

**THE IMPACT OF THE INTERNET ON ORGANISATIONAL CULTURE
WITHIN THE IT INDUSTRY**

Full dissertation by

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Abstract

Title: The impact of the internet on organisational culture within the IT industry
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This paper examines the impact of the internet on organisational culture within the IT industry. The first part of the literature study examines the history of the internet as well as, more specifically, its history and implementation within the organisation. The second part of the literature study analyses organisational culture. This is in order to determine the factors that change it, whether the internet could have played a role in changing the culture and, if so, how this change is managed and the implications of the change.

Two case studies support the literature study. The first case study is a quantitative study whereby questionnaires are used to determine how employees at two selected organisations perceive the impact of the internet. The second case study is qualitative and involves interviews with management at the selected organisations. Management's opinion on the impact of the internet as well as the use of the internet within the organisation is obtained. A comparison is made between the employees' and management's responses.

Recommendations are made in terms of what organisations should do to overcome the impacts of the internet on their culture.

The main focus of the paper is the effect of the implementation of the internet on organisational culture.

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Appendix B: Questionnaires and fact sheet

Appendix C: Graphs

Appendix D: Interview results

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List of abbreviations

A

ABI/ TML / Ebsco Host - information search engines

AIT – Advanced Information Technology

AMA – American Management Association

ARPA – American Research Project Agency

ARPANET – American Research Project Agency Net

ATM – Asynchronous Transfer Mode

B

BAC – Black Asian Coloured

BE – Black Empowerment

BU – Business Unit

C

CC – Carbon Copy

CBT – Computer Based Test

CMM – Capability Maturity Model

CMMI – Capability Maturity Model Index

CRM – Customer Relationship Management

D

DISC – Dimensions of behaviour: dominance; influence; dominate; influence

E

EDI – Electronic Data Interchange

G

GIBS – Gordon Institute of Business Science

GUI – Graphical User Interface

H

HR – Human Resources

I

ICT – Information and Communication Technology

IP – Intellectual protocol

IS – Information Systems

ISP – Internet Service Provider

IT – Information Technology

L

LAN – Local Area Network

MBA – Masters of Business Administration

MP3 – Music Player 3

MSN – Microsoft Messenger Service

N

NCP – Network Control Protocol

P

PBS – research company's timeline

R

RMS – Request Management System

S

SABINET – South African Bureau Network

SADC – Southern African Developing Community

SAS – Statistical application currently used by Statomet (University of Pretoria's Department of Statistics)

SMB – Small-medium sized business

SMME – Small Macro and Medium Enterprises

T

TCP / IP – Transmission Control Protocol / Internet Protocol

U

U.K. United Kingdom

U.K. – United Kingdom

U.S. – United States

Uninet – Universities' Network

UNCITL – United Nation Commission on International Trade Law

UN – United Nation

W

WAN – Wide Area Network

X

XP – Microsoft Office Professional

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1. Chapter 1: Introduction and structure

1.1 Introduction

Chapter one introduces the topic of the impact of the internet on organisational culture within the IT (Information Technology) industry. Its aim is to place the topic in context by clarifying the aim and objectives, scope, methodology, design and layout of the paper. As the foundation for the paper, it also aims to establish the value of the study.

1.2 Statement of the problem

The main problem that is investigated is the impact of the internet on organisational culture within the IT industry. This is separated into subproblems in order to obtain a comprehensive view of the main problem.

In order to give substance and backing to the main problem the following subproblems are discussed in the paper: history and background of the internet, organisational culture, factors that bring about a change in organisational culture, management of the internet and email within the organisation, and business and personal use of the internet and email within the organisation.

1.3 Main aim of the paper

The main aim is to examine the impact of the internet and email on organisational culture within the IT industry, in the South African context.

1.4 Outline of scope

Two forms of use of the internet and email are concentrated upon, namely: business and personal. Examples of business use are a graphical user interface (GUI) for a national banking system and an organisation's intranet.

Examples of personal use are the use by employees to do internet banking, check the cricket score and research a medical problem.

The IT industry is identified as the main industry thrust and the South African context is selected, based on the location of the organisations and nationality of respondents that took part in the case studies.

Specifically excluded from the scope of the paper are the following:

- Information Systems (IS) and computer systems.
- Industries and organisations that fall beyond the scope of IT.
- Ethics.
- Information philosophy.
- Information law.

1.5 Methodology

1.5.1 Assimilation of research material

The project is based on a two-pronged approach. Firstly, it is done on the basis of a literature search, the different sources are compared and integrated. Secondly, quantitative and qualitative case studies are undertaken. The quantitative case study is performed by means of questionnaires that have been distributed to IT workers below management level. The qualitative case study is conducted by means of interviews with management in various IT organisations or departments. The results of the case studies are analysed and documented.

This research makes use of the library and its resources (i.e. books and online databases), the computer and the necessary software (i.e. the internet – independently from the library databases), and the information retrieved in the interviews and questionnaires, i.e. management as well as employees working within the IT environment.

1.5.2 Design and layout of the paper

The paper is divided into six chapters, the focus of each chapter is laid out in Table 1.1.

Table 1.1 Chapter focus

Chapter	Focus
Chapter one	Introduction
Chapter two	Literature study part I: the history and background of the internet
Chapter three	Literature study part II: organisational culture
Chapter four	Quantitative case study
Chapter five	Qualitative case study
Chapter six	Conclusion
Appendix A	Glossary
Appendix B	Questionnaires and fact sheet
Appendix C	Graphs
Appendix D	Interview results

1.6 Research questions and focal points

The major research questions and focal points to be explored in this study are given in Table 1.2.

Table 1.2 Major research questions and focal points

Research Question	Focal Points
What is the history of the internet?	<ul style="list-style-type: none"> • Global, local and IT industry history • Growth of e-commerce and e-business

Research Question	Focal Points
How was the internet implemented and used within the organisation?	<ul style="list-style-type: none"> • History within the organisation • Social and technical issues • Business and personal use of the internet and email
How is the use of the internet and email managed within the organisation?	<ul style="list-style-type: none"> • Reasons to manage use of resources • Methods of managing resources
What is organisational culture?	<ul style="list-style-type: none"> • Origins of organisational culture • Organisational subcultures • Reasons why organisational culture is receiving increased attention • Reasons and means to measure organisational culture • Organisational culture within South Africa and within the IT industry
What changes organisational culture?	<ul style="list-style-type: none"> • Factors that impact on organisational culture • Reasons to change organisational culture • Means to change organisational culture
What is the impact of the internet on organisational culture?	<ul style="list-style-type: none"> • Ways in which the internet has had an impact on organisational culture • Effects of the internet on organisational culture

These questions are answered in the literature study (chapters two and three) and are further substantiated by the case studies (chapters four and five).

1.7 Case studies

1.7.1 Overview of the case studies

Both a quantitative and a qualitative approach are taken in order to complete the case studies. Although it is unusual that a quantitative and qualitative

study be undertaken together, it is believed that a comparison of the case studies will yield interesting and noteworthy results. Objectives of both case studies are very similar, however, the quantitative case study is aimed at a different target audience to that of the qualitative case study.

- **Quantitative approach**

A questionnaire, which forms the quantitative approach, has been distributed to employees at organisation A and B and a few employees from organisations outside of organisation A and B, grouped as organisation C.

- **Qualitative approach**

The qualitative approach has involved seven interviews with key managers in positions that have influence over the internet and email policy and employee behaviour in three different organisations, organisation A, B and D.

1.7.2 Aim of the case studies

The case studies' aim is to gain a further understanding of others' perceptions of the impact of the internet on organisational culture within the IT industry. This understanding will yield information on which an analysis and comparison can be performed.

1.7.3 Characteristics of organisation A, B and D

Organisation A, B and D have a number of characteristics that distinguish them from each other. Table 1.3 reflects these characteristics, it is important to note that these were the characteristics at the time of the interviews – November to December 2002.

Table 1.3 Characteristics of organisation A, B and D

Organisation A	Organisation B	Organisation D
Flat structure	Hierarchical structure	Hierarchical structure

Organisation A	Organisation B	Organisation D
Delivery orientated	Process orientated	Information orientated
Largest unlisted IT organisation in South Africa	Approximately 27000 to 35 000 employees	Worldwide it is the tenth largest IT organisation
International (based in South Africa, Australia, the U.K. and the U.S.)	International (based in South Africa and one European country)	International (based in South Africa and numerous countries globally)

All interviews and questionnaires have been conducted with and performed on bricks and mortar businesses that have an internet site and make use of an intranet and the internet.

1.8 State of existing knowledge

The following databases have been searched:

- ABI (Proquest, UMI, Chadwyk-Healey)
- Academic Search Elite – Ebsco host
- Emerald
- Nexus
- SABINET On-line
- Science Direct

The search has been conducted in order to place this research in context in terms of what has already been completed on this topic at a national level. The search, which took place between the 20th until the 24th of November 2002, found related studies. Table 1.4 below reflects the related studies that were identified; it is sorted in an ascending date order.

Table 1.4 Related research topics

Title	Researcher	Degree	Study Supervisor	Date
The World Wide Web: web site classification of some South African sites, with interaction pattern determination through usage of the flow construct	Van Niekerk, R.	MBA	University of Cape Town (UCT) Graduate School of Business	1996
Hypermedia and multimedia in education: trends toward a future solution	Nortje, E.	MDip Tech	Vaal Triangle Technikon (VAALTEC) Department of Graphic Design and Photography	1997
Wireless internet service provision: a future for Africa?	Naidoo, K.	MA	Rhodes University (RHU) Department of Journalism and Media Studies	1997
Analysis of consumer behaviour profiles leading to the engagement in internet commerce	Klein, D.	MBA	University of Cape Town (UCT) - Graduate School of Business	1998
ATM (Asynchronous Transfer Mode) as the	Van Log- gerenberg,	MSc	University of Pretoria (UP)	1998

Title	Researcher	Degree	Study Supervisor	Date
underlying technology for the internet of the future	A.		Department of Computer Science	
Application and utilisation of the internet for marketing	Rooseboom, H.	MBA	University of Stellenbosch (US) Dept of Business Management	1999
The influence of the internet on the applicability of the source regulations in terms of the Income Tax Act, no 58 of 1962	Wesson, N.	MComm	University of Stellenbosch (US) - Dept of Accounting	1999
An incremental approach to a secure e-commerce environment	Mapeka, K.E.	MSc – Computer Science	Rand Afrikaans University (RAU) - Department of Computer Science	2000
An investigation into the impact of the internet on the South African retail industry	Davey, A.	MBA	Milpark Business School - General	2000
An object oriented framework for implementing 3-dimensional world wide web sites	Munro, H.D.	MSc	Department of Computer Science and Information Systems -	2000

Title	Researcher	Degree	Study Supervisor	Date
			University of Port Elizabeth (UPE)	
Developing an Internet Addiction Disorder (IAD) Scale	Goolam, S.	MA	University of the Witwatersrand (UWITS) - Department of Psychology	2000
The attitudes of the major South African retailers towards the proliferation of electronic commerce	Dilotsotlhe, M.	MBA	Milpark Business School - General	2000
The role of cybermarketing in the marketing process of an organization	Engelbrecht, P.	MComm	Rand Afrikaans University (RAU) – Department of Business Management	2000
Asynchronous web-based technologies to support learning	De Villiers, Gabrielle Joy	MA (Information Science)	Professor J.C. Cronjé	2001-09-07
Government communication and dissemination of government information – the use of research to enhance effectiveness	Strydom, Maria Sophia	MA (Information Science)	Dr M.M.M. Snyman	2001-11-30

The results of this search reflect research in a number of areas, namely:

- E-commerce, marketing and retail
- Learning
- Psychology
- Technology
- Government, law and taxation

From this search it can be seen that the topic of the impact of the internet on organisation culture within the IT industry is similar to the work listed above. This is due to the fact that there have been studies conducted on the internet and e-commerce and their impact on society, specific industries and existing infrastructure. There are also papers listed above that examine the actual construction of the internet and possibilities for the internet to evolve technologically in order to provide solutions.

However, there is not a paper that addresses the impact of the internet on organisational culture. This paper addresses the topic of the internet in a unique approach in that it examines the impact of the internet on a social issue – the culture of an organisation. Like many of the above papers, it is also industry and country specific, with a focus on the IT industry within South Africa.

It can therefore be deducted that the proposed research is both relevant and unique.

1.9 Risks and limitations of the paper

The following risks and limitations exist:

- The case studies, both the qualitative and quantitative parts, are completed in the city of Johannesburg only. This is due to the fact that the chosen organisations have their head offices and the relevant employees are based in Johannesburg.

- The paper is only a study of current and past issues on the topic. However, the IT environment changes very quickly.
- The case studies' results depend on numerous factors (e.g. on the truthfulness of the respondent, on the respondents' ability to correctly understand the issues being examined, etc.).

From this it can be concluded that in order to manage the above risks or limitations the following steps must be implemented:

- Interviews must be held with managers who have work experience within as well as outside of Johannesburg in order to ensure the paper is not limited to a study within one city.
- Case studies must be distributed timeously and to parties whom the University of Pretoria or the author is familiar with in order to ensure that there will be a sufficient response that reflects true and accurate information.
- The case studies must be structured in such a way to avoid ambiguity.
- The objective and background must be clearly explained during interviews.
- The paper should be written in way so that it remains focused and detailed but does not become prescriptive or limited, in that slight changes in the internet environment or e-commerce legislation will render it outdated.

1.10 Conclusion

Chapter one has laid the foundation for the chapters that are to follow. It has done this by defining the main problem and sub-problems as well as the methodologies, case and literature studies, research questions and focal points of the paper.

Chapter one described the methodology and aims of the literature and case studies. Both the literature and case studies are two-pronged. The literature study consists of a study of the history and background of the internet and the case studies consist of a quantitative and qualitative approach. Questionnaires and interviews have been used for these approaches respectively.

The main research questions were highlighted in this chapter. They revolve around the impact of the internet on organisational culture.

The state of existing knowledge revealed that although similar work has been done in the area of e-commerce and e-business, a paper does not yet exist on the impact of the internet on organisational culture within the IT industry. Chapter one therefore reflected that this study is still unique and valid.

Chapters two to five will address these research questions by means of the literature and case studies. Chapter two and three provide the literature study and chapters four and five provide the case studies.

2 Chapter 2: Literature study of the history and background of the internet

2.1 Introduction

A literature study that considers the main and sub-problems assists in the understanding of the background to the problem. This chapter provides the first part of such a literature study as it has a focus on the history of the internet and its adoption and use in the organisation. Chapter three forms the second part of the explanation, its focus is on organisational culture and on whether this has changed as a result of the introduction of the internet and email into the workplace.

Chapter two is focused on the history of the internet and the management of internet abuse in organisations. The history of the internet covers a South African and global perspective as well as a view of the history within the IT industry. The history of e-business and e-commerce is discussed as well as the internet's implementation when it was introduced into organisations for the first time. A description is given of how the internet is used within the organisation as well as a description of the actions that lead to abuse. Direct and indirect methods are raised under the management of internet use.

2.2 History and background of the internet

This section details the background and the history of the internet in order to comprehend its impact on social aspects, such as organisational culture, more easily.

The military and academics were the first to make use of the internet. The internet has gone, in only a few years, from being a scientific means of communication to the main method of exchanging information for almost everyone – from artists to businessmen and business women (Attaran and VanLaar, 1999:241).

2.2.1 The beginnings of the internet

According to a body called the Internet Society, which hosts a site that discusses various internet-related topics, the history of the internet is complex and involves many technological, organisational, and community aspects. This society states that the internet's influence reaches to the technical fields of computer communications and throughout the world as online tools are used increasingly to accomplish electronic commerce, information acquisition, and community operations (Internet Society, 2002).

The internet has already been in existence since the 1960s. This was when Rand Corporation, America's leading war intelligence unit, was tasked by the United States (U.S.) Air Force with the job of finding a way for the U.S. authorities to communicate after a nuclear attack.

As a result ARPANET was established as a nation-wide computer network that would continue to function even if a large portion of it were destroyed by a nuclear attack. Predominantly academic institutions, scientists and the U.S. government made use of ARPANET during the 1960s and 1970s (Buys, 2000:34).

ARPANET's decentralised structure made expansion easy and its growth was a phenomenon of the 1970s (Sterling, 2000). ARPANET was differentiated from other corporate computer networks as it could accommodate many different kinds of machines. ARPANET's fame and popularity grew during the 1970s, it became "a high-speed digital post office" as people used it to work together on research projects and discuss topics of various interests (PBS Timeline, 2002).

The term "internet" was used for the first time in 1982 and the middle of the 1980s were distinguished by the surge in the sales of personal computers and super-minicomputers. Organisations began to use the internet to communicate with each other and customers during this period. The combination of inexpensive desktop machines and powerful, network-ready

servers allowed many organisations to join the internet for the first time (PBS Timeline, 2002).

Suddenly in 1992 the internet's nature changed as internet access was offered to the general public by commercial entities. The U.S. government stopped managing this area. Electronic commerce (e-commerce) received attention from the media, organisations, and the individual. Initially it was defined simply as electronic data interchange (EDI) or as online purchasing (Cronin, 1996:vii). Cronin states that during the mid nineties the internet redefined the model for electronic commerce to support the complete seller-to-buyer relationship.

Internet sites evolved from being merely online brochures to include functionality for users to search for information or purchase goods and services. The internet evolved into a tool that was geared for usability and easy navigation for quick and simple information retrieval. In the 1990s, Sterling (2000) forecast that linking to the internet will become cheaper and easier and its ease of use will improve.

The internet grew, within 30 years, from a Cold War initiative to what is now known as the information superhighway. The internet has changed the way in which the world works and lives and has brought about the information age (PBS Timeline, 2002).

2.2.2 The history of the internet in South Africa

According to Buys (2000:35) network connectivity started between universities in South Africa around 1986. The Universities Network (Uninet) was started in 1988. Rhodes University in Grahamstown and a private home in Portland, Oregon established the first sustainable email link in 1988. At a later stage this link was connected to the internet. However, due to the political situation in South Africa in 1989 the internet was restricted, this created a stumbling block (Buys, 2000:35).

Fortunately developments in Uninet and the end of apartheid boosted South Africa into the top 20 connected countries in the world. In 1999 it was estimated that South Africa had more than one million internet users and that there were more than eighty Internet Service Providers (ISPs) in the country (Buys, 2000:35).

2.2.3 History of the internet on a global scale

The U.S. is at the top of the list of internet-accessible networks and this concentration accounts for more than half of the total world use of the internet. A possible reason for this is the fact that the U.S. Department of Defense sponsored the original technical development of the internet. This concentration of connectivity has become a valuable business asset: internet connection costs in the U.S. are significantly lower and there is a wider variety of ISPs than elsewhere (Cronin, 1996:14).

Online business in Japan was distinguished by the fact that the multinational corporations adopted the world wide web as an organisational information source, a global marketing tool, and a lever for expanding business. Although personal computers with modems were far less common in Japan than in the U.S. the number of business related sites in Japan grew from six in 1993 to almost 100 in October of 1995 (Cronin, 1996:152).

Canada, with its strong telecommunications base, rivaled the internet coverage of the U.S. Canada's interest in the internet was consistent with their wholesale adoption of other forms of technology. Industry Canada reports that information technology is one of the nation's most important sectors (Cronin, 1996:105).

On the opposite end of the spectrum is Mexico, with a very poor telecommunications base. Unfortunately this has been a setback for internet penetration into the market in Mexico. Cronin states that at this time the internet in Mexico is in the state it was in the U.S. during the early 1980s – a

few privileged universities and institutions only have access to it, and within each of those institutions only a few chosen ones are given accounts (Cronin, 1996:115). Mexico and Canada, in this example, can be said to represent what is called a digital divide. A digital divide occurs when one country's technological advancement leaves less developed countries further and further behind as the gap between the "haves" and the "have-nots" grows. Another example of the digital divide is the Southern African Developing Community (SADC) countries *versus* the first world – or even second world countries – such as the U.S., U.K., Germany, Switzerland, France, etc. As the developed first world nations grow and learn and set up infrastructure that assists in this growth and learning, the SADC is left further behind.

The United Kingdom (U.K.) boasts a competitive telecommunications infrastructure, brought on by the privatisation that took place in the U.K. in the 1980s. Cronin states that this succeeded in helping the U.K. lead the internet availability and cost race in Europe. Sainsbury, "one of the world's leading retailers", opened up shop on the world wide web in February 1995 and by 1996 customers were asking Sainsbury staff when they would be able to buy all their supermarket goods on the internet and have them delivered (Cronin, 1996:131 and 132).

In Sweden the telecommunications company Ericsson focused on the internet and the world wide web as assets to enhance internal and external communications with a variety of target groups worldwide. This approach is different from the traditional marketing approach, which merely provided an online brochure for customers, that was seen in the mid 1980s.

A French car manufacturer, Peugeot, hosted a typical brochure site as early as 1995 *sans* the prices. Cronin says that, before the introduction of the Euro, there was a concern in Europe around publishing prices on the internet because of the common market place without a common currency (Cronin, 1996:138). Apparently car prices may differ by as much as 25 percent from one European country to the next.

The above examples of leaders and laggards illustrate that the international criteria for internet expansion was not rooted exclusively in enthusiasm or effort. Advancement and success in this field relied largely upon two criteria: open competition, for example the privatisation of the telecommunications industry, and the existence of an infrastructure.

2.2.4 The internet revolution

Use of the internet grew 11 percent per week between February and December 1993 (Amor, 2000:268). Some speculated in 1995, at the peak of the internet's growth and popularity, that the total number of internet users would exceed the population of the world by 2003 (Negroponte, 1995:6). However, since then the dot com crash, year 2000 bug, and the slump of IT have marked the end of this phase of expansion.

History reveals that the internet infiltrated civilization like nothing else has before. This phenomenon is described by many an author as a revolution. The Internet Society states that the invention of the internet has enabled worldwide broadcasting, a new mechanism for information dissemination, and a medium for collaboration and interaction between individuals and their computers without regard for geographic location (Internet Society, 2002).

The speed of infiltration of the internet is largely a result of its diffusion into almost every facet of civilisation. The internet is used as a communications medium, as a means of entertainment, a new method for trade and an alternative way in which to manage and run an organisation. Some would even go so far as to say that the internet is one of the most powerful tools in human history (Weinstein and Neumann, 2002). Weinstein and Neumann state that the internet and its technologies are fast becoming a very important foundation to almost every aspect of life. They state that very few aspects of commerce, education, communications, government, entertainment, or any other facets of our daily existence have remained unaffected.

2.3 History of the internet within the IT industry

This section describes how the internet made its way into the IT industry. In order to ensure that the same understanding be applied to what the IT industry is, this section starts with an explanation of what the IT industry is believed to be.

2.3.1 The IT industry

Information technology (IT) refers to the modern merger of computer technology with telecommunications technology. IT includes computers, peripherals, networks, fax machines, telephony, intelligent printers, and any other technology that supports either information processing or business communications (Whitten, Bentley and Barlow, 1994:72).

It is difficult to draw a border around an industry like the IT industry as IT exists within departments and support functions within many industries: health, financial services, supply chain, manufacturing, advertising, etc. There is an element in each of these industries that relies on IT for support. For example, the advertising industry uses the internet, which is IT, as an advertising medium and banking institutions use the internet to offer their clients electronic banking. However, these industries have not changed or even shifted their specific industry focus to IT. This example can be used to draw attention to the belief that although IT has become a support function within many industries those industries have not become IT. This can be compared to the financial services industry where financial services are seen as a separate industry despite the fact that every organisation, irrespective of industry, must make use of and document its financials.

2.3.2 History of the internet in the IT industry and IT organisations

The use of the internet for IT purposes only started seriously in the mid nineteen eighties, organisations began to use the internet as a means of communication, with each other and with customers (PBS Timeline, 2002). The period when the IT industry began to use the internet to build web

applications boomed in the nineteen nineties. PBS timeline states that in 1991 the world wide web was born (PBS Timeline, 2002).

2.3.3 Social issues arising from the initial implementation of the internet

Some organisations have demonstrated risk averse behaviour by letting others take the lead in technology and innovation and then only following where others have succeeded and learning from others' mistakes. This strategy did not benefit Barnes and Noble Inc. It simply watched an online bookseller, Amazon.com Inc., secure a strong first-mover advantage (Rosenoer, Armstrong and Gates, 1999:16).

This could even be said about the approaches to internet use within the organisation. Some organisations tested the use of the internet in their organisation by implementing it only in specific sections or departments of the organisation. Other organisations let the rest of the market test the water before they implemented the internet – and then implemented it later, all at once, organisation-wide.

One of these two approaches or a combination of these two approaches were taken to implement the internet in the organisation in the past, whether an IT organisation or not. The first approach is the gradual or phased-in approach and the second is the instant approach. Various characteristics exist within each approach, however, the basis of the two approaches remains the same.

The gradual approach is characterised by either a department-by-department or a level-by-level introduction of the internet and email. Employees are allocated internet access rights based on their need or seniority. An example of a need is an employee who needs to do research to perform his or her job. With this approach, training is done per department or per level. The organisation recognises social issues and these are addressed through the training and through policies that are made known to the employees. Employees who abuse the internet have their rights revoked, should this be

possible, or receive discipline in accordance with the internet and human resources policies.

Immediate installation of web browsers and networks for the whole organisation characterises the instant approach. The organisation that took the instant approach saw the benefits of adopting internet use or else saw the disadvantage of not having use of the internet or email – when viewing others in the market that had already started using these tools. This approach is typified by the organisation that adopted the wait and see attitude. As the majority of employees are seen to be advanced enough to already be using the internet and email, the organisation does not take cognisance of the social issues, neglects training and in doing so, neglects the social issues. With this approach the internet policy does exist but is only referenced when employees abuse the internet and email.

It is believed that there are positive and negative characteristics to both approaches. Neither approach was the best approach, it is advocated that a combination of the two approaches be applied. This will allow that the best two principles be applied. These two principles are not both present in either approach. The first principle, which is present on its own in the first approach, takes cognisance of social issues. The second principle, present only in the second approach, is to apply the same rules to everyone.

2.3.4 How technical issues that arose during implementation created social issues

Although the technical issues which revolve around how the internet was implemented relate directly to the pure technical aspects or mechanics of implementation, consideration must be paid to how technical implementation of the internet affected the social issues of the organisation. For example, implementing any new system for users without proper training or change management has repercussions. An example of such a repercussion is loss of productivity even though such a system allows users to work faster – if the

users perceive that the system is there to eventually replace their work they will be reluctant to use it or show its usefulness.

Ezor (2000:188) states that previously a simple link connected employee desktops through an email gateway or internal messaging service to the internet. At a later stage text-based dialup to ISP accounts became more feasible in general. Recently, organisations began connecting either part or their entire workforce to the internet, either through a dedicated terminal in a central location, from the desktop via a stand-alone modem, or by way of the local area network (LAN).

Ezor's opinion (Ezor, *ibid*) is that it is management's responsibility to decide who may receive this connectivity as he says adding users to an online resource creates significant incremental costs. He describes three categories of employees who he feels should receive connectivity first. These are: information services personnel, managers and client service staff and technically savvy employees.

It is believed that this opinion relates to the gradual approach identified in section 2.3.3 above. As the use of the internet became cheaper the approach towards implementation and use of the internet switched from the gradual approach to the second or instant approach. Organisations' concern moved from incremental cost to concern about the amount of bandwidth that employees were using, how employees represented their organisation online, and what employees were doing during office hours, i.e. the organisation's time.

The technical way in which the internet was implemented could also have widened the gap between the IT department and the rest of the organisation (Du Plooy, 1999). For a long time, the IT department has been perceived as a separate culture to the rest of the organisation. This could be due to the fact that the IT department can be said to have more of a deterministic culture whereas the rest of the organisation can be said to be non-deterministic. The IT department's deterministic culture represents machines, straightforward

answers and positivism, and the latter culture represents humans, a romantic worldview and emotion.

This gap also exists within the IT industry as IT organisations also have the need for a separate IT department to handle support functions of networks, machine repairs, connectivity, etc. as well as the implementation of the internet. If the organisation took the gradual approach (section 2.3.3 above) then the rest of the organisation could have felt threatened because the IT department yielded an authority over internet access and the breach could have been widened. If the organisation took the instant approach, then the rest of the organisation could have felt intimidated because the expectation that they know how to use the internet would have been present. Should they not have this knowledge they would have been viewed as slowing the organisation's progress down. For example, the instant approach leans on the fact that the people who had already been using the internet or email in their homes would have been those who were more interested in technology, these people tend to work either in the IT department or else to have a good relationship with the people in this department because they tend to be of the same culture, use the same jargon and enjoy the same pass times.

2.3.5 The history of e-business and e-commerce

According to Laudon and Traver (2002:6,7) the difference is that e-business is the “digital enablement of transactions and processes within a firm, involving information systems under the control of the firm” and e-commerce is “the use of the Internet and the Web to transact business. More formally, digitally enabled commercial transactions between and among organizations and individuals”. The conclusion can be made that the former is the enablement and the latter is the actual transactions that take place (Laudon, Traver, 2002:6 – 7).

The South African Department of Communications is of the opinion that the information age has transformed the world into a knowledge society. They state that electronic commerce and information and communications

technologies (ICTs) are rapidly transforming many aspects of the basic social and economic structure of the world. Business has become global, organisations have become decentralised and smaller businesses are playing a larger role in the economy (South African Department of Communications; Discussion Paper on Electronic Commerce:48).

Schwartz (1999:9) describes investors of the nineteen nineties as “following the money”. He states that venture firm partners were stating that any person with an idea for the internet could receive financial support. He continues to verify the short-term success of e-commerce with examples of investors’ blind faith in the internet. One such example is of Amazon.com, the infamous online bookstore that has now diversified its product range, Schwartz (1999:10) states that Amazon.com’s stock market capitalisation surpassed that of Borders, Barnes and Noble, Kmart, and J.C. Penney combined.

Although e-commerce created the initial stir in the market, e-business brings a tangible business benefit that, while not creating millions overnight, can improve the organisation’s internal processes and customer relations. Vering *et al* (2001:34), state that the financial benefits of e-business are harder to quantify and that e-business revolves around communication. Coetzer (2002:113) is of the opinion that e-business and e-commerce need to become business as usual as the market has matured and is ready for this. Gartner Group states that that the degree to which e-business activities impact an industry varies from simple paper replacement to fundamental changes in business relationships (Rozwell, Lehong and Flint, 2001).

Carr (2000:14) predicted that as e-commerce spreads out into other, more traditional industries these industries would begin to fracture. He is of the belief that “infomediaries” would gain more control over customer purchases and information. “Infomediary” is a term that Carr creates from two existing words, namely: intermediary and information. Fortunately for the more traditional industries, Carr’s prediction did not see fruition. Although e-commerce has had an impact on organisations it has merely provided another sales channel. Consumers still have a need for physical contact with real

people before they buy specific types of goods or services, for example investments. Some South African banks tried to sell investment products over the internet and removed this product from online offerings when consumer interest was seen to be on the decline. Online clothing, furniture and other personal items have also not sold well in the online shopping space. However, less personal items such as groceries, items that consumers can view extensively online (e.g. books, CDs and software) and brand name products (established, known and trusted) have sold well over the internet.

Irrespective of the successes or failures of e-commerce the need for an infrastructure that supports e-commerce and e-business is evident. Browning (2002) states that small and medium-sized businesses (SMBs) are facing pressure from customers and suppliers to participate in e-business. He says that this is because the barriers such as the cost of e-commerce and web content management are falling. There is even pressure in the legal arena as The United Nation (UN) Commission on International Trade Law (UNCITL), the UN body most concerned with e-commerce, has been working on the legal consequences of the development of e-commerce. Model Law on Electronic Commerce, finalised in 1996, covers issues such as the legal recognition of electronic writing and signatures (Buys, 2000:98). In South Africa, the Electronic Communications and Transactions Bill was promulgated in 2002 and President Thabo Mbeki signed it with a digital signature.

The need for legal infrastructure in South Africa in terms of e-commerce has been highlighted again with the internet fraud that has recently taken place. A few clients of a South African bank – one that is listed as one of South Africa's big five banks – were recently victims of an internet fraudster. The fraudster used spy software sent to the victims in an email as a means to record keystrokes on the victims' personal computers. The fraudster then used this information to log into the victims' internet bank accounts and transfer money. According to the media it is the responsibility of the bank to make their clients' aware of the fact that crackers could use spy software in this way. Since the incident a number of banks in South Africa have made protecting software available for their customers to download from their sites. Other measures

include an increase in security in the login process whereby clients are given the option to use a keypad on the screen instead of typing their details in manually from the keyboard.

2.4 Use of the internet in the organisation

This section addresses the personal and business use of the internet and email within the organisation. Organisational culture stems from the behaviour and the accepted norms and actions of its employees. To better understand the factors that have subjected organisational culture to change, it is best to understand how the internet and email are used within the organisation.

The benefits of business use of the internet, intranet, extranet and email range quite widely. Some of these benefits include: reduced cost in communications over long distances, “targeted research via the Web and Usenet can give you a never-before-available glimpse into the success and failure of your company and its competitors, and an opportunity to hear what your customers (or ex-customers) are saying” (Ezor, 2000:191), online availability of internal documentation, automation of business processes (for example, logging of timesheets or the request for stationery) and it also enables employees to work from home.

2.4.1 Business use of the internet

The internet has become an irreplaceable business asset (Rosenoer, Armstrong and Gates, 1999:13). Rosenoer *et al* state that advantages of conducting business over the internet are: information, choice, convenience, customization, savings, community, entertainment and trust (Rosenoer, Armstrong and Gates, 1999:18-21). It is believed that there are advantages of doing business over the internet and that some businesses do rely greatly on their internet channel for an increasing amount of their turnover, other organisations use the internet as an advertising tool and others use the internet with all its functionality to perform e-business.

It is believed that the main categories of business use of the internet are: e-business, e-commerce, use of the internet within the organisation for purposes other than e-business or e-commerce, use of the intranet and use of email. One organisation may employ one of these categories, a combination or even one within another. For example, an organisation's business may be e-commerce but the support processes may be handled by means of e-business (for example, their supplier ordering and tracking process may be done through e-business).

E-business and e-commerce are discussed above in section 2.3.5 and the use of the intranet is discussed below in section 2.4.3. An example of the use of the internet within the organisation for purposes other than e-business or e-commerce is the use of the internet for research or market survey purposes. A more detailed example of this is the technology and operations divisions of banking institutions who use the internet to keep up-to-date with the activities of their competitors. Another example is a software development organisation that investigates the use of a new tool or a new methodology and traces others who have already made use of the tool or methodology to ask for advice on it.

Email is used within the organisation quite widely nowadays. According to an estimation from International Data Corp (Flynn, 2002) in 2001 approximately 1.4 trillion e-mail messages were sent from North American businesses, up from 40 billion in 1995. Graff – in a Gartner Research article – says that email will continue to be a crucial business tool and that it will gain a bigger role within the organisation (Graff, 2002).

2.4.2 Business use of email

Most people's initial contact with the internet is via email. It is now widely recognised that email represents one of the most convenient ways of communicating as it offer a speedy response like the telephone but is not as intrusive (Jemmeson, 1997:140). Unfortunately along with the operational

benefits come some side effects of the misuse of email. Stevens and McElhill (2000:272) describe email as the “new office bully”.

The use of email for business purposes has both advantages and disadvantages. Some of the disadvantages, for example flaming, spamming, preference of email to direct communication, can be overcome through direct communication. This, however, may only be possible telephonically – or perhaps may not even be possible – where the email sender and recipient are in different locations or time zones. Other disadvantages of using email revolve around security, privacy, ethical and legal issues. How these are dealt with is covered in section 2.5.3 below.

2.4.3 The intranet and extranet

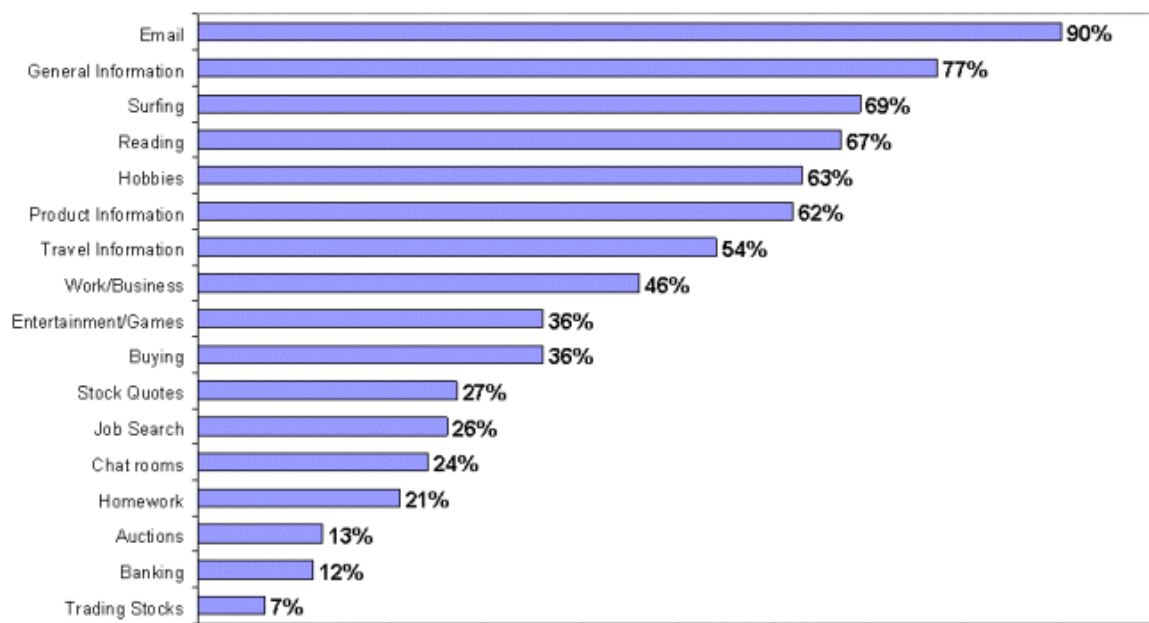
The intranet is like the internet but is only used internally by organisations and is contained within one or a few buildings in close proximity of each other. Intranets provide the capabilities of the internet such as browsing and search engine functionality (Turban, Lee, King and Chung, 2002:49). When the intranet is extended beyond the building or is connected to the internet to enable cooperation with suppliers and customers it is known as an extranet (Turban, Lee, King and Chung, 2002:49). An intranet runs off a LAN and an extranet would most probably need to run off a wide area network (WAN).

2.4.4 Personal use of the internet

Some organisations allow employees the perk of using their internet and email accounts for personal purposes while at work – with a few restrictions. Other organisations have strict policies that ban personal use. The Angus Reid Group quotes that 46% of employees with internet access use it for personal activities (Angus Reid Group, 2000:30). The Springs Gazette, Colorado, advocates that employers urge employees to ask their supervisor’s permission before “running a personal errand in cyberspace” (Boyle, 1999). A spokesperson for one of the local firms states that he knows employees use the internet for personal purposes but that he hopes they use it wisely.

According to Elron Software's 1999 email abuse study 86% of employees send and receive personal e-mail at work (Flynn, 2002).

Stanford University conducted a survey of 4000 internet users to determine a common list of activities. As depicted in Graph 2.1 below, they found that email is the most common internet activity, with the majority of all internet users claiming to make use of email. The next most common use of the internet is as an information search utility for products, travel, hobbies and general information. Just over a third of those who use the internet report that they engage in entertainment such as computer games, such as online chess. Stanford reports that chat room activity declines substantially in respondents older than 25 (2002).



Graph 2.1 What users do on the internet (Stanford University, 2002)

These days, with numerous employees taking work home on laptops or dialing in from home after hours, it does seem unfair of employers not to allow employees the odd errand on the internet or the odd personal email. Flynn states that today's American workers put in more on-the-job hours than at any time in history. For some employees who leave the house before light and go home when it is dark email may be the most efficient and effective way to stay in touch with friends and family members. For the sake of employee morale

and retention, savvy employers generally are willing to accommodate employees' need to send the occasional email (Flynn, 2002).

Unfortunately it is not all about a matter of time spent performing these activities. Organisations express concern about internet and email use for three reasons mainly: excessive use of bandwidth, resulting in network traffic which slows down legitimate work-related email or internet access, representation of the organisation's name on the internet, vulnerability to viruses and other security issues and, of course, use of the organisation's time for non-work related activities.

2.5 How organisations manage the use of the internet and email

Whether employees use the internet and email during or after office hours organisations express concern. One fact is certain – employees use the internet and email for personal purposes and this usage does have consequences for the organisation. It is for this reason, and a number of others – listed below in section 2.5.1 – that organisations need to manage usage.

2.5.1 Reasons for managing the use of the internet and email

Unlike other organisation resources such as the photocopier machine or the personal computer, abuse of the internet and email is not limited to consequences of cost, there are numerous hazards to deal with. The E-policy Institute identifies the following risks confronting the electronic workplace: workplace lawsuits, lost productivity, e-security breaches (theft of confidential data), e-sabotage (triggered by disgruntled employees and vengeful ex-employees), annoying hacker attacks, malicious cracker attacks, wasted computer resources, computer viruses, business interruption, fines and imprisonment, public relations nightmares, media scrutiny and public embarrassment (Flynn, 2002).

Flynn states that lawsuits include cases such as sexual and racial harassment/discrimination, wrongful termination, hostile work environment, defamation, copyright infringement, invasion of privacy. She continues to state that controlling employee email and internet is not a “big brother tactic”, that it is smart business (Flynn, 2002).

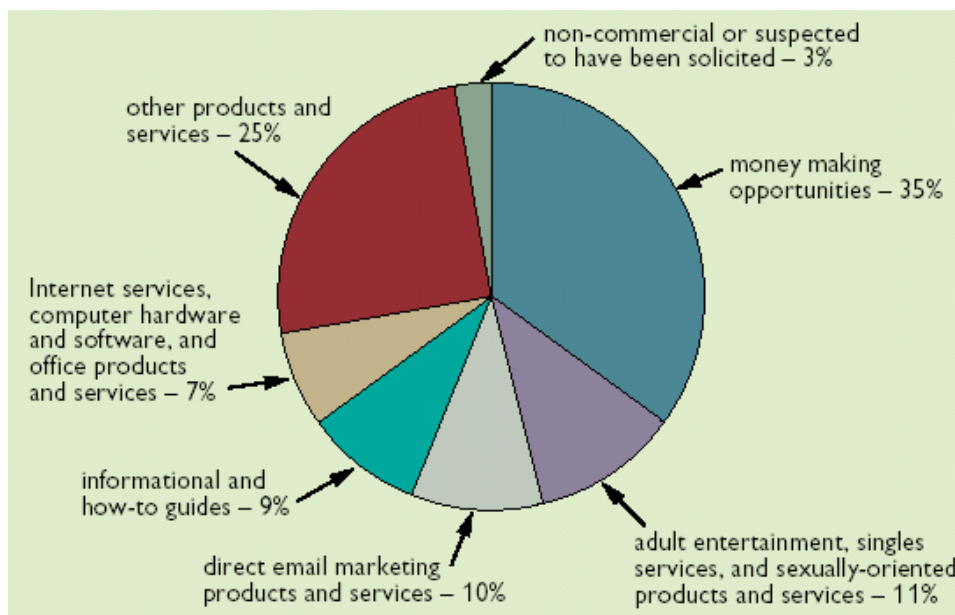
Gartner Group raises the risk of viruses that SMBs open themselves to, the most likely security incident SMBs will experience is a virus that arrives as part of an e-mail message (Pescator, 2002).

When employees abuse the internet and email much bandwidth is taken up by non-work related downloads, for example: streaming audio, mp3s, executables and pictures. This results in delays in the mail exchange server or on the internet server.

Two examples of internet abuse, from the E-policy Institute, are, firstly, the loss of productivity and, secondly, dismissal of employees. An example of the loss of productivity is where, in 1999, business in the U.S. lost \$500 million in workplace productivity when Congress released the Starr Report and President Clinton's video deposition over the internet. An estimated 13.5 million employees logged on to see what the President, Monica Lewinsky, and independent counsel Kenneth Starr had to say about the relationship between the commander in chief and the intern. The second example is of the dismissal of more than 40 employees from Xerox in 1999 for spending up to eight hours a day on pornographic internet sites, restraining the network to such an extent that legitimate email could not be sent or received (Flynn, 2002).

Another scenario that could take place is that an employee simply browses on the internet, uses his or her email address to logon to a site – that may not even be forbidden – and has the email address sourced by various spam distributors. Spam is unsolicited bulk email, commonly referred to as junk email. The problem that this poses for the organisation is that incoming spam email – which frequently contains images – creates heavy network traffic,

unless caught by a firewall. If it is caught by a firewall then it may make the firewall's processing slower and may even fill the quarantine space should many people receive junk email. Another problem that the receipt of spam brings with it is misrepresentation on the internet, as email addresses usually contain the organisation's name, for example, JohnSmith@OrganisationX.co.za. Cranor and LaMacchia (1998:74) state that junk email, unlike most junk postal mail, often contains explicit sexual language and / or photographs that many recipients find offensive. This point is substantiated in Graph 2.2 below. Receipt of spam, should spam enter through a firewall, may even cause unnecessary harm to the recipient or those around him or her, especially in today's open plan work environment. All of these risks are brought about by simple browsing of the internet. This leaves little wonder why organisations need to implement steps to manage employees' internet and email use.



Graph 2.2 Types of products and services advertising in analysed spam samples (Cranor and LaMacchia, 1998:74)

In conclusion, it is believed that managing email and internet use, no matter how lax or strict the management is, will contribute to creating a culture of awareness and responsibility within the organisation.

2.5.2 Direct methods of managing internet and email use

The following forms of direct management of internet and email use within the organisation are identified: a firewall, an internet policy and email or internet monitoring.

A firewall works like a sieve that catches any incoming or outgoing email that is offensive or forbidden. It can also block employees from visiting specific websites that are offensive or forbidden. The criteria upon which the sites or emails are forbidden are usually covered in the internet policy. Criteria often includes that the email may not contain specific types of attachments, for example pictures or executables (programme files), that the site or email may not contain any of the banned keywords, for example any word that has a sexual, religious, or defamatory connotation, or that the email or email attachment or internet download is too large.

An internet policy is an organisation's policy that is used to control the use and limit the abuse of the internet and email within the organisation. It may also state what the employee may and may not do with the software that is loaded on his or her workstation. Like any other organisational code of conduct, the internet policy is there to protect both the organisation and the employee.

In compiling the internet policy an organisation should make sure that the appropriate people are included in the initial process of establishing the policy. Frustration and potential risks associated with miscommunication and misunderstanding will be avoided in this way. Drolet (2000:59) states that it is not necessary to attempt to please every employee with the new policy. Privacy and ethical issues are likely to arise, however, these can be reasoned with if the organisation makes it clear that email or internet records are not the property of the employee but of the organisation. Attaran and VanLaar (1999:243) say that many organisations have a policy that states any email passing through their system automatically becomes the property of the organisation.

Once internet policies are established that reflect the organisation's culture IT staff should research, recommend and finally implement employee internet management software to ensure adherence to the policy (Carrington, 2001:30). Internet policies must be updated according to any technological advances and employees must be notified of these changes. Flynn says that it is best to ask each employee to sign and date a hard copy of the policy instead of relying on email to communicate it to employees (Flynn, 2002).

An organisation cannot expect an employee to know everything about the internet – especially if the internet is not directly in the employee's line of work. It is therefore best to educate and communicate to employees on this topic. The message that email and internet are to be used as business communication tools needs to be made clear. Guidelines that are clear on what is considered appropriate behaviour in terms of electronic communication need to be communicated and made available to employees (Flynn, 2002).

As soon as a thorough and detailed internet policy is compiled and communicated, organisations have a right to monitor the use of their internet resources. An American law firm, Morgan Cole, says that email and internet monitoring at work may be unlawful. Bolton (2001), the journalist who covered a story on Morgan Cole states that employers will face the dilemma of how to differentiate between personal and business emails before these are opened. Additionally, Bolton states that performance may not be measured based on monitoring conducted on use of email and the internet at work. It is believed, however, that the organisation has the right to read any email or monitor any use of the internet provided that the employee has been made aware, prior to any monitoring, of the fact that email and internet on organisation resources form part of the organisation's property and that the organisation may read these – at any time and without prior notice. The organisation's resources and any information that exists on these resources are property of the organisation, a court may request that this information be handed over for the purposes of supporting a lawsuit, in which case this information also becomes

juristic evidence and property. Monitoring may not even be necessary unless a problem exists, Laurent (1998:206) states that although many American organisations do not monitor their employees' electronic messages, these organisations would not hesitate to search the traffic if they suspect wrongdoing”.

The author is of the opinion that there are two schools of thought regarding personal internet and email use. The first school of thought is that employees' fascination with the internet results in a harmful distraction that prevents them from carrying out their duties (Borak, 2000:46). Those that subscribe to this school of thought believe that management and the human resources department are there to correct loss of productivity. Cole's (2002) newspaper article maintains this theory by stating that the task of monitoring employees' internet use is becoming an emerging HR best practice that provides employees with an environment that is conducive to productivity. The second school of thought upholds that employees should be encouraged to use the internet as much as possible. Mark (2000:22) says that the internet tells employees what is happening around the world and expands their thinking. He states that IT people who use the internet come up with interesting ideas. The e-commerce director of Legal and General who advocates encouragement of internet use also states that her organisation has a mere two-line internet policy to guard against pornography, libel or viruses in the workplace. Although organisations may adopt this attitude in the attempt to build themselves into learning organisations, a dependable policy is necessary to protect both the organisation and employee should some employees abuse this knowledge-sharing attitude.

2.5.3 Indirect methods of managing internet and email use

Once the internet policy is in place, employees have been trained and prompt action has been taken against any wrongdoers the next step that the organisation should take in reinforcing the internet policy is an indirect measure (Bick, 2002:28). An indirect measure can be anything from an incentive to changing the organisation culture.

A balanced blend of technology, policy and culture is needed to effectively manage employees' use of the internet during office hours. It is believed that organisational culture is the most important of these three components. Technology solutions, such as internet policies and firewalls are good deterrents to internet misuse, the bottom line is that employees will conform to the established organisational culture. Organisational culture instills a work ethic in employees, it dictates employee behaviour and attitude.

Culture can be changed through the promotion of standards and behaviours that the organisation values. For example, some organisations promote netiquette – network etiquette. Employees are expected to abide by the generally accepted rules of network etiquette. These include but are not limited to: be polite, do not be abusive, use appropriate language, do not swear, use vulgarities or any other inappropriate language.

Organisations should reward productivity, hire efficiently, encourage training and goal setting and lead by example. A way in which organisational leaders tend to be setting the example is by managing their own use of the internet and email. Most organisational leaders do not have the time that is required of them to reply to all their emails so they employ administrative employees to complete this for them. Flynn (2002) says that 43% of administrative professionals ghostwrite e-mail under executives' names, 29% of administrative staff are allowed to delete email addressed to the executive and 26% of administrative staff screen executives' incoming email.

2.6 Conclusion

Chapter two aimed to provide the first part of the literature study. Its focus was on the history of the internet and the management of internet abuse in organisations. The history has been covered from an international, South African and IT industry perspective.

The history and background reveal that the first users of the internet and email were the academics and the U.S. military. The internet's history dates

back to the 1960s where the invention of ARPANET led to the first network of networks that later became known as the internet. In South Africa, universities took the lead in 1986 with Uninet, only to be restrained by sanctions in 1989. However, in 1999 with the abolition of sanctions South Africa boasted over one million internet users and just over eighty service providers.

Globally the leaders in terms of internet use and availability were the U.S., U.K., Canada, Japan, Sweden and France. Countries such as Mexico were further disadvantaged in the race towards technological enablement as the digital divide between the haves and the have-nots was stretched even wider. Not only did the internet create opportunities for information sharing on an international basis but it also sped up the process of information sharing. Some even described the internet as an information revolution, the beginning of a knowledge era or information age.

Chapter two revealed that the internet had an impact on many industries and not just the IT industry. With this impact a number of social issues arose, for example, there has been a change in the way organisations compete and do business. The way in which the internet was implemented – either gradually or immediately – within the organisation has had social and technical consequences. Technical consequences revolve around the implementation and which users received use of the internet before others as well as the widening of the gap between the IT department and the rest of the organisation.

The discussion of e-commerce and e-business reveal that there is a need for technical and legal infrastructure in South Africa in these fields.

The topic of the use of the internet and email for reasons other than work has been raised in chapter two. It was found that employees use the internet for purposes of email and general searches the most. The question of whether employers should allow employees use of the internet and email to perform personal business has been raised. Chapter two identifies two possible schools of thought in terms of this. The first is that strict control needs to be

adhered to in terms of email and the internet. The second is that the organisation should be allowed to become a learning organisation and that control should only be exercised to protect employees and the organisation. Firewalls, internet policies and management of resources have been discussed as means to control employee use of internet and email resources.

In conclusion, it can be stated that the internet's history – from the 1960s to the way in which it is implemented within the organisation to the way it is managed within the organisation reveals that it may have impacted on the organisation's behaviours, norms and values and therefore its culture.

Chapter three provides the second part of the literature study. It has a focus on what organisation culture is and studies the impact of the internet on organisational culture from that perspective.

3. Chapter 3: Organisational culture literature study

3.1 Introduction

This chapter provides the second part of the literature study. It expands on the study completed in chapter two. Chapter two's focus is on the internet, this chapter's focus is on organisational culture. The two topics are brought together in chapters four and five where the case studies use the literature study as a foundation. Corporate or organisational culture can be described as the way that things are done around here the organisation. By changing an aspect of the way that the "things" are done the organisational culture is subjected to change. This chapter aims to examine organisational culture, how it can change, what makes it change as well as what encourages change. Changes, both tangible and intangible, that have taken place in the organisation as a result of the use of the internet and email are reflected upon. Like the previous chapter, chapter three aims to add substance and backing to the main problem: the impact of the internet on organisational culture in the IT industry.

Chapter three establishes an understanding of organisational culture through a discussion of: definitions of concepts related to this topic, origins and beginnings of the study of organisational culture, reasons for nurturing organisational culture, a method to measure organisational culture and, lastly, characteristics of organisational culture in South Africa and the IT industry. The factors that change organisational culture are raised as well as the ways in which to do so – should the organisation reach a point where this is necessary. Finally, the impact of the internet on organisational culture is discussed in terms of the types of impacts that have occurred.

3.2 Organisational culture

This section describes what organisational culture is. It also describes aspects of organisational culture such as subculture and organisational behaviour, as

an understanding of these will assist in a comprehensive understanding of organisational culture as a whole. Reasons are given why increasing attention is currently being paid to social issues such as these. Lastly, the organisational culture within the IT industry is investigated – the IT industry being the main industry thrust of the paper.

3.2.1 A description of organisational culture

Organisational culture can be compared to the human personality. Hofstede (1984:21) states that culture is to a human collectivity what personality is to an individual. Just as humans have personalities, organisations have corporate cultures. Personality is intangible but can still be interpreted through the way a person behaves. Similarly, with an organisation, employee behaviour reflects the organisation’s culture. An example of behaviour that creates organisational culture is of an organisation such as McDonalds, where the staff are friendly and offer quality service consistently all over the world.

Juustila (1994) is of the opinion that culture consists of three levels, namely: artifacts or products and behaviours, values and beliefs and underlying assumptions. She uses the following figure (Figure 3.1) to describe the cultural elements within each of these levels.

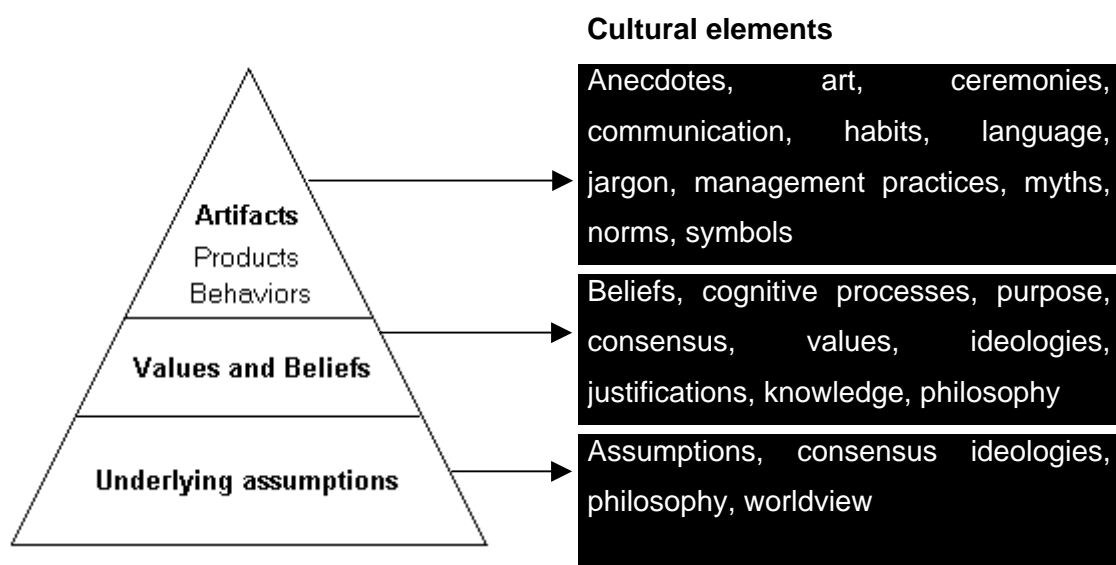


Figure 3.1 An adaptation of Juustila’s levels and elements of organisational culture (Juustila, 1994)

It can be deduced from this figure that the underlying assumptions form the basis of an organisation's culture, the values and beliefs are built on this foundation and the result of this is the products or behaviours that the organisation thrives on.

The underlying philosophy of the organisation stems from its leaders. Alignment between management and their control of the mission, vision and organisational values is critical as it strengthens culture and decreases conflict. The behaviour of top management determines the degree to which the staff will live the values of the organisation. A number of cases have been reported recently where the CEO of an organisation leaves because of a disagreement about the philosophy of the organisation. This is supported by Juustila's description of the levels of culture within an organisation in that the underlying values form the foundation on which the rest of the organisation's values and beliefs are built. If the leader's philosophy no longer forms this foundation then the leader will need to either accept the new culture or leave.

Just as there are tangible and intangible aspects of human personality there are also tangible and intangible aspects of organisational culture. Tangible aspects of personality include, amongst other things, the way a person dresses, speaks, walks and talks. Jarvis (2002) states that there may be visible signs of culture in the organisation's buildings, offices, shops and in the projected image. When a municipal organisation, a computer manufacturer, and a merchant bank are compared the culture difference is visible.

As with human personality, there are various descriptions that can be used to classify organisational culture. For example, a personality could be outgoing, withdrawn, loud, obnoxious, caring, etc. Some descriptions of organisational culture are: democratic, laissez-faire, participative, etc. (Jarvis, 2002).

3.2.2 Organisational subculture

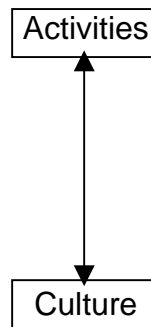
There is not usually only one general culture within an organisation: an organisation may have one or many subcultures that exist alongside its core

culture. An organisation may display elements of several cultures that could contradict each other and compete. Beach (1993:20) emphasises the importance of recognising that even a unified culture is not wholly homogenous. He states that subcultures exist and each organisational division perceives things differently.

Brown (1995:26) says that it is rare in practice that organisations possess only one homogeneous culture. Schein (1992:14) states that it is not appropriate to talk of one culture of a large organisation. He believes that it should be handled empirically and that a culture can only be spoken of if specific beliefs and assumptions are shared throughout the organisation, despite the fact that subcultures, with their own identities, exist in the organisation. By strengthening the core culture it is possible for a large organisation to have the same core culture throughout the different divisions and alongside subcultures that may exist. A culture can be strengthened through the following methods, among others: training, incentives given for behaviour that promotes the culture, proper communication and activities that promote organisation-wide information sharing.

3.2.3 Origins of organisational culture

An organisation's culture originates from a number of sources. The organisation's leaders greatly determine what the underlying values and philosophy of the organisation are, as is described in section 3.2.1 above. The leaders established the organisation for a purpose, so it could be said that culture originates from purpose as well as the leaders' values and beliefs. Goals and specific steps help the organisation to achieve its purpose. Beach (1993:20) describes that culture influences activities. He states that the development of the culture determines which activities remain and which do not. The activities and culture shape one another in a symbiotic relationship. He uses the figure "emergence of culture from the organization's activities" to illustrate his point.



**Figure 3.2 “The emergence of culture from the organization’s activities”
(Beach, 1993:20)**

Brown (1995:28) describes the formulation of subcultures within the organisation as emanating from the structure of the organisation itself. By their very nature divisions of an organisation differ, for example, the marketing division is very different to the finance division. The need to divide the organisation into divisions or departments that perform different functions creates an environment for different cultures to develop. The differences that develop under the influence of physical separation are fed by the differences within each division: personality, training, functions, purpose, challenges, etc.

The presence of subcultures may be the first sign that the organisation’s culture is fragmenting. However, if management values the core culture they will take cognisance of the subcultures and play an active role in promoting and strengthening the core culture. When management sees the core culture to be worth strengthening and promoting they perceive that the culture adds value and contributes to the success of the organisation (Juustila, 1994).

Schneider (1994:2–3) believes that every successful organisation has a core culture that forms the basis and sets the standard for its successful operation. He states that it is critical that this core culture be aligned with the organisation’s strategy and its core leadership practices. According to Schneider’s research this alignment determines the organisation’s effectiveness.

3.2.4 Organisational culture is receiving increased attention

“Why do Harley-Davidson customers wait a year for their new bikes when they can buy a comparable Honda or Yamaha on the spot?” asks Preston (2002:88). His answer is that these customers identify with a particular culture and want to be affiliated with it. He attributes culture as the distinguishing factor of successful organisations. Emerge International (2002) attributes the high percentage of failed mergers, acquisitions and general corporate change initiatives to the lack of attention to organisational failure.

Attention has recently been drawn to culture as a result of the evident successes of some companies, for example Harley-Davidson, and the failure of others, for example many of the merged organisations. The occurrence of mergers and acquisitions has also been on the rise during the last decade, making headlines and raising awareness of reasons for failure, culture being one of the reasons listed.

Management is suffering from anxiety about why their sophisticated analytical tools, better planning, more rational resource allocation and considerable investment have resulted in disappointment. They state that management has named culture as the cause of the problem. Gartner Group lists culture as a component of organisational resilience (Bell, 2002). It is therefore a trend that management is focusing more attention on culture in order to fix the problem or if no problem exists, ensure that their organisations are more resilient. A positive culture results in positive employee behaviour. Lambie’s research (2002) shows that a correlation exists between supportive or constructive behaviour and above average performance.

A specific culture must be grown before organisations can offer employees perks that require responsibility and ownership. Auxillium West (2001) believes that the importance of corporate culture is growing because of several recent developments. The first development is that organisations are encouraging responsibility in employees. The second development is that in exchange for more flexible work schedules, employees are expected to be on-

call. Thirdly, organisations are fulfilling employees' need to belong to a community with the formation of teams. Another development is that the advent of the internet has made working from home even easier and nowadays flexible work schedules are reasonable requirements for working parents and others who need such flexibility. These developments are advantageous for both employees and organisations as they result in a happier and more satisfied workforce. The importance of culture has therefore become both the employee and the employer's concern.

Rollins and Roberts (1998:6) state that they are convinced of the link between culture and performance. This view is becoming more widespread because many high profile organisations are making it known that their successes result from a focus on organisational culture. Rollins and Roberts list Johnson and Johnson and Hewlett-Packard as high-profile companies that consider organisational culture an important part of success (1998:7–8).

Quinn (2002) reaffirms this: Quinn believes that successful organisations have developed something that surpasses corporate strategy, market presence, or technological advantages – a power that resides in developing and managing a distinctive corporate culture.

3.2.5 Reasons why culture is measured

Measurement of organisational culture needs the support of all the staff as well as that of management in order to be successful. It is therefore not a simple overnight procedure. Before an organisation enters into the process of measuring culture it must be clearly understood why the cultural measure is necessary in the first place.

According to Heifetz (2002) culture needs to be measured for three reasons: to close the gap between the real and the ideal culture, to align values and goals throughout the organisation, and to create an individual-organisation fit. Heifetz states that closing the gap between the real and ideal culture is a

better move than restructuring everything as the precious core culture can be kept and just specific problematic elements of culture can be brought in line.

Although it may be unrealistic and undesirable to try to homogenise the organisation, the alignment of values and goals across the organisation creates a common core culture that is healthy and can co-exist with the subcultures. The creation of an individual-organisation fit decreases employee turnover as it is more likely that both the organisation and the employee will be suited.

3.2.6 Ways in which culture is measured

According to Lambie (2002) employee attitude surveys are often a successful measure of culture. However, this is a superlative measure and does not reveal the behavioural norms that are responsible for the attitudes observed. Lambie recommends that the employees' views on the behavioural norms in the organisation are compared with those perceived by management. Tools that are available off the shelf are: the Myers-Briggs type indicators that report on a person's core personality, the Edwards Personal Preference Schedule that measures broad behaviour patterns and anxiety levels, ability to adjust, tolerance for mundane work, etc. and DISC Dimensions of Behaviour that measure dominance, influence, steadiness and conscientiousness.

Due diligence is performed on an organisation before another organisation will consider merging with it or acquiring it. Due diligence is a report that reflects the type of information that shareholders and investors need to see about an organisation to determine whether they will invest in it or not, e.g. profit, turnover, staff turnover, etc. There are a number of types of due diligence reports, for example, occupational health and safety due diligence reports that measure whether an organisation is a health hazard or a risk, outsourcing due diligence reports that measure the risk of entering into business with a particular vendor.

As financial or occupational health and safety due diligence reports are compiled, so too can a cultural due diligence report be compiled. A cultural due diligence report measures how organisational culture affects the bottom line – or financial earnings of an organisation. Emerge International (2002) maintains that organisational culture feeds directly into employee satisfaction. Employee satisfaction, in turn, has a relationship with the success of strategy implementation. Employee motivation levels, which are also affected by the organisational culture, have significant bearing on the quality of the organisation’s products and services. Quality then affects an organisation’s sales and prices which affect revenue and earnings, therefore proving that it is beneficial for an organisation to measure its culture. Figure 3.3 demonstrates Emerge International’s theory of how organisational culture affects revenues and earnings.

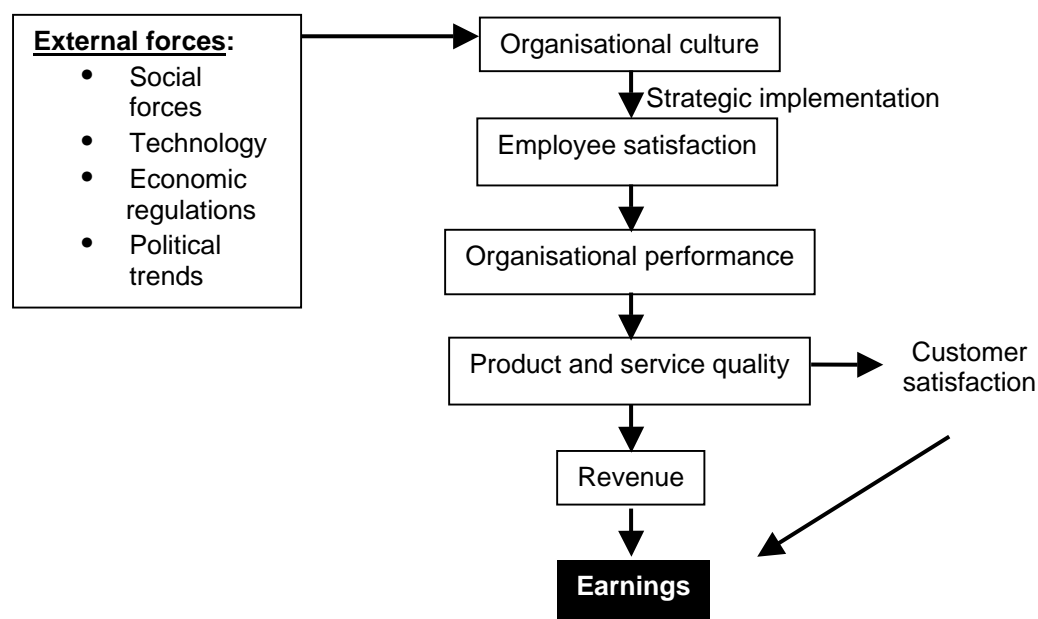


Figure 3.3 The effect of organisational culture on earnings (Adapted from Emerge International, 2002)

3.2.7 Organisational culture within the South African economy

Hofstede (1984:21) defines culture “as the collective programming of the mind which distinguishes the members of one human group from another”. He states that his definition of culture includes value systems, the cornerstones of

culture. He emphasises that culture is the property of groups and not of individuals.

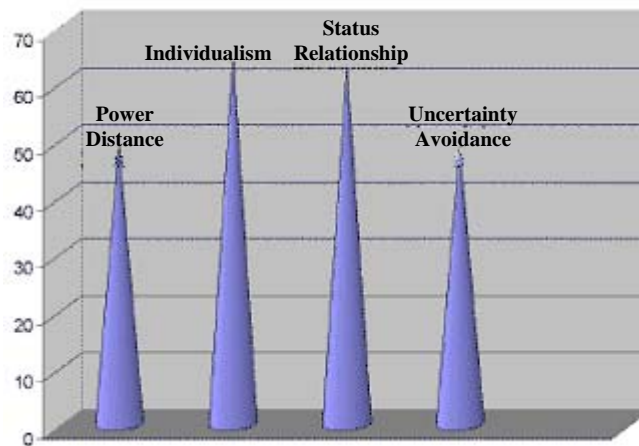
On the topic of organisational culture Hofstede (1997:18) is of the opinion that this is a soft, holistic concept with presumed hard consequences. He states that organisational culture is different from national culture for two main reasons. The first reason is that individuals usually choose to join an organisation and know that they may leave the organisation again one day. Secondly, individuals are only involved in organisations during working hours.

In 1966 he conducted a research project involving a major multinational corporation. The research resulted in the identification of four key dimensions of culture, and later a fifth.

The first dimension, power distance, refers to the measure of inequality between different levels within the organisation and the extent to which this is accepted. Uncertainty avoidance, the second dimension, refers to the degree of comfort with ambiguous situations. Individualism *vice versa* collectivism is the degree to which a person thinks in terms of 'I' *versus* 'we'. The fourth dimension is the achievement *versus* relationship orientation. It refers to "achievement" as the need for recognition in the workplace and "relationship" as the need for a human bond or connection. It could be said that "achievement" refers to status as well as tangible benefits and that "relationship" refers to the softer issues, such as relationship building. The fifth and final dimension – Confucian dynamism – is the long- or short-term orientation of different cultures. Hofstede used these dimensions, excluding the fifth, to complete an analysis on organisations within a number of countries, including South Africa. The graph is reflected in Graph 3.1 (Williams, 2002).

Hofstede's analysis for South Africa reflects high rankings for all dimensions excluding long-term orientation. The reason for this is that the individualism ranking is the highest-ranking dimension and individualists, as the name implies, prefer not to engage in long-term relationships. This is a reasonable

rating for South Africa as there has been a fair amount of uncertainty in the job market due to political factors, the fluctuation of the Rand and the brain drain. It would also be reasonable if this rating was applied to the South African IT industry alone, as generally people switch projects or even organisations frequently and do not form long-term relationships with one particular project or organisation. In terms of the fourth dimension, achievement ranked highly. The consulting and customer service offerings within the IT industry have been impacted the most by the IT recession of the past few years and South Africans have been forced to place more emphasis on tangible benefits and achievements in the work place rather than on the softer less tangible issues.



Graph 3.1 Hofstede's dimensional analysis for South Africa (Williams, 2002)

3.2.8 Organisational culture within the IT industry

A number of differences arise when comparing organisational culture within the IT industry to that of another industry. This opinion exists for a number of reasons. Firstly, the IT industry is a relatively new industry, in comparison to the more traditional industries such as healthcare, food, financial services, etc., which may have changed over the years although not changed fundamentally. Secondly, the IT industry, in its initial stages, was known to attract a specific type of employee: generally an employee who prefers machines to humans, i.e. has a deterministic worldview, and who tends to

apply a technological solution rather than a social or business solution. Thirdly, the IT industry grew at an accelerated speed and has since slowed down due to the IT recession that is experienced on national and international fronts.

Different industries have characteristics of work that vary according to industry-specific demands. Even within the IT industry a differentiation can be made between the consulting environment and the software development environment. The following are a few general characteristics of work within the IT software development environment that, when combined, set its culture apart from that of other industries: flexible day-to-day working hours but an expectation to put in overtime as deadlines draw closer or when a crisis arises, informality in dress (e.g. for programmers and development staff who are not exposed to the client environment), an excitement about software and new applications, teamwork, the ability to work from home at times, and the propensity of employees to change employment every two to three years based on salary increases and new experience to be gained.

These characteristics may not be present in all software development environments but are predominantly present across the broad base of IT organisations. The characteristics that are present within an IT consulting environment are somewhat different as the consultant is, at most-times, based at a client and, intentionally or unintentionally, adopts some of the behaviours that are acceptable within the client environment while still maintaining the standards and core culture of the consulting organisation.

Organisations within the IT industry view the importance of culture no differently than any other type of organisation does. “While there’s no replacement for technical know-how, truly great IT organisations place more value on their teams’ ability to share expertise, work with other departments and question conventional wisdom” (Preston, 2002:88).

3.3 Organisational culture change

This section discusses the factors that cause organisational culture change as well as mechanisms that can be used as tools to change organisational culture when the organisation identifies the need for this. Focus is placed on the IT industry and how organisational change has occurred within this industry.

Davies, Scammell and Hall (1997) describe cultural change to involve new frames of reference and new ways of acting. “Cultural change results from actors acquiring new symbolic resources (cognitive frames/paradigms: concepts, knowledge, skills) in changed structural contexts (organisational contexts, work processes) where these symbolic resources are meaningful, deployable and operational”.

3.3.1 Factors that change organisational culture

Brown (1995:87–88) describes an organisational learning cycle of culture change. This can be used to describe the factors that change organisational culture. Brown describes five classes of such factors, namely: environmental calamities, such as the current IT recession, environmental opportunities, for example technological breakthroughs such as the internet when it first came about, internal revolutions, for example the imposition of a new management team, external revolutions, such as nationalisation or other restrictive legislation, and managerial crises, for example the committing of a serious blunder by senior executives that result in the change of overall philosophy of the organisation.

A change in organisational culture can either occur because the organisation identifies the need for a culture change and promotes it or it can occur as a result of external factors that are beyond the control of the organisation. Even when an organisation has no desire to change it will eventually be forced to respond to movements in its environment if it is to survive (Johns, 1973:5). Lessem (1990:73) differentiates between managed and unmanaged cultural change in this respect. Unmanaged cultural change can be the result of

change as adaptation and learning or an evolutionary, therapeutic or revolutionary process. Each of these triggers or factors is now described.

Change as adaptation and learning (Lessem, 1990:73–74) occurs when environmental factors cause organisational responses to be rewarded or punished and cause the organisation to learn or adapt in accordance with this. An example of an environmental cause is the recession evident in the IT industry the past couple of years. A number of organisations responded by ignoring the flailing market and hired relentlessly. Theirs was a punishment: lack of income and many salaries to pay. These companies adapted by retrenching excess employees. In turn this affected the organisational culture.

Change as an evolutionary process, according to Lessem (*ibid*), is the natural and expected change that comes from within the organisation. Interaction of insiders and outsiders results in “change as a therapeutic process”. Such a change in culture is a characteristic of a learning organisation as an outside influence causes a positive outcome. The initial change may not always be positive but the long-term change will be because this process is therapeutic for the organisation. Lessem (*ibid*) states that the purpose of this change is to improve the organisation’s adaptive ability, or level of integration. An example of this change is an organisation that intends to move to a new maturity model and is in the process of implementing the Capability Maturity Model (CMM) methodology and training. Initially there will be resistance to the new way that work is performed as employees will struggle to change their work processes and will experience difficulty to find time for the training that needs to take place. However, after the CMM processes are refined and customised for the organisation, work should run smoother than before and the organisation should achieve its goal to be a maturity level higher.

Finally, change as a revolutionary process involves resolving the struggles for power between individuals or groups. Examples of this type of cultural change are: management successions, turnarounds, and mergers and acquisitions. Managed cultural change can take place through strong leadership. This can occur at the different life stages of the organisation, namely: creation, midlife,

and maturity. An organisation's life stages depend on its speed of growth, number and caliber of employees, evolution and improvement of processes, as well as the number of years in which the organisation has been in existence for. However, the number of years in which the organisation has been in existence for should not be used in isolation as an indication of maturity level. An example of this is: an organisation that was founded five years ago and attracted the best employees in the market with numerous years of experience and used existing processes and learnings – bought from an industry expert – cannot be compared fairly to another five-year old organisation without these attributes, i.e. with average employees and no processes in place.

Organisational culture is also impacted by the overall organisational strategy. According to Struwig and Smith (2002:23, 28) organisations should place increased emphasis on aligning culture and strategy. Figure 3.4 reflects the central role of organisational culture in strategy development and implementation.

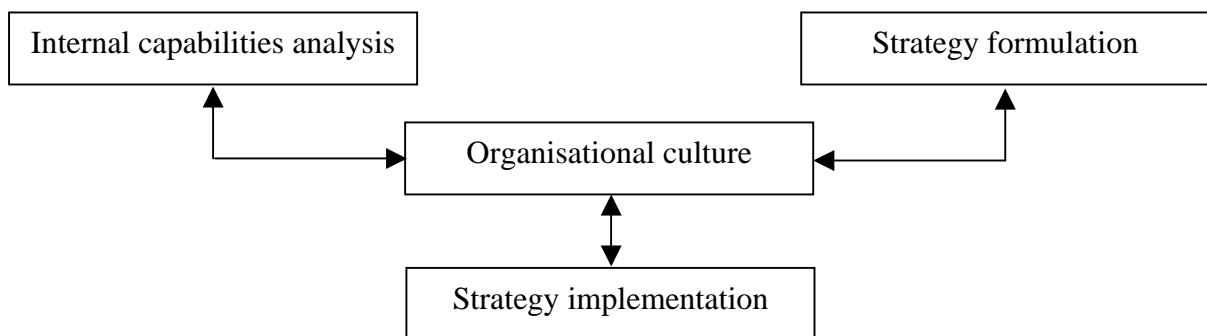


Figure 3.4 The central role of organisational culture in strategic management (Struwig and Smith, 2002:23, 28)

Although strong leadership and a clear vision are factors that can change organisational culture these need the support of the rest of the organisation in order to be successful. The ways in which to change organisational culture are identified in the next section.

3.3.2 Ways in which to change organisational culture

Organisational culture change is only possible where both management and employees are dedicated to the new ways of acting. New frames of reference must be reasonable and should not vary in essence from attributes of the core organisational culture. An example is of an organisation that, as a result of numerous sexual harassment cases, tries to reduce the unbalanced culture that is causing the upset. The organisation should try to instill a culture of gender respect in their employees. This can only be achieved if the organisation already has somewhat of a culture of respect – a respect for management, working hours, clients, etc. Once management makes a visible effort to adopt the culture it will cascade down to the rest of the organisation.

Bea (2002:6) states that organisational culture change does not happen overnight, that it takes incredible top-down dedication and repetitive communication efforts. Argyris (1953:113) is of the opinion that if the leader wants change then the change must be instigated in the network of human relationships that he or she is in, i.e. the organisation. He discusses the way that change can take place by empowering the management and supervisors of an organisation to change expectations and decrease their reliance on the leader. The new leadership pattern that is desired will only be effective if the alterations are also made in the existing set-up of human relationships between the leader and managers. Argyris (1970:63) also states that management higher up on the organisation's hierarchy is more likely to be able to change the system. This is because they are not as bound by the structure, systems and controls as the employees at lower levels on the hierarchy are.

However, another school of thought is that the organisation can change with or without the assistance of management or its leader. Schein (1992:297) believes that the way in which culture can and does change depends upon the stage at which the organisation finds itself. He uses a table (Table 3.1) to show the cultural change mechanism at each organisational stage. He describes the change mechanism for each stage starting with founding and

early growth, goes through midlife and ends with maturity and decline. The founding and early growth can refer to a new organisation or one that has already seen all of the stages, i.e. has experienced the destruction and rebirth change mechanism.

Table 3.1 Cultural change mechanisms (Schein, 1992:304)

Organizational stage	Change mechanism
Founding and early growth	1. Incremental change through general and specific evolution.
	2. Change through insight from organizational therapy.
	3. Change through promotion of hybrids within the culture.
Midlife	4. Change through systematic promotion from selected subcultures.
	5. Planned change through organization development projects and the creation of parallel learning structures.
	6. Unfreezing and change through technological seduction.
Maturity and decline	7. Change through infusion of outsiders.
	8. Unfreezing through scandal and myth explosion.
	9. Change through turnarounds.
	10. Change through coercive persuasion.
	11. Destruction and rebirth.

In order to change an organisation’s culture, management needs to shape the way that their employees behave, feel, contribute, interact and perform (Jarvis, 2002). This process can be launched through workshops that are held to devise a strategy and policy. If key or influential employees are involved from the start the change will be easier to implement as top management will

have employee buy-in and will have one less group to convince and one more group of employees who will influence others. As psychologists have proved that social influences change behaviour, this group of employees will become vital in the transformation of behaviour which, in turn, changes culture (Klobas and Cyde, 2001:62).

Once the strategy and policy have been drafted the next step will be to communicate this to employees and require feedback. An approach needs to be taken so that the employees view the change as positive and unthreatening, this can be achieved if employees' feedback is considered as it will allow them to take part in the change. Employees need to understand exactly what is required and what their roles entail. Suitable training can fulfill this need.

Once the organisation has finalised the strategy and policy, management needs to lead by example. Management's example is a critical ingredient in the process of building a new culture or strengthening an existing culture. Inconsistent messages sent from a senior level typically result in the fragmenting of cultures which could lead to subcultures. Although subcultures should not be seen in a negative light, if they result from inconsistent messages then the core culture that needs to override any subculture will be absent.

This approach addresses each of the items Bolton (2001) lists which can affect the organisational culture. These items are: levels of trust, risk taking, stress, fears and anxieties, social interaction, factions and politics.

When an organisation is exposed to external factors and finds that its culture is changing it can strive to maintain its existing culture by implementing the same measures and actions as it would when in the process of instilling a new culture. However, an external factor may not always be the direct cause of the change. It could simply be the catalyst, i.e. the organisation has reached a point where change is inevitable, with or without the external factor – change will occur as soon as it is triggered. When an external factor starts to

dramatically change the core culture it is also an indication that the core culture is not robust enough to withstand change. Management must make the decision to either strengthen the culture or change it.

3.4 The impact of the internet on organisational culture

Factors and forces that have had an impact on the internet are explained in section 3.4.1 so that the impacts that the internet has had on the organisation can better be understood.

Section 3.4 also discusses the impact of the internet on organisational culture. A list of effects is analysed. This list ranges from changes in the way that work is performed within the organisation as a result of the use of the internet and email, to how existing issues and opportunities have been impacted by the internet.

3.4.1 Impacts on the internet

Daly (2000:287) uses the “open-loop model of impacts of the internet” to explain how the penetration and use of the internet are affected by technological forces and environmental or external factors which are outside the organisation’s policy makers’ control. Daly’s model also considers the impact of the internet on organisations and recognises that these organisations are interlinked in complex patterns. Impacts on people may either be directly on the user, as a result of consumer use of the internet, or indirect; stemming from people’s participation in organisations or even as a result of changes in the way that organisations serve their clients.

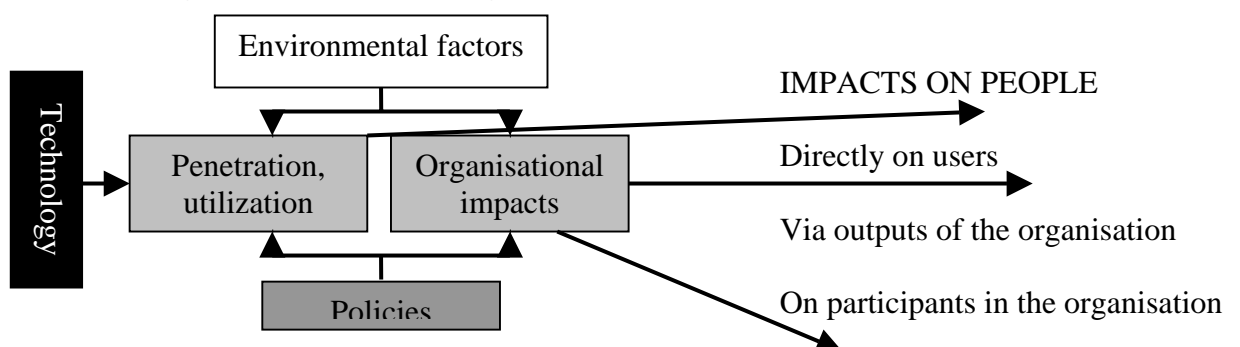


Figure 3.5 An adaptation of Daly’s open-loop model of impacts of the internet (Daly, 2000:87)

3.4.2 Has the internet impacted on organisational culture?

The internet and email have had both a trivial and significant impact on organisational culture. This statement is substantiated by the bulleted points below. These impacts have had tangible and intangible, short- and long-term and profound and marginal consequences for the organisation and the way in which work is performed.

Upon initial implementation, the internet and email had a number of implications. Some of these implications are the same as those for the implementation of most new systems. To mention a few: cost, training and exposure to a new type of operational risk. Cost implications involve the cost of: labour when installing the internet, software and hardware, upgrading, maintenance and daily running costs. Training costs include the cost of the actual training (i.e. the venue, the trainer) as well as the cost of the time spent in training (e.g. an employee's hourly rate multiplied by the number of hours spent in training – should this training be conducted during office hours and not in the employee's own time). The internet and email exposed organisations to numerous new operational risks. This resulted in the need to update existing operational risk policies and draft new policies, purchase software to control the risks (e.g. additional virus protection software), consistently monitor and control these additional operational risks.

A number of the social effects of the internet and email have been categorised and are now listed and reviewed.

- **Widening or narrowing of the gap between the IT department and the rest of the organisation**

As raised in chapter two, section 2.3.3, the internet has impacted on the organisation's culture as a result of the way in which it was implemented by the IT department. A culture gap already existed between the IT department and the rest of the organisation (Du Plooy, 1999:). For a long time, the IT department was perceived as having a separate culture to the rest of the organisation. This could be due to the fact that a different culture exists within

the IT department when compared to the rest of the organisation. For example, the IT department is predominantly more of a deterministic culture whereas the rest of the organisation is mostly non-deterministic. A deterministic culture represents machines, straightforward answers and positivism – and the latter culture represents humans, a romantic worldview and emotion. This gap also exists in the IT industry because organisations within this industry also have the need for a separate IT department to handle the support functions of networks, hard and software problems, etc.

Depending on how the internet was implemented, this gap could have been widened further or it could have narrowed. The level of authority awarded to the IT department greatly determines whether this gap will be widened or narrowed. The IT department often has rights to: configure users' internet access, train new users on the internet and monitor and control the use of the internet and email. Many possible situations arise, resulting from a combination of two possible scenarios. The first scenario is where the IT department abuses their authority and overriding access rights, this has the result of users feeling threatened, intimidated and also feeling that their privacy is invaded through monitoring and control. The second scenario is where the IT department uses the internet as common ground to assist in breaching this gap. An example of this is where they recognise the need for training (e.g. on what constitutes abuse, netiquette, how to make better use of the internet for work purposes) and assist users in setting up their internet and email accounts. Not only will this assist in breaching the gap but it will also make the IT department's job easier as, with proper knowledge, employees should be less likely to abuse the internet and email.

- **New resources for personal use in the workplace**

The internet and email have created new resources in the organisation, which can serve work and personal purposes. The way in which these resources are used for work purposes is reviewed in the bulleted point titled "A change in the way work is performed".

The internet and email allow employees to conduct their personal business during office hours, using the organisation's resources and reputation (i.e. each time an email is sent the organisation's name appears in the employee's email address). This has had an impact on the organisation's culture as specific steps have had to be implemented in order to protect the organisation's resources and reputation. Where these steps have not been implemented or have been implemented too late, legal repercussions have been felt by organisations. The organisation's culture will change in accordance with this impact as informal authority will be given to those who manage and control the resources. If legal repercussions were felt then it is likely that an employee or employees were laid off or at least faced a disciplinary hearing, this also impacts on the organisation's culture as it draws a line around which behaviour management will tolerate and that which it will not tolerate. One of the components of organisational culture is behaviour.

However, where the resources are used with proper discretion the impact on employees and the organisation can be positive. Where employees use the internet to manage their personal lives online they can save themselves and the organisation time, for example, it is quicker to perform banking and grocery shopping online than it is to stand in queue during a busy lunch hour to perform these tasks. Use of the internet during a lunch break may also encourage employees to spend lunch hour surfing the net thereby making them available should they be needed for something urgent. It is also usually more cost effective for the organisation if employees perform a quick query on the internet rather than on the telephone, e.g. an employee wants to check if his or her book has arrived at their local bookstore.

Organisations need to spend time on updating strategies, policies and procedures according to the new rules and regulations that they set for use of these new resources. Once the policy is updated, communicated and understood by employees the organisation can more easily and effectively manage these resources.

- **A change in the way that work is performed**

Simpson (2002:319) sums up how the internet and email have changed the way in which work is performed in one sentence: “a shift to make things simpler”. An example of how much simpler and more efficient technology has made life at work is email. Previously communication needed to take place through fax or the telephone. Email now provides a means of communication that is: quick, inexpensive, records the details of the message such as date, time and actual message, provides for easy storage (e.g. private folders) and some applications (e.g. Microsoft Outlook) even provide for email meeting invites and the administration of meetings to be done via email.

The way in which work is conducted has changed fundamentally with the aid of email. Employees’ first action in the morning after they fetch a cup of tea or coffee is to check email. Email is less intrusive than a phone call, has the same advantages as a fax does but can also be answered immediately.

The internet has also dramatically changed the way that work is done as it has opened up the door for organisations to research databases of information that they never had access to before. The internet allows employees to conduct research and even communicate with people who have performed the same work that they are performing so that they can ask for advice and do not need to re-invent the wheel.

E-business has also changed the way in which work is performed. E-business allows the organisation to take care of its internal processes over the intranet or extranet. An example of how e-business has simplified the workplace is Microsoft’s application called Great Plains. Great Plains is a timesheet and expenses system that can be used over an intranet and extranet. It allows employees to enter timesheets and expenses, submit these and allows managers to approve or reject timesheets and expenses online.

Another element that has impacted on the way that work is performed is e-commerce. E-commerce has provided organisations with another channel for

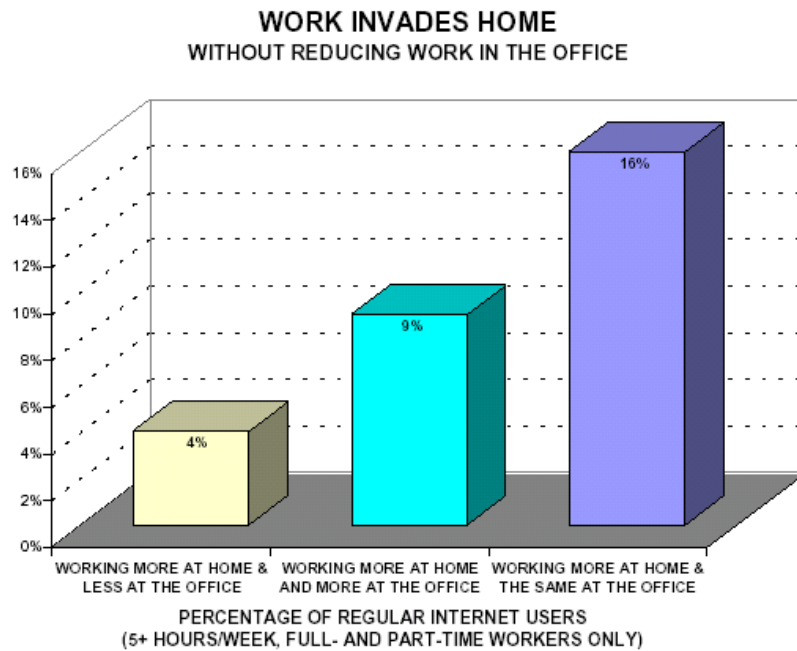
advertising and communication. It allows organisations to sell products and services over the internet.

When the way in which work is performed changes, an organisation's culture is also likely to change. This is because an organisation's culture comprises of behaviour as one of the elements. If behaviour changes then the organisational culture also changes.

- **The location of work has changed**

Laptops, the internet and email allow modern-day employees to have an office away from the office, the result of which is that some employees find it possible to work from home. A negative impact of this is that work invades the home without necessarily reducing work in the office. Stanford University conducted research into this topic in 2000 and found, as depicted in Graph 3.1, that 16% of their respondents work more at home and the same at the office while only 4% work more at home and less at the office (O'Toole, 2000:4).

Again, if the behaviour and values of the employees change then the culture will also change. If employees have stopped valuing their private time and have changed their behaviour to accommodate this then organisational culture has changed.



Graph 3.2 Work invades home without reducing work in the office (O'Toole, 2000: 4)

- **Globalisation, decentralisation and information sharing**

The terms globalisation and global village refer to the perception that the world is getting smaller as people connect and share cultures, customs, information, products and services. Although the world remains the same size, foreign countries do not seem as unknown, faraway and different anymore.

The internet and email have played a significant role in globalisation as they form a means for people to connect and integrate. This has had an impact on organisational culture as it has created new markets for products and services (markets that are accessible through a few clicks of a mouse), promoted information sharing and made the decentralisation of organisations simpler.

When products and services are offered for sale on overseas markets, which is a good opportunity for countries with weak currencies, the culture of an organisation is subjected to change. This is because employees must be geared to offering the overseas countries the service they expect: American service expectations are much higher than in South Africa for example. The

time difference between the selling and buying organisation must also be taken into account as it may require that employees work shifts or overtime. This involves a change in the culture of the organisation.

Information sharing and knowledge management changes the culture of an organisation as new roles and tasks will emerge. A new task to upload information to the organisation's knowledge database will emerge, employees will need to change their frame of mind to make it a habit to seek and use information on this database on a regular occasion and staff will need to be appointed to manage this database and information. As the organisation's use of its own knowledge and information changes for the better it will move to a new maturity level, i.e. it will become more of a learning organisation.

Decentralisation of an organisation becomes easier with the use of the internet and email. Communication is easily facilitated and an extranet can keep all employees, irrespective of location, informed and up to date. Specific functions can still be performed centrally – the extranet makes this more practical. An example of this is a development shop that has an error logging application available on its extranet. Branches in any country that have access to the extranet can record errors and these can be reported on and fixed centrally at the branch where the programmers are.

Kudyba and Diwan (2002:332) state that the distance between decision makers and their data has been closed. Organisations and their customers and inter-functional areas within organisations are also bridged. Much of the uncertainty of conducting business disappears when these gaps are closed. This has a positive impact on the organisation's culture: if uncertainty is removed employees can focus on achieving their work-related goals.

- **Increased competition between employees within the same organisation and between organisations**

Use of the internet and email has resulted in increased competition – between organisations as well as between employees within organisations. Competition has increased between organisations as more competitive

information is made available on the internet. An example of this is where one banking institution lowers its lending rates on student loans by a percent, its competitors can, within seconds of receiving this news, investigate the student loan product on the internet and determine that although the lending rate is a percent lower the loan is limited to a smaller amount, a bigger disadvantage to the client than the percentage decrease is an advantage. Without the internet, competitors would have had to wait for this information until the newspaper reported it. This is vital information that they can offer to their customers to counter the better percentage offer. Competition between departments and individuals in the organisation has also increased because of the internet. The majority of departments within an organisation have their own page on the intranet. Individuals become more competitive merely because more information is available at their fingertips and in today's information society knowledge is power.

Increased competition affects the organisation's culture in a positive way when an organisation is in competition with other organisations in its market space: the organisation's core culture will be re-evaluated if it is not aligned with the strategy that supports the competition, whether the competition is obvious or underlying. A new culture will be enforced if the core culture does not strive to surpass the competition. Internal competition between employees or departments can fragment the core culture as subcultures will begin.

Daly (2000:289) states that the impacts of non-use of the internet are significant. This is notable in countries such as Africa and also in Mexico. Not only do the laggards feel the impact of the digital divide as other countries' progress renders them further behind, they are also excluded from taking part in the global village and all the advantages that this has for their economies and development.

3.5 Conclusion

Chapter three revealed that as a result of a number of successes and failures of prominent organisations, organisational culture has recently received

increased attention. A strong culture is said to increase the organisation's resilience and assist in preventing its downfall. This is because of the correlation between organisational culture and public perception as well as organisational performance. Public perception refers to the public's awareness of the organisation's culture or branding, for example the attitude of customers on Harley Davidson's yearlong waiting list. An example of the correlation between organisational culture and organisational performance is of the friendly and efficient culture of McDonalds staff at any branch throughout the world.

Management and employees have realised that there is a correlation between culture and achievement or performance as well as between culture and the tasks performed within the organisation. Subcultures exist as a result of the differentiation of tasks from one department to another – and can either strengthen the organisation's core culture or weaken it. However, it is – to a certain extent – up to management's discretion whether to promote and reinforce the core culture or to allow the subcultures to become stronger and fragment the core organisational culture.

Management can strengthen or even change the organisation's culture in a number of ways. These include, amongst others, employee attitude surveys, Myers-Briggs personality tests and due diligence reports. The organisation's culture can also change as a result of other factors, internal – e.g. power struggles between different departments – and external – e.g. a recession. It is believed that the internet has been a factor that has changed the organisation's culture significantly since its introduction to the workplace.

Chapter three listed and discussed a few of the ways in which it is evident that the internet and email have had an impact on the culture of the organisation. The global nature of the internet is discussed in terms of the impact of the "global village" on the way work is performed, employees interact and share information and how it has increased competition. This chapter also discussed the need for the organisation to compile new policies and strategies and enhance existing policies and strategies to protect itself and its

employees as a result of the introduction of the internet and email to the workplace. It can therefore be concluded that the internet has impacted on organisational culture in a number of ways.

This and chapter two serve as the foundation for the case studies that follow in chapters four and five. Chapter four provides the quantitative case study – i.e. the study conducted by means of the questionnaire and chapter five provides the qualitative case study – the study of the interviews.

4. Chapter 4: Quantitative case study

4.1 Introduction

Chapter four provides a quantitative case study of the impact of the internet on organisational culture in the IT industry. The chapter that follows provides the qualitative case study of this topic. Both of these chapters aim to analyse results obtained from the industry in order to determine whether there was an effect and, if so, what this effect is.

The method in which the study was conducted is explained so that the relevance of the results can be clearer when these are analysed in section 4.4 of this chapter. Key points of the internet and email policies of organisation A and B are reviewed and are discussed in section 4.4 along with the results obtained from the case study. Since organisation D is composed of a mixture of organisations and is simply named “organisation D” for the purpose of this case study there is no internet or email policy that is available for comparison (this is explained further in section 4.2.3). The internet and email policies are examined to determine commonalities between the results of the study and the policies or to determine whether a gap exists between what the organisations practise and what their policies are.

The results of the questionnaires are discussed, specific questions are compared to others and organisation A’s responses are compared to those of organisation B. Graphs that reflect the results of the questionnaires are referred to and can be found in this chapter as well as in Appendix C. A graph has been compiled for each question in the questionnaire in order to ensure that the results are clear and can be referred to.

4.2 Method of study

The quantitative part of this study was conducted by means of questionnaires. The questionnaire results were examined by the University of Pretoria’s Department of Statistics: Statomet. This section addresses the questionnaire

– its objectives, structure, distribution – as well as the concerns and issues it raises. Examples of these are the non-response of part of the group to whom the questionnaire was distributed, distribution to diverse numbers in each group and reaching a common understanding of the terms used in the questionnaire. The role of Statomet and the processes that were undertaken in order to reach the final results are also described in this section.

4.2.1 Objectives of the questionnaire

The questionnaire can be found in Appendix B. It has been compiled to address the topic of whether the internet had an impact on organisational culture in the IT industry. The objectives of the questionnaire are to: gather information on different perspectives of the internet's impact on organisational culture, determine how employees make use of internet and email facilities at the workplace – both for business and personal use – and determine what impact this has on organisational culture. Another major objective of completing the questionnaire case study is to compare these results to the results of the interviews – i.e. compare employee opinion to that of management.

4.2.2 Structure of the questionnaire

The questionnaire addresses these objectives through five sections. The first section, personal details, gathers information such as the respondent's name, occupation, level, and contact details. This is in order to be able to analyse whether a respondent's level or occupation influences the answers given to the other questions. The contact details are captured so that feedback can be sent to the respondent, should they have chosen this option in the last question in the questionnaire.

Section B's focus is on the business use of the internet. It gathers information on whether respondents use the internet and email for work purposes, whether colleagues of the respondents have more or less time available since they started using the internet and email, the frequency and duration of use of internet and email facilities and whether or not the internet and email have

made work simpler.

The third section collects information on the personal use of email in the workplace. It seeks to determine duration and frequency of use, whether this impacts on productivity, what type of non-work related site attracts the most attention in the workplace, the perception of privacy while using these facilities in the workplace, the awareness of an internet policy and measures taken towards those who transgress the rules and regulations set by the internet policy.

Information on the organisation's culture is gathered in Section D. As this section has a number of open-ended questions it provides more of a qualitative study within the questionnaire. Respondents are asked to describe the organisation's culture through: a direct description of the culture and subcultures, an explanation of what is important to the organisation, as well as an account of the types of behaviour that have led to the organisation's culture becoming what it is. Questions are also asked to determine whether changes in culture have occurred in the past and what triggered these changes.

Finally, section E reviews the attitude towards the internet and email in the organisation. It establishes whether the respondents feel that the internet and email have changed their organisation's culture and improved the quality of their lives at work. The organisation's attitude towards the use of the internet and email is also ascertained in this section as the provision of training and change management is raised. The respondent's responsibility towards the organisation is evaluated through the last two questions as whether the respondent has a disclaimer on their email or downloads virus protection software and patches regularly impacts on the organisation's reputation and operational risk.

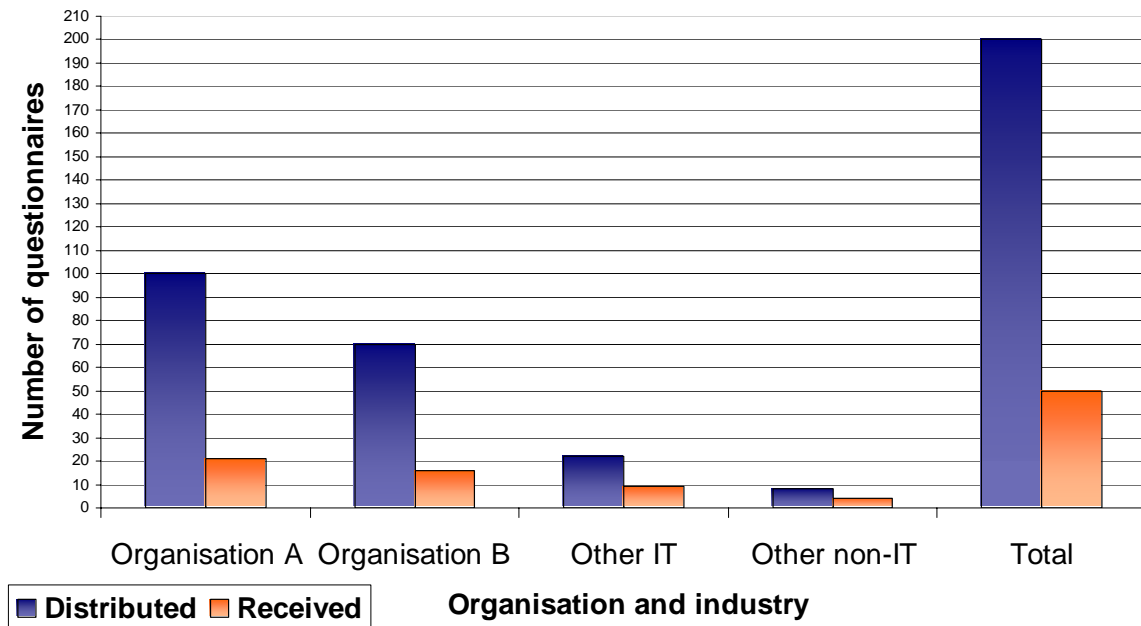
4.2.3 Distribution and receipt of questionnaires

Questionnaires were distributed by means of email to a group of employees

from organisation A and organisation B as well as to some individuals outside of these organisations. The group outside organisation A and B forms organisation D (organisation D has been used as organisation C has already been referred to in chapters one and five). In order to evaluate whether the results of the questionnaires are specific to the IT industry and organisation A and B, individuals outside of these organisations and even some individuals outside of the IT industry were approached to complete questionnaires. These results are compared with those in the IT industry and organisation A and B.

Approximately two hundred employees were approached in total. Of these approximately one hundred are from organisation A, seventy are from organisation B, and thirty are from other organisations – a mixed group. Of this mixed group approximately three quarters (i.e. 22 or 23) are from the IT industry. The other industries include: actuarial, accounting and auditing, mechanical engineering and statistical industries.

Questionnaires were received either via email or in paper-format as some of the respondents preferred to print a questionnaire and complete it manually. Fifty responses were received. Of these responses thirteen are from organisations other than organisation A and B, of which four are not from the IT industry. The largest response was from organisation A: 21. 16 responses were received from organisation B. Both organisation A and B fall within the IT industry category. The distribution and receipt of questionnaires are depicted in Graph 4.1.



Graph 4.1 Distribution and receipt of questionnaires

4.2.4 The effect of non-response

Since only a quarter of the approached employees responded to the questionnaire it must be asked whether the employees who were approached but did not respond would have had answers that are materially different to the responses received. If it is believed that these answers would differ greatly then the result of the quantitative study cannot be said to be totally accurate: the result will be just an indication of the typical responses received from these groups.

It is, however, believed that the responses received should not differ greatly from the norm and are a fair reflection of the typical response, therefore giving a fair indication. This is because the employees within the groups are homogeneous in some aspects – they share specific commonalities. For example, the employees within the same groups (excluding the mixed group): work in the same environments, for the same organisation and managers, work towards the same goals, are in the same broad income group, and share characteristics that made them decide to work for a particular industry and organisation – i.e. they share a common work culture. The assumption can

therefore be made that the responses of the employees who did not complete questionnaires may differ slightly but not greatly from those who did.

4.2.5 The effect of distribution to diverse numbers of employees in each group

Another factor that influences the accuracy and validity of the results is the fact that the questionnaire was not distributed to an equal number of employees in each of the groups – for example, 100 employees in organisation A, 70 in organisation B, 22 employees in other IT organisations, and eight in other non-IT organisations.

This influences the results in that each of the groups are not equally represented. When examined from a statistical point of view the results will reflect counts in each group that are lower than expected, not allowing for an accurate statistical analysis. This is explained further in section 4.2.7. The results therefore only serve as an approximate indication and not as fact.

4.2.6 A common understanding of the questionnaire

It was a concern that inconsistent results could be the outcome if respondents did not apply the same meaning to terms used in the questionnaire. To combat this issue a list of definitions was supplied with the questionnaire. Terms were defined according to the context of the questionnaire and topic although other definitions for the terms may exist for another context. Terms such as: consulting environment, internet policy, netiquette, organisational culture, organisational culture due diligence, software environment, and subculture are explained in the list. This list can be found with the questionnaire in Appendix B.

4.2.7 Statistical methodology

The Department of Statistics (Statomet) assisted with the analysis of the results of the questionnaire. The questionnaire first had to be converted into results that are meaningful to the department. This was done by allocating numbers to each of the options of each of the questions in a Microsoft Excel

spreadsheet. Where questions are open ended and do not have options for the respondent to tick, similar answers were grouped and numbers were allocated to each of these groups. Open-ended questions with answers that could not be sorted into groupings have been included in the study, but are only discussed and not tabulated or compiled into graphs. They form part of the qualitative part of this quantitative chapter.

Statomet used a system called SAS (Version 8) to complete a frequency analysis of the results. The frequency analysis includes information such as: frequency, percent, cumulative frequency, cumulative percent and missing frequency. The frequency indicates the number of responses to a particular question. The percent reflects the percentage of the total that the response is, for example: 21 out of 50 responses for organisation A as the place of work indicates that 42% of the respondents work for organisation A. The cumulative frequency and cumulative percentage simply add the frequency and percentage up to reach a total of 50 and 100 respectively. Where these totals are not reached there are missing frequencies. In mandatory questions the frequency should add up to the number of respondents, i.e. 50. A missing frequency indicates that not all of the 50 respondents answered the questions. There were missing frequencies for some of the questions that are not mandatory.

The groups of respondents were sorted according to organisation A, B and C for the sake of the analysis. Organisation A and B being the organisations described in chapter one and further elaborated on in the next chapter. Organisation D serving to capture the sum of the respondents who do not belong to organisation A or B.

With the frequency analysis, Statomet also compiled an analysis of the relationships of the results between the three organisations for each question. For example, for question five “how useful do you find your organisation’s intranet?” six respondents from organisation A, eight from organisation B and seven from organisation D find it extremely useful. For the same question, 13, seven and four respectively find it somewhat useful and only one from both

organisation A and C do not find it useful at all. Three respondents did not answer the question. The assumption can be made that this was because of carelessness while completing the questionnaire or else because they do not have an intranet in the organisation (therefore falling in organisation D's category as both A and B have intranets).

In Statomet's analysis a number of the relationship tables give a warning that a percentage of the cells have expected counts less than five. The expected count, or chi-square test, is the calculation of what is expected in a cell if there is no difference in the organisation, i.e. if all three of the organisations' cells were to be equal. This warning is a result of the probability (p-value) being equal to less than 0,05, therefore indicating a statistically significant difference. In turn, this is the result of the way in which the questionnaire was distributed – i.e. to diverse numbers of employees in each organisation grouping. This factor was explained in section 4.2.5.

The frequency analysis and relationships are used in the analysis of results, section 4.4.

4.3 Internet policies

The internet policies of organisation A and B are reviewed so that they can be compared to the results obtained from the questionnaires.

4.3.1 Organisation A's internet policy

Organisation A has a short to-the-point ten-page internet and email policy that is comprehensive. A number of its statements do leave loopholes for employee misconduct and some statements are incongruent with the behaviour and declarations of management. For example, it states that playing games at work is forbidden, however, at some of organisation A's business units this is not restricted but is only limited to times when this does not interfere with work. The policy is available on the intranet/extranet but it is very difficult to find. At the time of the study technical difficulties such as broken links and pages that constantly time out prevented successfully

downloading the policy. The policy was eventually obtained directly from the IT manager.

The policy's scope is to provide a consistent set of regulations for all electronic mail and internet connectivity practices within the organisation. The policy applies to all personnel who use or access – either directly or indirectly – the internet, intranet or any public networked or dial-in system (e.g. internet, email, bulletin boards, real-time chat sessions, etc.). It also applies to all information providing and acquiring activities. Examples of these are: sending and receiving email, up and downloading files, creating personal web pages, asking and answering questions, surfing the world wide web and reading newsgroups.

Objectives of the policy are to: create standards for employees to adhere to so that the organisation's image is protected, document standards of professional conduct for use of the internet, intranet and email, implement policies to assist in the prevention of malicious software entering the organisation's network.

Prohibited activities are listed as: downloading, transmitting and possessing pornographic and sexually explicit materials, transmitting libelous, slanderous, threatening or abusive messages, sending or participating in chain letters and proprietary information. A special note has been added concerning copyright laws: employees are warned that the internet is like a bookstore "you are free to browse as much as you like, but you are not welcome to make copies" (Organisation A, 2002).

Another section called "strictly forbidden activities" lists the prohibited activities listed above as well as others that could lead to instant dismissal. Other activities include, amongst many others: accessing confidential information that is not within the scope of work, misusing, disclosing without proper authorisation or altering organisation or personnel information, unauthorised decryption or attempt at decryption of any system or user passwords, willful or negligent introduction of computer viruses, Trojan horses

or other destructive programmes, deliberate pointing or hyper-linking of the company web sites to other internet or world wide web sites whose content may be inconsistent with or in violation with the aims of the policies of the organisation, solicitation of non-organisation business or any use of the email and internet systems for personal gain, playing of any games, participation in online contents or forms of gambling and streaming audio.

Since organisation A works with its own and its clients' intellectual property (IP), client and confidential information rules are explained. The policy states that when an employee communicates via email or any public computer system all of the organisation's existing professional standards for written communications apply. These standards are not available on the intranet, nor are they referenced in the policy, however, the policy does specify netiquette guidelines.

A disclaimer is automatically attached to the end of every email sent from the organisation's email account. However, since many of the employees at organisation A are based at client sites they send emails through the client organisation's email account. These emails still contain the name of the organisation in the automatic signature of the employee. Therefore organisation A's disclaimer will not be attached to the majority of emails sent by their employees with the organisation name on it.

The policy states that accessing the internet and other public computer systems for non-business use is generally not allowed when using the organisation's access account or equipment. The employee is asked to contact the organisation's help desk should an exception occur.

It is explicitly stated that any messages created, sent or retrieved over the internet or email belong to the organisation and should be considered public information which may be monitored and controlled at any time. It is mentioned that electronic mail tape backups are created and are subject to the legal discovery process and may be subpoenaed. A monitoring tool is used to monitor unrelated business activity as well as trap harmful intrusions

such as viruses, executables and other attachments. Organisation A reserves the right to regularly publish a list of the top internet sites visited and the top internet users.

The security section of the policy warns employees that the internet is not a secure environment and that they should never assume that activities are private. The employee is warned that email messages could even be re-distributed to large audiences.

Actions that lead to disciplinary action or criminal or civil proceedings are described but the actual steps taken in disciplinary action are not.

4.3.2 Organisation B's internet policy

Organisation B has a number of policies and regulations that, although at first glance seem intimidating, can easily be found on the intranet. At the time of the interviews and investigation of the policy (November 2002), it was found that most of these policies were updated in October 2002. Policies exist on information security, the internet and email. Regulations include: access control, information confidentiality, information integrity, information security, intellectual property rights, public representations, reporting and security, privacy, email code of conduct and personal use of the internet and email.

Regulations relate to the internet and email policies as they govern employees' rights to access the organisation's systems and software and how they make use of the organisation's information.

Access control regulations include rules on user authentication, internet service providers, establishing network connections and establishing new business. Information confidentiality forms part of the internet policy and consists of rules about information exchange, security parameters, posting of materials and message interception. It deals with any activity that may result in the organisation's information privacy being compromised. Information

integrity covers topics such as information reliability, virus checking, user anonymity and web page changes.

The information security policy details the roles and responsibilities of information security employees. It lays out who may have access to information, how risk assessment and analysis is conducted on information, what security methods are used, people, process and system aspects of information security as well as the dependence on information assets.

Intellectual property rights are discussed according to copyright and publicly writable directories. This includes software vendors' licence agreements and all materials on the internet. The policy advises that all materials on the internet be treated as copyright until express consent is given that the material may be used.

Public representations construe external representations, postings and inadvertent disclosure. Employees are advised to clearly indicate that their opinions are their own and not that of organisation B's whenever represented on the internet (in chat sessions and other offerings). The policy warns employees that flaming or similar written attacks are strictly prohibited. Organisation B states that it has the right to remove messages sent to internet discussion groups, electronic bulletin boards or other public forums if management deems the messages to be inconsistent with the organisation's business interests or policy. On the topic of inadvertent disclosure the policy states that employees must first consider whether the posting will put the organisation at a competitive disadvantage before placing comments on public news groups. Employees are informed that several separate pieces of information can be pieced together by a competitor to form a picture revealing confidential information and although this attitude is in conflict with the prevailing internet culture of openness, to avoid this mosaic picture emerging for competitors, employees should be reserved rather than forthcoming.

The internet policy even describes the way in which security problems must be reported. It first details examples of when security problems arise, i.e.

when information is lost, disclosed or stolen due to unauthorised use of or access to resources. Then it describes how to alert the information security manager. False security reports are also discussed and employees are warned not to fall prey to one of the many hoaxes that are forwarded via email – it states that these messages must be sent to the information security manager who will deal with them in the appropriate manner.

The policy reminds employees that they do not have default privacy protection from the organisation – the internet is not a secure environment. In addition to this, organisation B reserves the right to, at any time and without notice, examine electronic messages, internet activities and files that are stored or distributed from the organisation's assets. Reports on email and internet activity are routinely given to department managers in order for them to keep incremental costs under control. The policy also states, however, that it is not a rule that regular content and usage of electronic communications takes place but that it may occur to support operational, maintenance, auditing, security and investigative activities.

The email code of conduct is a two-page document that has the objective to ensure the efficient use of email for business purposes. It sets out guidelines that are intended to increase productivity and consideration for colleagues' time in the workplace. For example, it suggests compiling an executive summary as part of an email message, it reminds email senders that it is better to speak to a person than to email them – especially if the other person is within walking distance as not doing this means that email is used as a barrier to personal contact, it makes the recommendation that it is better not to carbon copy (CC) numerous other people when having an argument or confrontation with a colleague and it also states that not replying timeously to emails is rude. There are a number of practical guidelines and even email housekeeping tips that, if adopted by email users in the organisation, will achieve the objective of increasing productivity and decreasing the waste of time spent on email. The housekeeping tips include cleaning out the mailbox from time to time and getting to know the email application properly to get the best fulfillment out of it.

An agreement that the employee is aware of the fact that email is a tool and that he/she commits to refrain from specific banned activities (e.g. emotional responses or flaming, sending offensive or harassing statements) has been placed at the end of the code of conduct. However, there is no place for the employee to sign. It is therefore implied that the employee agrees with the statement once made aware of it unless a comment is sent to the head of information security.

Employees at organisation B may use the internet for personal purposes as long as it: is not during the organisation's time, does not pre-empt the organisation's business, and the incremental cost of the usage is negligible. Organisation B reserves the right to block sites to prevent employees from connecting with non-business websites during office hours. The policy points out that even where a site is not blocked it may still be banned.

Organisation B will take disciplinary action against employees who do not comply with its policies and regulations. Disciplinary action may include: counseling, verbal or written warnings, denial of access to premises or systems, suspension, dismissal, or summary dismissal.

4.4 Analysis of results

The results of the questionnaires have been examined section-by-section and question-by-question according to the layout of the questionnaire. This can be found in Appendix B.

The question of which organisation and industry the respondent belongs did not form part of the questionnaire. The organisation and industry of respondents is depicted in Graph 4.1 – Distribution and receipt of questionnaires. The majority of the respondents are from organisation A and the IT industry.

4.4.1 Section A: Personal details

- **Occupation**

Only two respondents did not answer this question. Occupations of respondents include: an actuarial assistant, an associate, an auditor and tax consultant, five business analysts, 17 consultants, four developers, three engineers, an information manager, an IT manager, two process integrators, four product integrators, a product manager, a programme manager, a project coordinator, three project managers, one research manager and a statistician.

The majority of the occupations fall within the IT industry. Others are familiar occupation descriptions, e.g. actuarial assistant, statistician. A number of occupation descriptions arise from the new methodology that organisation B employs, e.g. product manager, product integrator and process integrator.

- **Grade or level**

Ten respondents indicate no grade or level, nine indicate top management, 17 state that they belong to middle management, and seven state that they are in junior management and another seven indicate they are juniors.

This spread of the level is suitable for the study since the majority of the respondents belong to middle management level. One of the objectives of this study is to compare the perceptions of the employees who make use of the internet and email (captured in the questionnaires) to those of the employees who perform the management of these resources (captured in the interviews).

4.4.2 Section B: Internet and email use for business purposes

- **Description of the use of the internet and email**

All fifty respondents state that they use the internet and email for work purposes. Most of the respondents describe that they use the internet and email for all activities, including: internal and external communication, research, marketing of the organisation, receiving queries, getting electronic sign-off of documentation, capturing, submitting and approving timesheets and sourcing internal contact details. One respondent even answered

“everything” when asked to describe what he/she uses the internet and email for. This respondent is part of senior management at an IT organisation.

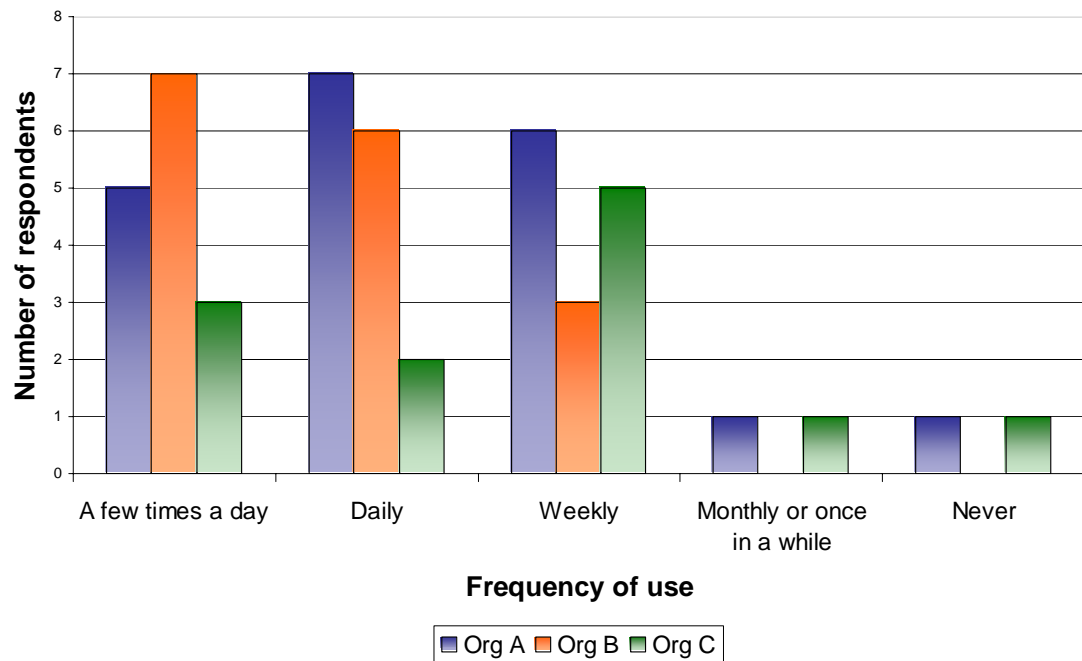
- **More or less time available as a result of use of the internet and email**

94% of those who responded to this question feel that their colleagues who have internet access and make use of email have more time available as a result of the internet and email. This could be because 60% of respondents use the internet for business for less than an hour a day and 42% use email for only two and a half to five hours a day. None of the respondents use the internet for eight hours a day or more and only 2% use email for eight or more hours a day. This 2% consists of a project coordinator, so the assumption can be made that this is use of email on and off throughout the day, not continuously – and not just for email but also for scheduling of meetings and viewing of calendars.

- **Use of the intranet**

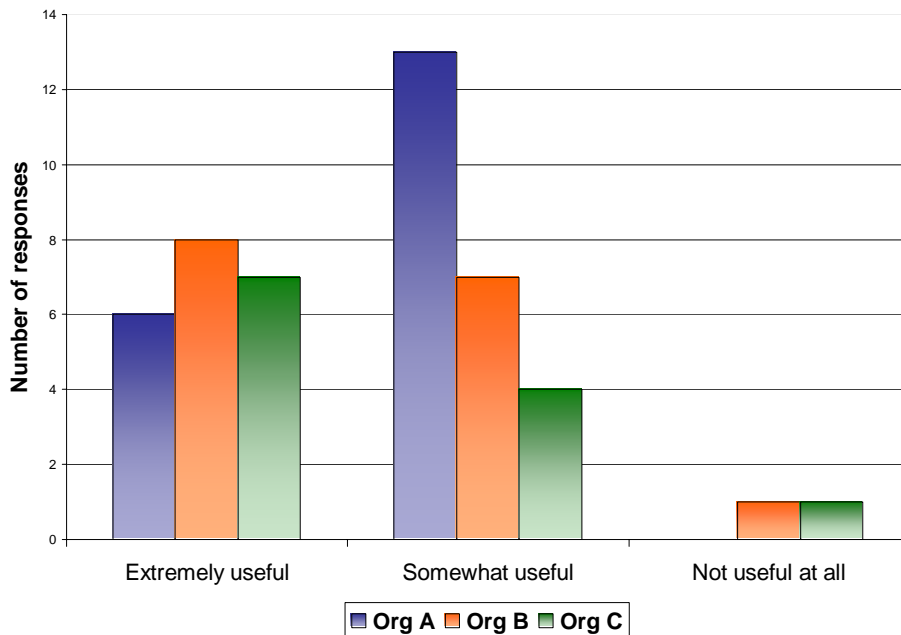
Only 30% of respondents state that they use their organisation's intranet a few times a day and the same amount say they use it daily. 4% never make use of the intranet. One of these respondents works for organisation A, the other for organisation D, both are in the IT industry. In correlation to this, 51% of those who responded find the intranet somewhat useful, 45% find it extremely useful and 4% do not find it useful at all. This 4% is comprised of two respondents, the one is the same respondent who indicated that he/she never makes use of the intranet. The other respondent is a junior or trainee from organisation B and makes use of the intranet weekly. When the results from organisation A, B and C are compared it is clear that organisation B makes use of the intranet the most times in a day. This is evident from Graph 4.2. This could be because, at the time when the survey was conducted, there were 27 000 employees who worked for organisation B (this count has since grown to over 35 000) and have their contact details listed on the intranet: a cause for respondents to frequently refer to the intranet to lookup details. Specific product information is also available on organisation B's intranet for reference both internally, e.g. when designing enhancements to a product,

and externally – to provide information to clients.



Graph 4.2 Frequency of use of intranet

The usefulness of the intranet is depicted in Graph 4.3. It can be seen that organisation B's employees not only make use of the intranet a number of times in a day but that they also feel that the intranet is extremely useful. Organisation A's employees feel that the intranet is somewhat useful. This could stem from the fact that the majority of organisation A's employees need to make use of the extranet and not the intranet. Organisation A's extranet is extremely slow and unreliable as it must be accessed via the internet.



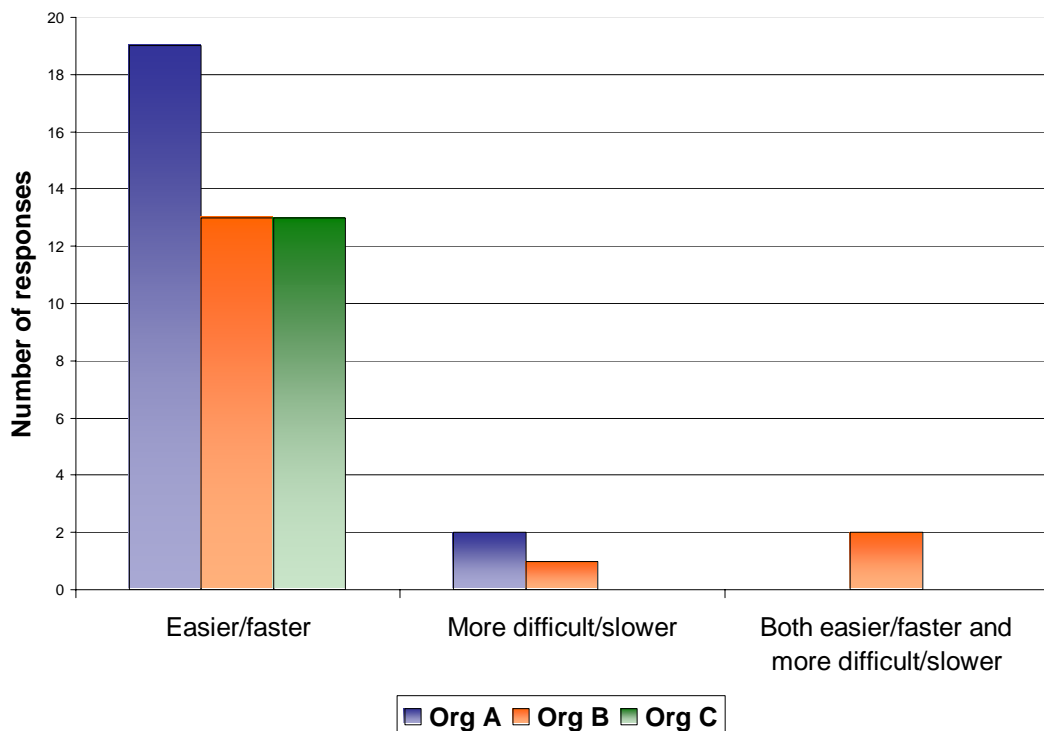
Graph 4.3 Usefulness of the intranet

- **The effect of the internet and email on the speed and ease of work**

The use of the internet and email has made the majority – 90% – of the respondents’ work easier and faster while 6% state that it has slowed their work down and made it more difficult. 4%, all from organisation B, state it has made it both easier and faster and more difficult and slower, i.e. in some aspects their work has been made faster and easier by the internet and email and in other ways it has not. An example of this is that although it is easier and faster to communicate via email with a person who is geographically far away, many people have started to use email as a means of communication with people who work in the same building as they do. This creates additional messages to respond to, which may take more time than a quick conversation with the person. People also tend to take less care with emails than they do with faxes, most likely because it is much quicker and easier to send an email, this means that a number of iterations may take place before an email is understood and resolved. Also, organisation B is rather a bureaucratic organisation where work revolves around the process. As a result, email may be another tool that both helps and hinders the speed of work.

Graph 4.4 reflects that very few respondents from organisation B and C and no respondents from organisation A feel that the internet and email have

made their work more difficult or slower. The majority of organisation A’s respondents are convinced that the internet has made their work faster and easier. A reason for this could be that a number of organisation A’s employees work at client sites and need to communicate with a number of different clients as well as internal organisation A staff who are not based at the same client site. Use of email will make this type of work easier as the internet and email make it possible for an employee to have a mobile office.



Graph 4.4 Use of the internet has made work easier/faster or more difficult/slower

- **Section conclusion**

From the results above it can be concluded that the internet and email have significantly changed the way in which work is performed. All respondents make use of the internet and email for business purposes, it is used for almost everything in the organisation – from communication to marketing to administrative activities – and it has infiltrated many areas of work. Despite this, respondents feel that they have more time available for each other and more than half of the respondents only make use of the internet for under an

hour a day. Email is time consuming and expends between two and a half and five hours of 42% of respondents' time, however, respondents feel strongly that use of the internet and email has enabled them to work simpler and faster. This leads to a final conclusion that the internet and email have had a positive effect on the way in which the organisation performs work.

4.4.3 Section C: Internet and email use for personal purposes while at work

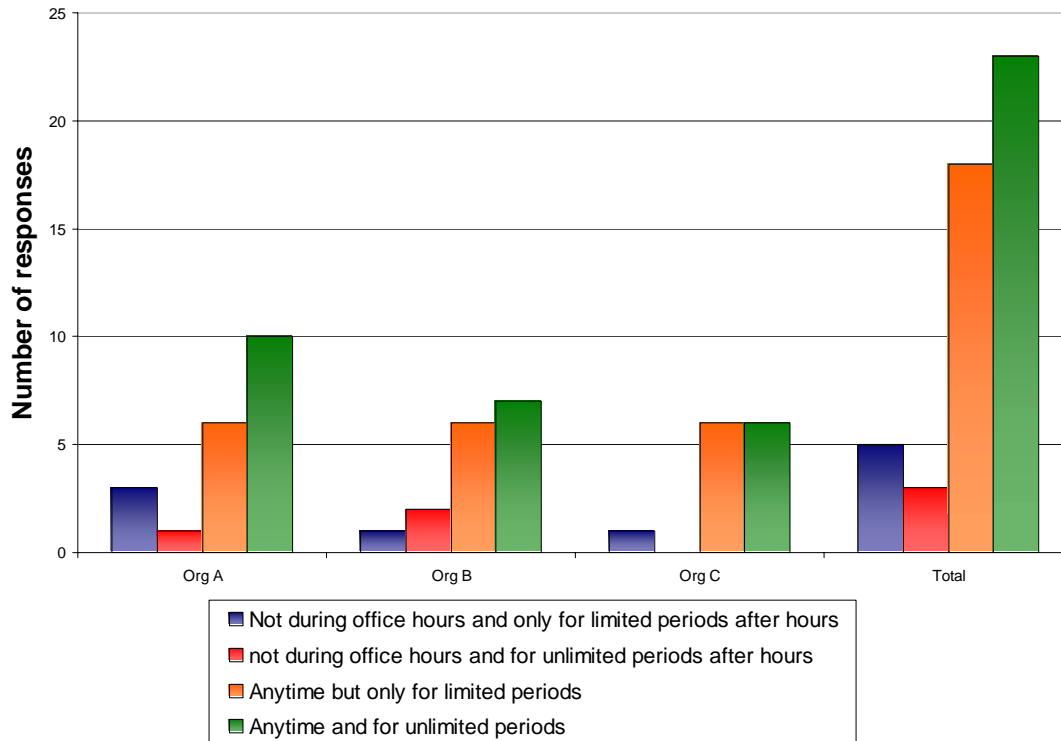
- **Personal access to the internet and email at work**

47 of the 50 respondents have access to the internet at work for personal use. The three respondents who do not have internet access for personal use at work are all from organisation A and work at client sites. It can be assumed that these three employees do not have internet access at client sites and spend the duration of their office hours at these sites. Within this group 46% state that they may use the internet for personal purposes at any time and for unlimited periods. 36% say that they may use the internet at anytime but for limited periods only, and 6% state they may not use the internet during office hours and may use it for unlimited periods after hours. 10% of respondents indicate that they may use the internet after office hours and only for limited periods. Organisations A, B and C do not differ vastly on their responses for this question. The results of this question are depicted in Graph 4.5 – Duration of internet use allowed during office hours.

- **Sending and receiving of personal email during office hours**

Only 10% of the respondents state that they may not send or receive personal emails during office hours. The majority of respondents who feel this way belong to organisation B. All work in the IT industry, one is part of top management, another part of junior management and the other is a junior. Two of the respondents did not enter a grade. Organisation B's internet and email policy does not state that personal emails may not be sent or received during office hours, however, it does state that these should not be deemed private. It is possible that the respondents would prefer to send and receive

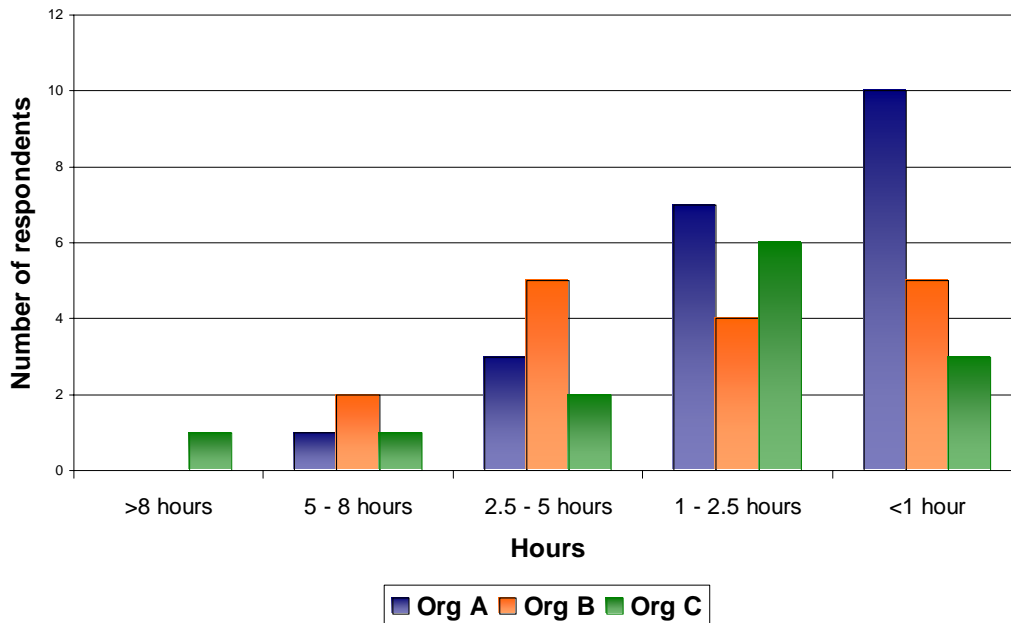
private email and they are aware that they are not able do this during office hours or from office facilities, it would therefore not be permissible.



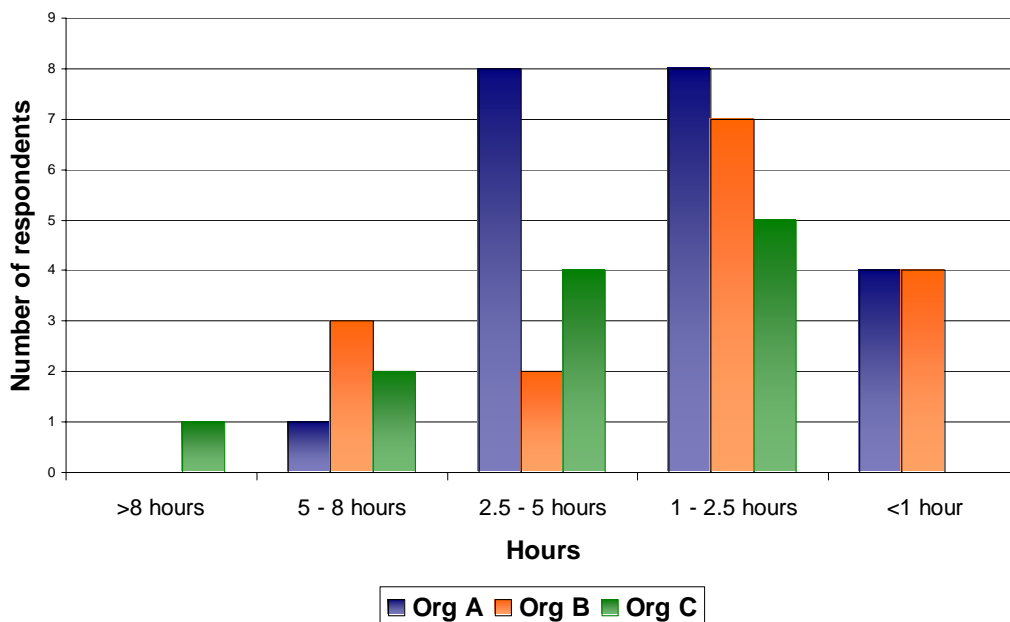
Graph 4.5 Duration of internet use allowed during office hours

- **Time spent on the internet and email for personal purposes**

The majority of respondents from organisation A spend less than one hour on the internet for personal purposes when their workload is normal but spend between one and five hours when the workload is low. Organisation B also spends more time on the internet when their workload is low. The majority of organisation D spends the same amount of time on the internet when their workloads are normal and low (one to two and a half hours). However, this figure doubles for 4% of respondents who indicate that they spend between two and a half and five hours when their workload is low. Graph 4.5 and 4.6 demonstrate the amount of time spent on the internet when the workload is normal and low.



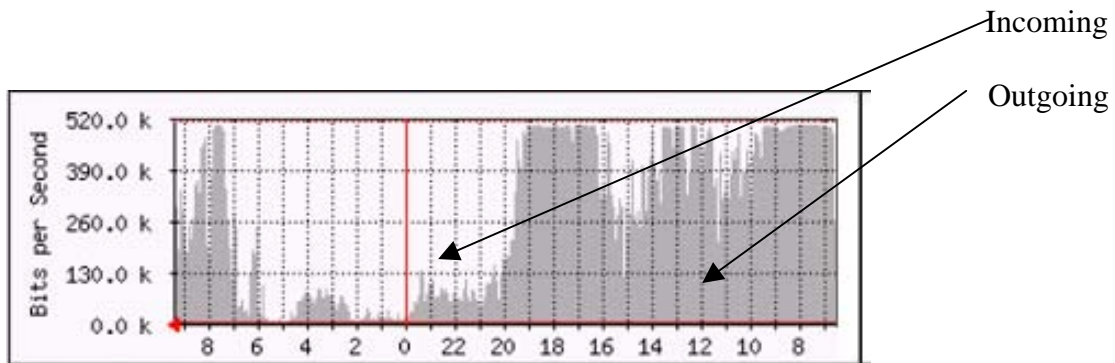
Graph 4.6 Amount of time spent on the internet and emails during a normal workload



Graph 4.7 Amount of time spent on the internet and emails during a low workload

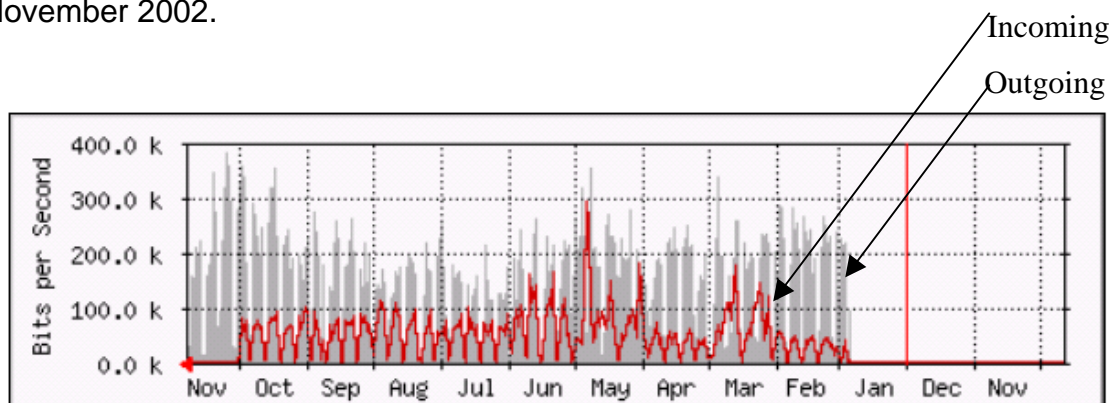
Organisation A provided a figure (Graph 4.7 – Traffic analysis) that shows the incoming and outgoing traffic on the server for the 26th of November 2002. The incoming traffic is indicated in gray and the outgoing traffic in red. This figure reflects the maximum kilobits per second of incoming traffic is 507.5,

the average is 222.9 kb/s. The maximum out is 4776.0 bits per second and the average is 120.0 b/s. From Graph 4.7 it is evident that there is more outgoing traffic than there is incoming traffic on this particular day.



Graph 4.8 Traffic analysis for 26 November 2002

When this is compared to the traffic analysis for a year it can be seen that even on an annual basis organisation A sends more email and performs more uploads than it receives emails and performs downloads. The traffic analysis for a year can be seen in Graph 4.9 – Traffic analysis for November 2001 to November 2002.



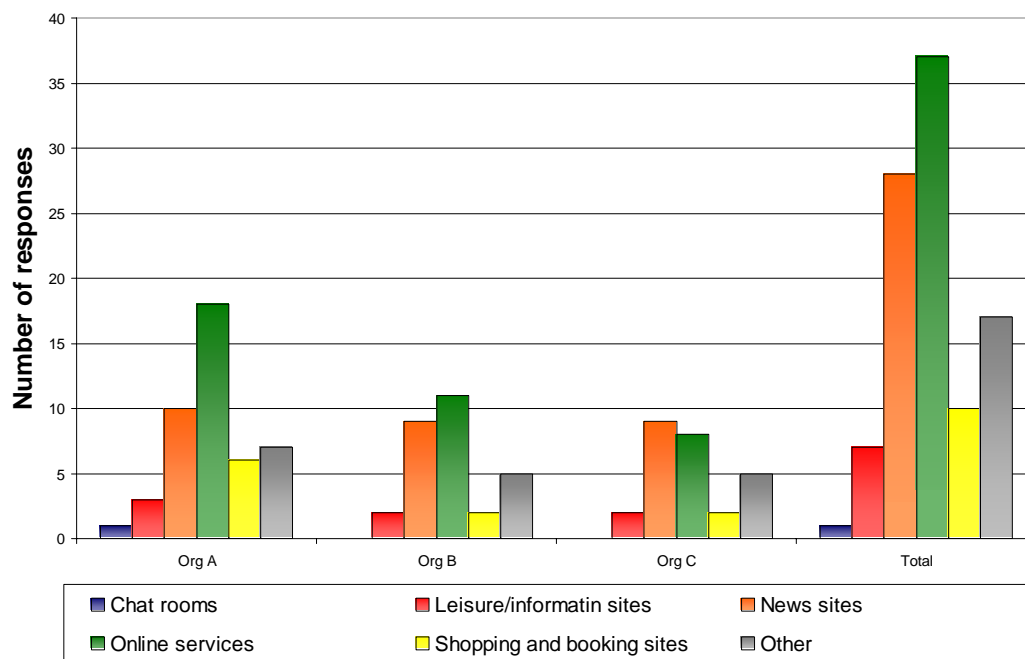
Graph 4.9 Traffic analysis for November 2001 to November 2002

Figures 4.1 and 4.2 can be interpreted as an indication of the time, in bits per second, that organisation A spends on sending emails and uploading information to the internet. If these figures are interpreted it can be said that organisation A spends less time receiving and responding to emails and downloading information than it does sending emails with large attachments and uploading information to the internet. Although organisation A spends time downloading information from the internet – for example, software, virus protection patches, documents and information – it spends more time

uploading information to the internet. Uploads include information sent to their own website and to their internet clients' sites from their e-business division. Although organisation A's e-business division is not its main business it evidently needs to upload to its client internet sites frequently.

• **Sites visited most frequently**

The majority of respondents make use of online services and news sites the most for personal gain while at work. This can be viewed in Graph 4.10 – Frequently visited sites. This is more or less similar for all organisations in the study. Organisation A has the only respondent who makes use of chat rooms. This respondent does not feel that the personal use of the internet and email has hindered his productivity. 68% of respondents feel that the personal use of the internet and email do not hinder their productivity.



Graph 4.10 Frequently visited sites

American Management Association (AMA) completed a survey in April 2001 on electronic monitoring and surveillance to gain insights into organisational policies and practices in this area (American Management Association, 2001). They discovered that only 38% of the organisations they surveyed used blocking software to prevent internet connections to unauthorised or

inappropriate sites, in many organisations restrictions are enforced through monitoring alone. The top restricted sites in these organisations are sexually explicit websites. Table 4.1 – American Management Association’s top restricted sites – shows what percentage of the organisations surveyed state restrictions to particular types of sites in their internet policies and what percentage enforce the restrictions of the policy by monitoring access to this type of site.

Table 4.1 American Management Association’s top restricted sites (adapted from American Management Association, 2001)

Restricted websites	Written internet policy		Active monitoring	
	Yes	No	Yes	No
“Adult” sites with explicit sexual content	81.5%	59.6%	80.3%	66.1%
Game sites	29.2%	17.2%	28.8%	20.0%
Entertainment sites	19.6%	11.1%	19.4%	13.0%
Sports sites	16.4%	9.1%	16.6%	9.6%
Shopping sites	15.8%	4.0%	15.6%	6.1%
Other sites	12.2%	9.1%	12.8%	7.8%

- **Privacy of the internet and email in the workplace**

Most of the respondents consider their personal use of email and the internet while at work to be private. Table 4.2 reflects that 54% of the respondents feel this way.

Table 4.2 Respondents who consider internet use/email to be private while at work

	Organisation A	Organisation B	Organisation D	Total
Private	11	11	5	27
Not private	10	5	8	23

Slightly more than half of the respondents deem their internet and email use to be private. This is despite both organisation A and B's internet and email policies explicitly stating that use of the email and internet is not private – neither from an internal nor an external perspective. For example, the internet is not a secure environment and both organisation A and B warn employees that emails and internet activities may be monitored from time to time without prior warning.

When asked what they would do if their privacy was invaded by management respondents said that they would feel embarrassed and angry. Some said that they would try to negotiate or at least to understand where they had stepped over the line and what impact this had on their work. Others would seek alternatives to achieve their ends, for example make use of the phone to chat with friends instead of sending emails. One of the respondents said that she would feel very despondent but would not be able to do anything except comply with management's demands. A male respondent stated that there should be no problem with his personal internet and email use while at work and no reason for it to be monitored as he does not view pornographic sites. From these responses it can be concluded that employees feel that they have a right to use the internet and email for personal purposes while at work and that they believe the only concerns for the organisation regarding this are cost, loss of productivity and a concern that employees do not visit sexually explicit sites.

- **Awareness of the internet and email policy**

The fact that employees feel they have a right to use the internet and email for personal purposes while at work raises the question of whether these employees have even seen their organisation's internet and email policy. 12% of respondents are not aware that the organisation has an internet and email policy and five of these six respondents belong to organisation A. Organisation A does, however, have an internet and email policy and makes this policy known to its employees through email updates and by placing the policy on the internet. When new employees join the organisation their attention is drawn to the policy. Most of the respondents in general state that

their attention has been drawn to the internet policy through email notifications and updates. One of organisation B's human resources (HR) managers was approached to explain the procedure whereby employees are made aware of the policy. She stated that when new recruits are briefed about their benefits they are encouraged to visit the intranet where the HR policy and intranet and internet policies reside. In addition to this, every new recruit is compelled to attend an induction programme during which they are trained on how to make use of the HR intranet.

- **Disciplinary measures**

58% of respondents say that when they transgress the internet policy they will face a general warning sent to all staff followed by a verbal warning, then a written warning ending with disciplinary action. Only 13 respondents know of anyone who has had measures enforced against them, they state that the organisation took action by blocking the user's access to the internet and sending a general warning to all staff. Eight of these 13 reveal that the person against whom action was taken had knowledge of the internet policy. An example of an email sent by organisation A's IT manager: "Once again Internet abuse has become a huge problem, as there seems to be a number of staff using the internet for which is clearly non work related (sic). To remedy this situation, we will be redirecting all internet traffic through the proxy server. With all of this in mind, please be aware that all internet access will be monitored to ensure that it is effectively used" (Personal communication, 2002).

- **Section conclusion**

The conclusion can be drawn, from this section, that although internet and email policies are in place all the respondents are not 100 percent familiar with them or with their regulations. Those who are aware of the policies do still try to push their boundaries until they receive warning about abuse. Employees in general feel that use of the internet and email at work is their right and that, unless they grossly abuse the facilities or visit sites of a sexually explicit nature, management has no business monitoring their use.

Respondents do not seem to be completely aware and understanding of the reasons for internet and email monitoring. If they are not aware of the reasoning behind this then it becomes difficult to change organisational culture.

4.4.4 Section D: Organisational culture

The following descriptions have been derived from the first four questions in this section for the organisational cultures of organisation A and B. The organisation D grouping has not been described as it consists of a mixture of organisations and not “organisation D”.

- **Organisational culture description of organisation A**

Organisation A’s respondents feel that their culture is young, vibrant and technology driven. They state that they work hard and play hard. They believe they are: ambitious, eager to get ahead, quality and excellence driven yet at the same are relaxed and casual and do not have issues – organisation A, according to its respondents, is focused on delivery and not problems. The culture is described to be slightly undisciplined and that employees “do what you think is right and the best thing at the time” (Questionnaires, 2002).

The delivery of quality work that is re-usable and which adds value to clients and organisation A is listed as an important characteristic of the organisation. Organisation A’s focus is on selling work and keeping the client satisfied by building long-term relationships. One respondent said that what is important to organisation A is working according to a set methodology – “whatever the flavour of the month is” – and then selling the work (Questionnaires, 2002).

Behaviour and repeated actions that have contributed towards organisation A’s culture are: delivery of quality work, bonuses on projects, recognition and rewards, social gatherings, information sharing and the trust that management places in employees. Actions that have impacted negatively on organisation A’s culture are, according to a respondent, the uncontrolled and unchecked release of cash as a reward or incentive instead of growing a culture of

personal pride and job satisfaction.

Subcultures within organisation A have developed because a number of the employees are consultants and spend 80 – 100% of their time at client sites. They therefore adopt some of the characteristics of the culture of the client permanently and definitely in part while at the client site. Subcultures are present within teams as there is a great sense of teamwork – this is stimulated through the culture whereby teams celebrate reaching milestones or work well done. A slight split has been caused in the organisation as a number of the employees have reached the point in their lives where they are starting families and are not interested in the “work-hard play-hard” mentality that often comes through in the social events. These employees are starting to form another family-oriented” subculture within organisation A’s young culture.

- **Organisational culture description of organisation B**

Organisation B’s respondents describe the culture as: bureaucratic, strict and process, quality and output oriented. The typical organisation B employee is described to be hardworking, competitive and focused on control and procedure. Organisation B’s environment is described by one respondent as highly politicised though another states that he feels the teamwork is strong. “Contemporary conservatism” is the oxymoron used by one respondent to describe the culture of organisation B’s “banking in the 21st century” (Questionnaires, 2002).

Working according to the process, producing quality work while adhering to a methodology, ensuring client satisfaction and ensuring consistent competitive measures are taken to keep organisation B as a major player in a very competitive market are the things that are really important to organisation B.

Behaviour or repeated actions that have contributed to this culture are: penalties for not working according to the process, regular travels to communicate with branches across the country, information sharing sessions, jointly establishing employees’ performance measurements by writing these

into agreements with employees, informal recognition and team events and regular training for all employees.

As organisation B is an extremely large organisation it has branches spread all over the country, many divisions and many employees. This is possibly where their need for emphasis on title, status and position in the organisation stems from. A number of subcultures exist, merely because of the size of organisation B and its geographical distribution. New employees who are brought in bring a young and energetic subculture to the organisation. One respondent states that she experienced a different culture when she was transferred from one division to another. As there is a strong focus on teams and on divisions there are numerous subcultures. The diverse nature of the work in different departments and divisions also results in diverse subcultures. For example, an employee working at a teller in a branch in Bloemfontein subscribes to the branch's subculture, which may be very different to the branch subculture in Cape Town – and these may both be very different to the subculture that is experienced in the technology division in Johannesburg.

Organisation A, B and C feel that management describe their organisation's culture in the same way as the employees do. 49 of the 50 respondents indicate this – the remaining one respondent did not answer this question.

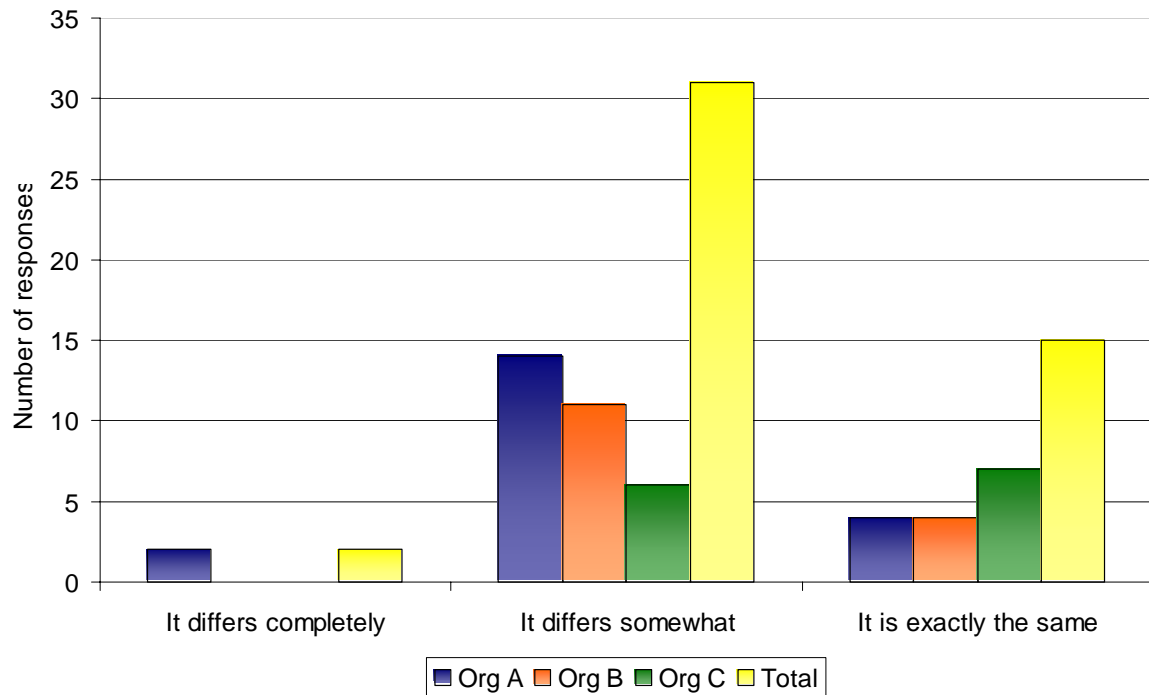
- **The culture of the IT industry**

The IT industry's culture is described by organisation A and B as cutthroat, driven by passion and teamwork, dynamic, young and vibrant. One of organisation B's respondents summarises the culture as "high-flying, somewhat elitist – does not always have its feet on the ground". Organisation D is less complimentary when it comes to describing the culture of the IT industry, possibly because organisation D is not wholly composed of respondents from the IT industry. Organisation D describes the industry as being more interested in providing high-earning competitive products than after-sales service and as looking for short-term quick wins instead of nurturing long-term projects.

95% of those who responded feel that the IT industry culture has been impacted the most by the internet as a result of being at the forefront of internet technology and innovation. The IT industry may also have absorbed much of the blame for the negative side effects of the impact of the internet, simply because it was at the forefront of the e-commerce wave. The internet's impact on the IT industry was first experienced as an upsurge when the e-commerce trend started but was soon experienced as being impacted very seriously as part of the recession. The recession in the IT industry was not simply caused by the slowdown of the e-commerce bandwagon but numerous other factors, e.g. the lull in the American and world economies, the September 11 crashes, etc.

- **The changing of an organisation's culture**

An organisation's culture may be exposed to factors that cause it to change over time: if the organisation grows in size the culture will change as the mix of employees changes, as different things become important to the organisation at different stages of its maturity it will also be subjected to change. Graph 4.11 – How organisational culture differs from the way in which it was initially defined – reflects that the majority of respondents feel that the culture differs somewhat to how it was defined before they joined the organisation, i.e. in their interviews. This makes sense as most of the respondents have been working at the organisations for either under a year or between one and two years. Unless there was a serious drive to change organisational culture or unless dramatic factors had influenced the organisations, it could not be expected that their culture would have changed completely.

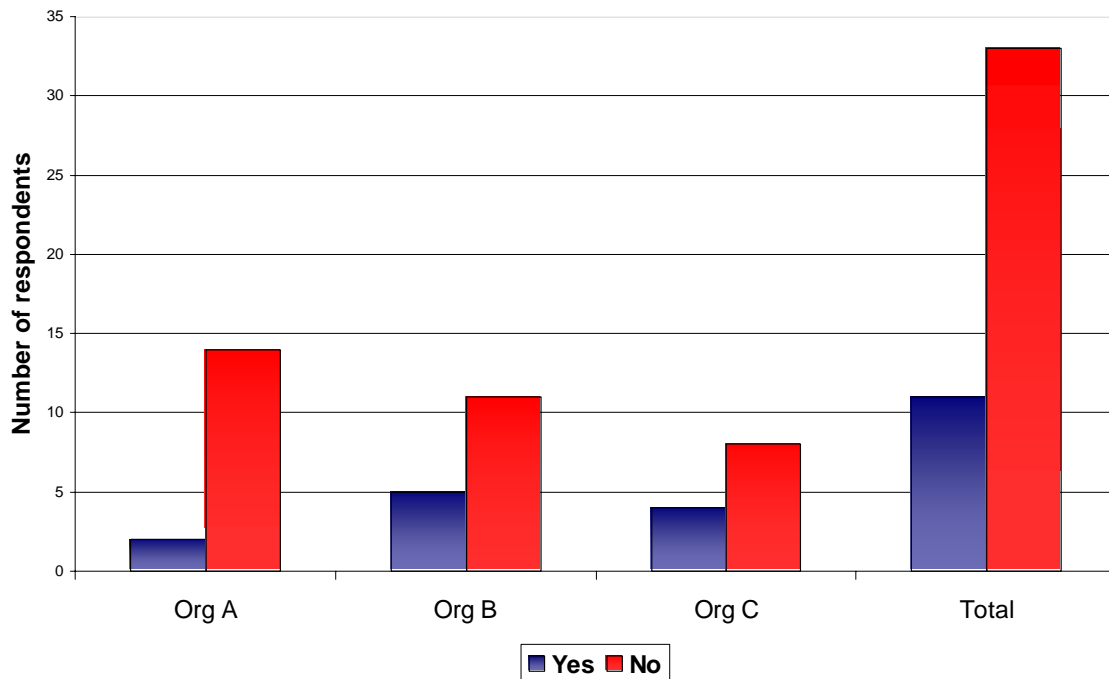


Graph 4.11 How organisational culture differs from the way in which it was initially defined

- **Organisational culture due diligence**

Both organisation A and B were, at the time of the survey, implementing steps to measure their organisation’s maturity stage according to the Capability Maturity Model (CMM). The CMM or Capability Maturity Model Index (CMMI) is a methodology whereby organisations can measure their maturity stage according to a pre-defined set of stages. At each stage different standards must be complied with and the organisation must run more flawlessly than at the last. The first stage is one of chaos, no processes are defined and work is done according to whatever means is possible. The fifth stage is where everything in the organisation, at every level, runs smoothly according to a process and the organisation is free to creatively expand and develop at an advanced pace instead of struggling with routine work. CMM can be said to be a means of conducting a due diligence test on an organisation. CMM was communicated to organisation A through an information sharing session. Organisation B holds CMMI training twice a week. However, the connection between the processes through which work is done and a cultural due diligence have not been explained to these organisations. This is evident through the number of respondents who indicate that a culture due diligence

has not been conducted at their organisation. Graph 4.12 reflects that 36% of respondents at both organisation A and B are not aware of this.



Graph 4.12 Has an organisational culture due diligence ever been conducted?

- The possibility and history of change for the organisation’s culture**
 96% of respondents think that it is possible for their organisation’s culture to change and 94% feel that their organisation’s culture has already changed in the past. Respondents feel that a strategy supported and implemented by management or strong leadership would assist in changing their organisation’s culture. One respondent stated that he feels that any culture can change, the issue is how effectively the change is managed in terms of stakeholder buy-in. Some respondents indicated that they do what the customer demands, others indicated that technology and employees are the catalysts for their organisation’s change. When asked what events triggered changes in the past respondents stated the following: parliamentary decrees, requests from customers for alignment with their value chain and culture, the move to be taken more seriously despite being a young organisation, normal growth of the organisation, the need for new policies and processes as the organisation’s size grew, mergers and acquisitions, retrenchments, abuse of the internet, customer centricity and competitor pressure.

To change or enhance the organisational culture employees are of the opinion that management can communicate and increase the transparency of the organisation. Respondents felt that organisational culture can be changed more easily if management consults employees and actively participates, with the employees, in enabling the change. Typical change management activities such as communication, training, involvement and leading by example need to take place, according to respondents, in order to facilitate the organisational change.

- **Questions eliminated from study**

Questions 28, 31 and 32 have been eliminated from the study. Question 28 has been eliminated as it raises the question of the difference between the consulting and the development environments within the IT industry. Since the population who responded to the questionnaire was not significantly dispersed between the consulting and development environments there is a lack of confidence in the validity of using this response to draw a conclusion to the question. Questions 31 and 32 focus on the internet culture and have been eliminated as the question has arisen whether such a culture exists – i.e. there is no television culture although many people own a television set and watch television. It is believed that questions 31 and 32 are no longer relevant to the study.

- **Section conclusion**

Understanding organisations' cultures assists in the analysis of the internet's impact on organisational culture. This section exposes that organisation A and B have organisational cultures that are vastly different in many respects but similar in others. An example of the similarities is their focus on teamwork, deliverables, customers and quality. On the other hand organisation A is more informal and does not focus on a hierarchy, possibly because the organisation has a flat structure. Organisation B is very process and procedure focused and also places a lot of emphasis on title and position in the organisation. Both organisation A and B's respondents indicate that their cultures have not changed dramatically over the past few years. There seems to be a gap

between how organisation A and B link CMM and culture yet respondents seem to understand that training, buy-in at all levels and consistent communication are integral factors in implementing an organisational culture change. It is interesting that both organisation A and B describe the IT industry culture slightly differently to the way that they describe their own cultures despite that both organisations fall in the IT industry category.

4.4.5 Section E: Culture and attitude towards the internet/email in the organisation

- **Change of organisational culture as a result of the use of the internet and email**

23 respondents feel that the use of the internet and email at work has changed their organisation's culture while 22 feel that it has not. The 23 respondents who indicated a "yes" for this question justified this answer with descriptions.

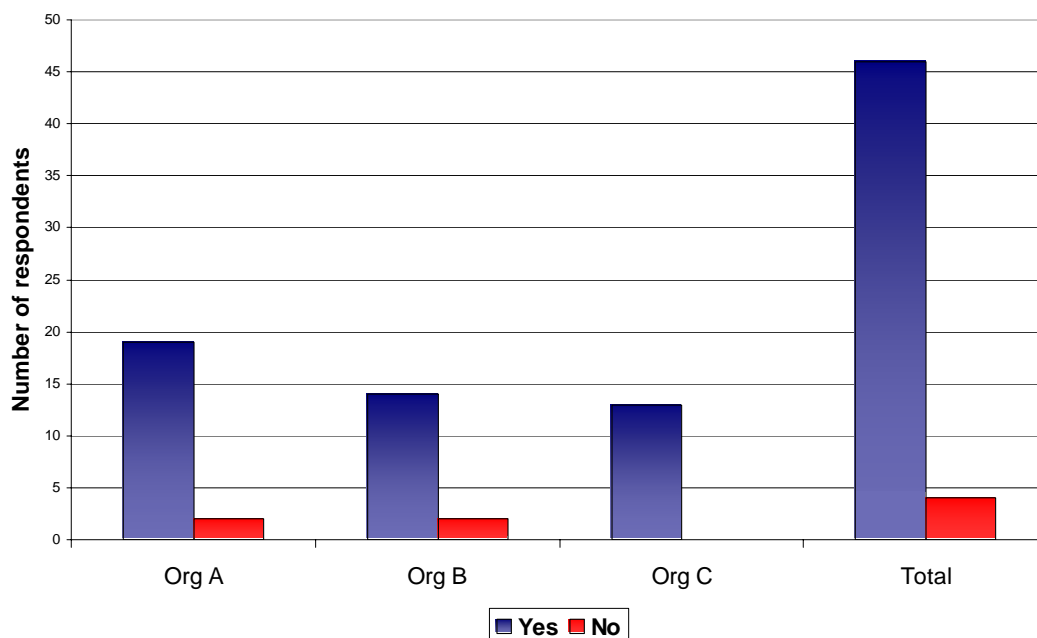
Some of the respondents feel that the use of the internet and email have lead to people spending more time at their desks and less time engaging in conversation and personal communication, jokes are even distributed via email these days instead of being told personally. Respondents also feel that the internet has played a role in the breakdown of close-knit teams and in creating subcultures because it supports an off-site distributed work environment. One respondent feels that the method of communication has changed for the worse in many cases: instead of direct communication people tend to put barriers up and communicate with each other via email. This is even a greater barrier because writing is toneless – email opens the door for ambiguity and misinterpretation. Unfortunately in a highly politicised environment such as organisation B, email is used as a tool where a number of employees are carbon copied on an email to prove a point and where employees would rather send email so that they have a backup as evidence than have a conversation with someone.

Another aspect of the impact on culture is that organisations are now laying down stricter boundaries for employees because of the risks they face in

terms of internet abuse. Although management encourages the use of the internet and email for employees to be proactive and remain competitive they have also learned that the use of these resources should be controlled.

- **Impact on quality of life at work**

Despite the numerous negative reasons respondents give on how the internet and email have contributed towards a hostile and unfriendly work environment the majority of respondents still feel that the internet and email have improved the quality of their lives at work. This is reflected in Graph 4.13 – Has the internet and email improved the quality of life? Only 8% are against a majority of 92% on this question.



Graph 4.13 Has the internet and email improved the quality of life?

- **Change management**

16% of respondents are aware of change management that took place when the internet was first introduced into the organisation. As the respondents mostly describe their organisation's cultures as young it can be assumed that the majority were not yet formally working during the time that the internet was first introduced into the workplace. Ten percent have received training on the internet and 20% are aware of netiquette being promoted or trained on at their organisations. This figure is small since organisation B's email code of

conduct specifies email guidelines with a section on netiquette – more respondents should be aware of this.

- **Responsibility towards the organisation: disclaimers and virus protection**

In terms of responsibility towards the organisation less than half the respondents state that they have a disclaimer on their emails. However, according to the internet policies disclaimers on organisation A and B's emails are attached automatically, usually even without the knowledge of the sender. Only 36% download virus protection software or update their patches on a weekly basis, 24% state that they never do this. A possible reason could be that the respondents are aware of the organisation performing this task on their behalf. This is only possible if the employee logs on to the network from time to time – and this could pose problems for organisation A as many of the consultants who work off site spend extended periods – weeks and sometimes even months – away from the office and at client sites where they cannot log on to the network for virus protection.

4.5 Conclusion

This chapter covered the quantitative part of the case studies. Its objective was to understand and analyse the results obtained from the questionnaires that were distributed. In order to ensure that this is done successfully the internet policies of organisation A and B were also discussed. Additional material was sourced from literature and from responses received from the human resources department of organisation B and the IT manager from organisation A.

Chapter four's approach was to analyse the questionnaire results section by section. A number of the questions were discussed together in logical groupings per section. A few of the questions discussed in this chapter form more of the qualitative part of the study since the answers were not counted or quantified and measured in graphs. The results of organisation A, B and D were compared to each other – graphs and tables were compiled to make this

comparison more visible and straightforward. Results were also compared to the internet and email policies of organisation A and B. The way in which industry, occupation and level impact on the study was also brought into this chapter so that the way these variables affect the outcome is understood.

A conclusion that can be drawn from chapter four is that the majority of the respondents do feel that the internet has had an effect on their organisation's culture. The internet and email have fundamentally changed the way in which work is performed. By changing the way in which work is performed – or employee behaviour – the organisational culture is subjected to change. The internet and email have also changed the boundaries that management needs to set in the workplace in order to ensure that the impact on the organisation's reputation, resources and legal risk are handled and mitigated. With the change in boundary comes the invasion of privacy at the workplace when the internet and email are used for personal purposes. Chapter four revealed that employees do not fully understand the need for internet and email monitoring, nor do they understand their rights in this regard.

The organisational culture of organisation A and B was discussed. Organisation A and B's culture differs in many respects but has some similarities, for example, a focus on teamwork, delivery and quality. This is possibly because both organisation A and B fall into the IT industry category.

Finally, there is evidence that alignment between organisational culture and the internet and email policy is lacking in both organisation A and B. An example of this is that a large number of employees are not aware of the precise rules and restrictions of the internet policy. Neither are they aware of their boundaries and what will happen if they transgress these. If an alignment has been done then it has been performed by the employees who wrote the policies and no buy-in or involvement was gained from the rest of the organisation – although this can only be done to a small extent, the policy does still need to govern the use of facilities and as such cannot be dictated by employees.

5. Chapter 5: Qualitative case study

5.1 Introduction

This chapter covers the qualitative aspect of the case studies. Its focus is on the interviews that took place with management from organisation A, B and C.

The method in which the study was conducted is discussed in this chapter. It explains how interviewees were selected for the study as well as the interview structure. The objective of explaining the method is to provide depth and background to the interview analysis.

An analysis of interview results is completed in this chapter. The analysis is performed for each question according to the sections of the questionnaire (Appendix D) and organisation A, B and C's answers are compared. The results of the interviews are also compared with the results of the questionnaires from chapter four. Differences are highlighted and discussed. This ensures that the responses of employees are compared to those of management.

5.2 Method of study

5.2.1 Steps of the case study

Key managers in positions that have influence over the internet and email policy and employee behaviour were approached for interviews. Seven managers were interviewed, four from organisation A, two from organisation B and one from organisation C. The interview results were recorded on tape and were compiled into a document. These are available upon request. This document was then summarised into a table where answers are tabulated per question and per organisation. This can be found in Appendix D. This summary was primarily used for the analysis of results in section 5.3.

5.2.2 Selection of interviewees

Interviews took place with the following managers from organisation A: an IT manager, an e-business consultant, a software development business unit head and a director. An internet banking channel manager was interviewed from organisation B along with the organisation's information security manager. A manager from organisation C was also interviewed. The roles of each of the interviewees are now explained to give background to their input into the interviews.

The IT manager from organisation A was involved in the compilation of organisation A's internet and email policy – discussed in chapter 4, section 4.3.1. This manager is directly involved in the control and monitoring of internet and email use at organisation A amongst other things.

The e-business consultant from organisation A heads up the e-business unit at organisation A. Approximately twenty people work in this business unit, e-business forms part of organisation A's product and service offering. E-business, within organisation A, performs work around building internet systems, functions or processes that run inside of a business and very often between a business and its customers – on the point of being seen as e-commerce. Where this business unit touches on e-commerce it is more on the customer relationship building aspect of e-commerce, i.e. more on marketing and customer interaction than selling.

The financial services software development unit business head was selected to retrieve information on management's view of internet use within the development environment. The changing ways of development and the impact that the internet has had on this brought an interesting angle to the interview.

One of organisation A's directors was selected as she heads up the global marketing and branding at organisation A. In this position she is aware of the

organisational culture of organisation A as well as the impact that the internet has had on organisation A on an international scale.

On organisation B's side an internet banking channel manager was interviewed. This brought a different point of view to the study as the transactional side of e-business – internet banking – is his main line of business at organisation B. This manager converts the internet banking clients' needs into technology solutions and was able to provide useful information on the internet from the clients' side as well as the supplier's side.

The other interview from organisation B was with the information security manager. He was involved in writing organisation B's policies for the internet and email and deals with all aspects of information security – the internet, email and information privacy and security.

Organisation C's interview with a customer requirements manager (CRM) assisted in giving the case studies more depth in terms of organisational culture. Part of the reason why this manager could achieve this is because his work is about putting the human element back into business, he could therefore relate to soft issues such as organisational culture. Organisational culture information was also obtained from organisation A, however, it is necessary to gain another organisation's perspective on this. This manager controls organisation C's customer requirements management initiative as his company that specialised in this was bought by organisation C. He describes his business as a way of handling interactions and using business intelligence to reroute customer queries to the correct agent. He was able to give substance on how the internet affected organisational culture in terms of CRM on the internet.

5.2.3 Structure of interview

Each interview was structured around the interviewee's experience in order to obtain the best outcome. This resulted in seven relatively unique interviews. The main focus of each of the interviews was still on the topic: the impact of

the internet on organisational culture in the IT industry. Each of the interviews answered specific questions from the questionnaire – but at a manager's level. The structure of the questionnaire was used as a basis for the interviews, however, not every section was covered and additional questions were added in each interview. The questionnaire can be found in Appendix B.

The interviews with the IT manager and the information and security manager were structured around the internet and email policy. Questions were asked to establish what boundaries the organisations have set, why these boundaries had been set, how they are communicated to employees and what repercussions employees can expect if these boundaries are transgressed. The different means of maintaining these boundaries were also discussed, for example, whether the organisation makes use of a firewall or simply monitoring to control internet and email abuse and whether specific software tools are used for this.

The interviews with the director, business unit head and CRM manager were structured to determine what organisational culture their organisation or business unit embodies as well as what type of behaviour top management will condone. These interviews also had the aim to determine whether management believes that soft issues such as organisational culture can affect their bottom line – i.e. profit – and whether they believe that it can be changed or whether it has changed in the past.

Interviews with the internet banking channel manager and the e-business manager were structured to determine the impact of the internet on how work is performed when the internet has fundamentally changed the organisation's products and mediums of distribution.

The summarised interview questions and answers can be seen in the table in Appendix D. All interview questions are discussed in the analysis of the results, section 5.3.

5.3 Analysis of results

As the interview structure followed the sections of the questionnaire, the results have been analysed according to each of the sections of the questionnaire. This approach gives the additional benefit of making the quantitative and qualitative comparison more straightforward. This comparison is done at the end of each section.

5.3.1 Internet and email use for business purposes

- **Use of the internet and email by management for business purposes**

Management from organisation A, B and C use the internet to conduct research and keep up to date with the latest trends in their industry. The manager of organisation C states that he, along with his organisation, researches extensively and would not be able to survive without the internet. Product information and facts about competitors are sought in this research activity. General searches are done and specific sites and databases are visited. As some information needs to be paid for, the organisation's login and password must be supplied before access to some sites is allowed. Information from other countries that was not previously available is within reach because of the internet. Information is power – the latest regulations, white papers, discussions and analysis of products and services enable organisation A, B and C to remain competitive in a challenging market.

- **How email is managed**

Email can be extremely time consuming if a systematic method is not used to manage its use. Managers from organisation A, B and C say that they can receive anywhere between 40 to 100 emails in a day. If unattended, this can create quite a backlog. A director from organisation A states that she keeps her emails from forming a backlog by checking Microsoft Outlook first thing in the morning and then at consistent checkpoints throughout the day. In the marketing and branding field she receives a great deal of trend information, which, according to Steven Covey's quadrants, can be important or urgent – depending on the cycle that the market is in. The consistent checkpoints in her day enable her to react quickly if urgent email is received, therefore not

disadvantaging organisation A should competitors also receive this information.

Organisation C's product effectively helps his clients to manage their emails better. Queries directed to an organisation are checked by a business intelligence tool for specific key words and are directed to the most likely agent to own this type of query, along with a best-fit response. This email response management system is a step to breach the gap between the organisation and the consumer as it provides the consumer with speedier and more effective service because queries are automatically directed to the correct agent.

Organisation B's channel owner answers a number of email queries himself in a day and feels that the internet and email have improved communication dramatically. He prefers email queries to telephone queries despite the impersonal nature of email. He believes that at least with an email query when he gets the same query more than once he can use the same answer he has sent before which saves him time. He is also of the opinion that receiving a response to a query via email saves the recipient time as it can be referred to at a later stage, possibly when a telephone query may have already been forgotten.

- **The use of an assistant to manage email**

The managers interviewed state that they spend a few valuable hours on the internet and email each week. When they are away on business or holiday travels or are working long hours towards a deadline and cannot attend to email they use an assistant. The financial services software development manager from organisation A makes use of his assistant on a continuous basis. Although she does not have rights to delete or read his mail she scans it and alerts him when important mail has arrived. This saves him time on his emailing but he states that if he had someone else reading his mail that it would be too disruptive as he would not always be 100% aware of everything going on around him.

- **Ways to enhance internal processes to increase productivity**

The financial services software manager is considering implementing a policy he read about in order to make his development team more productive. This policy will allow employees to only read emails in the mornings and at certain times during the day. This will assist employees who find that their colleagues email them numerous queries that do not need an immediate response. It will also, within the organisation, stop any expectation that may exist that email needs to be responded to immediately. The e-business consultant proposes that internet technology could be used to refine the organisation's internal processes. Timesheets are already captured, approved and submitted via the internet in organisation A. Organisation B uses a system called request management system (RMS) for this – it is a shared application that feeds information into the server. Other processes that could be refined are: applications for leave, requests for stationery and use of discussion boards and newsgroups within the organisation. Organisation A does use its intranet for the storage of intellectual property, however, the e-business consultant is of the opinion that a knowledge sharing culture does not exist within organisation A. He states that it is not an inherent characteristic of an organisation A employee to ask themselves whether similar work has been performed before when starting a new project, nor is it their characteristic to save work on the intranet when a project is completed.

- **The internet and email have made employees more or less available**

Although personal communication can never be replaced, organisation A's software development manager is of the opinion that email has made his team more available to each other. As part of his team is based in the United Kingdom (U.K.) the use of email has made quick queries and comments much simpler and cheaper than telephone calls. Although he states that his team does still spend approximately R2 000 per month on phoning team members in the U.K. he feels that email and the internet have enabled them to work on the same project despite the distance and the time difference. His business unit also makes use of an online error logging application whereby team members – both in South Africa and the U.K. – can log errors while testing the

same system. The fact that error logging can take place online has two major advantages. Firstly, there is no duplication as when a team member logs an error he/she can view other errors that have already been logged – up to the point where he/she last refreshed the system. Secondly, errors do not need to be recaptured. For example, should the U.K. team need to fax, phone or email errors or should South Africa need to do this to the U.K. the errors would need to be recaptured into whatever system is being used on the other side.

- **Differences in use of the internet and email in employees who work in e-business**

When asked whether employees in the e-business field use the internet and email in a different way to other employees the e-business consultant responded that their use is almost the same. The e-business team is very passionate about their work, being at the forefront of technology and about being creative and innovative at work. This could stem from the fact that this business unit is affected much quicker and more profoundly by changes in the market – it is leading edge. This passion drives e-business employees to learn new things, using the internet as a source. Other than that the e-business team uses the internet in much the same way as other employees at organisation A do. This manager pointed out that organisation A's use of the internet for learning and development is not very high.

- **Use of the intranet**

The use of the intranet is also not very high in organisation A. The IT manager reported 56 users logged onto the intranet at once as one of the highest readings. Out of an organisation of just under 1000 this figure should be closer to three or four hundred. Organisation A cannot determine which part of the intranet is used the most or receives the highest number of hits, however, the e-business consultant feels that the contact details on the intranet are probably the most valuable and used part, according to him, this is normal in most organisations. Organisation B's internet banking channel manager also states that the contact details section of the intranet is very useful. He finds that although product information is available on the intranet

people still send him enquiries – he feels that it is simply human nature choosing the quickest and easiest route.

It is likely that organisation A's usage of the intranet is so low because many of its employees need to access the site remotely, i.e. via an extranet. This causes frustration for these employees as the site takes a long time to download and specific pages become unavailable – resulting in a decrease in use. Organisation A has investigated what would be needed to fix this problem and has discovered that the technology required to make replications of the intranet each night is prohibitively expensive. Unfortunately the benefit does not exceed the cost at this stage.

Organisation C's customer requirements manager enthusiastically describes their intranet as awesome. He believes that it is the lifeblood of the organisation. A team of dedicated resources works full-time on keeping the intranet up to date. The intranet contains relevant IT news as well as information from organisation C's offices around the globe. Organisation A's e-business consultant's opinion is that organisation A needs a strategy and a dedicated team of resources to sort the intranet out. He believes that once this internal process is properly developed the culture around knowledge management and intellectual property will start to correct itself. Perhaps this scenario would encourage the off-site employees to make time to use the knowledge capital of the organisation by visiting organisation A's office before and after hours. The solution for organisation A could also be embedded in soft issues such as organisational culture or training.

- **Training and change management when the internet/email was first introduced**

Organisation A's IT manager underwent full change management when the internet was first introduced early in his career. He was working in the IT industry at a medical organisation. His organisation handled training on a department-by-department basis. Once that was completed it was done on a one-on-one basis when anyone new joined the organisation. He states that full access rights were given to almost everyone in the beginning, however,

the employees at the lowest levels were given limited rights. When the abuse started, unexpectedly at top management's level, rights were revoked and everyone was treated equally – irrespective of level. Each level received use of the internet only if they required it to perform their work function and this use was controlled. The e-business consultant experienced that the internet and email were not introduced into the workplace in one single effort. He states that by the time the internet was in the workplace many people had been using it at home for personal purposes. When the internet was introduced he says that the problem was that there was nowhere to go to – it was not at the level it is now: it contained words and not pictures and surfing the net was not necessarily entertaining. According to him, employees were already familiar with email by the time the internet was implemented.

Since the days when the internet was a mere Mosaic application and contained only text it has evolved through a number of stages. According to the e-business consultant, during its first stages the internet was used mostly for online brochures, the next stage was one where organisations were linked to the internet for business purposes – for example for electronic data change (EDI) – and then came the functionality stage. Online brochures boasted shopping carts, property sales pages used online home loan calculators and goods and services could be ordered and paid for over the internet. At the end of the nineteen nineties, as part of a challenge, a man who was nicknamed “Dot Coza” (short for South Africa's domain name: .co.za) spent over a month in a room with nothing else but a computer that was linked to the internet in order to prove that everything can be purchased and delivered through the internet. One of his first purchases was a pair of running shoes – he also managed to feed and clothe himself as well as buy furniture for the room. Nowadays purchasing food and other commodities over the internet is no longer a novelty. The director from organisation A states that as she works long hours she does not have time to do her grocery shopping during normal hours, so she does this online and her groceries are delivered. The e-business consultant states that the current stage of the internet is much more focused on information sharing, integrating processes and making them more efficient.

- **Netiquette**

With the evolution of the internet and email came the need for people to change their behaviour in accordance to these new resources. Another example of this need to adopt a new set of manners is with cellular telephones. When cellular telephones started infiltrating society there was a general attitude where people would flaunt their cellular phones and people would abuse others' rights by speaking on their phones at inappropriate times and places – in the cinema, theatre, lecture halls, etc. It took some time before people started to realise that a new set of rules apply. Nowadays it is regarded as poor manners to use a cellular telephone while in the cinema, lecture hall, etc. New laws have recently made it illegal to use a cellular telephone while driving. New sets of manners and rules also apply to the use of email. Flaming, writing in capital letters only, sending the same email to many people where this is unnecessary and getting the tone of an email right are a few things that have needed to be learned. "Netiquette" is the word that is used for "email etiquette".

Organisation A plans to teach its employees netiquette in the future. There has already been an instance where an employee flamed one of the managers. Organisation B has included netiquette guidelines in their email code of conduct. These guidelines include, amongst others: before sending an email consider whether it is really necessary – each unnecessary email has implications on corporate productivity, to clear the average inbox takes 90 minutes of a working day, reply timeously to email, if someone sends an advisory note do not simply reply saying "ta" as this email will be one of many emails that clog up the network and inbox without adding value and ensure that a descriptive header is used in the subject line of all messages. When organisation B's information security department has the time they explain the rights of the employee with regard to the internet and email to them during an induction course. Human resources directs new employees to the intranet and employees are informed of the expectation that they read the policies. Regular reminders are also distributed to staff throughout the year. Organisation A also directs employees to the intranet where the policy is

stored. However, a training session during new employees' induction is still in the pipeline.

- **Comparison of quantitative and qualitative case studies**

The comparison of managements' answers to those of their employees' yields a number of similarities as well as differences. On the side of the similarities, both management and employees feel that their colleagues have more time available as a result of the use of the internet and email. 94% of employees who responded to the questionnaire state that their colleagues who have internet access and make use of email have more time available as a result of this. 90% of the questionnaire respondents indicated that the internet makes their work easier and faster and management states the same – they state that it has dramatically improved communication and has enabled them to have access to international information which was previously unavailable.

On the side of the differences, employees spend between two and a half and five hours a day on email whereas managers spend only a couple of hours a week on email. This could be a result of the fact that managers have the option of using an assistant to scan emails either full-time or only when traveling and away from the office or near deadlines. It is also more likely that employees will schedule meetings for their managers than *vice versa* and as a result spend more time using their email and calendars in Microsoft Outlook (both organisation A and B make use of Microsoft Outlook as the email application).

Although organisation A's management is concerned about the use of the intranet there was only one respondent from their organisation who states that he/she never makes use of the intranet. Organisation B's internet channel manager makes use of the intranet for the same reasons as the employees make use of the intranet – mostly for the contact details but also to obtain specific product information.

- **Section conclusion**

It can be concluded that the use of the internet and email have changed the way that the interviewees perform work. Both these facilities have changed the way in which management enables their organisations to remain competitive. Management and employees do not differ greatly in the way they feel about the internet and email and how these have impacted on their work except that employees seem to spend more time on email than management seems to.

5.3.2 Internet and email use for personal purposes while at work

- **Access to the internet and email for personal purposes while at work**

Organisation A, B and C state that employees are allowed internet access for work purposes if they can justify a reason for this. They also state that employees have full-time access to these resources and how they use them for personal purposes while at work is their own responsibility. Organisation A's internet policy states that the internet and email are property of the organisation and may not be used for personal purposes, the software development manager supports this with his statement that the organisation prefers if private use of these facilities takes place outside of working hours. This software development business unit routinely checks the top sites visited, distributes this information to employees and blocks sites that pose a problem or are taking up too much bandwidth during office hours. Organisation C's manager relies on the maturity of the employee not to abuse the use of the internet and email. He states that as long as an employee keeps his or her performance promise to the organisation then he is content with that. Organisation B, although the internet policy states that the employee is accountable for what they use the internet and email for, has a specific department called "web marshal" that blocks sites that employees may visit during working hours that the organisation would prefer they do not. Examples of these sites are: sports, career, entertainment and any banned site such as pornographic, religious or political sites.

- **Peak periods and types of internet and email use**

The IT manager of organisation B states that the internet and email are used throughout the day by employees and that there is not a specific time when this is at a peak. He says that the bandwidth “flat lines” during the day. This use is for work and personal use and also is for use of the email and the internet (Personal communication, 2002). Organisation A’s non-work related sites that pose a problem are streaming audio and Hotmail’s MSN. Organisation A’s IT manager states that employees also make use of online banking, this correlates with employees’ responses when asked which sites they use the most. Online banking and other services do, however, save both the employee and the organisation time as the employee is spared from lengthy lunchtime queues at the bank or grocery store. Organisation C’s manager states that he visits his bank once or twice a year and performs all his banking on the internet to save time.

The use of streaming audio uses a lot of bandwidth and interferes with the use of the internet and email for legitimate work purposes. To curb this problem organisation A’s IT manager is in the process of putting a new structure in place which will limit the bandwidth that can be used during office hours. Other measures that are in place at organisation A, B and C are firewalls. A firewall checks everything that enters the organisation through the network. The firewall is used mostly to eliminate malicious viruses entering the organisation. Email messages that have executable attachments that could contain a virus are also caught by the firewall. These messages are kept in quarantine for a few days so that, if work related, the recipient may approach the IT or information security department to release it. Items in quarantine are deleted after a few days should no recipient have claimed them. The difference between organisation A and B in this regard is that organisation B blocks sites that are not work related during office hours. Organisation A states that this will not be done as it conflicts with the culture of the organisation – which is that it is a fun place to work. It is still possible for organisation A to do this as there are only 1 000 employees working in organisation A whereas there are close to 27 000 working for organisation B and stricter measures are needed to control a larger group.

- **Blocking of sites**

Organisation B's web marshal department makes the decisions on which sites to block during office hours. They base these decisions on sites that they know should be banned and continuously update the list of banned sites as they learn about new sites – not all banned sites have names that are obvious to what they are, e.g. they are not all named "how-to-make-a-bomb.com" or "pornography-galore.com". Web marshal adds to the list by monitoring which sites receive a lot of attention or are abused. Organisation A's software development business unit blocked streaming audio permanently because the managers noticed this was being abused, they have also blocked Mark Shuttleworth's site on the race to the moon at the time when he went to the moon as many employees were idling away time checking his progress and reading related news.

- **Reasons for controlling internet and email use**

Other than avoiding having employees idling away office hours while visiting non-work related sites on the internet, organisations have other reasons for controlling the use of the internet and email. Organisation A and B have the same reasons at the top of their lists. These include: optimal use of bandwidth, putting the organisation at risk and the best use of employees' time. Organisation A has optimal use of bandwidth at the top of their list for business reasons as well as cost cutting reasons. The IT manager at organisation A states that the organisation does internet hosting for other organisations and therefore needs to ensure that they have sufficient bandwidth available for these clients. Putting the organisation at risk includes earning them a poor reputation. It is for this reason that internet and email use is also monitored after hours. Organisation A states that this is monitored as the organisation's name is still at stake. Organisation B allows free access to career and sport sites but still keeps abuse sites blocked after hours.

- **The internet and email policy**

Both organisations A and B have a formal internet policy that was compiled by the IT manager and the information security managers at organisation A and

B respectively. The organisations examined other policies and extracted the best of these into their own policies. The internet policies of organisation A and B have been discussed in chapter four, section 4.3. The policies are revised when new technology creates more opportunities for employees to put the organisation at risk or when more of these are discovered that arise out of existing technology.

Other than through induction courses and the human resources department drawing employees' attention to the internet and email policies, organisation A plans to issue the policy to new employees upfront. Existing employees will be notified of the new policy and all employees – new and existing – will need to familiarise themselves with the content of the policy and sign a declaration that they have read and understand the policy. Organisation B's contract of employment, which also needs to be signed by the employee, requires that the employee familiarises him or herself with the internet and email policies. The information security manager at organisation B also distributes a user-friendly outline of security issues on an annual basis. Policies are freely available for reference on shared and public folders as well as on the intranet at organisation B.

- **Disciplinary action**

A softer, more human approach is taken by organisation A towards employees who transgress the internet and email policy. Unfortunately because of the different numbers of employees who work at organisation A and B (1000 *versus* 27 000) it would be difficult to accurately compare the number of transgressions at both organisations and make a recommendation on the best approach to discipline. However, since organisation A and B are so different in culture and structure amongst other things a one solution fits all approach would most probably fail at one or both organisations. Organisation A's IT manager initially contacts the employee who transgresses the internet and email policy for a coaching session. During this session he explains to them why their behaviour is not desirable and how they can improve their behaviour. The second approach, should the employee still not adhere to the policy is that the IT manager contacts the employees' business unit head. The

business unit head then speaks to the employee and if there are still problems after that the usual human resources disciplinary action channels are followed. The IT manager states that the business unit heads are not made aware of employees who are first time offenders and turn over a clean slate. Organisation B, on the other hand, reports abuse directly to an employees' manager and restricts the employee from accessing the internet. It is then up to the manager what additional measures to take. The IT manager states that he will not allow an abusive employee back onto the internet until he is satisfied that the right disciplinary measures have been enforced and that the employee is rehabilitated and is likely not to transgress the policy again. Both organisation A and B state that an employee could be instantly dismissed should the transgression of the policy be major and warrant such action.

- **Comparison of quantitative and qualitative case studies**

According to the questionnaire results, 46% of employees believe that they may use the internet and email for personal purposes at any time and for unlimited periods. However, not only do the internet policies of organisation A and B state that personal use may not be during office hours, management also states that they would prefer the use to be after hours. Employees' use of the internet generally increases when their workloads decrease. Organisation A employees state that they spend less than one hour on the internet for personal purposes when their workload is normal but spend between one and five hours when the workload is low. Management's concern that employees are idling away office hours is therefore unjustified as, based on the above statistics, the assumption can be made that most employees only browse the internet for personal purposes if they are bored at work and are looking for something to keep them busy. On the other hand, it can be said that management would prefer employees to be learning, taking up courses or assisting their colleagues with work instead of surfing the internet.

The IT manager of organisation A was correct in his statement that a number of employees make use of online services as the category of site made use of most frequently. Online services include banking and shopping services

available over the internet. Employees do not differ very much from management in this respect as management also states that they would rather use online services than waste time in queues.

Organisation A's IT manager states that employees' email will only be read by him or his team should this need arise from legal or management reasons. He says that should any of his team be caught reading employees' email for no such reason they will be subjected to disciplinary action. Although 57% of employees surveyed believe that their email is confidential while it is not, they can rest assured that it is not read unless necessary.

A concern is that 12% of employees said that they are not aware that the organisation has an internet and email policy while management state that this is explained to them during induction – or at least that their attention is drawn to the policy during induction. 10% of these employees belong to organisation A. Fortunately organisation A is planning on revisiting awareness of the policy by enforcing employees to read and then acknowledge reading and understanding the policy by signing a declaration.

- **Section conclusion**

It can be concluded that more communication regarding internet and email policies and the boundaries that these impose on employees need to be reviewed by organisations. Employees are not 100% familiar with their rights and the rights of the organisation. This has an impact on the relationship between employees and management that, in turn, affects the culture of the organisation.

5.3.3 Organisational culture

- **Description of organisational culture**

Organisation A's director describes the organisation to have a problem-solving culture. She believes that when the organisation is faced with a challenge the employees bring the solution. She describes the culture to be audacious in a positive way and the employees to be confident, self-motivated

and self-directed. Organisation A purposefully lacks structure as it is a roles-based organisation, this requires that the employees who work there do not need to be told what to do. The director believes that putting the client first and establishing a business partnership is important to organisation A and has contributed to this positive culture. The e-business consultant believes that the organisation's culture has changed from being the entrepreneurial, work-hard play-hard culture. He believes that the culture has matured into a typical corporate culture where employees are there to do the work, please the client and get the job done. He states that the hours that employees are putting in are also shorter these days – and that this is a good change. He is of the opinion that by not instilling a particular type of culture another kind of culture is inherently instilled. He feels that the lack of strategy and dedicated resources with regard to culture are making it more and more difficult to change the culture.

As different business units at organisation A were interviewed different perspectives on the culture were obtained. The specific cultures within each of the business units can be said to be subcultures of organisation A. The IT manager describes the culture within the IT department as focused on knowledge transfer and sharing. He explains that his employees get excited about new technology and are passionate about IT. The e-business consultant's employees share this passion for IT. Their culture is one that has a high regard for learning new and creative things. He states that e-business employees are easily excitable and love their work. The director interviewed at organisation A believes that a healthy balance of subcultures is good for an organisation. She is content that these exist within organisation A. She also states that if different subcultures did not exist there would be reason for concern: the supply chain business unit should have a different culture to the financial services business unit simply because the nature of their work is so different.

Another subculture at organisation A is that of the software development business unit. The software development manager describes this culture to be flexible, tolerant of differences, innovative and process orientated. The

software development model is based on Microsoft's process mentor and solution framework. These methodologies support teamwork and processes. The manager states that his management team encourages employees in the team to be different as it grows innovation and builds stronger teams. He believes that the organisational culture has changed to be more professional and client focused as the business unit has matured.

Organisation B's internet banking channel manager states that there are numerous cultures within organisation B simply because there are many divisions geographically spread throughout South Africa. These divisions and branches perform different functions and types of work. The main culture of organisation B is that of process and hierarchy. He finds that the subculture within his division – technology – is very academic compared to the operational culture in the branches. He also states that the subculture within the technology division is strict, professional and hierarchical.

Organisation C's customer relationship manager states that organisation C is many times bigger than its biggest competitor. It is the tenth biggest IT organisation in the world and as such also has a number of subcultures. The size of the organisation requires that there is also a culture of hierarchy and structure. Organisation C's manager describes the organisation as having a high-tech, leading edge, very advanced technology culture that is completely mechanised. He states that the culture is extremely supportive and that information is available very readily, therefore increasing the innovative spirit of the organisation. He also believes that the organisation's culture filters from the top down – and that if there is a change in culture that it starts from manager level and above.

- **Organisational culture due diligence**

The e-business consultant from organisation A is skeptical about whether an organisational due diligence has been conducted at organisation A previously or whether the organisation is even ready for something like this. However, the director from organisation A states that the capability maturity model (CMM) is a measure of organisational culture and that this is currently taking

place within organisation A. She states that a 360-degree leadership review was conducted at the last leadership camp that will give the organisation an indication of where the issues lie – if there are any issues. She also mentions the start-stop-continue sessions that organisation A routinely holds. These involve employees completing anonymous feedback forms for each other that reflect what they believe is constructive advice or criticism on what behaviour or actions must be started, stopped or continued. An example: Sue must start respecting others' time and report punctually for meetings, she must stop taking on too much work from others and she must continue the good relationship she has built with her client. Information from the start-stop-continue sessions is used in employees' performance reviews and by the employees for their own self-improvement. However, it is doubtful whether this information is captured or used elsewhere in the organisation. 28% of organisation A's employees who answered the question on whether they are aware of a measure of culture having taken place or taking place at their organisation state that they are unaware of such a measure.

A capability maturity model (CMM) is also being introduced at organisation B. The technology division has regular training on their processes so that, when measured by Gartner Group, the division will reflect its true maturity level according to CMM. CMM has not been introduced into all divisions yet – so there is still some conflict about this within the organisation as not all divisions have accepted the change and those that have need to explain the lag in delivery caused by implementing new processes. Another initiative in place at organisation B is the values approach. The objective of the values approach is to obtain participation from employees in obtaining a culture that supports specific values. Examples of the values are, amongst others: integrity, teamwork and honesty.

Organisation C's manager states that he used to measure the organisation's culture at his organisation before it was sold to organisation C. He previously owned his own organisation and then sold this to organisation C. He says that in order to determine the management style the whole management team was sent for medical tests. Low stress levels and a good bill of health were

reported. Organisation C's manager believes that this was a reflection of the culture of their work environment: fun, supportive and respectful of employees' private and family time.

- **Impact of the IT recession on organisational culture**

Organisation C's manager believes that the massive retrenchments within the IT industry impacted on organisational culture. When employees are retrenched the remaining employees tend to change their behaviour somewhat: they either become despondent or else they work much harder than before in case another retrenchment comes up. This impacts on the organisational culture. The director at organisation A believes that the culture at organisation A has not changed – even despite the IT recession – but that it has just reinforced itself. Although organisation A has also faced retrenchments a possibility could be that because the organisation is smaller than organisation C the remaining employees were pulled closer as a team and the core values and culture strengthened.

- **Organisational culture changes from inside the organisation**

Other factors that change organisational culture may be activated from within the organisation. Should an organisation want or need to mature or grow itself into a learning organisation a requirement may be that it changes its culture somewhat in order to support this change. Organisation B's internet banking channel manager says that organisational change has been promoted in order to commercialise their technology division's services. The director from organisation C states that the resources are there to promote a learning organisation: subscriptions to Forrester and Gartner and other business tools and databases are available to all employees.

- **The effect of internet culture on organisational culture**

When asked whether the internet culture has had an effect on organisational culture organisation B's internet banking channel manager responded that it has had an impact on organisations and people that are on the advanced side of the digital divide. He believes that the internet has changed culture

fundamentally and uses two examples to support his statement. The first is of information dissemination in the workplace and the second is of how people nowadays use the internet and email for communication, to meet people, for advertising, shopping and banking. Not having access to the internet is in itself an impact as it is a major disadvantage. Countries that find themselves on this side of the digital divide – for example Mexico and many African countries – are impacted by not having the power of information or being part of the global village.

The e-business consultant compares the internet culture to an equivalent television culture – there is no such thing. He says that everyone has a television set, watches it and that it has changed people's lifestyles and culture and brought the world closer together but that there is no specific culture that has formed because of it. One of the respondents to the questionnaire stated that he believes there is no such thing as an internet culture. However, the IT manager from organisation A has the opinion that a change that has occurred as a result of the internet culture is that people in the workplace have put barriers up because it is much easier to send an email than it is to make a phone call. It can be said that whether or not a specific internet culture exists, the internet has impacted on the way in which work is performed as information dissemination, sharing and communication has changed fundamentally.

- **Comparison of quantitative and qualitative case studies**

49 of the 50 respondents feel that management describe their organisation's culture in the same way as they do. They also concur on the extent of change that has taken place in the organisation. The study of the employees' opinions *versus* those of management supports this.

Organisation A's employees' opinions on the culture of the organisation are aligned with what their management feel the culture is, except for the viewpoint that the culture is a work hard and play hard culture. The e-business consultant feels that the work hard and play hard culture has changed into a more mature corporate culture where the hours are shorter and employees'

focus is on getting the work done. It is likely that the employees who indicated this have been at the organisation the longest and that this view dates back to when the culture was more of a work hard play hard culture. It is also a possibility that the work hard play hard culture still exists within some of the subcultures within the organisation. Organisation B's employees and management are in agreement about the dominant cultures within organisation B as well as the number of subcultures present.

5.3.4 Culture and attitude towards the internet/email in the organisation

- **Disclaimers and virus protection**

Although not a forced issue at the moment, organisation A is in the process of standardising a disclaimer that fits in with the branding and image of the organisation and this will be automatically be attached to each email that is sent from organisation A's network. This will not, however, be attached to the emails sent from employees who work off-site at the clients' offices. At the time of the interview organisation B had also not enforced a disclaimer on all emails, this was to take effect from January 2003 though.

Push technology is used to load virus protection on each computer that is attached to a network at organisation A, B and C. Organisation A has not yet decided how to ensure that the employees who work at client sites receive regular virus protection updates though as push technology through their clients' firewalls is not permitted.

- **Comparison of quantitative and qualitative case studies**

Less than half of the respondents state that they have a disclaimer on their emails. The internet policies state that disclaimers are attached to emails automatically, however, the IT manager from organisation A and the information security manager from organisation B state that, at the time of the survey, this was not performed automatically on all emails but that it will be in the future.

In line with the fact that organisation A does not expect its employees to download their own virus protection 10% of employees state that they never do this. 18% of organisation A's employees download virus protection software or update their patches on a weekly basis – these could be part of the group of employees who are based at client sites where organisation A is not permitted to push virus protection upgrades to its employees through the clients' firewalls. At the time of the survey 12% of the respondents who never update their virus protection were from organisation B – organisation B planned to do this automatically for all employees by January 2003.

5.4 Conclusion

This chapter examined the interviews that took place with management from organisation A, B and C. The objective of this chapter was to discuss and compare the answers of the different managers in organisation A, B and C to each other as well as the questionnaire responses. The various ways of managing the use of the internet have been discussed as well as management's attitude towards these resources.

The chapter has been started with a description of the method of the case study. The way in which the interviewees were selected has been detailed and the way in which the interviews were structured has also been described.

The analysis of the results was completed in accordance with the sequence of questions in the questionnaire. Four sections were detailed, after each section a comparison of the interview results and the questionnaire results took place – there were only slight differences between what management stated and what employees completed in the questionnaires.

These differences were found in three areas: the amount of time spent on email, knowledge of internet policies and on the “work hard play hard” description of organisational culture. The first difference highlights that employees spend more time on email than their managers do. Knowledge of the organisation's internet and email policies was also an area where

differences between management and employee responses were present. This particular difference impacts on the relationship between management and employees. The policy also specifies rules on email disclaimers and virus protection: employees' statements differ from the rules laid down in the policy regarding this. This chapter identified this as an area for development in order to overcome one of the impacts of the internet and email on the organisation.

In terms of the third area – organisational culture – where differences were found, some managers from organisation A differ from a number of organisation A employees as they do not feel that “work hard play hard” is an accurate description of their culture.

Organisations A, B and C do not differ fundamentally on the measures that are taken to manage personal access to the internet and email. Organisation A and B even have the same top reasons for controlling internet use. These are to limit the use of bandwidth and protect the organisation's reputation.

It can be concluded, based on the qualitative and quantitative studies, that the use of the internet and email have changed the way in which work is performed. Chapter five highlights that the introduction of the internet and email into the workplace has resulted in a number of changes in the workplace – from the way in which management enables their organisations to remain competitive to the way in which employees communicate with each other on a formal and informal basis.

6. Chapter 6: Conclusion

6.1 Introduction

Chapter six concludes the study of the impact of the internet on organisational culture within the IT industry. It examines the topic for a final time from the perspective of the resolution of the main problem. It also analyses the answers to the research questions and focal points. The literature study and case studies' results are compared to each other to determine any major discrepancies between what has already been written about this topic and occurrences within the organisation as well as perceptions of employees and management.

A few recommendations are made for the organisation based on both the literature and case studies. Recommendations are also made for future and further studies that can use this study as a foundation or take direction from this study.

6.2 Resolution of stated problems

The main problem has been stated in chapter one (section 1.2, page 1) as the impact of the internet on organisational culture within the IT industry. It is believed that this topic has been sufficiently investigated as there has been a constant focus throughout the literature and case studies on answering this question.

From this study it can be concluded that the internet has impacted on the organisation's culture. Further substantiation of this statement is provided in section 6.3 "Research questions and focal points answered".

The subproblems were listed in section 1.2.1 (page 2) as: history and background of the internet, organisational culture, factors that bring about a change in organisational culture, management of the internet and email within

the organisation, business and personal use of the internet and email within the organisation. Each of the subproblems has been addressed within the literature and case studies. The investigation of these subproblems has substantiated the conclusion to the main problem, i.e. that the internet has had an impact on the organisation's culture. Conclusions to the subproblems can also be found in section 6.3 "Research questions and focal points answered".

6.3 Research questions and focal points answered

Each of the research questions are addressed in order to determine the conclusion to these questions. The main problem and subproblems are contained within the research questions.

- **What is the history of the internet?**

The background and history of the internet was investigated on a local and global basis. The growth of e-commerce and e-business was also investigated. The history of the internet was investigated in the literature study – although the implementation of the internet in the organisation was investigated in terms of the case studies, particularly the interviews.

The investigation of this question revealed that the birth of the internet lies in the 1960s and that the first users of the internet were the military and researchers. As the internet's origins lie in the U.S. the growth of the number of internet users and the availability of the internet was the highest in the world in the U.S. during the 1980s. On a local front, after sanctions were lifted South Africa's internet use grew – by 1999 there were just over one million internet users in the country. The U.K., Canada, Japan, Sweden and France were also grouped as leaders in the field of internet use and availability. Laggards were identified as Mexico and some African countries that fell on the poorer side of the digital divide.

The internet revolution, as it was often described, offered opportunities in terms of e-business and e-commerce. The conclusion reached in this regard

was that originally e-business and e-commerce were seen as separate from each other but that as business necessitated and as the internet boom slowed down, e-business and e-commerce became more interlinked and interdependent. Organisations started facilitating business transactions as well as sales and advertising from their websites. Some started allowing clients and suppliers access to perform actions on their sites through functionality designed particularly for this.

- **How was the internet implemented and used within the organisation?**

Again, the history and background of the internet were examined. This time in terms of the implementation and the perception of how it was implemented within the organisation. This perception was seen to be a good indicator of employee and management reaction on the topic of social and technical issues. Both business and personal use of the internet and email have been addressed.

The study revealed that a number of social issues arose as a result of the impact of the internet. An example of one of these is the change in the way organisations compete and do business. The way in which the internet was implemented – gradually or immediately – within the organisation also had social and technical consequences. Technical consequences revolve around the implementation, the selection of users first in line to receive access to the internet as well as the widening of the gap between the IT department and the rest of the organisation.

The discussion of e-commerce and e-business in chapter two revealed that there is a need for technical and legal infrastructure in South Africa in these two fields.

The topic of the use of the internet and email for reasons other than work has been raised in chapter two. It was found that employees mostly use the internet for purposes of email and general searches. Surfing the internet, reading and hobbies were also listed high on the list of internet activities that employees engage in most frequently and for the longest duration. The

question of whether employers should allow employees' use of the internet and email to perform personal business has been raised. Chapter two identifies two possible schools of thought in terms of this. The first is that strict control needs to be adhered to in terms of use of email and the internet. The second is that the organisation should be allowed to become a learning organisation and that control should only be to protect its employees and the organisation itself. Firewalls, internet policies and management of resources have been discussed as the means to control employee use of internet and email resources.

In conclusion, it can be stated that the internet's history – from the 1960s to the way in which it is implemented within the organisation to the way it is managed within the organisation – reveals that it may have impacted on the organisation's behaviours, norms and values and therefore its culture.

- **How is the use of the internet and email managed within the organisation?**

This study has revealed that there is a need to manage the use of the internet and email within the organisation. It has been stated by management that internet abuse during or after office hours is not desirable due to the consequences for the organisation. These consequences range from, amongst others, cost to reputation to viruses to loss of staff and loss of productivity.

Reasons for the need to manage the use of email and the internet as well as the methods of managing these resources have been discussed. Direct and indirect methods have been suggested as measures to simply curb abuse or even to stop personal internet and email use in the workplace completely.

Some examples of direct management of internet and email use within the organisation have been identified as a firewall, an internet policy, and email or internet monitoring. Indirect means to manage this have been identified as anything from an incentive to changing the organisation culture. Technology, policies and culture need to be managed and balanced in order to manage

the attitude and use of email and internet within the organisation. Netiquette training, rewards for productivity and leading by example have been identified as examples of measures to manage this.

It has been concluded in previous chapters that proper and timeous management of email and internet use assists with the creation of a culture of awareness and responsibility within the organisation.

- **What is organisational culture?**

In order to understand organisational culture its origins have been identified. Reasons for the sudden increase in attention paid to organisational culture have also been discussed. This led to the analysis of how organisational culture is measured as well as the organisational culture within South Africa and the IT industry.

Chapter three defined and gave examples of organisational culture as well as organisational subculture. Organisational culture has been compared to human personality in terms of the way that culture and personality are manifested. Examples of these are the way the organisation or person behaves, the values important to the organisation or person and the image or style that the organisation or person exhibits.

Chapter three identifies that an organisation may have a subculture or many subcultures that co-exist with the core culture. Subcultures are the result of the division of business into departments and the clustering of like-minded individuals.

- **What changes organisational culture?**

Factors that impact on organisational culture as well as reasons and means to change organisational culture have been raised in chapter three in response to this research question.

Chapter three states that organisational culture is changed through internal or external measures. Internal measures are planned, occur because of the natural course of change or are revolutionary.

In terms of planned change, the organisation may have reasons for changing its culture. Examples of such reasons are that the organisation realises that it is stagnating or recognises a competitive opportunity that requires a change in its attitude or mindset. External and internal factors cause natural change and revolutionary change is a result of a struggle for power from within the organisation.

A change in the way employees behave, feel, contribute, interact and perform is needed to bring about a change in the organisation's culture. Workshops, communications and revision of stagnant strategies and policies are needed to be implemented in order to achieve this change.

- **What is the impact of the internet on organisational culture?**

This has been stated as the main problem and has been the main focus of the paper. The ways in which the internet has had an impact on organisational culture and the effects of the internet on organisational culture have been discussed in previous chapters.

Points that support the statement that the internet has had an impact on organisational culture have been raised. These are summarised as: widening or narrowing of the gap between the IT department and the rest of the organisation, new resources for personal use in the workplace, a change in the way that work is performed, the change in the location of work, globalisation, decentralisation and information sharing and increased competition between employees within the same organisation and between organisations.

It has been concluded that the internet and email have had both a trivial and significant impact on organisational culture and that these impacts have had

tangible and intangible, short- and long-term and profound and marginal consequences for the organisation and the way in which work is performed.

6.4 Comparison of literature and case study results

A high level comparison of results of the literature study and the case studies revealed that the latter supports the information retrieved in the literature study. A few of the points raised in the literature study have been tabulated in order to substantiate this statement. Both the main points and the support have been described at a high level, more detail can be found within the literature study, (chapters two and three), the case studies (chapters four and five) and the appendixes (questionnaires, graphs and interview results).

The main points that were stated in the literature study have been tabulated and analysed according to the case studies' results in Table 6.1.

Table 6.1 Comparison of results of the literature and case studies

Main points from literature study conclusions	Results in support from case studies
The impact of the internet has been felt by many industries and not just the IT industry (chapter 2).	Non-IT industry employees also completed the questionnaire and 75 percent answered that they feel the use of the internet and email at work has changed their organisation's culture (Question 39, Appendix B: Questionnaire).
Social issues have resulted from the impact of the internet on organisational culture (chapter 2).	Social issues have arisen from the use of the internet and email in the office – e.g. employees become and seem less sociable in their interactions and more abrupt in their responses due to toneless emails.
The internet is mostly used and is	Organisation A's IT manager stated

Main points from literature study conclusions	Results in support from case studies
<p>used by those observed in the Stanford case study for the longest duration for sending email and performing general searches (chapter 2).</p>	<p>that according to his records organisation A employees mostly use the internet in their personal capacity for email (e.g. Hotmail) (Appendix D, interview results). Although the audience is different to the Stanford audience the result is similar.</p>
<p>Other than email and general searches the internet is used by those observed in the Stanford case study for surfing, reading and hobbies (source: chapter 2).</p>	<p>37 percent of the respondents to the questionnaires use online services the most, 28 percent visit news sites most frequently and 17 percent visit other sites (unclassified) most frequently (Appendix C, graphs). This partly supports the statement that the internet is used for reading and hobbies (i.e. news sites). Although the audience is different to the Stanford audience the result is roughly on the same track.</p>
<p>Firewalls, policies and the management of resources are used as means to control the use of the internet and email within the organisation (chapter 2).</p>	<p>Organisation A, B and C have firewalls, policies and management processes in place to control the use of the internet and email.</p>
<p>The internet has impacted on organisational behaviour, norms and values (chapter 2).</p> <p>The internet and email have had an impact on the culture of the organisation (chapter 3).</p>	<p>The way that employees communicate with each other, entertain themselves during their breaks, share information and the fact that they now make use of online services changes the way the organisation behaves as well as the</p>

Main points from literature study conclusions	Results in support from case studies
	norms and values of the organisation, i.e. the organisational culture.
There has been a recent increase in the amount of attention paid to organisational culture (chapter 3).	A cultural due diligence process (i.e. CMM and CMMI) has been implemented at both organisation A and B. Organisation D's manager has already conducted a culture test on his employees (Appendix D, interview results).
Subcultures exist as a result of the differentiation of tasks from one department to another (chapter 3).	Organisations A – D state that subcultures exist within their organisation due to the size and division of the organisation into business units and departments (Appendix D, interview results).

6.5 Recommendations

Recommendations have been made in order to have the impact of the internet on organisational culture be positive and contribute to a culture of learning. Recommendations are based on the literature and case studies.

It is recommended that:

- An internet and email policy is implemented in the organisation. It should leave no question about what is and what is not permissible in terms of the use of these resources. Measures that will be taken to address non-adherence to the policy need to be made known as well. Any changes to the policy must be communicated to all employees.
- Employees must sign an acknowledgement after joining the organisation that states that they have read and understood the policy. Communication from employees on terms they disagree with or improvements they can

suggest should be encouraged. These suggestions and proposed changes must be discussed at a workgroup that must as a result take further action.

- This policy is updated regularly as new technologies emerge, creating new threats to the organisation and its employees. Specific people within the IT department should be made responsible for letting a policy workgroup know about these technologies.
- The policy should be subject to a regular review by a committee who is not solely comprised of IT staff. A workgroup should be established with employees from each area of the organisation in order to promote creativity and represent the employees of the organisation. This will open the way for the gap between the IT department and the rest of the organisation to be narrowed.
- The policy should not be restrictive but penalties for behaviour that is not in line with the policy or culture should be enforceable (e.g. remove internet access for a specific period) and should discourage unwanted behaviour.
- All employees should be given netiquette training. Behaviour that is not in line with netiquette should be politely reprimanded until a culture of respect and consideration is established.
- Incentives to use the internet and intranet for learning should be given in order to cultivate a learning organisation. Management should lead by example. Management should encourage employees to find articles on the internet on their specific line of work or to investigate solutions and determine trends that the rest of the world is following. This will assist the organisation in becoming a learning organisation as well as in moving to the next stage of maturity.
- Knowledge management and exchange should be encouraged. The organisation's solutions and past projects should be available on the intranet. A culture whereby employees upload relevant information to the intranet and seek knowledge on the intranet when starting a new project or entering a new area should be sought after.

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Appendix A: Glossary

1. Introduction

The following terms are defined as they have either not been defined or have not been explicitly defined within the body of the dissertation. The purpose of the glossary is to provide a common understanding of terms that form a foundation for the main problem; the impact of the internet on organisational culture within the IT industry. Terms that are not defined in the glossary are defined as they occur within the various chapters.

Additional terms have been defined in the fact sheet that is part of the questionnaire. This can be found in Appendix B.

2. Definition of terms

Behaviour

To behave is to act or react in a specified way. Behaviour refers to manners or the way of doing things (Sykes, 1978:67). Synonyms for behaviour according to the thesaurus are: actions, bearing, carriage, comportment, conduct, demeanour, deportment, manner, ways, functioning, operate (Collins, 1998:45)

Culture

“Culture is a pattern of beliefs and expectations shared by the organization’s members. These beliefs and expectations produce norms that can powerfully shape the behaviours of individuals and groups” (Grantham, 2000:34). The Thesaurus lists the following synonyms: civilisation, customs, life style (Collins, 1998:105).

Cyberspace

“Computer theorists use the term ‘cyberspace’ to refer to the notional social arena we ‘enter’ when using computers to communicate. ‘Cyberspace’ can be used more generally to refer to the potential ‘lifeway’ or general type of culture being created via Advanced

Information Technology (AIT), the congeries of artifacts, practices, and relationships coming together around computing” (Hakken, 1999:1).

Digital age

The age or era of electronics, e.g. the computer, television, cellular telephone, etc. Hakken (1999:245) defines this as the “post-industrial” age.

Digital property

Electronic belongings, e.g. computer files. Harris (1998:6) defines that digital property “...is the content on your computer or on the Internet”.

E-business (electronic business)

“The digital enablement of transactions and processes within a firm, involving information systems under the control of the firm” (Laudon, and Traver, 2002:7).

E-commerce (electronic commerce)

“Encompasses all business conducted by means of computer networks” (Department of Communications, Discussion Paper on Electronic Commerce, 1999:4). Laudon and Traver (2002:6) describe e-commerce as “the use of the Internet and the Web to transact business. More formally, digitally enabled commercial transactions between and among organizations and individuals”.

Global village

Term that is used to describe the phenomenon of globalisation, the effect that the world feels smaller and more like a small town or community because of the connection that people have as a result of the internet.

Internet abuse

The exploitation and misuse of the organisation’s internet resource by employees. Specifically this is the abuse of the organisation’s time, reputation and expenses in terms of bandwidth, misrepresentation of the organisation on the internet and misuse of employees’ productive working time.

Online

Connected to the internet.

Values

“Standards or principles considered valuable or important in life” (Mark, 1999:45). Lessem (1990:49) states that values are manifestations of the culture but not necessarily the essence of culture.

Virtual communities

Groups of people who communicate over the internet with each other on topics that they have in common. Virtual communities have commonalities with physical communities in that they meet regularly, exchange ideas and share common interests (i.e. reasons for being part of the community).

World Wide Web

“The subset of Internet computers that connects in a specific way that allows for easy sharing of data using a standard interface” (Schneider and Perry, 2000:394).

Appendix B: Questionnaire

Definitions

The following definitions are supplied to remove ambiguity that may exist around specific terminology that is used in the questionnaire. Other definitions may exist so please read the definitions in context of the questionnaire.

- **Consulting environment**
The environment that exists where services are sold to assist in the solving of a problem or in the exploitation of an opportunity. This problem/opportunity may also be software development.
- **Internet policy**
The policy that an organisation employs in order to control the use or abuse of the internet and email within the organisation. The internet policy states what the employee is forbidden to do on the internet and with email as well as what his/her rights are in this regard.
- **Netiquette**
Email etiquette. For example: do not type only in capital letters; do not forward chain letters; etc.
- **Organisational culture**
Corporate or organisational culture is similar but not the same as national, ethical, religious or any other culture. Organisational culture specifically refers to the values and behaviors of employees in work organisations.
- **Organisational culture due diligence**
The process of reviewing and investigating the statements and representations of an organisation with respect to its attitudes; beliefs; values and accepted norms.
- **Software development environment**
The environment that exists in which software is built or enhanced.
- **Subculture**
A fragment of a culture that exists within a culture – the beliefs, values and assumptions that may compete with the dominant culture. A subculture may be present within the different divisions or business units of an organisation – or they may exist within the same division or business unit.

Questionnaire

MCom Informatics dissertation

Purpose:

This questionnaire serves to gather information on different views on the impact of the internet on organisational culture. It aims to determine how employees use the internet and email at work, both for business and for personal use, and what impact this has on organisational culture.

How to complete the questionnaire:

This questionnaire should be completed as honestly as possible; there are no incorrect answers. You can complete it electronically or by hand if you would prefer to print it. Please mark answers with a cross in the appropriate checkbox.

Should you be unfamiliar with the specific terminology used in this questionnaire please refer to the attached definitions. Should you have any further questions please do not hesitate to ask; contact details are provided on page 9.

There are five sections:

Section:	Contains:
A:	Personal details
B:	Internet and email use for business purposes
C:	Internet and email use for personal purposes while at work
D:	Organisational culture
E:	Culture and attitude towards the internet/email in the organisation

* Denotes optional fields

Section A: personal details

Name *:	
Occupation:	
Grade/level*:	
Telephone #*:	
Email address:	

Please note that even though Grade/level is an optional field, if the exact grade or level is confidential or sensitive, it would be beneficial to the study if you could fill in: junior; senior; or middle management.

Section B: internet and email use for business purposes

1. Do you use the internet or email for work purposes?

Yes No

2. If yes, please describe what you use the internet or email for:

(Include primary as well as supporting work activities – e.g. primary being web design (internet) or customer response (email) and supporting being timesheet capture and approval (internet) or communication with team (email))

3. Do you find your colleagues who have access to the internet and email more or less available?

More available Less available

4. How often do you use your organisation's intranet?

- A few times a day
- Daily
- Weekly
- Monthly or once in a while
- Never

5. How useful do you find your organisation's intranet?

- Extremely useful
- Somewhat useful
- Not useful at all

Please answer questions 6 – 8 if you answered yes to question 1 above:

6. Has the use of the internet or email made your work easier and faster or more difficult and slower? Please explain how:

(You may tick both boxes if you substantiate your answer properly)

Easier/faster More difficult/slower

7. Estimate how much time you spend daily on the internet for work purposes:

- More than 8 hours
- 5 – 8 hours
- 2.5 – 5 hours
- 1 – 2.5 hours
- Less than one hour

8. Estimate how much time you spend daily on work-related email:

- More than 8 hours
- 5 – 8 hours
- 2.5 – 5 hours
- 1 – 2.5 hours
- Less than one hour

Section C: internet and email use for personal purposes while at work

9. Do you have access to the internet at work for your personal use?

- Yes No

10. If so, for which hours and for how long are you allowed to use the internet at work?

- Not during office hours and only for limited periods after hours
- Not during office hours and for unlimited periods after hours
- Anytime but only for limited periods
- Anytime and for unlimited periods

11. Are you allowed to send or receive personal emails during office hours?

Yes No

12. Please estimate the amount of time you spend on the internet and emails when your workload is normal:

- More than 8 hours
 5 – 8 hours
 2.5 – 5 hours
 1 – 2.5 hours
 Less than one hour

13. Estimate this time when your workload is low:

- More than 8 hours
 5 – 8 hours
 2.5 – 5 hours
 1 – 2.5 hours
 Less than one hour

14. Does the use of the internet or email hinder your productivity?

Yes No Somewhat

15. What sites do you visit most frequently?

- Chat rooms
 Leisure/information sites – e.g. sport or radio and TV station sites
 News sites – e.g. CNN, Inet Bridge
 Online services – e.g. banking or medical aid sites
 Shopping and booking sites – e.g. Amazon or British Airways
 Other (please specify)

16. Do you consider your personal internet use/email to be private while at work?

Yes No

17. If you answered yes to the above question: what would you do if this privacy was invaded?

(For example: management called you in to discuss limiting your visits to particular sites or limiting the amount of personal emails sent from your account)

18. Does the organisation you work for have an internet policy?

Yes No

19. If it does, how was your attention drawn to this and by whom?

(Not the person's name, just his/her role in the organisation)

20. If you answered yes to question 18 – which of the following measures is your organisation most likely to implement against employees who transgress the internet policy?

General warning sent to all staff offences.

Verbal warning

Written warning

Disciplinary action

All of the above, in the same order, according to the number of offences

21. Have you – or anyone you know – ever had measures enforced against you/them? If so, please describe these measures and how they were enforced.

Yes No

22. Where measures were taken, did you – or the person you know who this happened to – have knowledge of the internet policy?

Yes No

Section D: organisational culture

23. Describe the culture of the organisation you work at in less than ten words:

24. What is really important to your organisation?

(E.g. producing quality work; working according to a set methodology or process; selling work)

25. What behaviour or repeated actions contribute to this culture?

(E.g. organisation socials/parties; incentives; information sharing sessions; informal recognition)

26. Describe any subcultures that are present within your organisation:

(Subcultures within your business unit/division or another)

27. How does your organisation's culture differ from how it was defined in your interview before you joined the organisation?

- It differs completely, the culture is nothing like what was explained
- It differs somewhat but the core culture is the same
- It is exactly the same

28. Are you aware of any differences in organisational culture between consulting and software development environments? If so, please describe these.

Yes No

29. Has an organisational culture due diligence ever been conducted at your organisation in the time that you have been working there? Please indicate the number of years/months that you have been employed at your organisation.

Yes No

30. How would you describe the IT (Information Technology) industry's culture?

31. How would you define "internet culture" (outside of the organisation)?

32. Do you think that internet culture, as you described it in question 31, has an impact on your organisation's culture? If so, please describe how.

Yes No

33. In your opinion, has the IT industry culture been impacted the most by the internet as a result of being seen to be at the forefront of internet technology and innovation?

Yes No

34. Do you think it is possible for your organisation's culture to change? If so, what would change it?

Yes No

35. Has this culture changed in the past?

Yes No

36. If so, what events triggered this change?

(Tangible and intangible events)

37. Do you think that management describes the organisation's culture in the same way as you do?

Yes No

38. What does management do to change or enhance organisational culture?

Section E: attitude towards the internet/email in the organisation

39. Do you think that the use of the internet and email at work has changed your organisation's culture? If so, please describe how:

Yes No

40. Do you feel that the internet and email has improved the quality of your life at work?

Yes No

41. If you had already entered the workforce when the internet was introduced for the first time, did any change management take place when the internet was implemented?

Yes No

42. Have you ever received training on the internet from your organisation?
(If you have received this from another organisation please indicate the industry.)

Yes No

43. Has your organisation ever promoted or trained on netiquette?

Yes No

44. Do you have a disclaimer on your email?

Yes No

45. How often do you download or update virus protection software or patches?

- Weekly
 Once a month
 Once every three months
 Never

Thank you for the time and effort taken to complete this questionnaire.

The information drawn from the questionnaire shall remain private and confidential and shall only be used for the purpose of this research. Neither your name nor the name of your organisation will be revealed.

Would you like to receive feedback on the results of this questionnaire?

Yes No

Pamela Cooke

Tel: 082 414 8116

Email: pcooke@iqgroup.net

Appendix C: Graphs

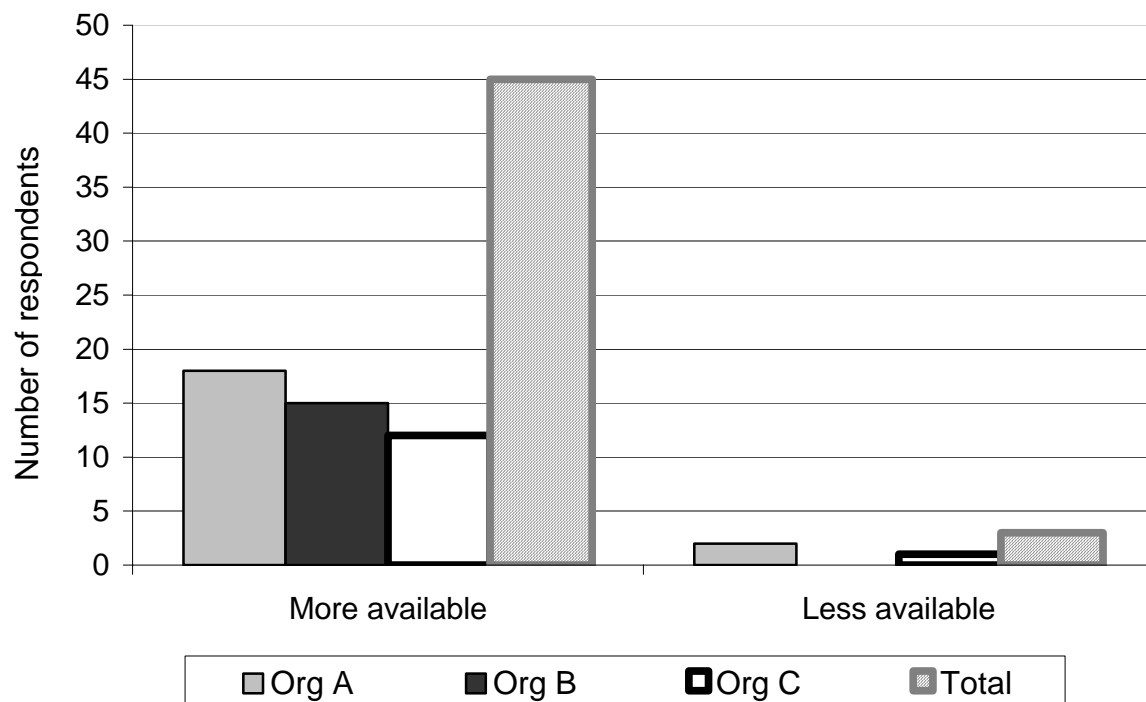
1. Introduction

Graphs have been compiled using the results obtained in the questionnaires. This appendix follows the sequence of the questions as set out in the questionnaire. Graphs have been compiled for specific questions in sections B – E. The information reflected in each of these graphs is discussed in chapter four. The reasons why some graphs and not others have been graphed are also discussed.

2. Graphs

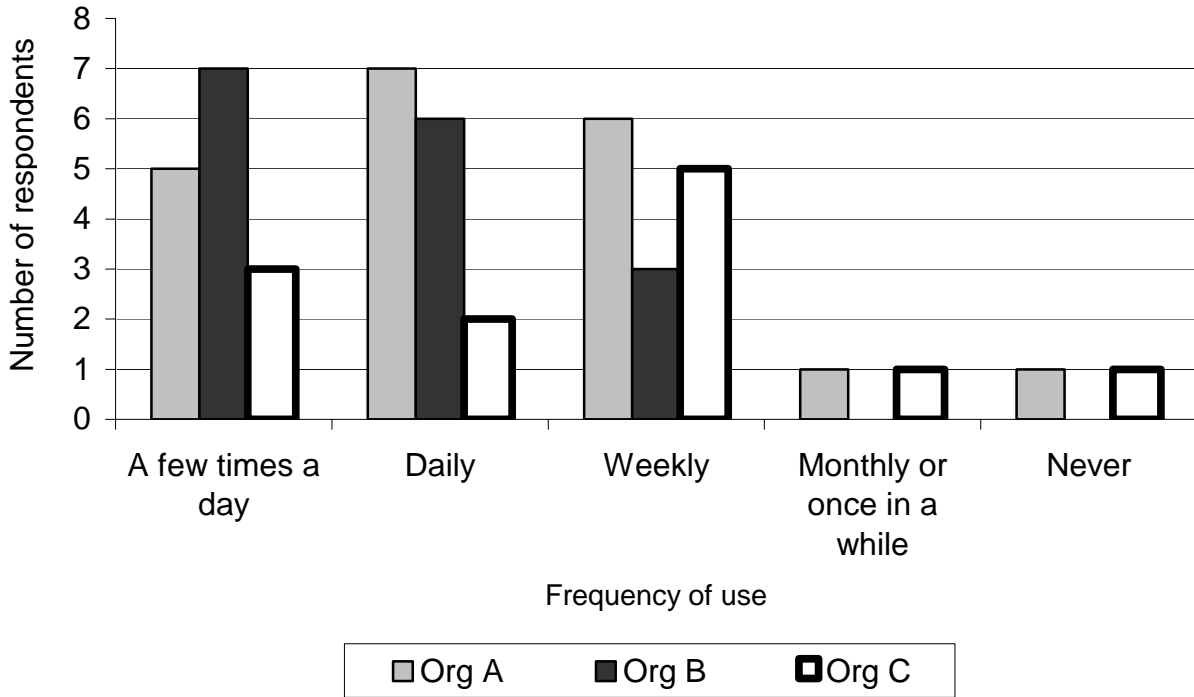
2.1 Section B: Internet and email use for business purposes

Question 3: Do you find your colleagues who have access to the internet and email more or less available?



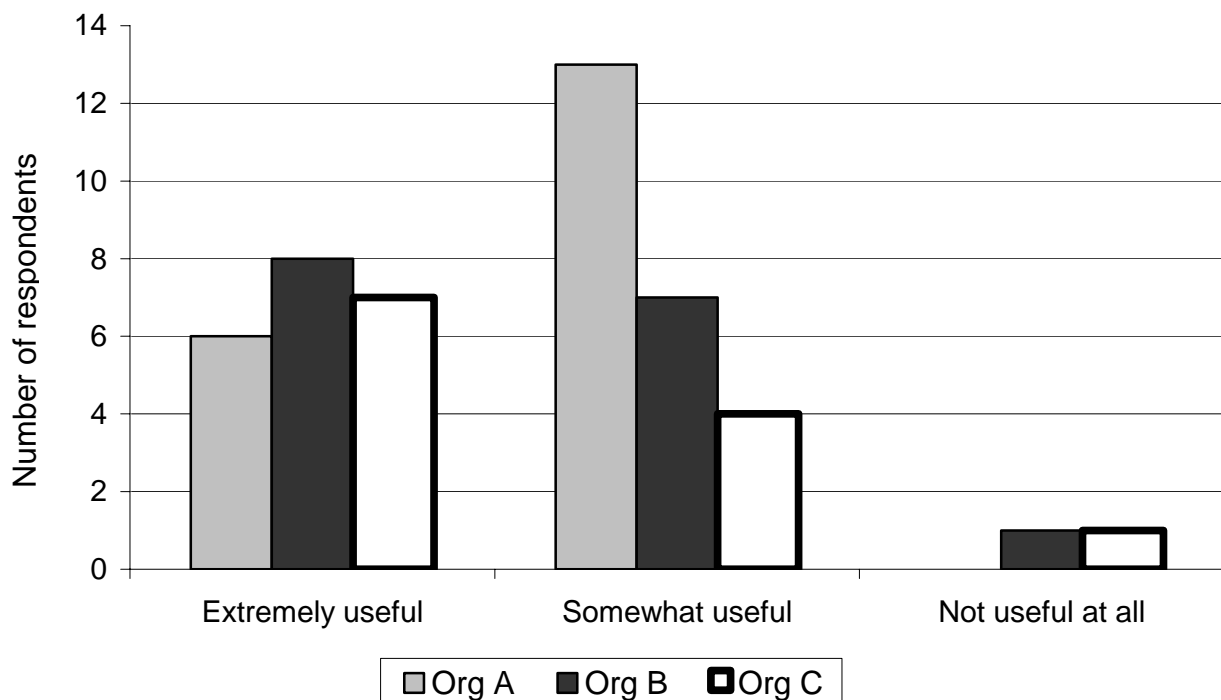
Question 4: How often do you use your organisation’s intranet?

Options: a few times a day; daily; weekly; monthly or once in a while; never.



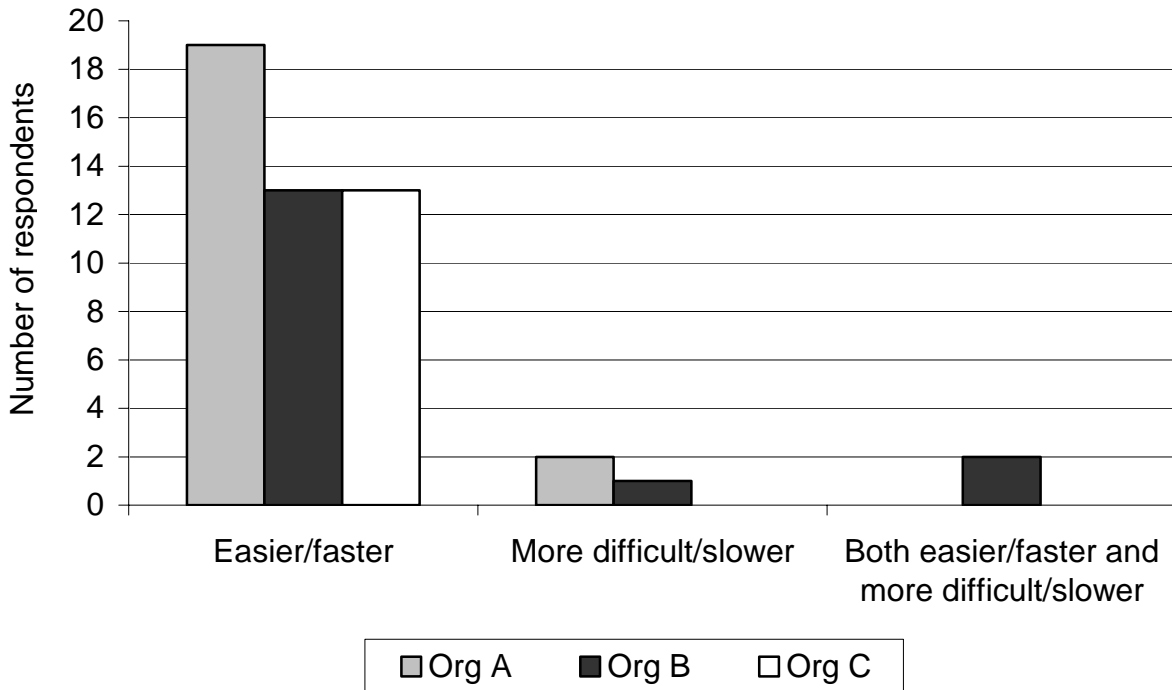
Question 5: How useful do you find your organisation’s intranet?

Options: extremely useful; somewhat useful; not at all useful.

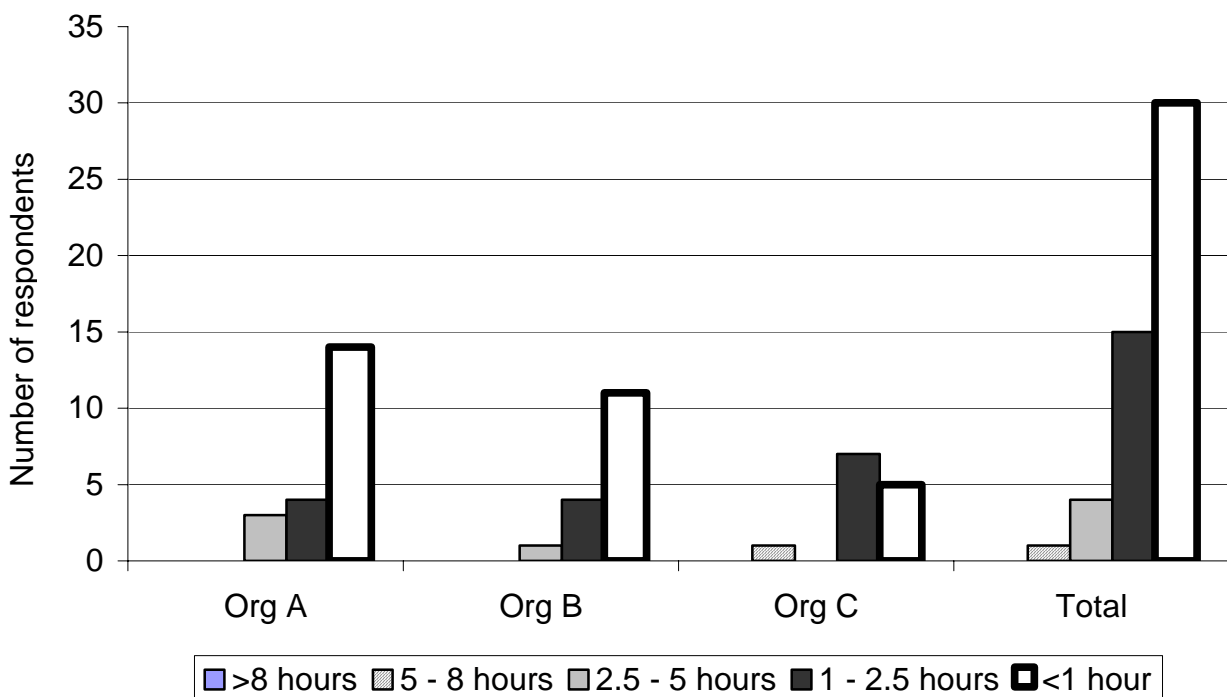


Question 6: Has the use of the internet or email made your work easier and faster or more difficult and slower? Please explain how.

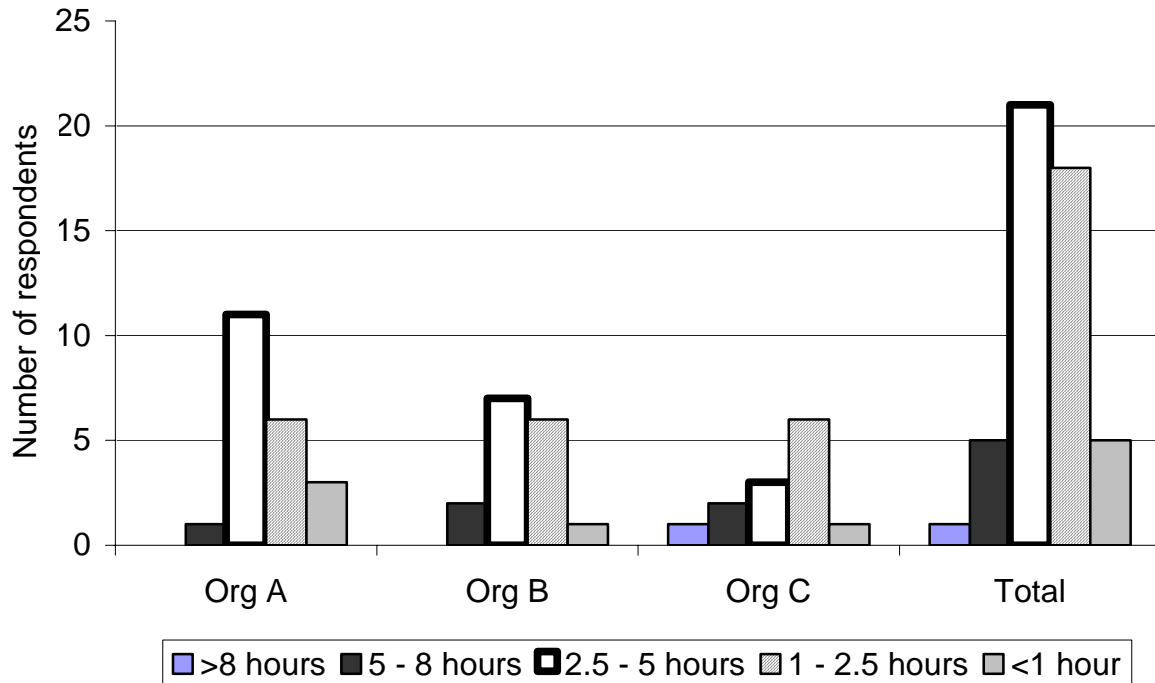
Options: easier/faster; more difficult/slower.



Question 7: Estimate how much time you spend daily on the internet for work purposes. Options: more than 8 hours; 5 – 8 hours; 2.5 – 5 hours; 1 – 2.5 hours; less than one hour.

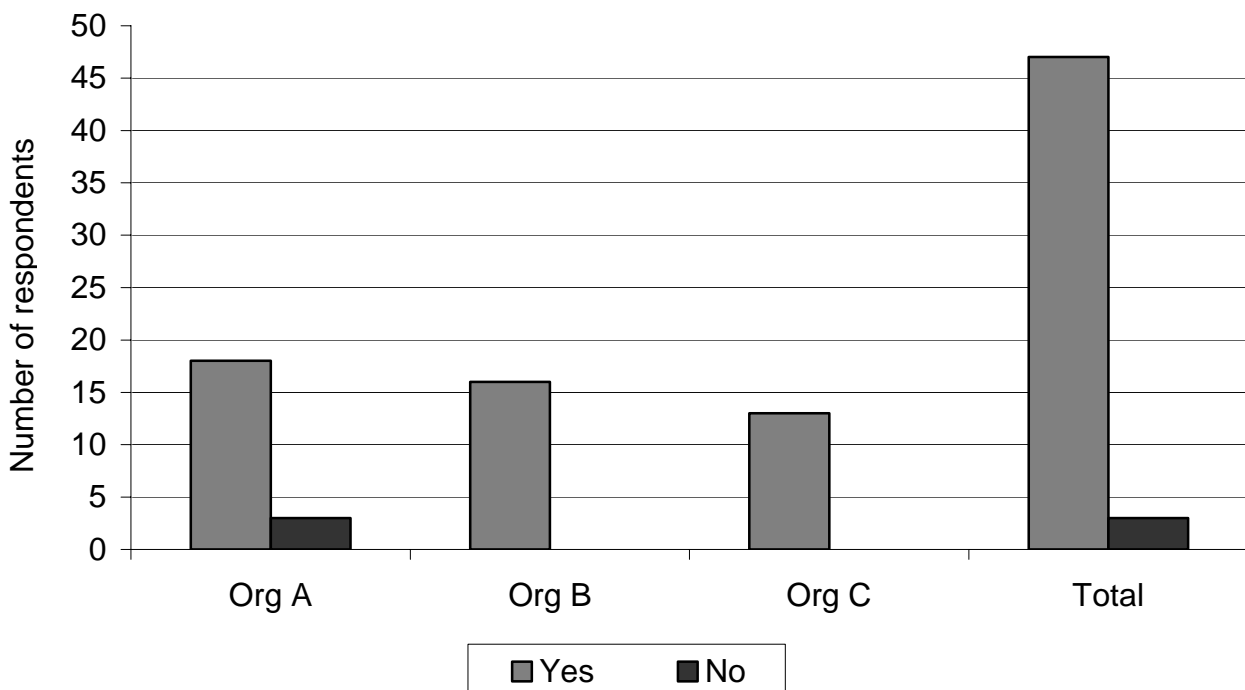


Question 8: Estimate how much time you spend daily on work-related email. Options: more than 8 hours; 5 – 8 hours; 2.5 – 5 hours; 1 – 2.5 hours; less than one hour.

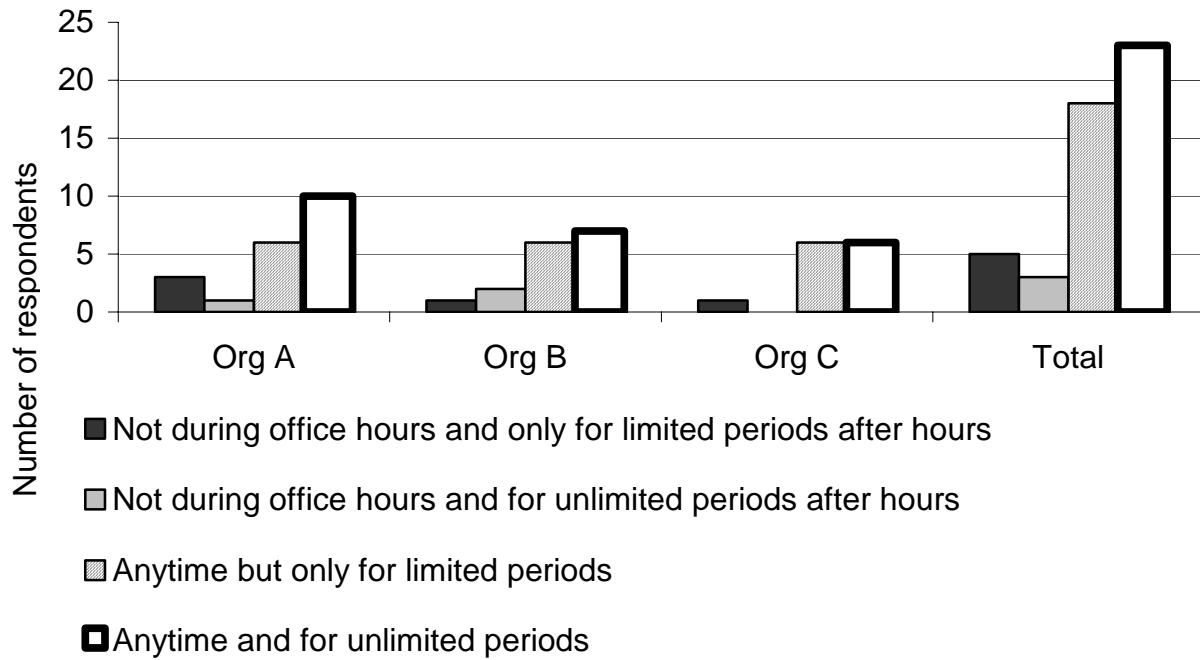


2.2 Section C: Internet and email use for personal purposes while at work

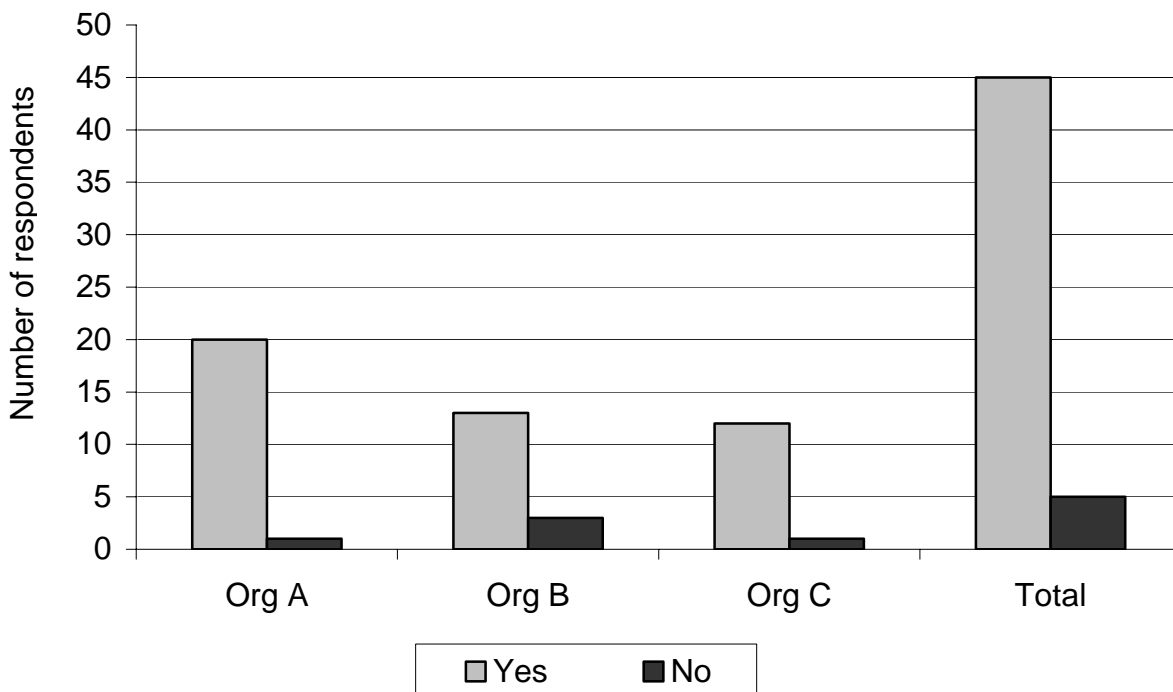
Question 9: Do you have access to the internet at work for your personal use? Options: yes; no.



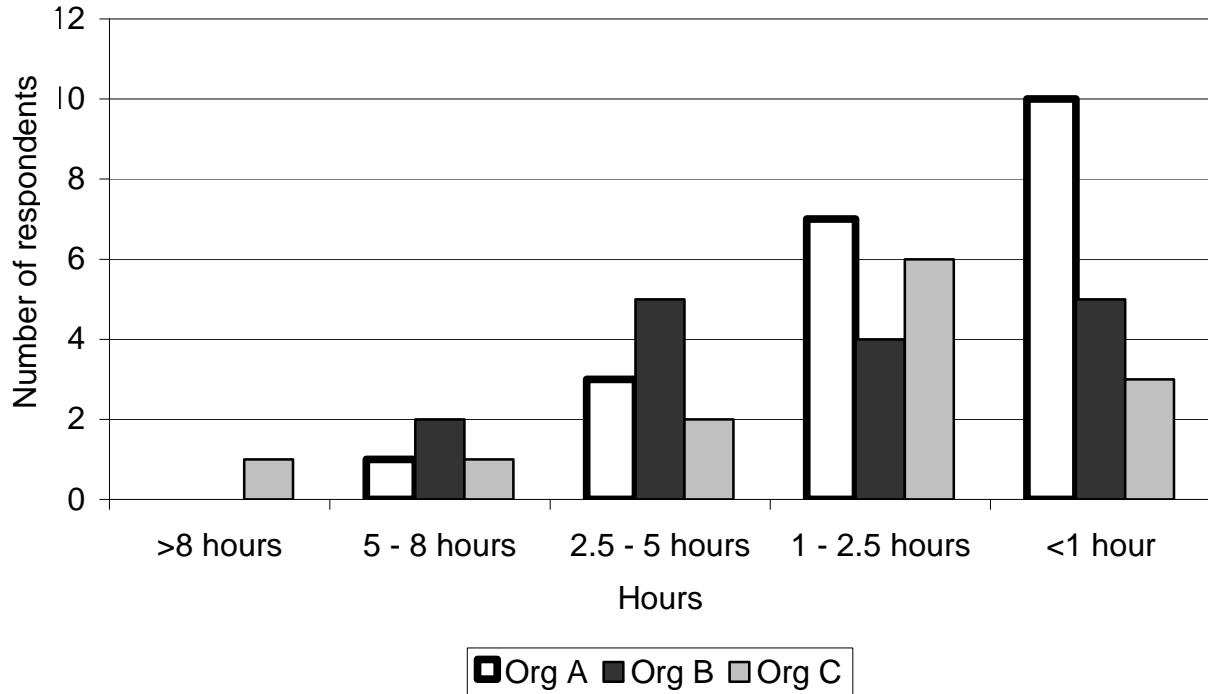
Question 10: If so, for which hours and for how long are you allowed to use the internet at work? Options: not during office hours and only for limited periods after hours; not during office hours and for unlimited periods after hours; anytime but only for limited periods; anytime and for unlimited periods.



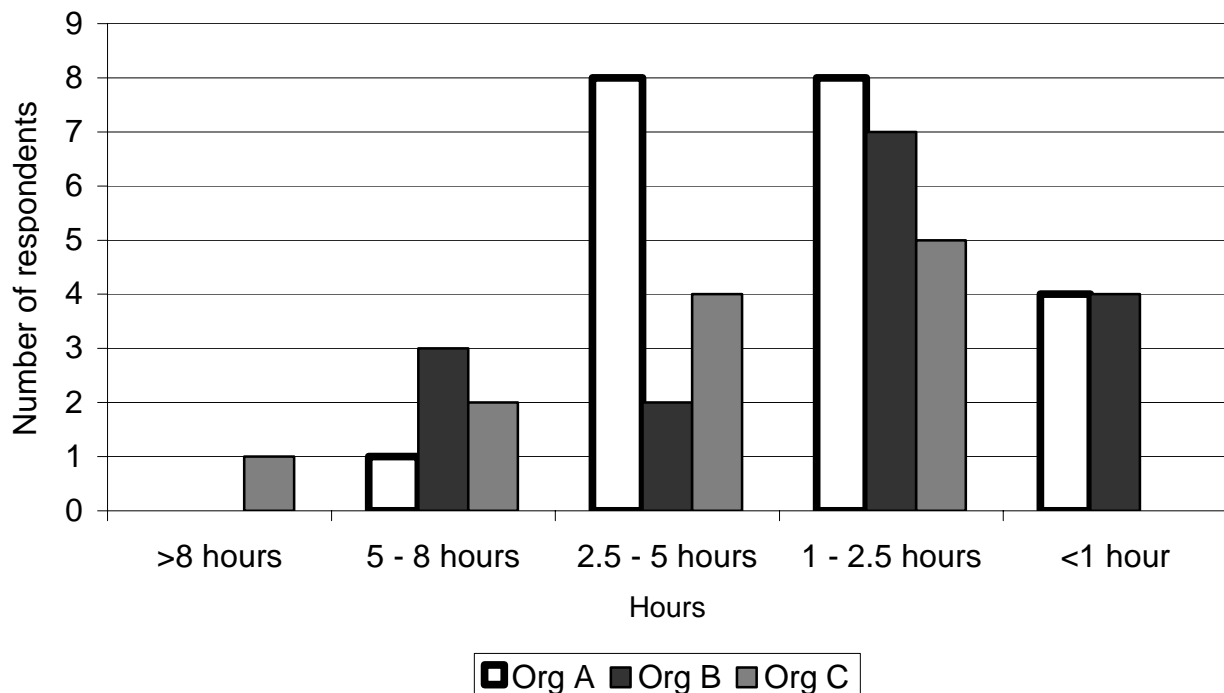
Question 11: Are you allowed to send or receive personal emails during office hours? Options: yes; no.



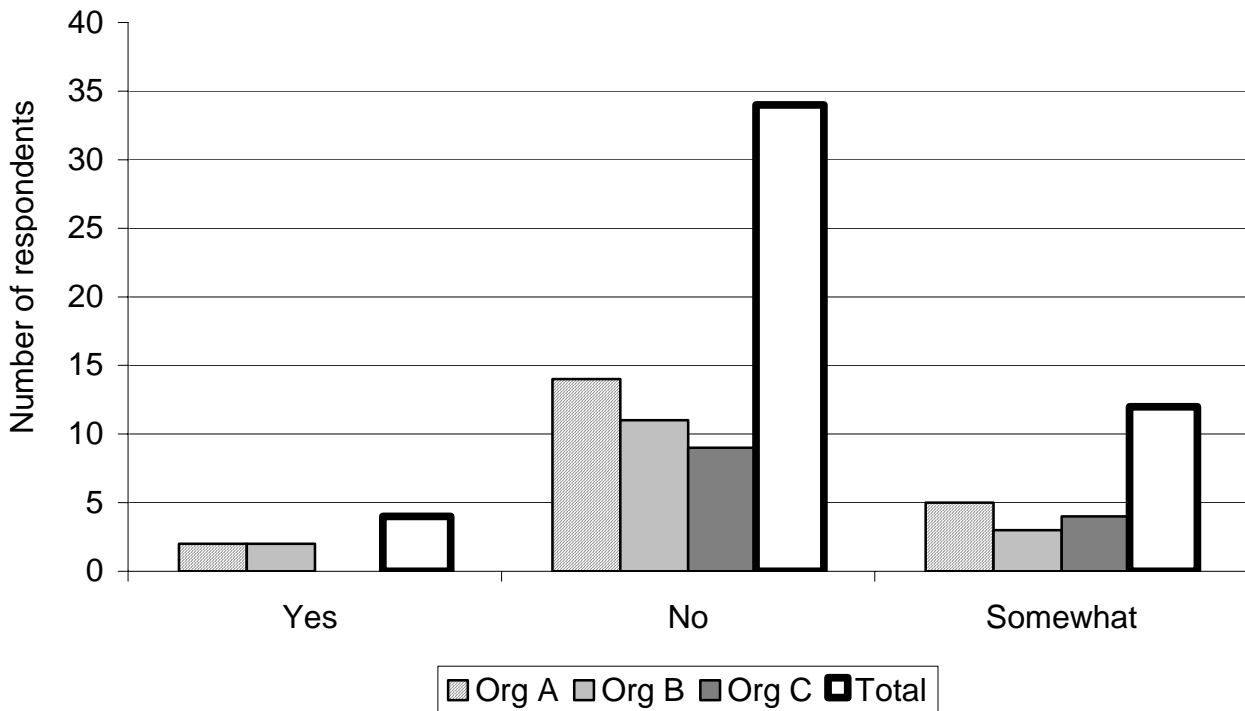
Question 12: Please estimate the amount of time you spend on the internet and emails when your workload is normal. Options: more than 8 hours; 5 – 8 hours; 2.5 – 5 hours; 1 – 2.5 hours; less than one hour.



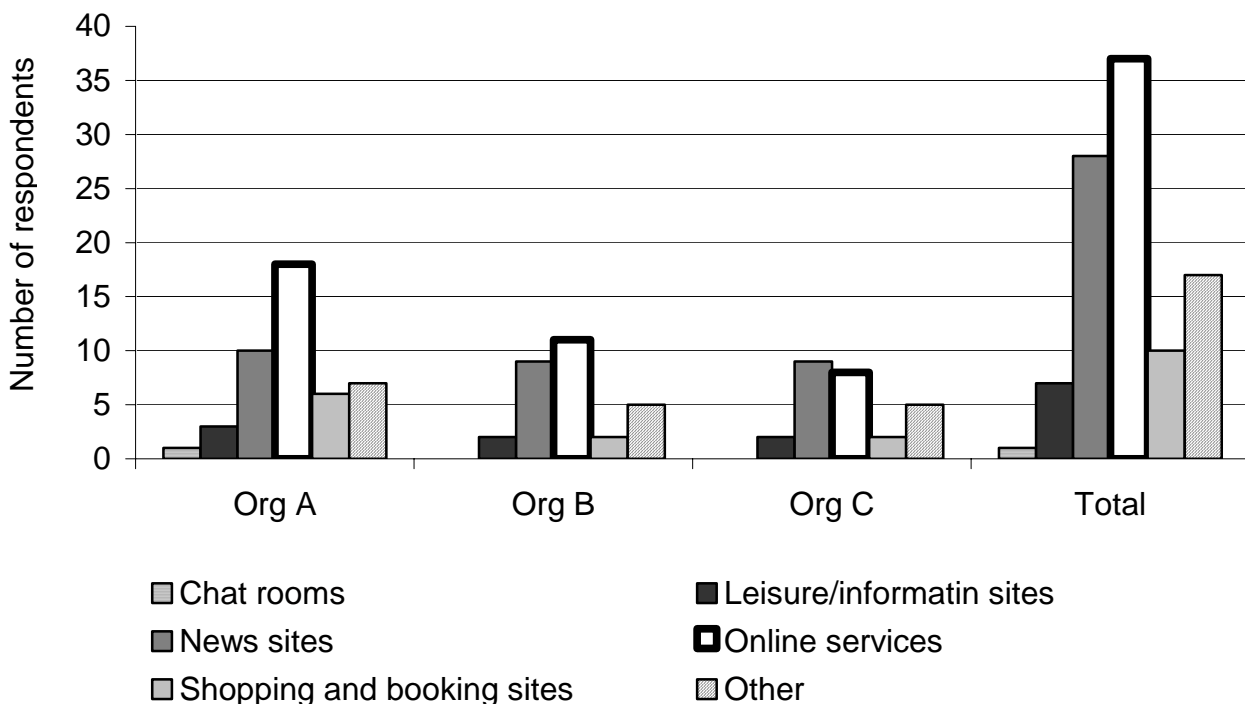
Question 13: Estimate this time when your workload is low. Options: more than 8 hours; 5 – 8 hours; 2.5 – 5 hours; 1 – 2.5 hours; less than one hour.



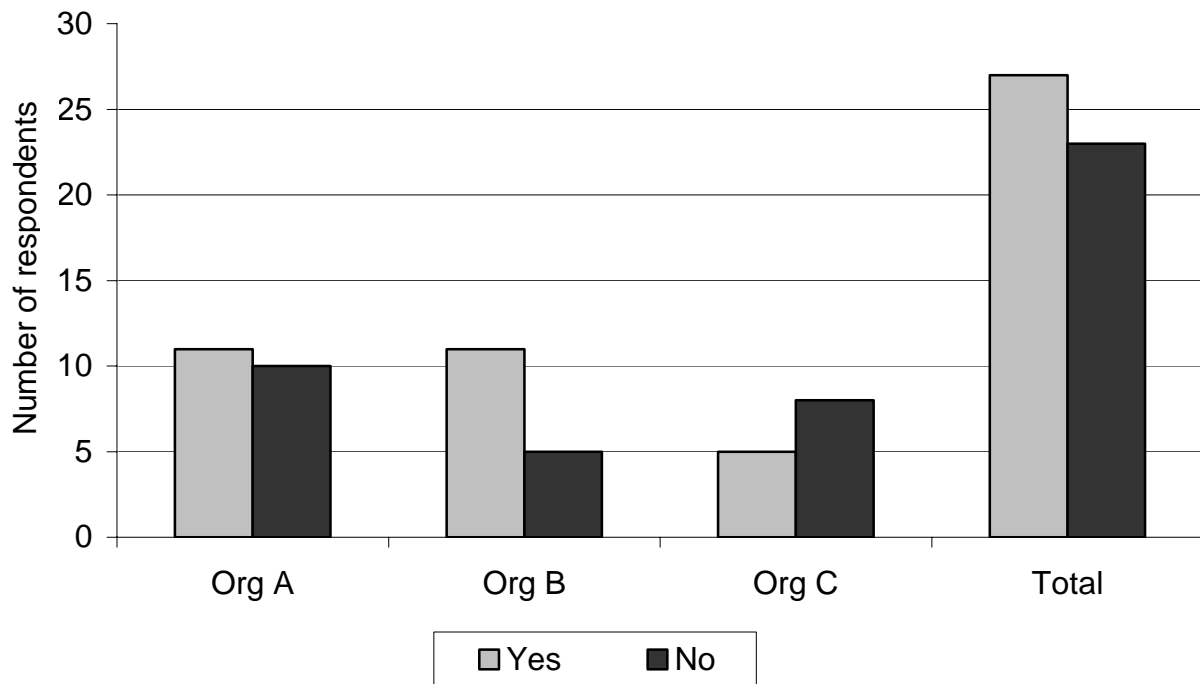
Question 14: Does the use of the internet or email hinder your productivity? Options: yes; no; somewhat.



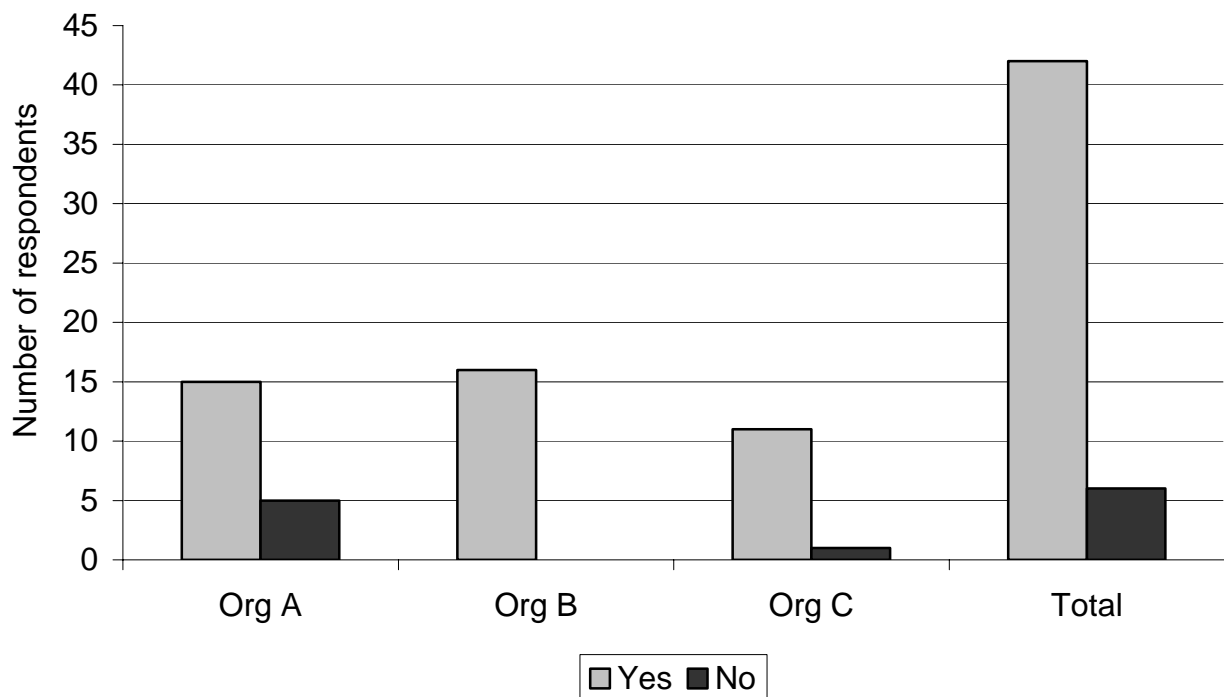
Question 15: What sites do you visit most frequently? Options: chat rooms; leisure/information sites – e.g. sport or radio and TV station sites; News sites – e.g. CNN, Inet Bridge; online services – e.g. banking or medical aid sites; shopping and booking sites – e.g. Amazon or British Airways; Other (please specify).



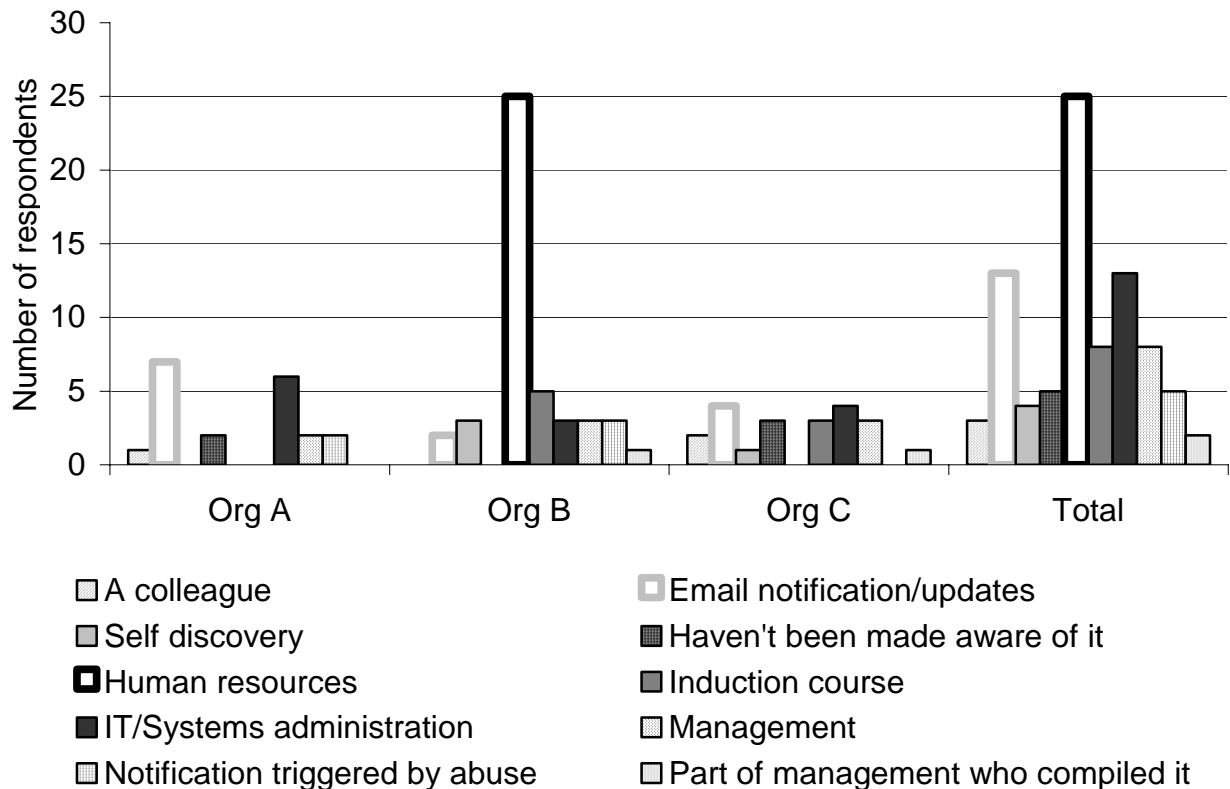
Question 16: Do you consider your personal internet use/email to be private while at work? Options: yes; no.



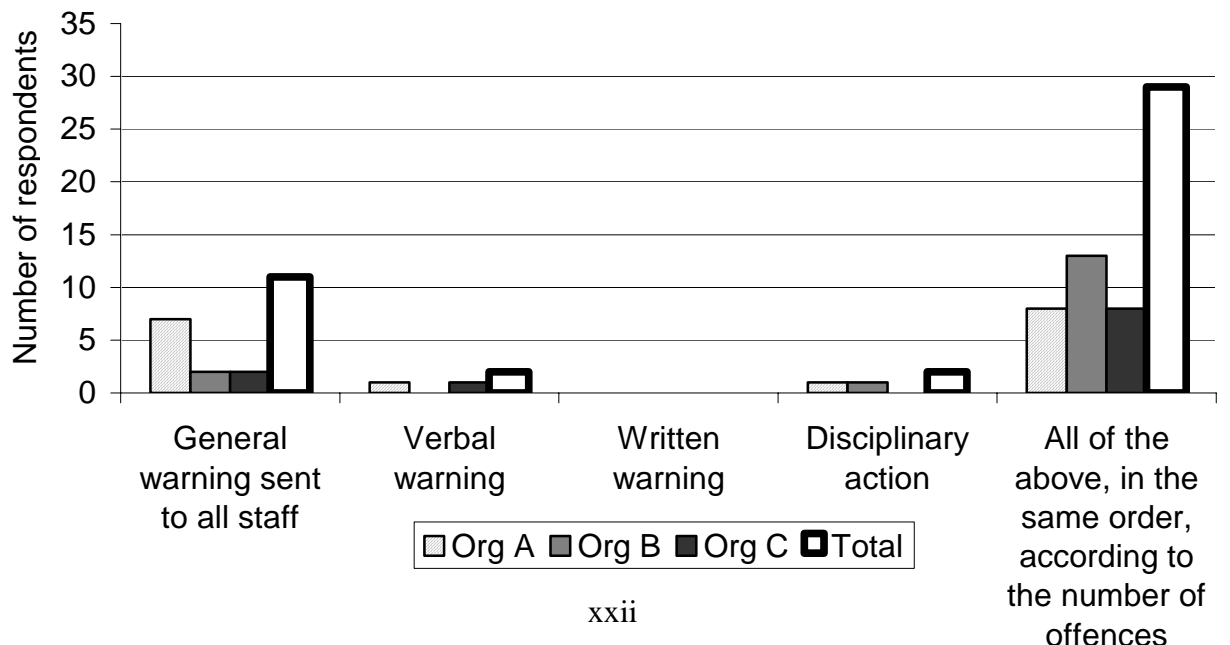
Question 18: Does the organisation you work for have an internet policy? Options: yes; no.



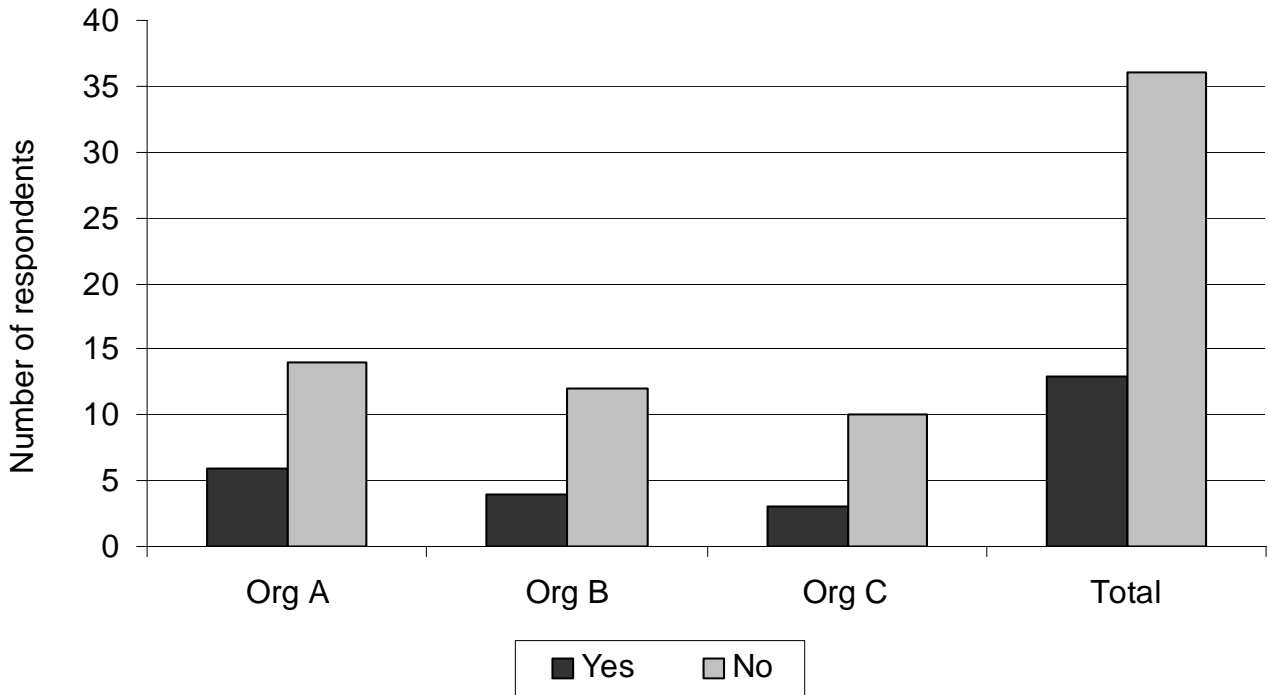
Question 19: If it does, how was your attention drawn to this and by whom? (Not the person's name, just his/her role in the organisation)



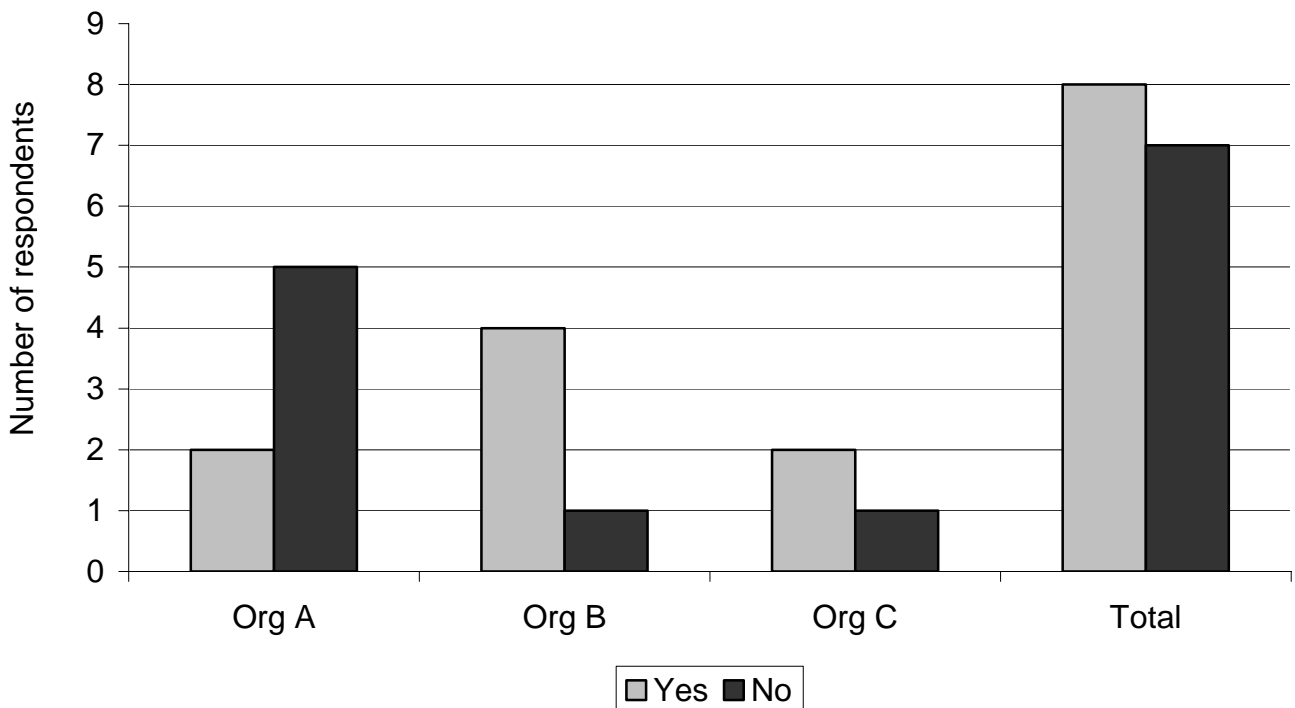
Question 20: If you answered yes to question 18 – which of the following measures is your organisation most likely to implement against employees who transgress the internet policy? Options: general warning sent to all staff; verbal warning; written warning; disciplinary action; all of the above, in the same order, according to the number of offences.



Question 21: Have you – or anyone you know – ever had measures enforced against you/them? If so, please describe these measures and how they were enforced. Options: yes; no.

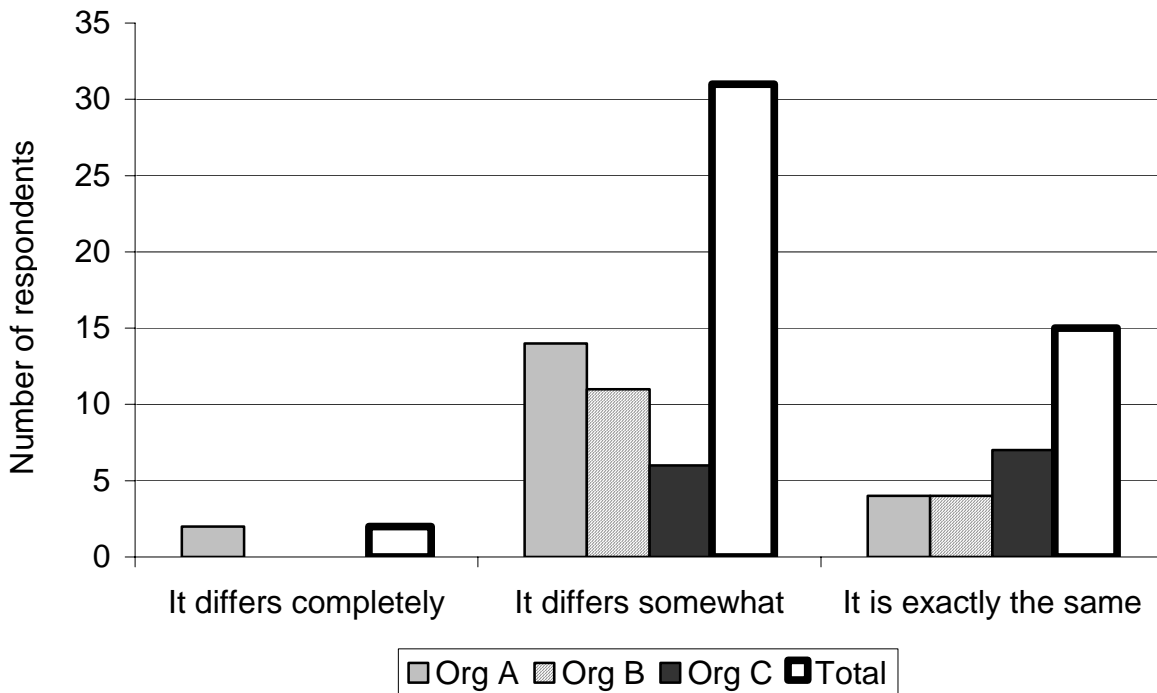


Question 22: Where measures were taken, did you – or the person you know who this happened to – have knowledge of the internet policy? Options: yes; no.

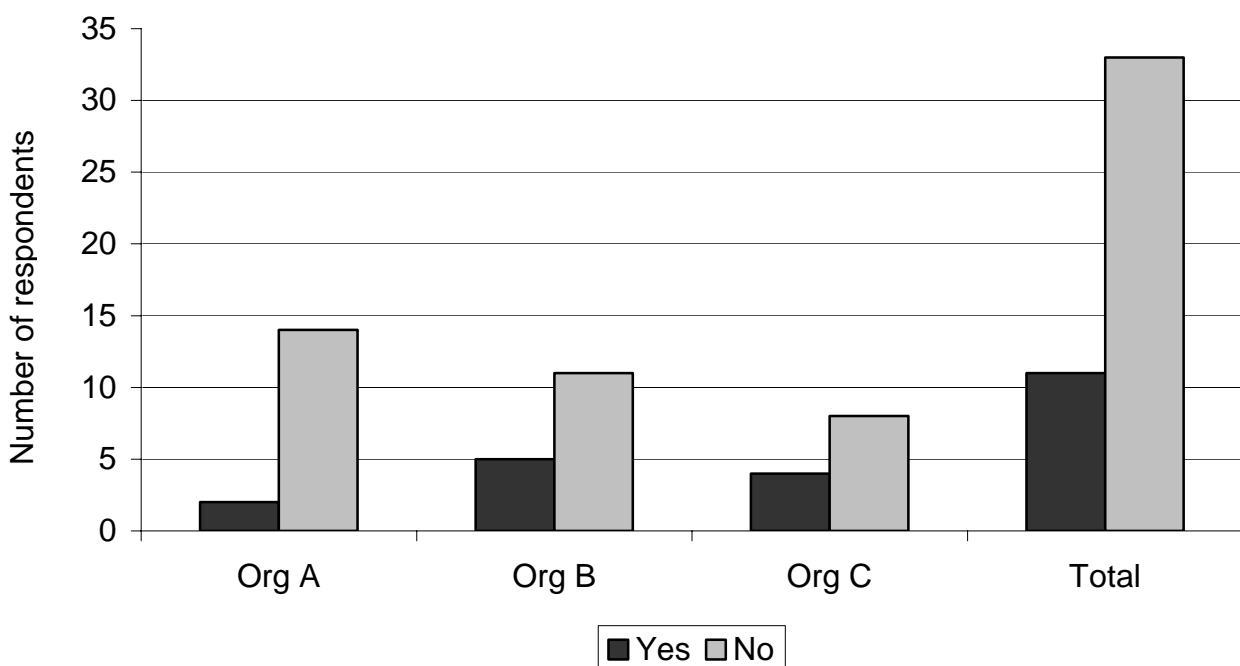


2.3 Section D: Organisational culture

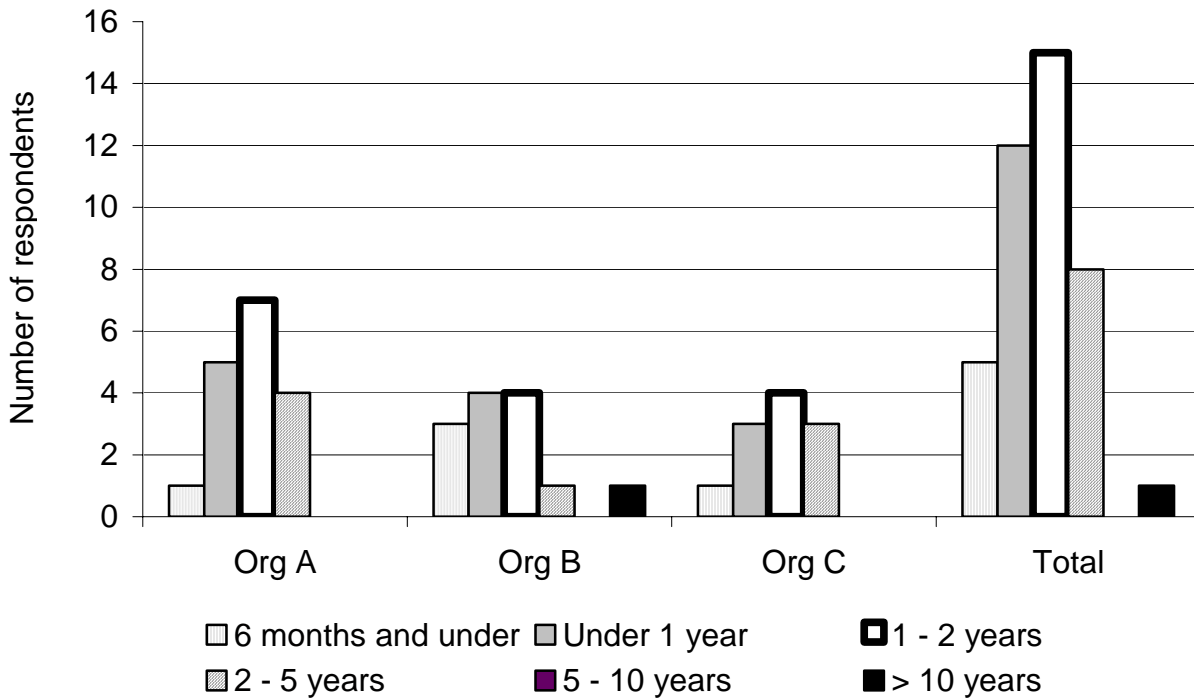
Question 27: How does your organisation’s culture differ from how it was defined in your interview before you joined the organisation? Options: it differs completely, the culture is nothing like what was explained; it differs somewhat but the core culture is the same; it is exactly the same.



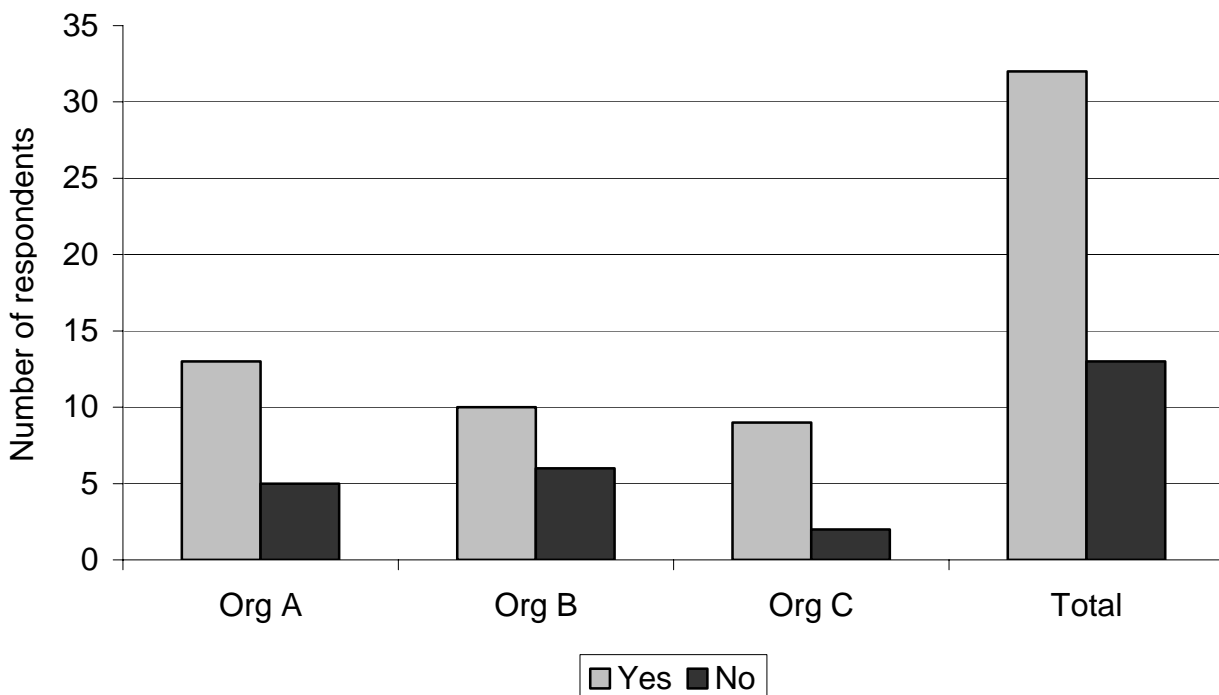
Question 29: Has an organisational culture due diligence ever been conducted at your organisation in the time that you have been working there? Options: yes; no.



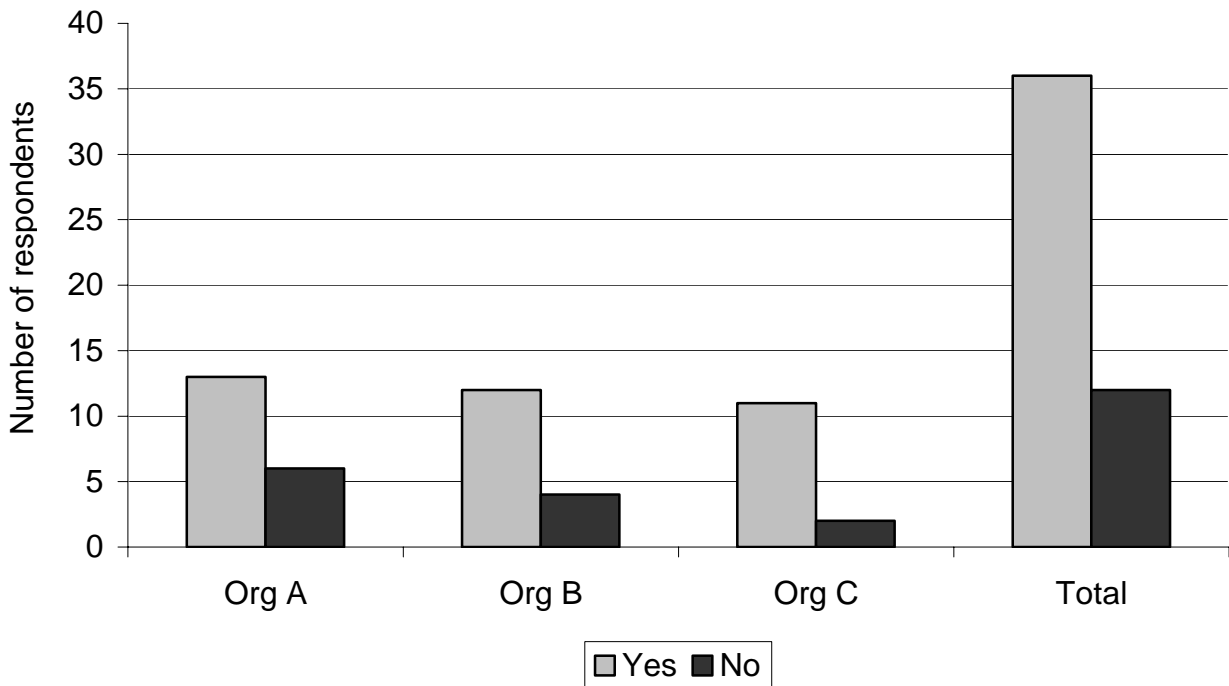
Question 29: Please indicate the number of years/months that you have been employed at your organisation.



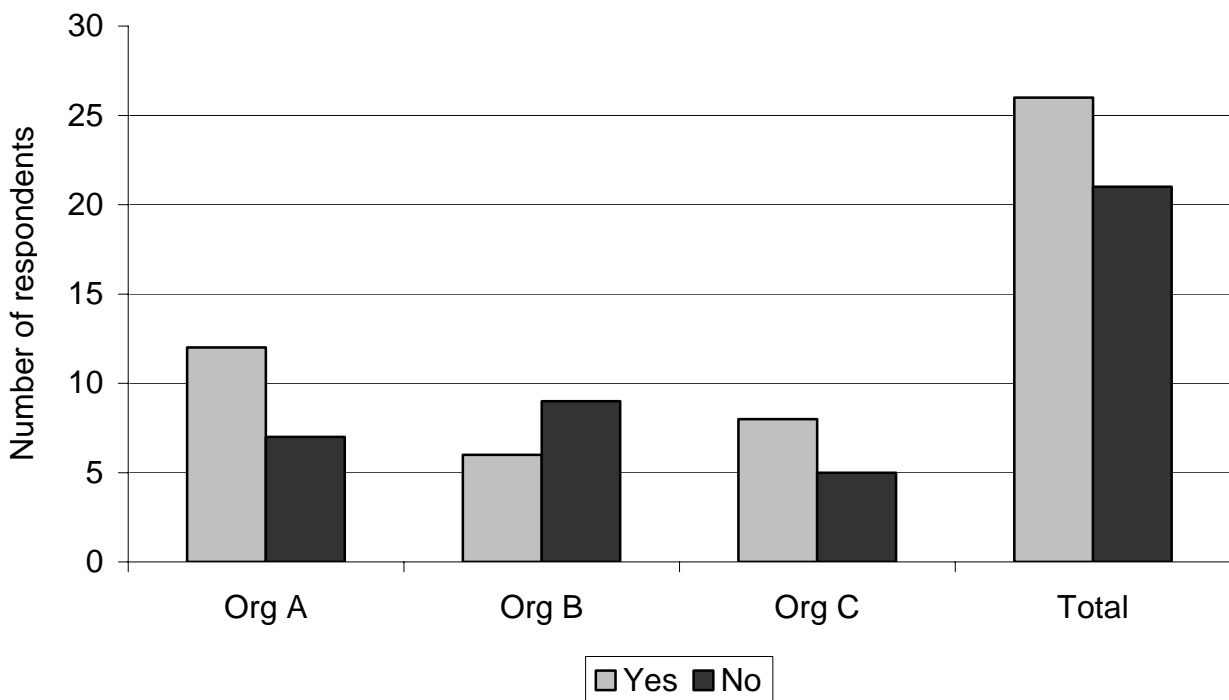
Question 33: In your opinion, has the IT industry culture been impacted the most by the internet as a result of being seen to be at the forefront of internet technology and innovation? Options: yes; no.



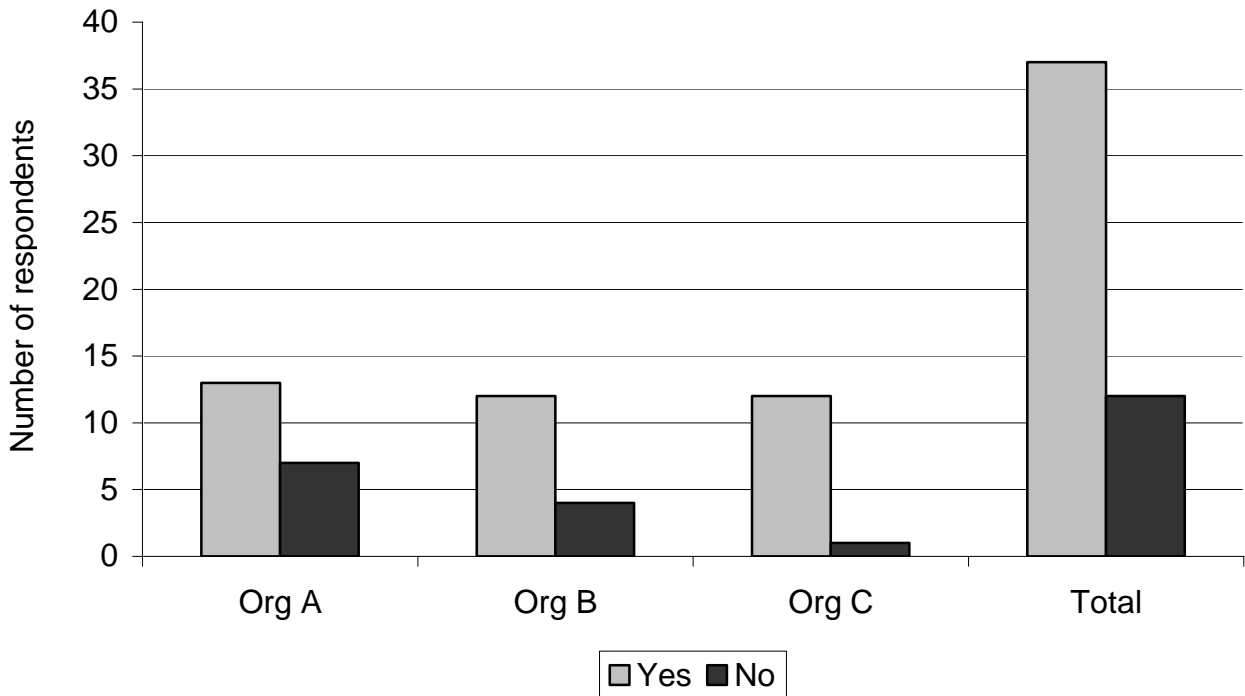
Question 34: Do you think it is possible for your organisation’s culture to change? If so, what would change it? Options: yes; no.



Question 35: Has this culture changed in the past? Options: yes; no.

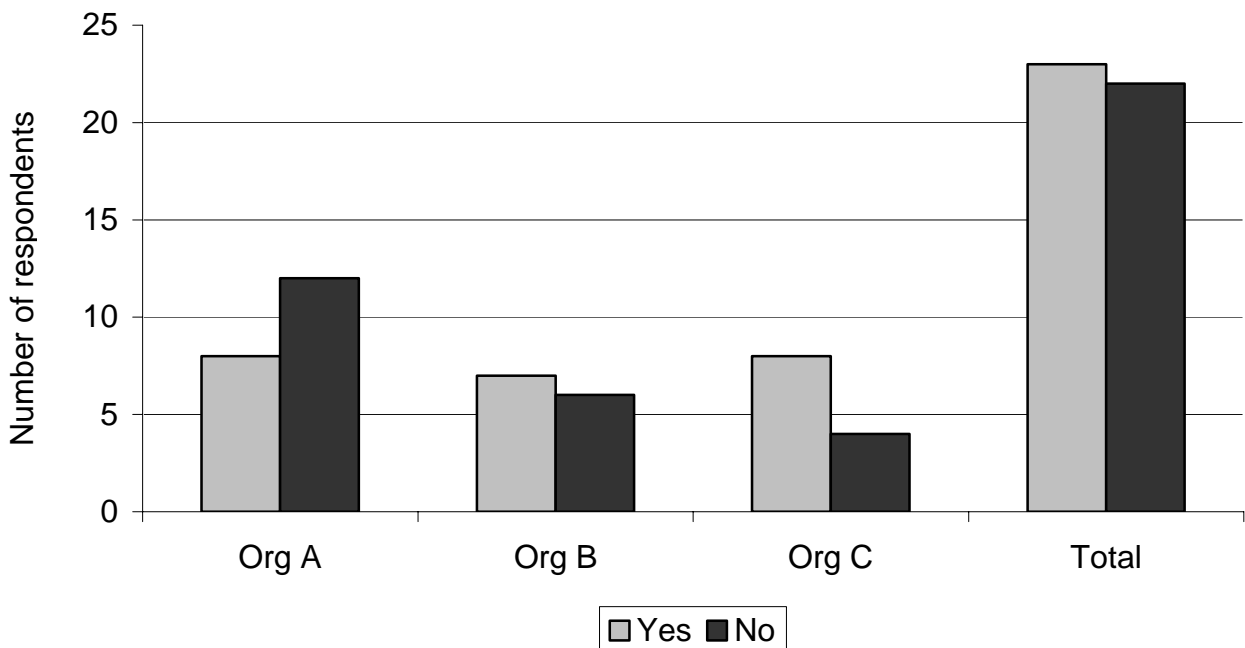


Question 37: Do you think that management describes the organisation’s culture in the same way as you do? Options: yes; no.

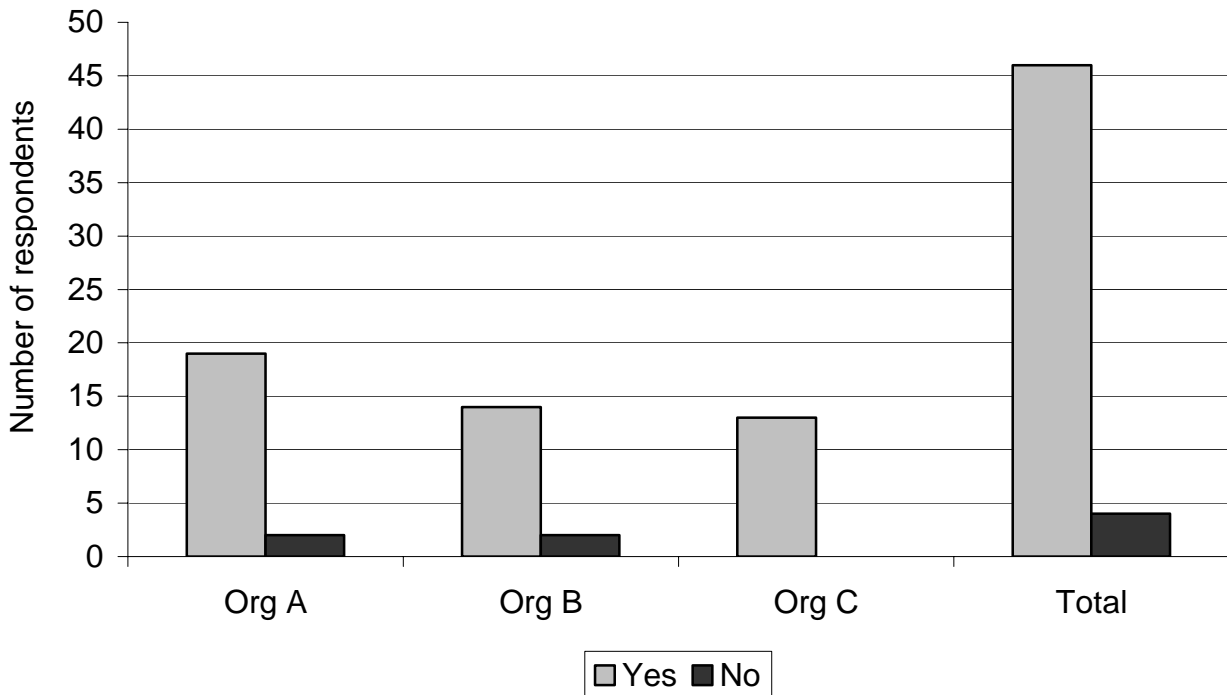


2.4 Section E: Culture and attitude towards the internet/email in the organisation

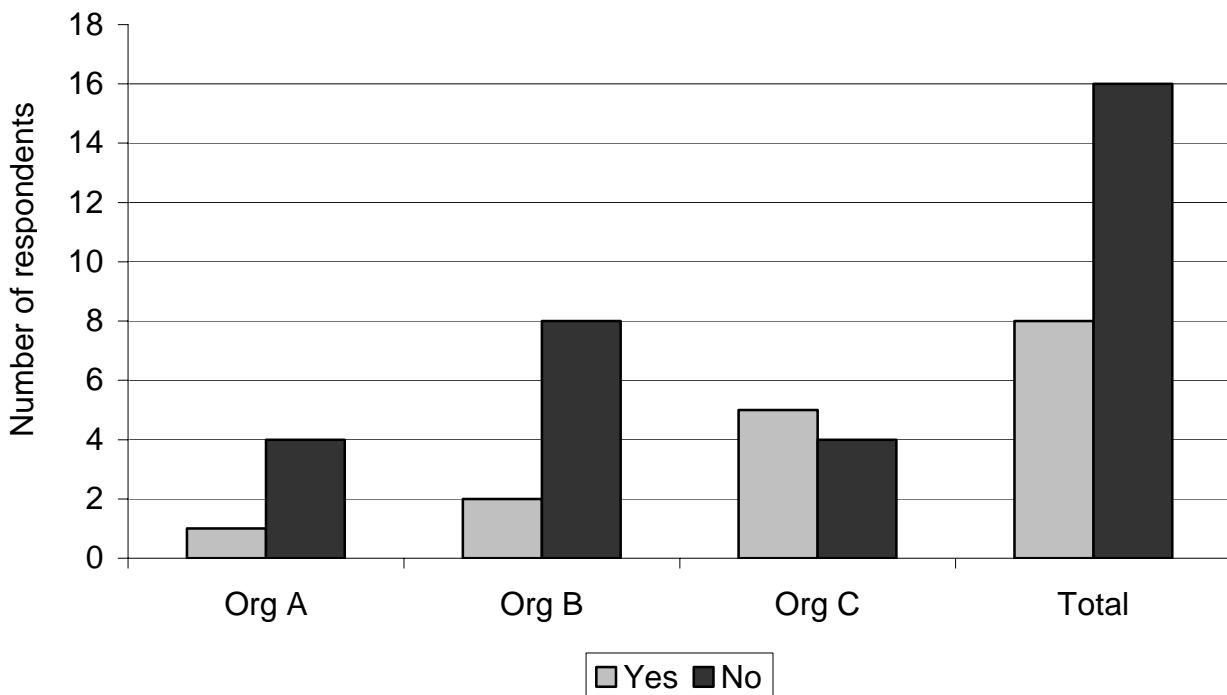
Question 39: Do you think that the use of the internet and email at work has changed your organisation’s culture? If so, please describe how. Options: yes; no.



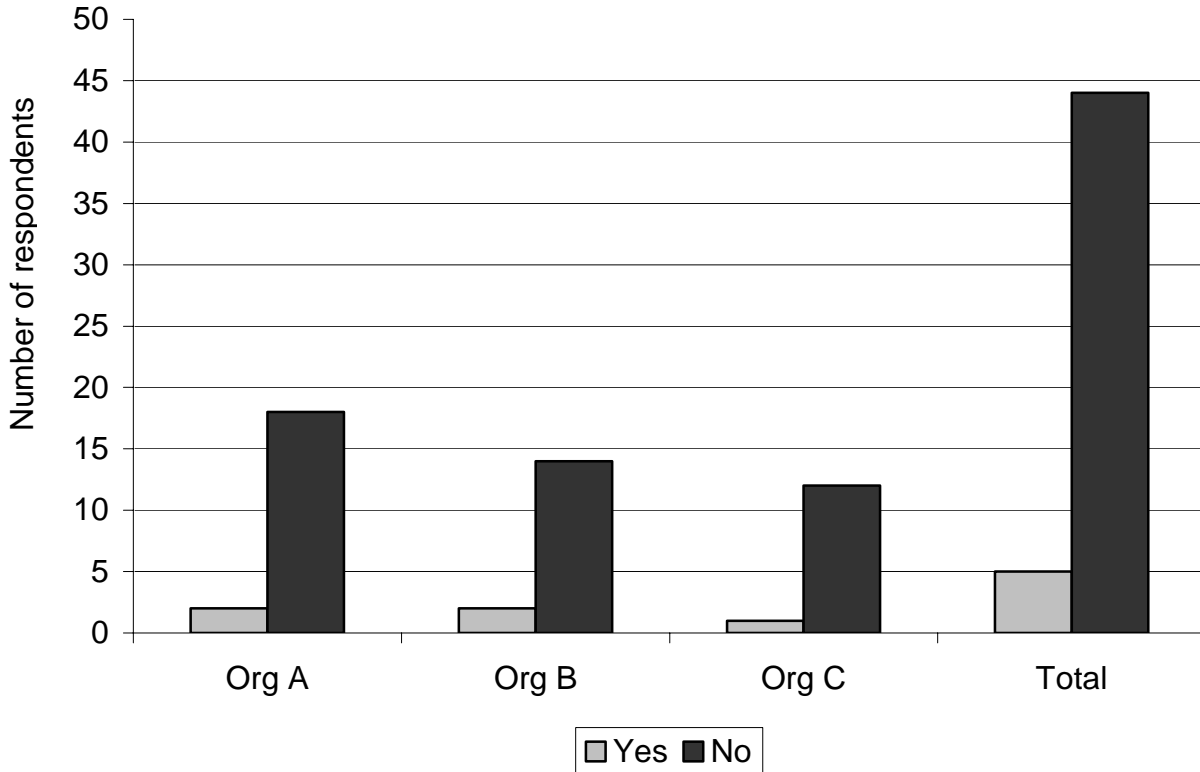
Question 40: Do you feel that the internet and email has improved the quality of your life at work? Options: yes; no.



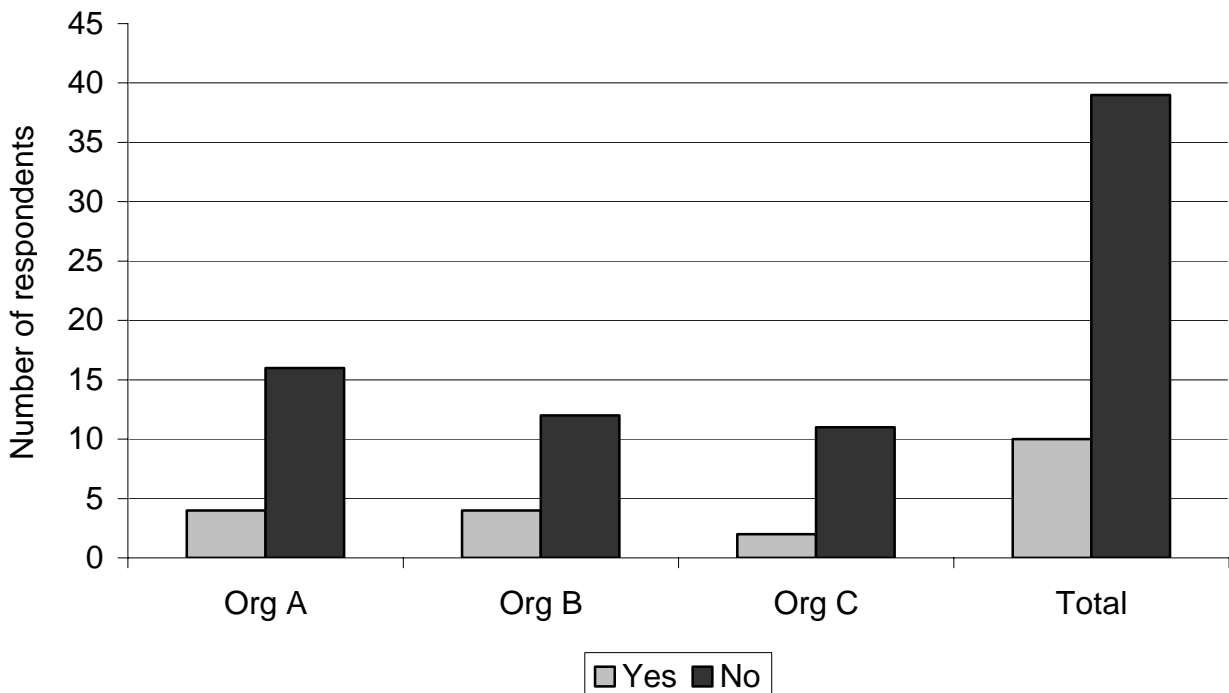
Question 41: If you had already entered the workforce when the internet was introduced for the first time, did any change management take place when the internet was implemented? Options: yes; no.



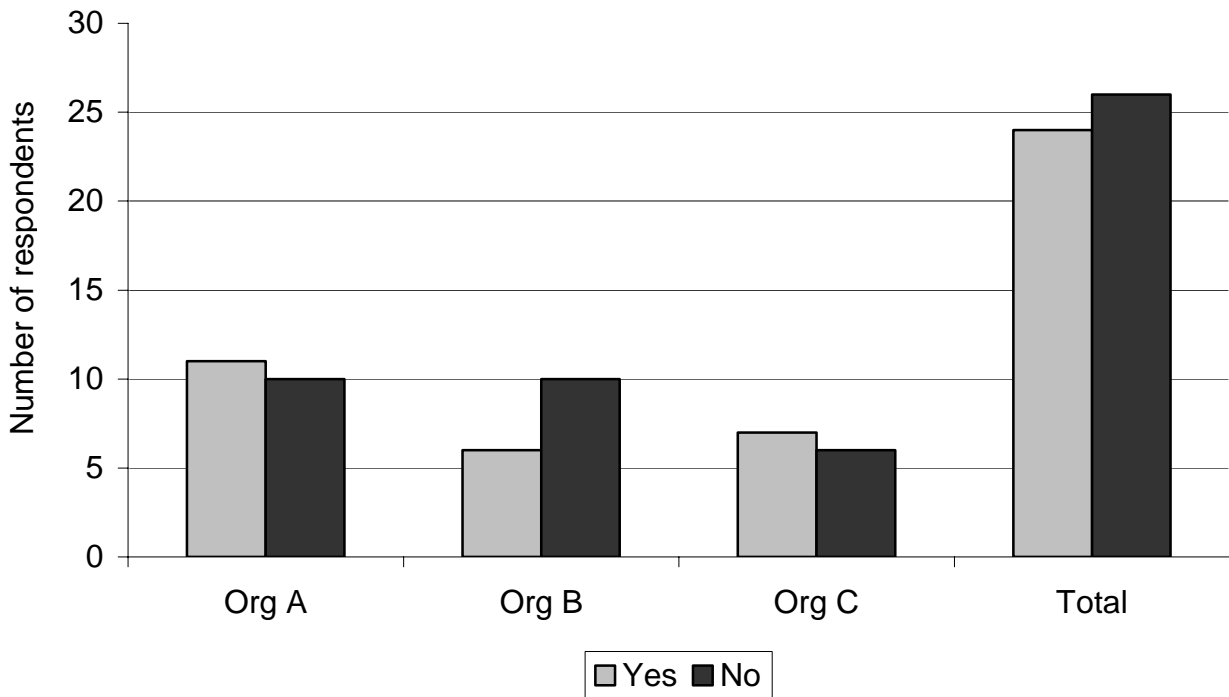
Question 42: Have you ever received training on the internet from your organisation? (If you have received this from another organisation please indicate the industry.) Options: yes; no.



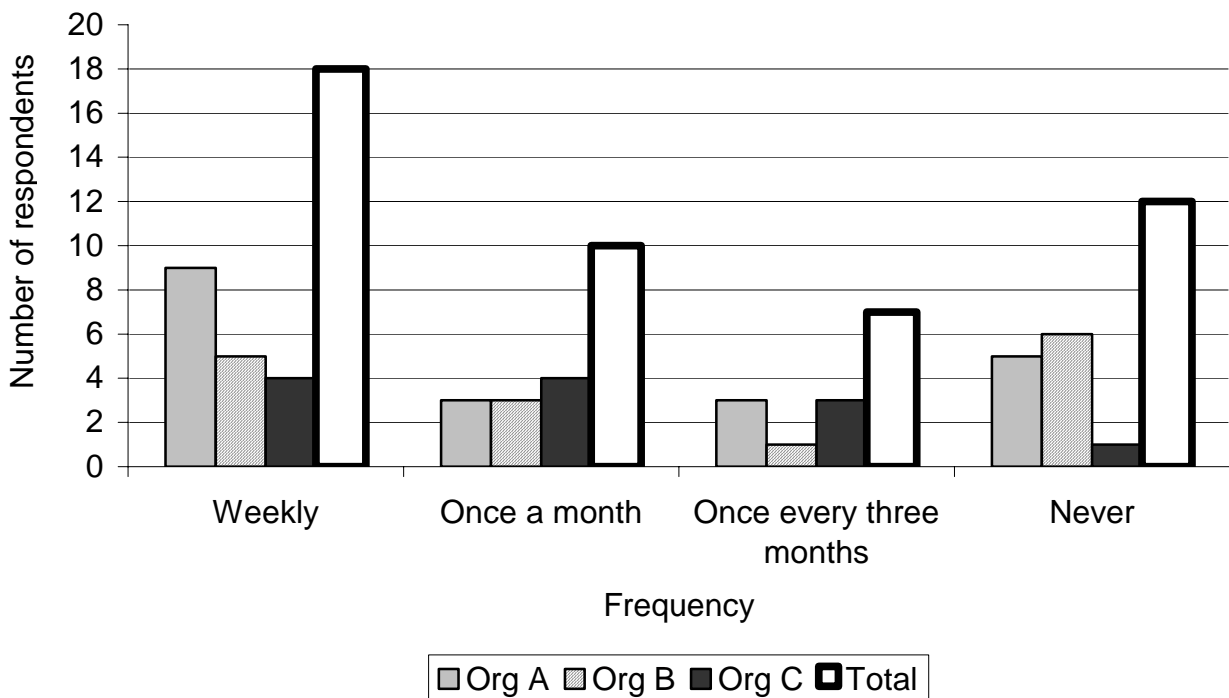
Question 43: Has your organisation ever promoted or trained on netiquette? Options: yes; no.



Question 44: Do you have a disclaimer on your email?



Question 45: How often do you download or update virus protection software or patches? Options: weekly; once a month; once every three months; never.



Appendix D: Interview Results

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
Who initially compiled the internet policy?	The IT executive, another executive and the IT manager (IT manager).	The information security manager. The formal policy is on the intranet. It really states that you may not go into porn sites, hate sites, things like that and it also steers employees away from abuse of the internet during office hours. We also have in our employment contracts that it covers abuse of company assets. So it covers everything (Information security manager).	The IT Department.
How was the internet policy compiled?	The best of four other companies' policies has been extracted (IT manager).		

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
What are the main reasons for having an internet policy?	<p>There is a need to have sufficient bandwidth for clients for whom organisation A hosts internet sites.</p> <p>There is also a need to have a legal leg to stand on (IT manager).</p> <p>Firstly as a security mechanism and secondly to manage the resources (Software development business unit head).</p>	Optimal use of bandwidth, putting the company at risk and optimal use of people's time (Information security manager).	
How often is the policy revised?	This is the first revision that has come out. It will get revised as new technology emerges (IT manager).		
How has the policy been communicated	It has recently changed and from now on will be issued to new employees upfront and existing employees will be	HR covers the policy in the induction course and, over and above that, the organisation has all the reminders that	

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
to employees?	<p>notified of it. All employees will now be required to sign a declaration that they have read and understood the policy (IT manager).</p> <p>We've got a one-pager that states that employees may only go to sites that will not be offensive to others in the office (Software development business unit head).</p>	<p>result from the web marshal. However, from time to time there are reminders and therefore there is constant communication. Some employees are called in for discipline (Internet banking channel manager).</p> <p>Firstly there's a statement in the employment contract that requires people to familiarise themselves with our organisation's policy. Then once a year I'll put out something that gives a broad outline of security issues. I sometimes send these out via brochure or email to the whole organisation. There are also policies on shared</p>	

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
		folders, public folders and on the intranet. We also have a chat to new employees – we supposedly give a ten-minute talk about what they may and may not do (Information security manager).	
What is the procedure for non-adherence to the policy?	The employee who does not adhere is “coached” by the IT manager at first. If this does not correct the behaviour then the business unit head will speak directly to the employee and, if the behaviour is still not corrected the full HR disciplinary route will be followed (IT manager).	It is up to management’s discretion. It could be a warning or a dismissal, depending on the type of abuse. However, I won’t authorise someone to get back onto the system unless I’m satisfied with the type of disciplinary action that has taken place. If it’s a chain letter and there has been an impact on our image on the market I’ll enforce disciplinary action (Information	

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
		security manager).	
Has an employee ever been dismissed as a result of visiting a particular site?	No (IT manager).	Management handles this, I can't give you specific cases. We have had incidents where we have not renewed contracts though. Dismissals over browsing of porn, not as far as I know, we have had written warnings though (Information security manager).	
What other measures have been taken to curb internet abuse?	In the future when organisation A has a new technical infrastructure it will be able to limit bandwidth so that only a certain amount of bandwidth is allowed during working hours. After hours the policy will allow unlimited access (IT manager).		
What sites are	Mostly Hotmail accounts where MSN		

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
visited the most?	messenger is available. Banking sites as well as audio stream sites such as Highveld; 5FM; 702. Those are our biggest bugbears at the moment (IT manager).		
When may employees use the internet?	They can use it any time, but obviously we would prefer that this is outside of working hours for private business but they can use any hours that they want to. Of course if someone wants to download something – any software – we try to get them to do that after hours (Software development business unit head).	Organisation B gives its employees internet access depending on the type of job that the employee is doing. There is a certain accountability level but nothing stops these employees from looking at other sites. There are some proxy checks where they see if you try to go to some sport sites or pornography sites (Internet banking channel manager).	
If already	At the previous company I worked at		

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
working when the internet was first implemented, how was this handled?	<p>we went through full change management where they actually set up proper training where a department was pulled in on extensive training. Thereafter it was on a one-to-one basis where if a person had a problem they could contact the training centre. It went through an entire change management process (IT manager).</p> <p>I don't think it was introduced in one shot. Most people were already using it in their homes when it was introduced. I think that email was introduced before the internet was. Internal company email and then email</p>		

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
	to the rest of the world (E-business consultant).		
Was everyone given rights immediately?	It was given to everyone initially but it was strict. The average employee received fewer rights than management. Eventually this was reversed as it was found that management was abusing the internet (IT manager).		
How has the organisation's use of the internet changed?	It changed a lot as they started using the internet in the early nineties. It was mostly used then for brochure/advert purposes. People are currently much more focused on how to use the internet. The focus is now on information sharing and integrating		

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
	processes and on making them more efficient (E-business consultant).		
What does the organisation use the internet for in terms of work?	<p>Logging errors when developing software with clients who have access to the internet and our site (Software development business unit head).</p> <p>A lot of research and daily access to news (Director).</p>	More than 99% of the time I use it for actual work (Internet banking channel manager).	<p>If our intranet or extranet stops organisation C stops. We are totally dependent on internet protocol for working. The internet is available all the time, we use it for everything – but obviously through firewalls.</p>
What is the benefit of using the	I get the information that I need very quickly. If I didn't get the information very fast it would be an advantage for	We work in a very competitive environment. I like to know what my three competitors are doing and I go	There are benefits, absolutely. We research for specific projects, e.g.

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
internet for work?	our competitors. Secondly, the access to the information is often located in different parts of the world and if I didn't have the internet I wouldn't get it (Director).	and have a look at what is on their sites, what's new on their sites, the changing prices. I also have a look at the news – the last time one of the banks announced a price cut in their subscription fees it was in the news (Internet banking channel manager).	what the return on investment (ROI) is; who is the biggest what in the world; the average number of calls processed by the agent; the number of bounces; etc. All those stats are available.
What is the intranet mostly used for?	Within organisation A we have the Knowledge Management server (Knowman) on which we keep all of our organisation's intellectual property (IP) documents. We average 56 people logged onto the intranet at one time (IT manager).	We have a Knowledge Network (Knet) that is used for updating and communicating processes at the branches. There are also other intranets – HR online; dot contact – which are very useful (Internet banking channel manager).	

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
	<p>I think our intranet is a waste of time (E-business consultant).</p> <p>The main purpose of the intranet was to complete timesheets (Software development business unit head).</p> <p>I think our intranet usage is low. The re-design and the psyche behind it was that we had a business model that needed to become a practical reality to everyone in the organisation. So the front end of the intranet is actually our business model so it dynamically allows you to get used to and</p>		

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
	<p>intuitively draws you into the psychology of the business model. Again, I don't think there's been massive adoption of that except at a management level but what it has done has put consistency of thinking into second and third tier management (Director).</p>		
<p>Are employees forced to have a disclaimer at the bottom of their email?</p>	<p>Everyone should have a disclaimer, yes. It is not currently enforced but at the moment we are looking at a product that will allow us to enforce our organisation's policies on the desktop while you are logged onto the organisation network. While you are somewhere else and not actually</p>	<p>At this stage not every email at organisation B's group has the disclaimer, hopefully by the end of January that will be a reality though (Information security manager).</p>	

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
	logged onto the network we will not be able to enforce this policy (IT manger).		
What times of the day do you find are the busiest?		I don't monitor the bandwidth utilisation. I know that we flat line during the day. We use our entire bandwidth the whole day. It starts at seven in the morning and ends at seven at night. This is the same bandwidth that is being used by mail (Internet banking channel manager).	
Does the organisation teach or train on netiquette?	Not really, no. However, it does plan to (IT manager).	They do have a policy that states that the email that you are given by organisation B is purely for work purposes. People know that they can't abuse the system. There's always someone watching them (Internet	

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
		banking channel manager). The policy states what you should and should not do. There is also a code of conduct around the use of email, which is probably the closest to netiquette. (Information security manager).	
What is limited in terms of emails?	We restrict sending of executables; video files; MP3s. We try to restrict pictures but people have found ways around it (IT manager).		
What is e-business?	Supporting functions within the business – selling; marketing; finance –e-business actually includes e-commerce. It's a subset of all the functions (E-business consultant).		

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
Do you think that e-business and e-commerce will pick up again now that the dot com hype is over?	I don't think so. I think it will pick up again with the rest of IT but only as a part of IT. I also think IT in general is just going to become more and more part of the administration of the business. It's going to loose its hype and sensationalism and people are going to stop thinking it's so complicated and difficult (E-business consultant).		
What example does management set to steer the organisation	We are mindful of the fact that if we break a law it's not fine. I think we all use it appropriately and when we need to. Do we use the internet to place a grocery order – sure – we work till nine at night and start at six in the morning.		

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
away from internet abuse and towards internet use?	Do what you preach because if you don't people will follow (Director).		
How much time do you spend on the internet in a day?	It varies, if I quantified it, a maximum of six hours a week but in a period of intense research that figure could escalate (Director).		
Do you have an assistant for your email?	My assistant will scan the mail for me, so she will look for mail that she thinks is very important. She'll see something pop up and then raise my awareness of the mail by telling me about it. She scans through but she doesn't really read my mail. She doesn't have any	Let's look at it from two perspectives; firstly, as I said I'm on the transactional side of e-business. However there is also the communication side of the internet and email. Emails as communications have changed things. At some companies, if the servers are	No, I'm constantly logged on to Outlook. I probably process about 50 to 100 emails a day.

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
	<p>delete access on my mail (Software development business unit head).</p> <p>If I am away, I do some periods of traveling, or near a deadline the organisation's secretary will handle my mail. She knows what to deal with (Director).</p>	<p>down people stop working. They can't do things manually (Internet banking channel manager).</p>	
Is virus protection enforced?	<p>Organisation A does not expect employees to do anything in terms of virus protection. We've gone with the centralised option where our server does pushes to the computers. Our only problem at the moment is the employees off site.</p>	<p>When new machines arrive or new staff, the virus protection software is standard (Internet banking channel manager).</p>	
Describe the	<p>Organisation A's culture has changed</p>	<p>I've worked with people in different</p>	<p>Organisation C is many</p>

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
organisation's culture.	<p>quite a lot. The whole entrepreneurial, hard-working, lots of fun culture has changed into a much more typical corporate culture. There are a lot more people who are just interested in getting the job done than in having fun (E-business consultant).</p> <p>For me, it's a company ahead of its time who has gone through its teenage years and is now coming into adulthood. It astounds the people who watch it. I think it astounds its management more than anything else because the people are audacious, appropriately audacious (Director).</p>	<p>parts of the organisation. Organisation B has different cultures in different divisions and levels (Internet banking channel manager).</p>	<p>times bigger than its biggest competitor. Worldwide it is the tenth biggest IT company or group. If we didn't have a culture of high-tech, leading edge, very advanced culture we would have to say "what culture have we got?". It's one hundred percent mechanised.</p>

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
<p>How would you describe the subculture of your organisation?</p>	<p>The subculture of organisation A within the IT department is that there is a focus is on knowledge transfer and sharing but that employees know how to have fun at work (IT manager).</p> <p>If anyone has a subculture we have one and ours is probably the strongest. I think it's because a lot of the work we do is a lot more creative and is a lot more fun. Also it's a group of people who like to do things their own way, who also have a bit of a different value set: they are here because that's what they want to do. They really do love new technologies (E-business</p>	<p>In the technology division the culture is different, I work with educated people, each person has at least one degree. The kind of caliber of people who I work with creates a completely different environment in terms of professionalism, thinking and respect. This is quite different to an operational environment where the highest academic qualification is possibly matric (Internet banking channel manager).</p>	

Question	Organisation A <i>E-business consultant, Director, IT manager, software development business unit head</i>	Organisation B <i>Internet banking channel manager, information security manger</i>	Organisation C <i>Customer relationship manager</i>
	<p>consultant).</p> <p>In the software development side I would say that we try to create an environment that is flexible where differences are tolerated. We encourage people to be innovative, to learn new technologies to think differently (Software development business unit head).</p> <p>It is important to have subcultures because everyone needs a sense of belonging, that's human nature. Whatever you do and however you try and fragment the world it always reclusters back into some kind of</p>		

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	demographic profile. So yes, sub-cultures do exist within organisation A. We have a healthy balance of subcultures. The supply chain individuals could not be the same as a person who works in a bank (Director).		
Do you think that the internet has had an impact on organisational culture?	There's been a huge change; the way business is conducted has changed significantly. For example, it is now so much easier to send an email than to make a phone call. It has also opened the door to undesirable behaviour. On the other hand, it allows for research: if we are doing research on software we can find out all the pros and cons from people who are already using it (IT		

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	manager).		
Do you think the culture in e-business differs from elsewhere because of the use of the internet as a product sold to the client?	I don't think it's any different. The very technical employees use the internet as a resource to find information and learn. Other than that, the others use it for exactly the same things as everyone else uses it for. There's literally no difference (E-business consultant).		
Has a due diligence of culture been done in the organisation?	I doubt that very much (E-business consultant). We are doing one right now. We are doing Capability Maturity Model	There are some initiatives such as the values approach that exists within the technology department. It states, "we are in the technology division, we know we belong here and we come from	I personally haven't done it at organisation C. I sold my company to organisation C and we used to do that in my

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	<p>(CMM). We've also done a 360-degree leadership review on the last leadership camp. This will give us a very clear indication of where the people issues are so we feed the stop-start-continue process with that (Director).</p>	<p>diverse backgrounds but this is our aim and the process we will try to follow". Other divisions have their own cultures – like retail have their own thing. So organisation B has tried to get their people to participate in getting their culture in line (Internet banking channel manager).</p>	<p>previous company. We went as far as sending the whole management team for certain medical tests that deduce a management style. All these guys had very low stress and were extremely healthy because they have fun at the office, are supported and are happily married. We did this about four years ago. We were voted, along with a large bank,</p>

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			as the best management style in the country. That is because it is directly attributable to a passion and need to achieve.
Do you think conducting a due diligence test within the organisation would add benefit?	I think it would. I think our organisation has grown so quickly and changed so fast that a lot of people have lost touch with what the culture is. I think that when an organisation reaches a stage it starts coming to its own and nobody can dictate what it becomes anymore (E-business consultant).		
What triggered the culture	A combination of fast growth and lack of attention to instilling the desired	The company's level of competitiveness and its ability to attract	Behaviour is probably the main thing. The way

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change?	<p>culture in the new hires (E-business consultant).</p> <p>Initially the culture changed as the organisation moved from maturity level to maturity level. Now it is changing to match the verticals that we've divided ourselves into – e.g. financial services, e-business, etc. (Software development business unit head).</p>	<p>and retain the best employees in the market. Technology has also played a major role. We used to write pen and paper memos but technology has advanced so much that it has impacted on our organisational culture (Internet banking channel manager).</p>	<p>that you treat people will result in different types of traits. Too much pressure results in horrible traits: people become unfriendly towards each other.</p>
How would you define internet culture outside of the organisation?	<p>To me it's just an extension of what's happening in business. I don't think it's going to be a separate culture. The equivalent would be something like a TV culture – there's no such thing as a TV culture. Everyone has a TV and</p>	<p>If you compare our society to one where there is a digital divide you can see a definite differentiation (Internet banking channel manager).</p>	

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	everyone watches TV (E-business consultant).		
Do you find that there is a culture of internet abuse within the organisation?	Yes, but it's got more to do with the culture within the organisation than the internet. It is due to the organisation's unstructured processes. At a lot of places you can do what you like but you are monitored but if you do something you aren't allowed to you will get disciplined. Whereas organisation A has a very loose culture around this (E-business consultant).		
Has the organisation's culture changed?	I think the culture has changed, we've become more professional, more customer oriented, it comes with five years' maturity (Software development		

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	<p>business unit head).</p> <p>I don't think it has changed at all. I think it has reinforced itself. One thing I have noticed is that we are using the intranet to do a number of things. To start managing our clients through our opportunity management system that front ends to an administrative system (Director).</p>		
<p>What steps has the organisation put in place to use the internet to</p>	<p>We've already done it to a large degree; everyone has access to Foresters and Gartner to which our organisation has subscriptions. We've got access to a lot of business tools and anyone who wants to get into that</p>		

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become a learning organisation?	<p>information is welcome to do so. However, we've had to introduce web sense as there will be the usual people who abuse the facility. However, you don't want to preclude people from doing internet banking and making their time far more efficient. We've re-written our internal training programme and put it on the intranet in a computer based test (CBT) format (Director).</p>		
Do you think it's management's duty to manage where the		<p>Yes. The technology division has already done this – they had a vision of commercialising their services and the culture that was pushed was the values approach (Internet banking channel manager).</p>	

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organisation is going in terms of culture?			
Do you think CRM has changed cultures in other organisations?			Yes, definitely. It has created knowledge management as it allows for storage of information.