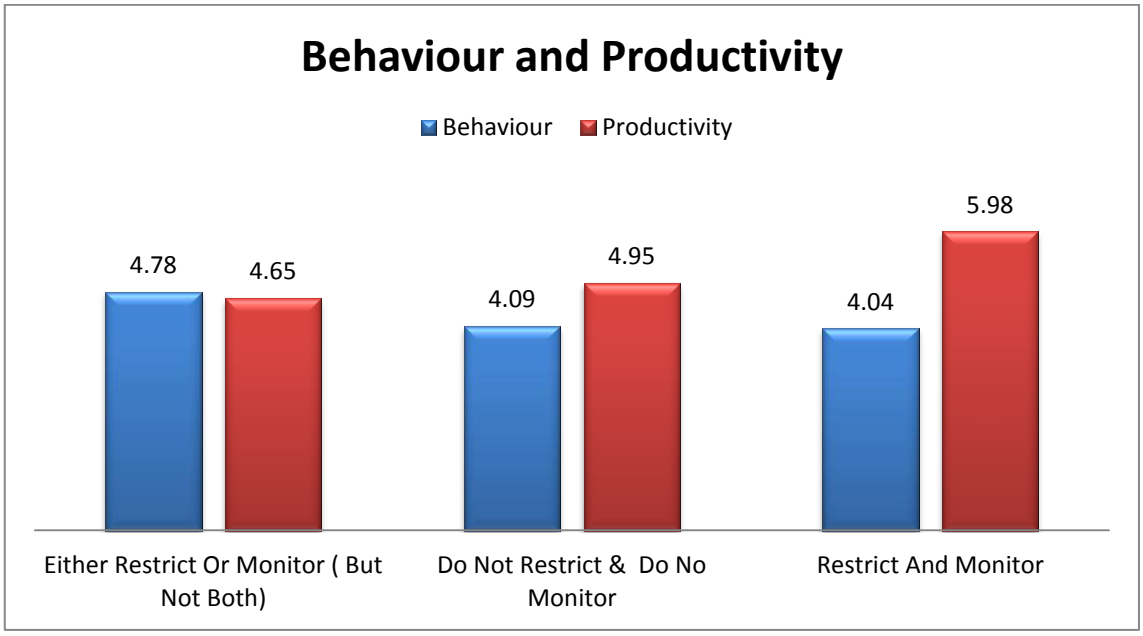


Figure 18: Employee cyberloafing behaviour and productivity based on organisational IUP perception

In addition to having the least level of productivity, respondents that perceived their organisation to either restrict webpage access or monitor web activities

also scored the highest bad internet behaviour. The best internet behaviour was by respondents who perceived the organisation to both restrict and monitor online activities.

4.10 Hypothesis Conclusion

The results indicate that respondents who perceive their organisation to monitor online activities and restrict access to websites will most likely engage less in cyberloafing. The results all show that this same group of respondents will be more productive than their other counterparts who perceive their organisation to not monitor their online activities and restrict the webpages they access. Thus Hypothesis 5 is supported.

4.11 Conclusion

The results of the research analysing the relationships between organisation IUP's, employee cyberloafing behaviour and productivity depict a complexity that was marginally explained by the hypothesis tested in this research. Recommendations for future research were summarised following the research results received. The findings suggest that the cyberloafing behaviour an employee depicts does not explain how productive they are but an organisational IUP can impact on the levels of cyberloafing behaviour.

The table below outlines the overall conclusion of the hypotheses outlined in this research. A detailed explanation of these findings is discussed in the proceeding chapter.

Hypothesis	Findings	Overall Conclusion
Hypothesis 1	Organisational communication not necessary to have a greater level of IUP enforcement.	Reject Hypothesis
Hypothesis 2	Productivity was greater amongst employees who had received communication on organisational IUP's.	Reject Hypothesis
Hypothesis 3	The level of cyberloafing on a mobile device does not coincide with productivity.	Reject Hypothesis
Hypothesis 4	Cyberloafing behaviour has a negative impact on productivity but not a significant impact.	Reject Hypothesis
Hypothesis 5	IUP implementation and enforcement does positively impact on productivity and reduce cyberloafing behaviour	Accept Hypothesis

5 DISCUSSION OF THE RESULTS

5.1 Introduction

A detailed analysis of the research results discussed in the previous chapter will be outlined in this chapter. The purpose of this chapter is to review the hypotheses put forward by providing relevant insight on the findings and concluding how these results compare with research literature.

Based on the literature review and the outlined problem statements, 5 hypotheses were drawn up to determine if any insight could be gained about how the Internet use policies developed and enforced by organisations can impact employee cyberloafing behaviour and productivity. This research attempted to explore any existing and relevant relationships between these variables.

5.2 Demographic profile of respondents

As discussed in Chapter 4 a total of 53 respondents correctly completed the online questionnaire. The largest number of respondents came from the 25 -29 years group. No respondents were less than 25 years or over 60 years old. The author expected some representation from these two age groups as they also make up the active working population. A larger sample size could have been used to show a wider representation of age groups than the one collected.

The age group of respondents does not strongly tally with the respondent job profile results. The majority of respondents had a ‘management’ role followed closely by the ‘specialist’ role. Considering that the ’25 – 30’ age group consisted of the highest number of respondents then the expectation would be; to have a higher representation of respondents in the ‘junior’ role. The results characterise a big criticism to using the snowball sampling method. Considering that 63 % of the respondents had senior, management or executive roles it would be expected that this group would know their organisational policies

better and were more likely to depict cyberloafing behaviour and productivity attributes that are not consistent with the majority of the population.

5.1 Discussion pertaining to Hypothesis 1

5.1.1 *Hypothesis 1*

Employees who have had their organisation communicate IUP's to them will more likely, perceive Internet policy enforcement to exist than employees who have not been communicated to about IUP's.

5.1.2 *Literature Comparison*

The literature review in Chapter 2 outlined the importance of not only implementing but enforcing IUP's. Laughton (2010) emphasized that when developing IUPs the first step should be to educate users about Internet activities permissible within an organisation so to, in due course protect not only the organisation but also employees against illicit internet behaviour.

Based on the results obtained, organisational communication does not necessarily translate into a greater perception of IUP enforcement within an organisation. The results showed that respondents who had not received any communication on IUP were more likely going to perceive their organisation to enforce IUP's. These findings differ substantially from research conducted by Case and Young (2002).

An Internet use policy must be a visible tool providing guidance to employees on what Internet use behaviour is acceptable (Case and Young 2002). Communication is therefore an important component of managing an IUP. The existence of an IUP in an organisation does not necessarily mean it will be effective. Research conducted by Case and Young (2002) to human resource managers and company presidents found that, organisations that requested employees to sign an IUP agreement were more likely to have an IUP that they perceived to be effective.

Research has shown that developing an IUP alone is identified to be ineffective in combating unproductive Internet usage and the important area of concern is how organisations communicate and enforce these policies (Young 2010). Organisations have a multitude of methods to effectively communicate IUP's but aggressive methods i.e. employees training are more effective especially to new young hires. This method also allows an organisation to stay abreast with new technologies and communicate policy updates (Young 2010).

5.1.3 *Evaluating the Sample*

A possible limitation of the sample in relation to the hypothesis brought forward could be that the respondents were well aware of internal company policies either through social communication or through an online repository (Intranet) thereby not requiring any formal communication from the organisation. Many organisations resort to indirect communication of IUP by notifying employees of IUP breaches using filtering software. The research enforces this notion (Figure 12) as most respondents did not receive any communication but perceived organisation monitoring of internet usage to take place.

The sample used consisted of mostly senior and management profiles in organisations, the results would have been more relevant if the sample represented the demographics of a typical organisation i.e. largely junior employees.

5.1.4 *Overall Findings*

Based on the research data and literature review it could be argued that communication is not necessary for employees to perceive IUP enforcement to exist in an organisation. With the use of Internet filtering software employee perception on IUP enforcement can be amplified, however if an organisation wants to have an effective IUP then communication through employee training programs is a prerequisite.

5.2 Discussion pertaining to Hypothesis 2

5.2.1 *Hypothesis 2*

There is a significant difference in the productivity and cyberloafing behaviour of employees who have had their organisation communicate IUPs as opposed to those that have not.

5.2.2 *Literature Comparison*

Many organisations choose not to properly and continuously communicate their IUP's within the organisation opting rather to implement web monitoring software that monitors and alerts management of any substantial policy infringement. Most research i.e. (Case and Young 2002) focuses on the importance of communication and not the impact it has on cyberloafing behaviour or productivity of employees.

The results obtained from this research show that employees who had been communicated to on IUP depicted better behaviour than those that stated they received no communication on internet policies. Productivity was also higher for respondents that stated that they received IUP communication. The hypothesis that productivity and behaviour will differ significantly when communication takes place within an organisation was however rejected. Future research should possibly further dissect the multiple types of policy communication including formal and informal channels. By doing so it may be possible to differential how specific types of communication will impact behaviour and productivity.

5.2.3 *Evaluating the Sample*

The sample used to test this hypothesis was adequate to identify that communication does have some impact on the behaviour and productivity of employees. The results could have been improved by asking detailed questions on the types and frequency of policy communication. Considering that

respondents were asked to self-report on their behaviour and productivity many respondents could have potentially incorrectly stated their behaviour and productivity.

5.2.4 *Overall Findings*

The overall findings do not support the notion that an organisation must communicate its IUP's in order to have some influence on the cyberloafing behaviour and productivity of its employees. Research does state the importance of communication when developing and maintaining an IUP but the ramifications of not doing so would need to be further investigated broadly.

5.3 Discussion pertaining to Hypothesis 3

5.3.1 *Hypothesis 3*

There is a significant relationship between different levels of cyberloafing using a mobile device and the level of productivity exhibited by employees.

5.3.2 *Literature Comparison*

The proliferation of mobile devices i.e. Tablets and smartphones provides employees with easy access to online services. Organisations that choose to have very stringent policies may very well leave employees with no alternative but use their mobile devices to access the internet. The disadvantage is that an organisation is no longer aware nor can it control the cyberloafing activities an individual may be involved in.

The increase in the processing power of Smartphones and tablets has resulted in the boundary between fixed and mobile Internet being blurred, such that converged communication services allow users to experience the internet just like a fixed device, allowing them to even switch devices without diminishing the

experience (de Reuver, Ongena and Bouwman). The ability to easily switch from using the organisations network to the personal mobile device mean that organisations should reconsider how existing IUP deal with type of cyberloafing behaviour.

Research conducted by Lim and Chen (2009) showed that the access of personal email and access of non-work related websites were the highest cyberloafing activities undertaken by male and female employees. Downloading of non-work related information was ranked amongst the lowest of cyberloafing activities. Whilst these results are consistent with the results undertaken in this study, the shortcomings are that in 2009, mobile devices such as tablets had not been readily available on the market as they are today.

Research was undertaken to determine if the use of mobile devices for cyberloafing had any bearing on productivity especially since organisations cannot restrict website access or monitor online activities on the personal mobile devices of employees.

5.3.3 *Evaluating the Sample*

Research conducted by World Wide Worx (2012) showed that a total of 7.9 million South African's use their mobile phones to access the internet. The author assumed that the respondents who took part in the survey had access to at least one mobile device that could be used to access the internet at work. Future research would do well to determine internet availability options available at work by employees' e.g. mobile phone, tablets and external wireless hotspots.

5.3.4 *Overall Findings*

The results of this study showed that the 3 different levels of mobile cyberloafing were not significantly different to infer that a certain level of mobile cyberloafing behaviour will result a higher or lower level of productivity. The

results could possibly reinforce that productivity could have many other highly correlated variables that could significantly adjust the productivity of employees.

5.4 Discussion pertaining to Hypothesis 4

5.4.1 *Hypothesis 4*

An employee's cyberloafing behaviour has a negative significant impact on productivity.

5.4.2 *Literature Comparison*

Research on cyberloafing (Henle et al. 2009; Zyl 2009; Kidwell 2010) clearly makes a case that cyberloafing behaviour has negative consequences for an organisation and that an organisation must devise an Internet use policy to mitigate any associated risks. Anandarajan et al (1998) are of the opinion that an individual's tendency to interact with the internet (playfulness) can enhance perceptions of job characteristics, satisfaction and productivity. Lim and Chen (2009) agree by adding that not all cyberloafing activities are detrimental to the organisation, rather certain types of cyberloafing can have a positive effect on employees and ultimately productivity.

No statistically significant relationship was found between cyberloafing behaviour and productivity. It was hypothesised that employees with high cyberloafing behaviour would more likely be less productive than employees that depicted low cyberloafing behaviour. Intuitively it would make sense that employees who spend less time partaking in non-work related activities would stand to be more productive but more exploratory research would be required to determine what cyberloafing factors and employee attributes will result in positive and negative productivity levels.

5.4.3 *Evaluating the Sample*

When comparing the sample used in this research report to that of other research's the principal limitation of this sample was the limited size of 53 respondents. An adequate sample size of at least 100 would have been beneficial to determine any interesting relationships through factor analysis.

5.4.4 *Overall Findings*

Based on the questionnaire results no significant relationship between cyberloafing and productivity could be determined. Existing literature does suggest that cyberloafing can either have a positive or negative impact on productivity. The overall findings are that further research would be required to identify additional factors that will predict productivity based on cyberloafing activities amongst South African organisational employees.

5.5 Discussion pertaining to Hypothesis 5

5.5.1 *Hypothesis 5*

Organisations perceived to enforce both website restriction and the monitoring of employee online activities will depict higher levels of productivity and lower cyberloafing behavioural levels than organisations that are not perceived to enforce these policies.

5.5.2 *Literature Comparison*

Literature expands on the importance of enforcing a IUP in a consistent manner throughout the organisation and also ensuring that disciplinary action is taken against offenders (Siau et al. 2002). Organisations are now implementing internet monitoring software and internet filtering software as prerequisite disregarding the privacy concerns or internet that may South African employees

have. These requirements stem from the fact that many more users are now using social media and online services on a daily basis.

The implementation of IUP's in organisations is meant to ultimately mitigate cyberloafing behaviour and improve productivity. Existing research reinforces that all organisations must implement and enforce IUP's, and by doing so they can mitigate cyberloafing behaviour. However existing literature does not overwhelming agree that cyberloafing results in a deterioration of productivity. The context of cyberloafing by an employee must be fully understood and this can either negatively or positively impact productivity.

5.5.3 *Evaluating the Sample*

The sample used to test this hypothesis was adequate to identify that the implementation of an IUP will impact on the cyberloafing behaviour of employees. The results could have been improved by requesting more respondents to take part in the research. Considering that respondents were asked to self-report on their personal behaviour and productivity, they could possibly bias the results in favour of appropriate cyberloafing behaviour and appropriate productivity levels.

5.5.4 *Overall Findings*

In line with existing literature the findings of this research are that IUP's implemented and enforced can reduce cyberloafing behaviour. The impact that IUP's have on productivity is not consistent with literature. The findings of this research suggest that employees who are aware of IUP enforcement have will depict better behaviour and increases productivity than other respondents.

6 CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

Chapter 5 provided a brief presentation of the research findings, the purpose of this chapter is to conclude the research report, summarising the overall results and making suggestions for further study.

6.2 Conclusions of the study

The purpose of this research was to investigate the effect that Internet use policies have on employee cyberloafing behaviour and job productivity. The findings of the research were that the implementation and enforcement of IUP's is essential in mitigating cyberloafing behaviour and improving productivity. The analysis of this research showed that cyberloafing does not directly result in a decrement in productivity and organisations must be meticulous in dealing with cyberloafing behaviour. Existing literature does suggest that employees can positively gain job satisfaction through cyberloafing.

6.3 Recommendations

Policies regarding the use of Internet within an organisation can no longer be developed with the same objectives as the previous century. Organisations need to take note that employees now have greater access to the internet through mobile devices and so the impact that IUP's have on cyberloafing and productivity is reduced.

Policy makers are recommended not to assume that a low level of cyberloafing behaviour will improve productivity because this could just as well stifle innovation and job satisfaction. Organisations should rather create policies that are in line with the modern employee requirements (e.g. Social connectivity).

Policies that continue to explicitly state the boundaries and provide reasons and lastly organisations must constantly communicate the required behaviour of employees rather than rely on filtering software to control cyberloafing behaviour.

6.4 Suggestions for further study

6.4.1 *Larger Sample Size*

The sample size of 53 respondents was insufficient to firstly apply statistical tests i.e. Factor Analysis and because this sample size was small it did not fully represent the demographics of a typical South African ICT organisation. Further studies would do well to address the above limitations.

6.4.2 *Limit Self-Administered Questionnaires*

The use of self-administered questions to determine productivity and behaviour was one substantial limitation of this study. Respondents may possibly rate themselves inconsistently and possibly misunderstand the questionnaire scale resulting in self-selection bias which will jeopardize the internal and external validity of research (Lieu and Dewan 2010).

6.4.3 *Detailed Cyberloafing Behavioural and Productivity Variables*

Future research would do well to classify the impact and extent to which certain behavioural attributes have on a company. E.g. cyberloafing by sending personal email is not considered as bad as browsing pornography in the work place. This research had a limitation in that it did not consider the fact that certain behavioural variables could have a greater impact on productivity than others.

6.4.4 *Further Research*

The internet continues to grow and play an important role in both our personal and work place environments. The growth of internet connectivity infrastructure in South Africa as well as its reliance in the workplace should result in more opportunities for research.

This research focused on identifying if cyberloafing behaviour and productivity can be affected by an organisations' IUP. Further research could expand on this topic by identifying if the internet policies an organisation chooses to implement have any bearing on behaviour or the culture of an organisation. Alder, Noel and Ambrose (2006) states that an organisation with very stringent policies will stifle innovation and probably frustrate employees who feel that their online activities limit productivity.

Further research that aims to study behavioural and productivity variables should focus on determining how and what policies can best balance these two

It is very possible that employees would partake in cyberloafing behaviour because of normalisation. Lim and Teo (2005) described it as the practise of cyberloafing because 'everyone else' does it. In their research they identified that 88% of respondents cyber loafed because this was common and generally acceptable behaviour. Normalisation will have some impact on the results of cyberloafing behaviour as this cyberloafing behaviour is not as a result of organisational IUP implementation or enforcement. Further research should subgroup respondents according to the company they work for and identify the levels of normalisation taking place in that organisation.

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APPENDIX A

Research Questionnaire Distributed

Q1.1 Please Enter the name of your organisation.

Q1.2 Which age group do you belong to?

- ❍ Less than 20 Years (1)
- ❍ 20 - 24 (2)
- ❍ 25 - 29 (3)
- ❍ 30 - 39 (4)
- ❍ 40 - 49 (5)
- ❍ 50 - 59 (6)
- ❍ 60 or more (7)

Q1.3 Please select your industry.

- ❍ Information Technology (1)
- ❍ Engineering (2)
- ❍ FMCG (3)
- ❍ Mining (4)
- ❍ Manufacturing, Production, Trades (5)
- ❍ Medical (6)
- ❍ Distribution, Warehousing & Freight (7)
- ❍ Sales (8)
- ❍ Human Resources and Recruitment (9)
- ❍ Motor (10)
- ❍ Telecommunication (11)
- ❍ Marketing (12)
- ❍ Legal (13)
- ❍ Media (14)
- ❍ Hospitality (15)
- ❍ Education (16)
- ❍ Other (17)

Q1.4 Please select your Job Level

- ❍ Junior (1)
- ❍ Specialist (2)
- ❍ Senior (3)
- ❍ Management (4)
- ❍ Executive (5)

Q1.5 Approximately how big is your organisation?

- ❍ Small (Up to 49 Employees) (1)
- ❍ Medium (50 - 199 Employees) (2)
- ❍ Large (More than 200 Employees) (3)

Q1.6 Does your company have a profile on any Social Networking Sites? (E.g. Facebook, LinkedIn, Twitter)

- ❍ Yes (1)
- ❍ No (2)

Q2.1 Does your company have a policy governing Internet usage?

- ❍ Yes (1)
- ❍ No (2)

Answer If Does your company have a policy governing Internet usage? Yes Is Selected

Q2.2 Have you read your company's Internet Usage Policy?

- ❍ Yes (1)
- ❍ No (2)

Answer If Have you read your company's Internet Usage Policy ? Yes Is Selected

Q2.3 Are these policies generally acceptable to you?

- ❍ Yes (1)
- ❍ No (2)

Q2.4 Does your company regularly communicate this policy?

- ❍ Yes (1)
- ❍ No (2)

Q2.5 Does you company have restrictions to websites you can access?

- ❍ Yes (1)
- ❍ No (2)

Q2.6 Do you think your company monitors all your website and email activities ?

- ❍ Yes (1)
- ❍ No (2)

Q2.7 Does your company limit the time you spend on any websites?

- ❍ Yes (1)
- ❍ No (2)

Q2.8 Are you aware of any company email restrictions (e.g. File Attachment type restrictions)?

- ❍ Yes (1)
- ❍ No (2)

Q2.9 Which of the following social networking sites do you have unrestricted access to?

- ❑ Facebook (1)
- ❑ LinkedIn (2)
- ❑ Twitter (3)
- ❑ Google + (4)
- ❑ MySpace (5)

Q2.10 Which of the following communication software do you have unrestricted access to ?

- ❑ Instant Messengers (e.g. Skype, Google Talk, Yahoo Chat, Windows Live) (1)
- ❑ Collaboration Software(e.g. Microsoft Live Meeting, Dim Dim, WebEx) (2)

Q2.11 Have you ever been disciplined for breaking any Internet Usage Policy?

- ❍ Yes (1)
- ❍ No (2)

Q2.12 Do you know of anyone that has been disciplined for breaking an Internet Usage Policy?

- ❍ Yes (1)
- ❍ No (2)

Q3.1 How often do you receive personal email in your company's email address?

- ❍ Never (1)
- ❍ Less than Once a Month (2)
- ❍ Once a Month (3)
- ❍ 2-3 Times a Month (4)
- ❍ Once a Week (5)
- ❍ 2-3 Times a Week (6)
- ❍ Daily (7)

Q3.2 How often do you access non - work related websites during working hours ?

- ❍ Never (1)
- ❍ Less than Once a Month (2)
- ❍ Once a Month (3)
- ❍ 2-3 Times a Month (4)
- ❍ Once a Week (5)
- ❍ 2-3 Times a Week (6)
- ❍ Daily (7)

Q3.3 How often do you read News Websites whilst at work ?

- ❍ Never (1)
- ❍ Less than Once a Month (2)
- ❍ Once a Month (3)
- ❍ 2-3 Times a Month (4)
- ❍ Once a Week (5)
- ❍ 2-3 Times a Week (6)
- ❍ Daily (7)

Q3.4 How often do you check personal email at work ?

- ❍ Never (1)
- ❍ Less than Once a Month (2)
- ❍ Once a Month (3)
- ❍ 2-3 Times a Month (4)
- ❍ Once a Week (5)
- ❍ 2-3 Times a Week (6)
- ❍ Daily (7)

Q3.5 How often do you send personal email at work ?

- ❍ Never (1)
- ❍ Less than Once a Month (2)
- ❍ Once a Month (3)
- ❍ 2-3 Times a Month (4)
- ❍ Once a Week (5)
- ❍ 2-3 Times a Week (6)
- ❍ Daily (7)

Q3.6 How often do you instant message (Non job related e.g. with Friends or Family) ?

- ❍ Never (1)
- ❍ Less than Once a Month (2)
- ❍ Once a Month (3)
- ❍ 2-3 Times a Month (4)
- ❍ Once a Week (5)
- ❍ 2-3 Times a Week (6)
- ❍ Daily (7)

Q3.7 How often do you access sports websites at work (e.g. Supersport, ESPN)?

- ❍ Never (1)
- ❍ Less than Once a Month (2)
- ❍ Once a Month (3)
- ❍ 2-3 Times a Month (4)
- ❍ Once a Week (5)
- ❍ 2-3 Times a Week (6)
- ❍ Daily (7)

Q3.8 How often do you access entertainment websites at work (e.g. YouTube, E! Online)?

- ❍ Never (1)
- ❍ Less than Once a Month (2)
- ❍ Once a Month (3)
- ❍ 2-3 Times a Month (4)
- ❍ Once a Week (5)
- ❍ 2-3 Times a Week (6)
- ❍ Daily (7)

Q3.9 How often do you download non work related information at work (e.g. Music, Magazines, Software)?

- ❍ Never (1)
- ❍ Less than Once a Month (2)
- ❍ Once a Month (3)
- ❍ 2-3 Times a Month (4)
- ❍ Once a Week (5)
- ❍ 2-3 Times a Week (6)
- ❍ Daily (7)

Q3.10 How often do you shop online at work?

- ❍ Never (1)
- ❍ Less than Once a Month (2)
- ❍ Once a Month (3)
- ❍ 2-3 Times a Month (4)
- ❍ Once a Week (5)
- ❍ 2-3 Times a Week (6)
- ❍ Daily (7)

Q3.11 How often do you look for employment whilst at work?

- ❍ Never (1)
- ❍ Less than Once a Month (2)
- ❍ Once a Month (3)
- ❍ 2-3 Times a Month (4)
- ❍ Once a Week (5)
- ❍ 2-3 Times a Week (6)
- ❍ Daily (7)

Q3.12 How often do you play games online during work hours (e.g. AngryBirds, Chess)?

- ❍ Never (1)
- ❍ Less than Once a Month (2)
- ❍ Once a Month (3)
- ❍ 2-3 Times a Month (4)
- ❍ Once a Week (5)
- ❍ 2-3 Times a Week (6)
- ❍ Daily (7)

Q3.13 How often do you use your mobile device for online activities that are NOT work related ?

- ❍ Never (1)
- ❍ Less than Once a Month (2)
- ❍ Once a Month (3)
- ❍ 2-3 Times a Month (4)
- ❍ Once a Week (5)
- ❍ 2-3 Times a Week (6)
- ❍ Daily (7)

Please answer the questions below with regards to the level of Internet use policy enforcement in your company.

Q4.1 Is your company's Internet use policy (IUP) accommodating to your personal interests ?

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Somewhat Unlikely (3)
- ❍ Undecided (4)
- ❍ Somewhat Likely (5)
- ❍ Likely (6)
- ❍ Very Likely (7)

Q4.2 Does your company's Internet use policy (IUP) help you deal with practical issues at work ?

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Somewhat Unlikely (3)
- ❍ Undecided (4)
- ❍ Somewhat Likely (5)
- ❍ Likely (6)
- ❍ Very Likely (7)

Q4.3 Does your company's IUP make you a better worker ?

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Somewhat Unlikely (3)
- ❍ Undecided (4)
- ❍ Somewhat Likely (5)
- ❍ Likely (6)
- ❍ Very Likely (7)

Q4.4 Does your company's IUP help you deal with problems at work ?

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Somewhat Unlikely (3)
- ❍ Undecided (4)
- ❍ Somewhat Likely (5)
- ❍ Likely (6)
- ❍ Very Likely (7)

Q4.5 Does your company's IUP provide you with the online freedom you deserve ?

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Somewhat Unlikely (3)
- ❍ Undecided (4)
- ❍ Somewhat Likely (5)
- ❍ Likely (6)
- ❍ Very Likely (7)

Q4.6 Does your company's IUP somehow extend your work deadlines ?

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Somewhat Unlikely (3)
- ❍ Undecided (4)
- ❍ Somewhat Likely (5)
- ❍ Likely (6)
- ❍ Very Likely (7)

Q4.7 Does your company's IUP help limit the time spent on sites that you would normally access after working hours ?

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Somewhat Unlikely (3)
- ❍ Undecided (4)
- ❍ Somewhat Likely (5)
- ❍ Likely (6)
- ❍ Very Likely (7)

Q4.8 Does your company's IUP make you leave the office completing more work ?

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Somewhat Unlikely (3)
- ❍ Undecided (4)
- ❍ Somewhat Likely (5)
- ❍ Likely (6)
- ❍ Very Likely (7)

Q4.9 Does your company's IUP make it difficult to fulfil your work obligations ?

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Somewhat Unlikely (3)
- ❍ Undecided (4)
- ❍ Somewhat Likely (5)
- ❍ Likely (6)
- ❍ Very Likely (7)

Q4.10 Does your company's IUP make you spend less time doing productive work?

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Somewhat Unlikely (3)
- ❍ Undecided (4)
- ❍ Somewhat Likely (5)
- ❍ Likely (6)
- ❍ Very Likely (7)

Q4.11 Does your company's IUP make you take up time you would rather spend on work?

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Somewhat Unlikely (3)
- ❍ Undecided (4)
- ❍ Somewhat Likely (5)
- ❍ Likely (6)
- ❍ Very Likely (7)

Q4.12 Do you end up using external internet devices (e.g. 3G Card) for work related purposes because of your company's IUP?

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Somewhat Unlikely (3)
- ❍ Undecided (4)
- ❍ Somewhat Likely (5)
- ❍ Likely (6)
- ❍ Very Likely (7)

APPENDIX B

Consistency Matrix

Analyse and evaluate the impact that Internet use policies have on employee behaviour and job productivity within South African organisations.					
Sub-problems	**Literature Review**	**Hypotheses**	**Source of Data**	**Type of Data**	**Analysis**
Determine the relationship that exists between the perceived level of IUP existence and enforcement within South African organisations.	Laughton, P. A. (2010) Hierarchical analysis of acceptable use policies, Vol. 10. Genova, G. L. (2009) NO PLACE TO PLAY: CURRENT EMPLOYEE PRIVACY RIGHTS IN SOCIAL NETWORKING SITES, Business Communication Quarterly, 72(1), pp. 97-101. Henle, C. A., Kohut, G. and Booth, R. (2009) Designing electronic use policies to enhance employee	1. Employees who have had their organisation communicate IUP's to them will more likely, perceive Internet policy enforcement to exist than employees who have not been communicated to about IUP's. 2. There is a significant difference in the productivity and cyberloafing behaviour of employees who have had their organisation communicate IUPs as opposed to those that have	Questionnaire	Quantitative	Bivariate Analysis cross-tabulation Difference of means One – Way Anova test

	perceptions of fairness and to reduce cyberloafing: An empirical test of justice theory, Computers in Human Behaviour, 25(4), pp. 902-910.	not. 3. There is a significant relationship between different levels of cyberloafing using a mobile device and the level of productivity exhibited by employees.			
Analyse the impact that IUP existence and enforcement has on employee cyberloafing behaviour and productivity.	Ferreira, A. and du Plessis, T. (2010) Effect of online social networking on employee productivity, Vol. 11. Mahatanankoon, P. (2009) Internet Work / Play Balance, Encyclopedia of Information Science and Technology, Second Edition, pp. 2205-2209. Smith, W. P. and Kidder, D. L. (2010) You've been tagged! (Then again, maybe not): Employers and Facebook, Business Horizons,	1. An employee's cyberloafing behaviour has a negative significant impact on productivity. 2. Organisations perceived to enforce website restriction and monitoring of employee online activities will depict higher levels of productivity and better cyberloafing behavioural patterns than organisations that are not perceived to enforce these policies.	Questionnaire	Quantitative	Regression Analysis Means Analysis

	53(5), pp. 491-499. Lim, V. K. G. and Chen, D. J. Q. (2009) Cyberloafing at the workplace: gain or drain on work?, Behaviour & Information Technology, pp. 1-11.				