




BMR

BUREAU OF MARKET RESEARCH



**AN EXPLORATORY STUDY ON NEW MEDIA USAGE
AMONG ADOLESCENTS IN SELECTED SCHOOLS IN
TSHWANE**

Research Report No 381

OBOARD OF CONTROL

Prof NB Pityana Prof MC Maré Prof M Shahia Prof DH Tustin	Prof AA Ligthelm Dr DP van Vuuren Ms M Harris
--	---

RESEARCH AND PUBLICATIONS COMMITTEE

Prof DH Tustin (Chairperson) Prof AA Ligthelm Prof JPR Joubert	Prof CJ van Aardt Prof JW Strydom Prof EO Udjo
--	--

COORDINATING PROJECTS COMMITTEE

Dr DP van Vuuren (Chairperson) Ms M Harris (Vice-Chairperson) Dr P Haupt Ms R Roux Mr DG Parker Ms S Harding	Prof M Shahia (Unisa) Prof DH Tustin (BMR) Prof AA Ligthelm (BMR)
---	---

DIVISIONAL PROJECTS COMMITTEES

INCOME AND EXPENDITURE PATTERNS	BEHAVIOURAL AND COMMUNICATION	ECONOMIC RESEARCH	SAARF DEMOGRAPHIC RESEARCH
Ms R Roux (Chairperson) Mr DG Parker (Vice-Chairperson) Mr T Ras Mr BR Jennings Mr G Bijker Mr C van der Merwe	Dr DP van Vuuren (Chairperson) Ms M Harris (Vice-Chairperson) Mr DG Parker Ms S Harding Mr S Matlala	Mr DG Parker (Chairperson) Ms S Harding (Vice-Chairperson) Mr BG Rousseau Ms S Barnard Ms R Roux	Dr P Haupt (Chairperson) Ms M Harris (Vice-Chairperson) Ms S Scott Dr DP van Vuuren Mr DG Parker Ms A Casteleijn Ms M Böehme Dr H Phillips

YOUR CONTACTS AT THE BMR**RESEARCH**

Prof DH Tustin (Head)	(012) 429-3156	Prof AA Ligthelm	(012) 429-3151
Prof CJ van Aardt	(012) 429-2940	Prof EO Udjo	(012) 429-3326
Prof JPR Joubert	(012) 429-8086		

SERVICES**COMMISSIONED RESEARCH**

Prof DH Tustin	(012) 429-3156
Prof AA Ligthelm	(012) 429-3151
Prof EO Udjo	(012) 429-3326
Prof CJ van Aardt	(012) 429-2940
Prof JPR Joubert	(012) 429-8086

ACCOUNTS

Ms Sheleph Burger	(012) 429-3175
-------------------	----------------

SALE OF REPORTS

Ms P de Jongh/Ms M Goetz	(012) 429-3338/3329
--------------------------	---------------------

LIBRARY

Ms Cheryl Kemp	(012) 429-3327
----------------	----------------

PROGRAMME IN MARKETING AND MARKETING RESEARCH / PROGRAMME IN MARKETING RESEARCH PRACTICE

Ms EM Nell	(012) 429-3183
------------	----------------

MEMBERSHIP

Ms P de Jongh/Ms M Goetz	(012) 429-3338/3329
--------------------------	---------------------

LIAISON

Ms P de Jongh	(012) 429-3338
---------------	----------------

GENERAL TELEPHONE NUMBERS

(012) 429-3338

E-MAIL ADDRESS: bmr@unisa.ac.za

POSTAL ADDRESS

Bureau of Market Research

PO Box 392

UNISA

0003

GENERAL FAX NUMBER

(012) 429-3170

WEB SITE ADDRESS: <http://www.unisa.ac.za/bmr>

STREET ADDRESS

Bureau of Market Research

Theo van Wijk Building (Goldfields Entrance)

Unisa Muckleneuk Campus

PRETORIA 0002

**AN EXPLORATORY STUDY ON NEW MEDIA USAGE AMONG
ADOLESCENTS IN SELECTED SCHOOLS IN TSHWANE**

by

**DH Tustin (D Com)
DP van Vuuren (D Phil)
GS Shai (BA Hons)**

**BUREAU OF MARKET RESEARCH
COLLEGE OF ECONOMIC AND MANAGEMENT SCIENCES
UNIVERSITY OF SOUTH AFRICA**

©2009 Bureau of Market Research

ISBN 978-1-920130-30-5

Printed by Department of Production Unisa, Pretoria
Published by the Bureau of Market Research, (BMR)
University of South Africa, P O Box 392, UNISA, 0003

©All rights reserved. No part of this publication may be reproduced, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission in writing of the Head of the Bureau of Market Research.

RESEARCH REVIEWERS

This report was reviewed by a Research Panel consisting of Prof DH Tustin (BMR: Executive Research Director), Dr DP van Vuuren (BMR: Head, Youth Research Unit), Prof PJ Fourie (Professor, Communication Science, Unisa), Prof DP Conradie (Research Professor, Faculty of Humanities, Tshwane University of Technology) and Mrs GS Shai (BMR: Student Intern)

Exclusion of claims. Despite all efforts to ensure accuracy in the assembly of information and data or the compilation thereof, the BMR is unable to warrant the accuracy of the information, data and compilations as contained in its reports or any other publication for which it is responsible. Readers of all the publications referred to above are deemed to have waived and renounced all rights to any claim against Unisa and the BMR, its officers, project committee members, servants or agents for any loss or damage of any nature whatsoever arising from any use or reliance upon such information, data or compilations.

CONTENTS

	Page
LIST OF EXHIBITS IN TEXT	v
LIST OF FIGURES IN TEXT	v
LIST OF TABLES IN TEXT	vii
GLOSSARY	ix
PREFACE	xi
CHAPTER 1: BACKGROUND, LITERATURE OVERVIEW AND AIM OF THE STUDY	
1.1 INTRODUCTION	1
1.1.1 The Internet	3
1.1.1.1 <i>Internet features</i>	4
1.1.2 Cellphones	9
1.1.3 Other new media	14
1.2 INTERNATIONAL TRENDS	16
1.3 THEORETICAL FOUNDATION	22
1.3.1 Diffusion of innovation	22
1.3.1.1 <i>Theory of individual innovativeness</i>	23
1.3.1.2 <i>Theory of perceived attributes</i>	24
1.3.1.3 <i>Communication channel, social networks, and external factors</i>	25
1.4 RATIONALE OF THE STUDY	25
1.5 AIM OF THE STUDY	29
1.6 CONCLUSION AND REPORT LAYOUT	31

CHAPTER 2: RESEARCH METHODOLOGY

2.1	INTRODUCTION	33
2.2	SAMPLING PLAN DESIGN	33
2.2.1	Defining the population of interest	34
2.2.2	Data collection methodology	34
2.2.3	Sample size	34
2.2.4	Sampling methodology	34
2.2.5	Sampling plan execution	34
2.3	RESEARCH INSTRUMENT DESIGN	35
2.4	DATA EDITING, CODING, CAPTURING AND STORING	36
2.5	CONCLUSION	36

CHAPTER 3: ANALYSIS OF FINDINGS

3.1	INTRODUCTION	39
3.2	TRADITIONAL MEDIA	39
3.2.1	Television viewing	40
3.2.2	Radio listenership	43
3.2.2.1	<i>Favourite radio station</i>	45
3.2.2.2	<i>Most popular radio programme</i>	46
3.2.3	Magazine reading	47
3.2.4	Newspaper reading	48
3.2.5	Cinema viewing	50
3.3	THE INTERNET	51
3.3.1	Access to the Internet	51
3.3.2	Internet usage	53
3.3.3	Social networking sites	55
3.3.4	Interpersonal communication on Internet	56
3.3.5	Weblogs	57
3.3.6	Websites	57

3.4	CELLPHONES	59
3.4.1	Exposure and usage	59
3.4.2	Cellphone activities	65
3.4.3	Personal feelings about and attitudes to cellphones	68
3.4.4	Cellphone branding and financing	71
3.4.5	Cellphone acquisition	73
3.4.6	Cellphone expenditure	73
3.4.7	MXit	76
3.4.7.1	<i>Incidence</i>	76
3.4.7.2	<i>Time spent on MXit</i>	76
3.4.7.3	<i>Number of contacts on MXit</i>	79
3.4.7.4	<i>Other uses of MXit</i>	80
3.4.7.5	<i>Other instant mobile messaging services</i>	81
3.5	GAME CONSOLES AND MUSIC APPARATUS	82
3.6	MUSIC DEVICES	83
3.7	ECONOMIC BEHAVIOUR	84
3.7.1	Influences on buying decisions	85
3.7.2	Acceptance of premium advertisements on cellphones	86
3.7.3	Brand considerations	87
3.7.4	Advertising media and media content preferences	88
3.8	PERIPHERAL RESEARCH ITEMS	89
3.9	CONCLUSION	90
CHAPTER 4: CONCLUSIONS AND RECOMMENDATIONS		
4.1	INTRODUCTION	91
4.2	SUMMARY	91
4.3	CONCLUDING REMARKS	95
4.4	FUTURE RESEARCH	95
BIBLIOGRAPHY		97

LIST OF EXHIBITS IN TEXT

Exhibit	Page
1.1 PERCEIVED ATTRIBUTES	24

LIST OF FIGURES IN TEXT

Figure	Page
1.1 CATEGORIES OF INDIVIDUAL INNOVATIVENESS	23
3.1 INTERNET ACCESS MODES	52
3.2 ACTIVITIES USED ON THE INTERNET	53
3.3 LENGTH OF CELLPHONE OWNERSHIP	62
3.4 CELLPHONE FEATURES	63
3.5 CELLPHONE CONTENT DOWNLOADS	67
3.6 PREFERRED CELLPHONE BRAND	72
3.7 CELLPHONE ACQUISITION	73
3.8 AVERAGE DAILY TIME SPENT ON MXit BY TIME CATEGORY	77
3.9 AVERAGE TIME (IN MINUTES) SPENT WITH DIFFERENT INDIVIDUALS	78
3.10 OTHER USES OF MXit	80
3.11 OTHER INSTANT MOBILE MESSAGING SERVICES	81
3.12 FACTORS IMPACTING ON THE YOUTH'S PURCHASE DECISIONS	85

LIST OF TABLES IN TEXT

Table	Page
3.1 TELEVISION CHANNELS VIEWED BY SCHOOL TYPE	40
3.2 FAVOURITE TELEVISION CHANNEL	41
3.3 TOP FIVE FIRST-MENTIONED TELEVISION STATIONS BY SCHOOL TYPE	42
3.4 TOP 10 RADIO STATIONS	44
3.5 TOP FIVE FIRST-MENTIONED RADIO STATIONS BY SCHOOL TYPE	45
3.6 TOP FIVE RADIO STATIONS BY SCHOOL TYPE	45
3.7 TOP FIVE RADIO PROGRAMMES BY SCHOOL TYPE	46
3.8 TOP 10 MAGAZINES	47
3.9 TOP FIVE FIRST-MENTIONED MAGAZINES BY SCHOOL TYPE	48
3.10 TOP 10 NEWSPAPERS	49
3.11 TOP FIVE FIRST-MENTIONED NEWSPAPERS BY SCHOOL TYPE	49
3.12 CINEMA VIEWERSHIP BY SCHOOL TYPE	51
3.13 USE OF SOCIAL NETWORK SITES	55
3.14 TOP FIVE POPULAR WEBSITES BY SCHOOL TYPE	58
3.15 WEBSITE FEATURE RATINGS	58
3.16 CELLPHONE OWNERSHIP BY SCHOOL TYPE	59
3.17 CELLPHONE ACCESS BY SCHOOL TYPE	60
3.18 PREFERRED CELLPHONE NETWORK OPERATORS	61
3.19 REGULARITY OF CELLPHONE USAGE IN SELECTED LOCATIONS	64
3.20 ENGAGEMENT IN CELLPHONE ACTIVITIES	65

3.21	PERSONAL BENEFITS GAINED BY CELLPHONE OWNERSHIP	70
3.22	TOP FIVE LISTED CELLPHONE BRANDS BY SCHOOL TYPE	72
3.23	CONTRACT OPTIONS BY SCHOOL TYPE	74
3.24	AVERAGE MONTHLY EXPENDITURE ON CELLPHONE BY COST ITEM AND SCHOOL TYPE	75
3.25	NUMBER OF DAILY Mxit CONTACTS	79
3.26	FREQUENCY OF PLAYING GAMES ON A CELLPHONE AND THE INTERNET	82
3.27	HAND-HELD GAMES DEVICES/CONSOLES	83
3.28	DEVICES FOR LISTENING TO MUSIC	83
3.29	FACTORS INFLUENCING PURCHASE DECISION OF ADOLESCENTS BY SCHOOL TYPE	86
3.30	ACCEPTANCE LEVELS OF PREMIUM ADVERTISING ON CELLPHONE	87
3.31	CATEGORIES OF MEDIA CONTENT	88
3.32	TOP DJs, FAVOURITE PLACES, ROLE MODELS & FORM OF ENTERTAINMENT	89

GLOSSARY***Adolescent**

A child between the ages of 12 and 18 years.

Bing

An instant messenger for mobile phones improving on the combined advantages of Short Message Service (SMS) with those of well-known instant messaging platforms.

Blog (or Weblog)

A Website usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video

Bluetooth

Wireless technology that enables communication between Bluetooth-compatible devices.

Cellphone

A long-range, electronic device used for mobile voice or data communication over a network of specialised base stations known as cell sites.

Console or video games

Games played on a device specially made for game play called a video game console.

Diffusion

The process by which new innovations are communicated through certain channels over time among members of a social system. It is a special type of communication concerned with the spread of messages that are perceived as new ideas.

Diffusion (innovation) rate

Rate of adoption by people (adolescents) of new media innovations.

E-mail

Electronic mail (or e-mail) means the exchange of electronic text messages and computer file attachments between computers over a communications network, such as a local area network (LAN) or the Internet.

Facebook

Facebook is a social networking Website that was originally designed for college students, but is now open to anyone 13 years of age or older. Facebook users can create and customize their own profiles with photos, videos, and information about themselves. Friends can browse the profiles of other friends and write messages on their pages.

Internet

The Internet spreads across the globe and consists of countless networks and computers, allowing millions of people to share information. The Internet is the actual network of networks where all the information resides.

* Only terminology relevant to the study is included in this glossary. All sources of glossary terms used are cited in the bibliography and explained in more detail in the relevant sections of the report.

Internet Café

A café or shop that provides Internet access to the public at a fee.

iPod

A digital audio player brand.

Méèp

Méèp (from Vodacom) is a real-time instant messaging service that keeps users connected to contacts or 'buddies' whenever and wherever. Via cellphones, users can use *méèp* to chat to other *méèp* cellphone users, and even *méèp* PC users.

MP3 player

A digital audio player or portable consumer electronic device (or portable music player device) that allows users to store and play music files in MP3 format.

Multimedia Messaging Service (MMS)

An upgraded version of the short message service (SMS) through which users can send and receive multimedia messages such as texts, pictures, video clips, audio clips, etc with any other compatible cellphone.

MXit

A social mobile or mobile instant messaging application developed in South Africa running on cellphones with GPRS/3G.

MySpace

An online community that allows friends to keep in touch and meet new people as well.

New media

A term encompassing the emergence of digital, computerised, or networked information and communication technologies in the later part of the 20th century.

Short Message Service (SMS)

A mobile data service that allows alphanumeric messaging between mobile phones and other equipment such as voice mail systems and e-mail.

Twitter

A social networking and microblogging service allowing users to send brief text updates or micromedia such as photos or audio clips and publish them, either to be viewed by anyone or by a restricted group, which can be chosen by the user.

YouTube

An innovative video sharing Website that facilitates upload, viewing and sharing of video clips.

Weblog or blog

A **blog** (short for 'Weblog') is a Website usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video.

World Wide Web (WWW or Web)

The Web is a hypermedia information storage system based on the Internet, which links resources around the world.

PREFACE

In 2008, the Bureau of Market Research (BMR) at the University of South Africa (Unisa) started a Youth Research Unit (YRU). This unit forms part of the research activities of the Behavioural and Communication Research Division of the BMR. The focus on adolescents (also referred to as Generation Y (Gen Y) or the Millennium generation) emanates from the fact that this market segment in South Africa is highly informed and knowledgeable about products and brands. In fact, adolescents (children from 13 to 18 years of age) in South Africa accounted for approximately 16 % of the entire South African population at the end of 2008. This together with an increasing disposable income of children has resulted in many businesses targeting the South African adolescent market as key future consumer market. Not only does the adolescent market evoke interest from marketing and market segmentation perspectives, but with more children being exposed to information, new technology and media innovations, business interest also resides in this market to support marketing communication strategies in particular. To support business in this respect, the YRU has been commissioned to study new media usage and behavioural patterns among South African adolescents. Currently, research measuring the exposure and response to and usage levels of adolescents of communication media such as cellphones, Mxit and other mobile messaging services, Internet, Facebook and MySpace as well computer derived games on various consoles, is limited.

Roleplayers in the market that are taking the lead in acknowledging the need for information on media communication behaviour tracking among South African adolescents, is the Film and Publication Board of South Africa as well as the two leading cellular communications companies in South Africa, namely Vodacom and Cell C. These entities jointly commissioned the YRU to develop a generic research model to track media usage and behaviour of South African adolescents over time. The developmental phase of this syndicated research programme started in early 2008. This phase culminated in a pilot study among almost 500 adolescents enrolled at five judgmentally selected high schools located within the City of Tshwane boundaries. The outcome of the research findings on the Tshwane pilot study is presented in this report.

Although the first part of the study followed a pilot study approach, the research findings presented in this report have created a wealth of information that could stimulate more expansive research. In fact, the outcome of the research model designed by the YRU on new media usage among adolescents, shows early signs of strategic business value. More specifically, the research model will ideally suit the needs of businesses to develop not only their future market and market segmentation strategies, but also to steer their future marketing, marketing communication and competitive business strategies. The pilot study also revealed that the research model designed during the developmental phase is ideally suited to broader research applications. Against this background, the generic model will be applied within the broader Gauteng secondary education market in 2009. This expanded project will target 15 high schools in the Gauteng province. Besides taking the form of a quantitative study, the 2009 Gauteng study will also include qualitative research among a sample of adolescents enrolled at schools located in Gauteng. This approach will add to the richness of information anticipated from the Gauteng study and will also support a more in-depth understanding of the media communication behaviour of Gauteng adolescents.

Furthermore, besides extending the survey to Gauteng, the 2009 research programme of the YRU will also involve a national roll-out of the new media youth research project. To support this initiative, in February 2009 the Divisional Projects Committee of the Behavioural and Communication Research Division recommended close collaboration between the YRU and Ipsos-Markinor. The research project will be concluded as part of Ipsos-Markinor's Khayabus study that applies a random sampling approach including approximately 3 500 households across South Africa. At an anticipated rate of one out of every three households including teens within the age groups of 10 to 14 years, it is anticipated that the BMR/Ipsos-Markinor project is likely to attract a fairly large sample of the youth across South Africa. Such a sample will, for example, also allow for regional analysis, comparing media usage and trends across rural and urban areas. During the research study, the cellphone and e-mail contact details of the participating youth will be captured to further facilitate the establishment of future cellphone and/or online-panels. These panels will be maintained and regularly updated by the BMR.

In an attempt to remain on the forefront of market developments and to keep track of the market dynamics within the communications and media industry and targeting the youth in

particular, the establishment of the YRU in 2008 has presented an ideal platform to generate valuable research with high application value to policy and business decision-makers in both the private and public media and communications sectors of South Africa. The vision of the YRU is to establish itself as the leader in generating research relevant to youth media usage and behaviour in South Africa. With this vision, the YRU is directly aligned with the research scope of the BMR's Behavioural and Communication Research Division, which in the recent past, has also conducted research on the adolescent as an economic entity, who often trades independently in the South African economy and exerts an appreciable influence on family purchase decisions of South African households. In particular, the supplementary research efforts of the BMR's research programme have already contributed and will continue to contribute to the development of consumer behaviour theory and practices specifically focused on adolescents as a growing economic entity within the broader South African consumer market.

This report was edited by Mrs C Kemp (BMR Language Editor). Mrs M Nowak, Ms P de Jongh and Mrs M Goetz (BMR Senior Research Coordinators) were responsible for the typing and technical layout of the report.

Prof DH Tustin
Executive Research Director
Bureau of Market Research

CHAPTER 1

BACKGROUND, LITERATURE OVERVIEW AND AIM OF THE STUDY

1.1 INTRODUCTION

One of the most dramatic changes in the world and also in South Africa during the past decade has been the arrival of the Internet and cellphones. These media types are regarded as new media especially when compared to traditional electronic/broadcast (television and radio) and print (newspapers and magazines) and out-of-home (outdoor and cinema) media. Both the Internet and cellphones have become part of society and are nowadays part of the lives of many young people and adults. In fact, Internet and cellphone access has not only changed the communication dynamics, behaviour and habits of adolescents, but has also had an immense impact on many dimensions of business, culture, politics, sport and society. These media types are also increasingly impacting on the way in which interpersonal relationships between people are formed.

The immense change in the media environment, specifically in South Africa over the past few decades, is evident from the following major evolutions in the communication industry of South Africa:

- The first radio broadcast in South Africa took place in 1923, with the South African Railways broadcasting from Johannesburg (Van Vuuren 2004a). This historic event was not long after the First World War.
- Just after the Second World War, the South African Broadcasting Corporation (SABC) introduced commercial radio stations.
- In 1960, an FM radio network in most of the indigenous languages was launched.
- In 1976 television (analogue broadcasting) was introduced.
- Following the democratisation of the country in 1994, the SABC was one of the first media organisations to be unbundled with the opening up of the airwaves for private radio and television stations throughout the country (Van Vuuren 2004b).

- In the early 1990s two new mass communication media, namely the Internet and cellphones were introduced into South Africa, changing interpersonal communication for life.
- In the years to follow the digitalisation of personal and mass communication has already changed, and will continue to change interaction between people irrevocably. Most recent developments show that the radio industry is currently digitalising and moving towards Internet 'broadcasting' worldwide, whilst the television industry is bracing itself for a new era of high definition digital television. In November 2008 South Africa officially started to migrate from analogue to digital television broadcasting (Ndawond 2008). Digital broadcasting will probably be fully installed in South Africa by 2011 while the global shift to digital will probably be concluded in 2015.

These communication changes outlined above clearly reflect the emergence of digital, computerised or networked information and communication technologies, especially during the later part of the 20th century. The collective term encompassing these technologies is *new media*, of which the Internet and cellphones (each with their own constantly new and increasingly popular features) are regarded as the 'new' major innovations which have diffused rapidly and have been adopted by the young and the old. The rate of adoption or diffusion has stimulated the need for media research especially among the adolescent population of South Africa.

The discussions to follow bear specific relevance to the exposure and introduction of people (especially adolescents) to these new media communication types and accordingly explore how people or members of a social system respond to the rapid diffusion of these new innovations.

1.1.1 The Internet

The Internet (or Net) is a new, innovative communication medium based on broadcasting and publishing. However, unlike traditional broadcast media, it facilitates two-way communication between participants. The medium possesses interactivity - it has the facility for individuals and organisations to communicate directly with one another regardless of time and distance (Koekemoer 1998). From its start in the late 1970s, the Internet, as communication medium, has shown tremendous growth (Intoweb Marketing 2007). Currently, the Internet is used by approximately 20 % of the total world population, with North America the continent with the largest penetration (71.1 %) and Europe the second largest (43.4 %). Africa has the lowest usage with only a 4.4 % penetration rate. Clearly, the gap between Africa and the rest of the world, or the low diffusion rate, with regard to Internet connectivity is huge. However, Africa is the continent showing the greatest potential to further increase Internet connectivity and adoption of this new media. This is already clear from the fact that Africa has recorded the highest growth of 1 100 % in Internet access from 2000 to 2008 (Internet World Stats 2009). Leading the way in this regard is South Africa, which accounts for almost 90 % of all African Internet users (Kelly 2000). According to the leading South African technology research organisation World Wide Worx (2008), Internet users in South Africa at year-end 2008 were estimated at 4.6 million (an approximate 10 % diffusion rate). For year-end 2007, the number of Internet users in South Africa was 4.1 million, for year-end 2006 the number was 3.8 million and for year-end 2005 Internet users amounted to 3.6 million. These figures include users across all age groups, but with no specific breakdown for adolescents, who are progressively showing increased levels of engagement with this new media. Factors contributing to the perceived high rates of diffusion of the Internet among adolescents include the roll-out of Internet access services not only to households, businesses (with specific reference to Internet shopping, Internet Cafes and wi-fi hot spots) and communities (eg digital villages), but also to schools across South Africa. Undoubtedly Internet access has changed the communication lifestyle of many adolescents, who nowadays are adept at applying the

main features of the Internet, namely e-mail and the World Wide Web (WWW). These two Internet features or innovations are discussed in more detail below.

1.1.1.1 *Internet features*

In the sections to follow, electronic communication (e-mail) and the World Wide Web (WWW) are discussed as two main features of the Internet.

E-mail

Electronic mail (or e-mail) means the exchange of electronic text messages and computer file attachments between computers over a communications network, such as a local area network (LAN) or the Internet (WordNet 2006). More specifically, e-mail or cyberspace communication, allows for the exchange of computer-stored messages via telecommunication links between computers. It entails creating, transmitting, or storing primarily text-based human communications with digital communications systems (Sharpened.net 2000). Every year from 1994 to 2000, the Internet experienced massive growth in South Africa. Alongside the proliferation or diffusion of the Internet, electronic communication on the computer or communication via electronic mail (or e-mail) featured as one of the first uses of the Internet and still remains very popular.

The reason for the growing use of e-mail, is not only due to its simple text message facility, but also due to its increasing robustness during the last few years. Nowadays, e-mail can be used to incorporate formatted text, colours, and images into the message. Also, documents can be attached to e-mail messages, allowing files to be transferred via the e-mail protocol. With such attractive features the increasing use of e-mail to connect with other people via cyberspace, is indisputable.

World Wide Web

The World Wide Web (or Web) is a subset of the Internet and is not synonymous with the Internet with which it is often incorrectly used interchangeably. Whereas e-mail is

part of the Internet, it is not part of the Web. In fact, the Web, a hypermedia information storage system based on the Internet, links resources around the world. As an Internet feature, e-mail ranks alongside the Web as the most used features of the Internet. In fact, the Web probably saved the Internet. It has not only changed the appearance of the Internet, but also made it possible for pictures and sound to be displayed and exchanged. Prior to the Web, the Internet really only provided screens full of text (and usually only in one font and font size). Thus, although it initially was pretty good for exchanging information, and indeed for accessing information, Internet was visually very boring. The introduction of the Web in the early 1990s also led to (or at least coincided with) the explosive growth of e-mail.

Not only has the Web developed over time as an information source, but over time various social networks diffused on the Web. The most popular diffusions in this regard include Facebook and MySpace with an estimated over 90 million active users and 240 million profiles recorded internationally (Thomas 2007 and 2008a) for each respective network. Clearly both these networks are a growing phenomenon and attract huge user traffic as will be noted from the discussion on these popular social network sites below.

The idea behind social networking is that instead of maintaining a list of the people you know and how you know them, you use the services on the site to keep an eye on your friends and acquaintances. More specifically, a social network service focuses on building online communities of people who share interests and/or activities, or who are interested in exploring the interests and activities of others. Most social network services are Web-based. Of the main types of social network sites mentioned above, each one has a different focus or innovative features. For example, MySpace was meant to provide a place for new music to be discovered but turned into the online equivalent of the local mall - a place for kids to hang out. In turn, Facebook is an amalgam of a system to keep track of friends and a way to create and maintain loose networks of like-minded people. In South Africa the use of network services is very much in its infancy,

with the early adopters choosing not to use MySpace but following the United States trend of a move to Facebook as the platform of choice (Kelly 2007).

MySpace is just one of a multitude of social networking sites that has diffused on the Internet over the past few years and has attracted especially young people. In fact, with many competitive networks developing following the introduction of MySpace (such as Facebook), this social network site could probably not be regarded as the most exclusive new media. In fact, this network has in the recent past been cited in Thomas (2007) as attractive to the *dumb, poor and loners*. In turn, Facebook is perceived as a network for the *smart, rich and cool*. Although both these networks sites have been attracting especially the younger generation, the older members of society have also started to show keen interest in the use of social networking services. More specifically, MySpace and Facebook are both huge social networks for teenagers and increasingly for people over 35 years of age.

The social networking innovation first caught on with South Africans in the form of MySpace.com, but local Internet users seem to be following the worldwide trend of belonging to more than one social network at a time. In South Africa, Facebook has emerged as the major competitor of MySpace. This massive social networking service grew to prominence due to its attractive features and highly appealing tools. In fact, the Web Information company Alexa has indicated that Facebook was the highest accessed Website in South Africa in 2007 (Lingham 2007) displacing Google, which for long has been the most accessed Website in South Africa since the new millennium. Worldwide, Facebook is the fourth most accessed Website.

To gain some idea of the magnitude of users or diffusion rate, international figures reveal increased interest among users of this communication medium and show that users of the social networking site Facebook has increased from 40 million users in 2005 (Search engine people 2009) to over 200 million users in 2007 (Intoweb 2009), and is

still growing rapidly (Fox 2007). South Africans in particular have embraced the Internet social networking revolution, with over 50 000 new users signing on to the local Facebook network in 2007. The Facebook 'South Africa' network ranges between 87 000 to 120 000 members (Reece 2007 and Thomas 2007). Most recent figures show that Facebook boasts over 25 million members worldwide (Reece 2007). Facebook's exponential growth is also indicative of the fact that users are extremely well networked in real life via this social network site. Facebook typically includes profile pages consisting of, amongst others, a number of different sections, including information, status, friends, friends in other networks, photos, notes and groups. One of Facebook's most popular features has been the ability to upload photos. Users can upload unlimited photos from their cellphone or through a Web interface. Also, Facebook notes allow users to write a Facebook blog and all notes are displayed in the user's profile and 'other' members can add comments.

Facebook has also evoked high levels of interest and is a very popular communication medium among South African adolescents. However, the exact magnitude, popularity levels and diffusion rates of Facebook, MySpace and even new innovative cellphone social networks among local adolescents in particular, are rather uncertain or sparse at this stage. There is also very limited public demographic information on South Africa's youth using social networks. These shortcomings motivated the study to measure the lifestyle changes of adolescents using social network sites to communicate. How, when, how frequently and for what purposes these networks sites are utilised and how these innovations are adopted and impact on the behaviour of adolescents in particular, were cited, among others, as the main research focus of this study rather than only quantifying the number of adolescents who use Internet features such as e-mail or any of the WWW (FaceBook and MySpace) or cellphone (MXit) social networks.

Further manifestations of the Internet or cyberspace culture arising from, among others, the use of computer networks for communication and entertainment, include blogs and

online videos. These are discussed separately below as part of the discussion on the Internet. In fact, blogs and YouTube are both Websites and should be contextualised as part of the discussion on the WWW.

Weblog

A **blog** (short for 'Weblog') is a Website usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video (TechTarget 2007 and Webopedia 2009a). The personal blog, an ongoing diary or commentary by an individual, is the traditional, most common blog. Other blogs also provide commentary or news on a particular subject. Most blogs are primarily textual, although some focus on art (artlog), photographs (photoblog), sketches (sketchblog), videos (vlog), music (MP3 blog), audio (podcasting), which are part of a wider network of social media. The collective community of all blogs is known as the *blogosphere* (Wikipedia 2009a). Since all blogs are on the Internet by definition, they may be seen as interconnected and socially networked. Media often refer to discussions 'in the blogosphere' as a gauge of public opinion on various issues. Because of the simplicity of creating a blog, many people (often young kids and adults) have found a new presence on the Web. Instead of writing confidential entries in a book that no one is supposed to see, people can now share their personal feelings and experiences with thousands of people around the world, which impacts on the confidential sharing of information. Blogs are typically updated daily or monthly.

YouTube

Finally, to facilitate upload, view and share video clips, YouTube was created as an innovative video sharing Website in 2005. Prior to its launch, there were only a few simple methods available for ordinary computer users who wanted to post videos online. With its easy to use interface, YouTube made it possible for anyone who could use a computer to post a video that millions of people could watch within a few minutes. The wide range of topics covered by YouTube has turned video sharing into one of the most important parts of Internet or cyberspace culture. Also, the launch of

South African based video sharing Websites like MyVideo, Zoopy (with video and photo sharing features) and Twac, is a clear sign of IT growth and development in the local market. As the Internet grows in South Africa, these sites are anticipated to become invaluable to local communities at large (Justin 2007). The specific attraction of Twac is the professional comedy clips added weekly as well as the user-generated content created by the youth, which is currently being developed in 16 schools nationwide.

1.1.2 Cellphones

A mobile phone (also known as a handphone, wireless phone, cellphone, cellular phone, cellular telephone or cell telephone) is a long-range, electronic device used for mobile voice or data communication over a network of specialised base stations known as cell sites. Most current mobile phones connect to a cellular network of base stations (cell sites), which are in turn interconnected to the public switched telephone network (PSTN) (the exception is satellite phones).

As with Internet diffusion, cellphone usage has also shown dramatic growth in especially Africa. After starting from 2 million cellphone users in Africa in 1998, the International Telecommunication Union (ITU) figures increased to 51 million and 82 million in 2003 and 2004 respectively. Worldwide, there were 4.0 billion cellphone subscribers in 2008 (ITU 2008).

In South Africa, the cellular networks officially started commercial operation in 1994. This introduction started a telecommunication revolution that has for ever changed the way of communication and exchange of information. In fact, cellphones have changes the lives of people as much or more than television as traditional communication medium. To gain some insight of the magnitude of cellphone access of adults 16 years and older in South Africa, the databases of the South African Advertising Research

Foundation (SAARF)² were utilised. In this regard the following cellphone usage statistics for South Africa bears relevance (SAARF 2007):

- Of the 31.1 million adults in South Africa, 18.8 million owned or rented a cellphone in 2007, whilst 2.1 million people had accessed the Internet 'during the seven days' preceding the All Media and Products Survey (AMPS).
- Of the youngest group (those between the ages of 16 to 24) in the SAARF 2007 All Media and Products Survey (AMPS), just less than 60 % owned or rented a cellphone. Of these 70.3 % were Africans and 53.5 % White. In turn, Whites represented the majority (53.5 %) of those who accessed the Internet 'the preceding seven days'.

The above SAARF figures not only provide some indication of the magnitude of the South African population with cellphone access but also reflect Internet usage.

Besides voice calls, the main features making cellphones attractive devices include the following:

- Short Message Service (SMS) for text messaging that allows for the interchange of short text messages between mobile telephone devices. More specifically, Short Message Service (SMS) is a mobile data service that allows alphanumeric messaging between mobile phones and other equipment such as voice mail systems and e-mail (MobileIN.com 2009). SMS text messaging is the most widely used data application in the world, with 2.4 billion active users, or 74 % of all mobile phone subscribers sending and receiving text messages on their mobile phones.
- MXit (see discussion below).

² The South African Advertising Research Foundation (SAARF) supplies the advertising, marketing and media industries with information on consumers' attitudes, behaviours and life-styles.

- Multimedia Messaging Service (MMS) which is an upgraded version of the SMS through which users can send and receive multimedia messages such as texts, pictures, video clips, audio clips, etc with any other compatible cellphone. It's an advanced messaging service that lets users send multiple media in one single message to one or more recipients.
- Internet e-mail and browsing (see section 1.1.1).
- Bluetooth. This wireless technology enables communication between Bluetooth-compatible devices. It is used for short-range connections between desktop and laptop computers, PDAs (like the Palm Pilot or Handspring Visor), digital cameras, scanners, cellular phones, and printers (TechTerms 2009a).
- Built-in cameras and camcorders (video recording).
- Music (MP3) playback and ringtones (see section 1.1.3 below).
- Radio receiver.
- Video viewing and video downloading.
- Memo and document recording.
- Personal organiser and personal digital assistant functions.
- GPS (Global Positioning System).
- Serving as wireless modem for PC.
- Gaming (also see section 1.1.1) (will probably soon serve as game console for online and other high quality games).

It is specifically the innovative mobile phone uses of text messaging (eg MXit) and video games which have prompted this study to identify and track alpha users or key elements in any social network who dominate the connectivity of the core members of the community. For this study the audience or community specifically refers to adolescents. Against this background the study investigates, among others, how Internet usage compares with cellphone content usage with specific reference to MXit and gaming.

MXit

As part of cellphone evolution (and similar to the WWW), mobile social networks have also attracted much attention in South Africa. The mobile social network MXit is allegedly increasingly becoming even more popular than other computer-based social networks such as MySpace and Facebook. MXit is a social mobile or mobile instant messaging application developed in South Africa (in 2005) and runs on cellphones with GPRS/3G (Wikipedia 2009b). MXit services are focused around allowing users to communicate with each other via messages (cheaper than sending an SMS). MXit has extended this functionality into file sharing, rich messaging (eg audio, photos) and even the ability to send a 'vibe' or vibration alert to someone. There's also a group chat function to allow users to chat with a group of your friends.

As mentioned, MXit is not only a social network but also uses mobile instant messaging (MIM). With MXit, users can send and receive text messages to and from mobile phones and personal computers via the Internet using GPRS or 3G instead of the standard SMS technology. Used on its own, SMS does not include alias capabilities (using alias or user names for identification purposes by contacts or 'buddies') nor does it allow for confirmation that the intended recipient is available. Being transaction based (rather than session based), plain SMS (without MIM) does not ensure that the recipient will receive the message in real-time. MIM allows the community of users to register as being present and/or available, allowing for more real-time text messaging and communications than would be possible with traditional mobile messaging.

Currently MXit has its user base largely concentrated in South Africa (estimated at 6.5 million plus South Africans with approximately 7.5 million users worldwide) where it was initially established (Thomas 2008b).

In addition to basic chat services, MXit also offers loads of other ways through which users can express themselves on their mobile phones. For example, MXit users can now

meet people, play games and customise their phones. Other innovative MXit features include the MXit e-commerce store (TradePost) where users may purchase access to certain services (eg messages and reviews) by using Moola (equivalent to one South African cent), the MXit currency. MXit Music is also a new and recent initiative aimed to support the growth of South African music. MXit music is available to MXit users via, among others, the TradePost contact on a MXit client (Wikipedia 2009b). These features are anticipated to add to the already fairly high diffusion rate of this media communication feature, especially in the adolescent market. Alternative IM services include Bing, Twister and *Mèèp*, to mention but a few alternatives.

- *Bing*

Bing is branded as a 'mobile room for good friends' (Bing Home Webpage 2009) and is an instant messenger for mobile phones improving on the combined advantages of SMS with those of well-known instant messaging platforms (like **I Seek You** (ICQ) and Microsoft Network (MSN)). Bing features include adding friends, single and group chats, personal status and mood sharing, entertainment news, quizzes, funny e-cards and GPRS settings.

- *Twitter*

Twitter is a social networking and microblogging service allowing users to send brief text updates or micromedia such as photos or audio clips and publish them, either to be viewed by anyone or by a restricted group which can be chosen by the user (Wikipedia 2009c). The service allows users to send and read other users' updates (known as **tweets**), which are text-based posts of up to 140 characters in length.

- *Mèèp*

Mèèp (from Vodacom) is a real-time instant messaging service that keeps users connected to your contacts or 'buddies' whenever and wherever via cellphones.

Users can use *mèèp* to chat to other *mèèp* cellphone users, and even *mèèp* PC users. With *mèèp* users can chat to multiple *mèèp* buddies and invite up to nine at the same time to join the conversation. As with MXit, *mèèp* has its own currency, *mèèpots*. More specifically, *mèèpots* are tokens that can be purchased in order to use the *mèèp* service (Mèèp Webpage 2009)

1.1.3 Other new media

Consoles or video games and digital audio players are two additional 'new' media types relevant to this study. Each of these is discussed in more detail below.

Console or video games

A further communication innovation includes **console** or **video games** that have also gained popularity not only among the youth, but also adults. In the recent past, gaming has been dubbed by the US Centre for Media Research as '*mainstream entertainment*' (Bayley 2008). More specifically, console or video games are played on a device specially made for game play called a video game console. The player interacts with the game through a controller, a hand-held device with buttons and joysticks or pads. Video and sound are received by the gamer through a television. Currently, personal computer (PC) game software is available on CDs or DVDs, although earlier game machines used cartridges containing read only memory (ROM) chips.

The most recent innovations of game consoles include the Microsoft Xbox, Sony PlayStation (PS) (with PS3 currently among the most popular), and Nintendo GameCube (with Wii and DS currently among the most popular) (PCMAG 2009 and Game Planet 2009). In 2005, a decade after the introduction of the PlayStation game console, the first handheld model, the PlayStation Portable (PSP) was introduced to the market. The PSP even plays music and videos and displays photos. In Europe, Nintendo has sold more Wii systems in one year than Xbox 360 and PlayStation 3 together since their

launch. In 2008 Nintendo managed to sell more than eight million Wii's worldwide (Eurogamer 2009).

Digital audio players

Digital audio players (iPods and MP3 players) have also diffused as new media, which is evident from iPod sales of more than 110 million units worldwide in 2007 (Beal 2008). This makes the iPod the best-selling product in the history of digital audio players. The sections to follow describe these new media innovations in more detail.

iPod

iPods have also diffused among adolescents as a popular image building interface and have attracted fairly high adoption rates among the youth due to its ease of use. In fact, the iPod has become the staple product of the portable music market. Since introducing the iPod in 2001, several new versions of the popular device have been made available. Besides the iPod version, the following are available (TechTerms 2009b):

- iPod mini, which is a smaller version of the iPod that comes in various colours and stores fewer songs.
- iPod Special Edition, which is a variation of the basic iPod (the first being a black U2 iPod with the signatures of the band members on the back).
- iPod photo, which is an iPod with a colour screen that allows users to store and view a library of photos as well as play music.
- iPod shuffle, which is an extra small iPod that only holds a few hundred songs and does not have a screen.

All iPods store data on an internal hard drive, except the iPod Shuffle, which uses flash memory. Thus, each iPod, including the shuffle, can also be used as a hard drive. Aside from being a music player, the iPod can serve as a backup device, a basic organiser and

an alarm clock. To transfer files to the iPod, users must first connect the device to a computer using a USB or Firewire cable. iTunes can automatically transfer playlists and songs or users can simply change the program's preferences to manually update the iPod.

MP3 player

A MP3 player (or Digital Audio Player – DAP) is a portable consumer electronic device (or portable music player device) that allows users to store and plays music files in MP3 format. MP3 players are small handheld devices and often use flash memory for storing MP3 files (Webopedia 2009).

1.2 **INTERNATIONAL TRENDS**

The reason for first reverting to previous research studies on new media from an international perspective as part of the exploratory phase of the entire youth research media communication project, was not only to stimulate the discussion on the topic matter, but also to highlight international trends and findings, draw some comparisons and borrow from the experience gained from similar previous studies. This investigation proved to be of particular value in constructing the research model for the media communication study among South African adolescents and to investigate possibilities in terms of the applied analysis approaches used internationally.

Internationally, the most recent opinion on adolescents and the new media is that they are the defining users of the Internet. This is particularly evident in the USA where adolescents not only chat and spend more time online than adults, but also use online technologies such as instant messaging more often than adults (Lenhart, Madden & Hilton 2005). Worldwide, the Internet and cellphones are also currently used predominantly for interpersonal communication as opposed to their initial primary use for entertainment and information.

Most research studies on new communication media have been conducted mainly in the developed part of the world. A good example of early research in this regard was by researchers at the London School of Economics and Political Science in the last years of the previous century (Livingstone 1998). This study was undertaken at the start of the diffusion cycle of cellphones, and the Internet was not as widely used as currently. Some of the findings of this multi-country (Britain, Israel and 10 countries in Europe) study are also relevant to the current situation in South Africa, especially with regard to the use of and access to computers and the Internet. Some of the findings from the latter study included the following:

- In every one of the 12 countries involved, results showed that children and young people preferred outdoor/social activities to the media. Children and young people preferred being with friends above all else.
- In some countries (Britain, for example) parents and teachers regarded screen media as a threat to reading of printed material, whilst in some other countries (eg Denmark) television viewing was not seen as a threat to the reading of books.
- Major differences were found between countries with regard to the availability of the most recent technological developments. Whereas in Finland a limited number of affluent and rural children had Internet access a decade ago, only tiny minorities had Internet access in Britain and Italy. Social class differences were also prevalent regarding availability and access.
- Across Europe 10 years ago, there was evidence of fragmentation of the television audience and an increasing tendency for family members to watch television alone was evident.

Within the context of dramatic social, economic and developmental changes faced by South Africa, research on adolescents and the new media should take account of the developments emerging from the European examples highlighted above (Livingstone 1998; Van der Voort, Beentjes, Bovill, Gaskell, Livingstone, Koolstra & Marseille 1998).

Also worth noting in this regard is the outcome of a second study in Europe in Flanders, Germany and Sweden in 1998 (Johnsson-Smaragdi, d'Haenens, Krotz & Hasebrink 1998). This study analysed the integration of the 'new media' in the media environment of young people. The study revealed that television viewing was still the dominant mass medium, but interestingly, however, computers as a new medium were seen as undoubtedly being part of the everyday media environment. The study showed that about half of children had access to a personal computer (PC) at home while the use of print media was rather low when compared to audiovisual media.

A more recent study conducted in 2007 in Denmark presents a much more insightful understanding of the needs and motives of 'tweens' (8–12-year-old children) for acquiring a cellphone. Using Maslow's hierarchy of needs theory as well as the means-end chain (MEC) model to understand how these children relate product attributes to their self perception and personal values, the study offered an ideal understanding of patterns of similarity and differences between needs, motives and values of children with regard to cellphones (Martensen 2007). Some of the Denmark findings revealed the following:

- Three needs and motives were identified in relation to cellphone ownership, namely:
 - safety, security and practical needs
 - social needs and recognition (friendship etc)
 - needs reflecting ego and self-actualisation

- Five primary factors were identified reflecting underlying motives for cellphone ownership. These were:

- Abstract attributes. It is regarded important that a cellphone has the latest features and that it is advertised in the media. A good cellphone is always expensive and evokes interest.
- Functional consequences. Cellphones must be practical, flexible and should provide a feeling of security.
- Psychosocial consequences. Cellphone ownership/access secures social approval/acceptance.
- Instrumental values. Cellphone ownership/access evokes self-confidence, self-control and sociability.
- Terminal values. Cellphone ownership/access improves self-esteem, social recognition and true friendship.

It is noted from the Denmark research that there is a clear psychological relationship between a young person and the use and ownership of a cellphone. Valuable experience to be noted from this study was that it is not enough to focus only on tweens' age but also on tweens' needs, motives and personal values (Martensen 2007:33). A similar research theme is addressed by Valkenburg and Peter (2007) that, instead, focuses on the Internet as new communication medium. The authors of this study found that online communication was positively correlated to the closeness of friendships, with a proviso that the effect held only for respondents who primarily communicated online with existing friends and not for those who mainly talked to strangers. One of the findings in this study concludes that 'it is not online communication per se that is important for social interaction and relationship maintenance but rather its greater opportunities for intimate self-disclosure' (Valkenburg & Peter 2007:276). This explains earlier findings by Gross (2004) that the vast majority of adolescents seem to use the Internet to maintain their existing network of friends.

The scope and approach used by Buckingham (Broddason 2006) during a 2000 research study also evoked additional considerations to be accounted for when conducting

research among the youth market. In this regard it is important to note the cultural facets investigated by the study in the UK and other industrialised countries. More specifically the research revealed that the polarisation between the rich and the poor had a clear impact on the establishment of a new multimedia culture amongst young people. The outcome of this study revealed that the rich tend to have much greater access to the new media when compared to the poor.

The role of culture in the use of the new media is also illustrated by further research comparing new media communication usage patterns in Japan and Taiwan. The use of the Internet by the Taiwanese youth for example, is far greater than that of the Japanese youth, in spite of the fact that broadband services are cheaper and faster in Japan. In contrast, text messaging on cellphones is used more by the Japanese youth than the Taiwanese youth (Ishii & Wu 2005). The authors suggest that culturally different personal relationship patterns in the two countries have resulted in different media usage by the youth.

Another interesting trend emerging internationally worth noting is the move away from individual groups to individual networks. Instead of being 'closed in' by one social network, person-to-person communication continuously switches between networks (Wellman 2001:238-248). This social phenomenon is termed *networked individualism* by Broddason (2006).

Past research on the international front also seems to play-off traditional media with new media communication. In this regard a unique long-term study in Iceland, covering a period of 35 years, showed a 'monumental' shift in the media and communication habits of Icelandic youths. More specifically, a persistent decline in the use of the 'old' media (books, newspapers and radio) was found by this study. In addition, the study showed that the proliferation of television sets at home helped to create a new viewing environment in the home. However, this did not lead to an increase in television

viewing because the new media, especially cellphones and the Internet, created a 'media rich' environment for the child. The resultant usage of the media changed the nature of television viewing: *The media rich child may be alone, but she is not necessarily lonesome... television is perhaps becoming more of a background medium than envisaged previously* (Broddason 2006:116).

An empirical study on parental perceptions of their children's electronic media use in New Zealand also highlights the views of parents on new media and the role of policy in the ordinary household. Parental concern about the potential dangers that the new media pose for children were found, however, contextualized by their limited knowledge and understanding of the new media. The study confirmed a willingness by parents to play a primary role in the protection from and control over electronic media (Eagle, Bulmer & De Bruin 2003).

In a developing giant such as China, a study in five cities (Beijing, Shanghai, Guangzhou, Chengdu and Changsa), found that more than 80 % of people under 24 years are using the Internet (Liang 2005). Although this study did not focus on the youth per se, it is interesting to note that the Internet in China is more like an entertainment highway. *People use the network for entertainment and chatting more than they use it to seek information, or for work or study* (Liang 2005).

A final observation made by Montgomery (2000) that bears relevance to the work of the YRU is that a new generation of market research companies in the USA represents an intense focus on research on the new media industries. Most of the information produced is proprietary, which is guiding the development of digital content and services for children. She concludes that *'Market research on children, the youth and new media is dramatically outpacing academic research on the subject'* (Montgomery 2000:62). She also stresses the need for policy research in the area.

In summary the new communication media is a reality worldwide, and children and young people are important (probably the most important) users of these new media types. The consulted international literature can be summarised as follows:

- Broadly, because of rapid developments in the field, children and young people (who are by nature natural innovators) will use these media and will become familiar with them faster than adults. The usage and impact of these media on the youth are therefore important.
- In general, reading of printed material by young people is under threat.
- Socioeconomic factors are important elements in the understanding and usage of the new media by children, with those who have gained quick access compared to those who have not.
- For children and young people, the new media (especially cellphones) are far more than just a communication medium. In fact, there are psycho-developmental factors at play, which are important to them.

Communication scholars agree that a 'monumental shift' is occurring in the media and communication habits of young people (Broddason 2006).

1.3 THEORETICAL FOUNDATION

1.3.1 Diffusion of innovation

The underlying rationale for the YRU study on new communication media among adolescents is partly based on the diffusion of innovation theory, which was developed over a half century ago with the aim to provide a popular framework to explain how new ideas and technologies are spread and adopted in a community (Rogers 2003). Rogers (1963) defines diffusion of innovation as the process by which an innovation is communicated through certain channels over time among members of a social system.

Components of the classic diffusion framework include the innovation-decision theory, the individual innovativeness theory, the theory of rate of adoption and the theory of perceived attributes (Rogers 2003). In addition, the diffusion framework includes theories relating to communication aspects and channels. Only the individual innovativeness theory, the theory of perceived attributes, and concepts relating to communication channels are discussed as these are the most relevant to adoption of practice by individuals. Finally, some factors that are external to the diffusion framework but which affect adoption of practice are discussed.

1.3.1.1 *Theory of individual innovativeness*

This theory suggests that in most social systems there are innovators, early adopters, early majority adopters, late majority adopters and 'laggards'. These five categories are often visually represented as a bell-shaped curve as reflected in figure 1.1 (Rogers 2003).

FIGURE 1.1

CATEGORIES OF INDIVIDUAL INNOVATIVENESS

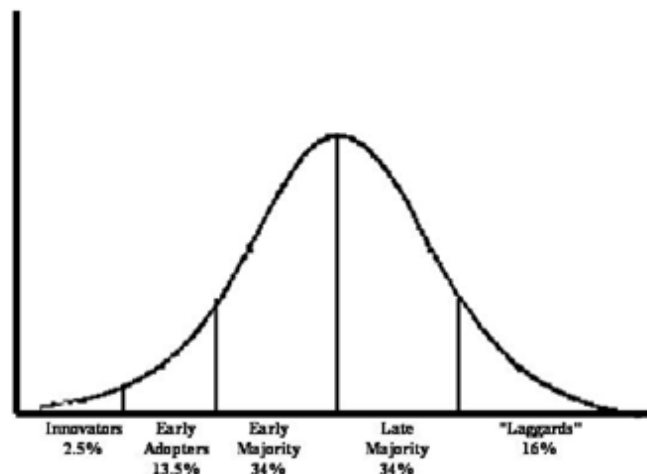


Figure 1.1 represents the different types of adopters and roughly reflects categories corresponding to standard deviations. That is, early and late majority adopters are often statistically shown to be one standard deviation 'above' the mean (average adopter), and the innovators, and early adopters, and laggards are two to three standard deviations 'below' the mean. The figure illustrates the fact that there are relatively few adopters at first but that, as the technology, concept, or practice is picked up by innovators and early adopters, their influence will have an impact on the later adopters that make up a majority of potential adopters.

1.3.1.2 *Theory of perceived attributes*

Another diffusion theory, the theory of perceived attributes, focuses on how participants view characteristics of the practice under investigation (in this case new media). These have been typically categorised as those that relate to the complexity, compatibility, trialability, relative advantage and observability of a practice or technology (Rogers 2003). A brief description of each of these attributes is presented in exhibit 1.1.

EXHIBIT 1.1

PERCEIVED ATTRIBUTES

Attribute	Description
Complexity	This involves the degree of difficulty of understanding and implementing the practice from the perspective of the potential adopter.
Compatibility	This concerns itself with a host of factors relating to the degree to which the practice is compatible with current objectives and philosophies of the participant.
Trialability	This deals with the potential to experiment with the practice on a smaller, less intensive scale. The expectation is that if an owner can implement the new practice on a trial basis, he or she can possibly even modify the potential practice further to meet his/her specific needs.
Relative advantage	This speaks to the possibility of reduced cost, or other factors that may make adopting this practice advantageous over other alternatives, including ability to socialise, safety aspects, etc.
Observability	This relates to the degree to which the potential adopter has had the opportunity to see the practice implemented or see the results of the implemented practice.

In summary, the more profitable, understandable, personally compatible, observable, and testable the participant considers the innovation, the higher the potential for adoption.

1.3.1.3 *Communication channel, social networks, and external factors*

Further concepts relevant to the diffusion of innovations framework and having influence on adoption/rejection decisions include those relating to the communication channel, social networks, and external factors (Rogers 2003). Firstly, communication channels include the change agent (new media communication types) and attributes of the new medium (for example, uploads, downloads, chat, calls, photos, information exchange, subscription etc). Secondly, social networks and systems include support systems such family and friends and the type and amount of interaction with, for example, the educational system or community. Finally, external factors such as media, social workers, government, education practitioners, etc all affect adoption of practices.

Diffusion of innovations research can provide information on, for example, barriers and external motivations that may have strong influences on the decision to adopt or reject a new media communication practice. These factors may include the individuals' personality, sociodemographic characteristics, networks and prior knowledge of the topic. Other influences may stem from the five perceived attributes associated with the practice or innovation under question (complexity, compatibility, trialability, relative advantage, and observability) or from the adolescent's social network and the availability of information and assistance from other sources.

1.4 **RATIONALE OF THE STUDY**

When compared to traditional media like television, radio, magazines, newspapers, cinema and outdoor media, the media communication developments described in section 1.1 are regarded as new within the communication industry of South Africa.

However, it is not uncommon nowadays to view television online (WebTV), listen to radio online (WebRadio or NetRadio) or even read electronic newspapers.

It is clear from the above discussion on the new media communication types that fairly limited information is available on the needs, nature of usage and usage levels among South African adolescents, in particular the rural youth. More specifically, it is uncertain how new media communication innovations are diffusing among, especially, adolescents in South Africa. Awareness of these factors would allow business an ideal opportunity to focus their efforts on creating awareness and knowledge when promoting new products or innovations. Through proper research analyses and a better understanding of the adoption process of new media specifically, social scientists, marketers and advertisers will be much better positioned to develop a fully integrated marketing and communication plan, focused on, among others, a predetermined stage of the adoption process.

The above facts and background comments provide sufficient rationale for conducting empirical research on new media usage and behaviour in the South African adolescent market. In fact, closely monitoring the media usage and behaviour of the South African adolescent market as a future consumer market is, as mentioned, not only important from a marketing communication perspective, but also bears relevance to future, marketing and market segmentation and penetration strategies in support of sustainable business growth.

Research on the new media also has the potential to benefit the secondary education market of South Africa in particular, which could capitalise on these new developments by integrating them into the learning environment and concomitantly develop academic and communication skills of adolescents. Awareness of new communication media trends and adolescent diffusion rates of new media, as well as an understanding of how adolescents respond to these new innovations, could further assist in developing

business strategies to improve, among others, the perceived aliteracy levels (a person who is able to read but rarely chooses to do so – Dictionary.com 2009) currently prevailing among the South African youth. The latter is specifically relevant to exponentially more secondary schools expressing their concerns about the education system producing aliterates who seemingly prefer new media features and television to books. Also, with the popularity of and rise in, among others, instant messaging, e-mail, Internet and online gaming services, and cellphone text messaging (SMS), a new language (Internet slang) tailored to the immediacy and compactness of these new communication media, has emerged. With more than 1 000 chat abbreviations (Internet slang) available nowadays, schools have already expressed their concerns about the impact of the new media developments on the grammar and writing skills in the classroom environment. Since students are becoming more accustomed to using short-cuts when sending a message or talking in a chatroom, it has become harder and harder for them to write and spell correctly. Besides this disturbing tendency, communities have also started, and continue, to raise concerns about the impact of new media providing access to unauthorised environments such as pornographic sites. The advent of new media has also raised concerns about e-plagiarism which carries with it its own dilemma for the academic society in particular. However, other schools of thought seem more positive about the development of new media and encourage the creatively that, for example, short-text messaging evokes. Seemingly, the new media also present ideal opportunities for new media classrooms whereby new media (the latest technological tools) are integrated into curricula. Such developments could improve not only technological skills of both educators and learners but could also advance active learning using new media. Finally, industry critics have also raised concerns about the harmful effects on children being exposed to advertisements on, for example, social network sites – also referred to as cyberbullying.

Clearly the new media innovations and developments have impacted across various areas and will continue to do so in the future. Regardless of whether the impact is

positive or negative, business across various economic sectors (eg communication, marketing, education, sociology, psychology, etc) has to take account of these developments and how the diffusion of the new media impact on adolescents as future consumer market. Logically, the arguments presented above, have all fuelled the motivation and rationale for continued research on new media targeted at the adolescent market of South Africa, who seemingly are caught up in a cyberspace culture hardly short of dynamic and innovative media developments.

To provide for an initial understanding on how the changing dynamics within the communication media market of South Africa are affecting adolescent behaviour, this report presents the outcome of the first pilot study among adolescents enrolled at a selected sample of secondary schools in the City of Tshwane. To further complement these findings, and to allow for some comparative analysis, results from a previous research study conducted by the Film and Publication Board (Chetty & Basson 2006) are also shared for convenience. The latter study specifically focused on Internet usage and the exposure of learners to pornography. This comprehensive report publishes useful and complementary data on access to the Internet, as well as Internet and cellphone usage. The scope of the study covers secondary schools in Gauteng, KwaZulu-Natal and the Western Cape. It was established from the study that the majority of the 934 high school children surveyed (88 %) have their own cellular phones, whilst 81 % reported that they have access to a computer at home. Interestingly, Internet access was gained through a wide variety of sources, namely:

- Cellphones – 7 %
- Family member's work – 18 %
- Friend's home – 19 %
- Public venue – 23 %
- School – 37 %
- Home – 52 %

These figures provide some early indication of the high diffusion rate of the Internet among high school children in urban areas of South Africa. However, the seemingly high diffusion rates of the Internet should be judged against the relatively low penetration rates of between 7 % and 10 % reported for adults (people 16 years and older) in South Africa by SAARF (SAARF 2007). The findings of the Tshwane pilot study presented in chapter 3 of this report will further serve to verify the Internet diffusion figures published by the Film and Publication Board study in 2006. Also, ongoing longitudinal studies will probably be the only long-term solution to solve the need for scientific information in a rapidly changing media environment.

1.5 **AIM OF THE STUDY**

The rationale for the study provided sufficient background regarding the importance and value of research on new media targeted specifically at the adolescent market of South Africa. As with the introduction of television in South Africa in 1976, the need for research on the new media (Internet and cellphone and their corresponding features) is imperative. The discussion up to this point has largely emphasised this need. Consequently, the YRU in consultation with its sponsor members, decided to undertake a research study on the incidence and usage of new media among adolescents. More specifically, the study investigates the rate of diffusion of new media in the adolescent market and the extent to which new media innovations have been adopted among adolescents. The study has also been developed to identify the factors that impact on and direct the new media communication behaviour of adolescents.

To facilitate the process of designing a research model for the study, it was decided to first conduct a pilot study on new media to gauge the usage and frequency levels of new media among secondary school children in the City of Tshwane. This pilot study focused mainly on access to and usage of the Internet and cellphones as major new communication media types. The research instrument also measured usage levels of new media features such as social networking sites (eg MySpace, FaceBook and MXit)

and gaming. In support of comparative analysis, the study also measured access and usage levels of adolescents with regard to other media such as iPods, MP3 players as well as traditional media, including broadcasting (television and radio) and print (magazines and newspapers) media and cinema. Traditional media types were also investigated to gain a better understanding of the preferences of adolescents in terms of their favourite television and radio programme/channel/station.

Primarily, the study aimed to establish which new communication media features are adopted by adolescents, how adolescents network via the new media, what relative advantages are experienced through the diffusion and use of new media as well as which external factors impact on adolescents' decisions to adopt or reject a specific new media communication practice. The model also adds value by investigating the extent to which the use of new media is consistent with adolescents' expectations, values, norms, image or status profiles. The adolescent as economic entity was also investigated in terms of his/her new media communication purchase behaviour with specific reference to specific brand choices, preferred media service providers, as well as the amount spent on new media and their respective features. In this regard the study also examined the factors impacting on adolescents' purchase decisions and brand choices of new communication media as well as their preferences of advertisements published through new media channels.

Overall, the aim of the pilot study among five schools in Tshwane was to test the research model designed for the descriptive research study in preparation for a broader quantitative research study to be conducted across Gauteng and nationally in 2009. Thus the pilot study enabled the YRU to develop and refine the research instrument for a larger scale study, firstly targeting the urban areas of Gauteng before being rolled-out at national level (urban and rural).

1.6 CONCLUSION AND REPORT LAYOUT

It seems that the third media revolution is currently well underway. Electronic communication is a worldwide phenomenon, and the way people communicate has again made massive inroads into traditional forms of communication. Of possible concern is the impact of these new communication media developments on traditional paper-based books, magazines and newspapers. In a developing country such as South Africa the Internet and cellphones are already making an impact across industry, the government, and society. With a relatively small proportion of people in the country (10.3 % of adults, 16 years and older – World Wide Worx 2008) having access to the Internet, the impact and usage of this new mass communication medium will probably be stronger among adolescents. Research to measure the usage of the new media and how the new media have diffused among adolescents will be of great importance and value to business, education and society in general.

This chapter provided a broad background on new media developments at local and international levels. This overview presented a basis for explaining the importance and aims of conducting youth research on new media usage in South Africa. The research methodology for the five-school pilot survey is explained in chapter 2, while the results emanating from the pilot survey are discussed in chapter 3. How these outcomes impact on the South African situation and the implications thereof are discussed in more detail in chapter 4. Chapter 4 also summarises the findings of the pilot survey, which set the scene for future planning and expanding the research scope to a much broader youth population.

CHAPTER 2

RESEARCH METHODOLOGY

2.1 INTRODUCTION

Chapter 1 presented a review of the literature on the developments of new media occurring locally and internationally (eg Europe, East Asia, USA, India, China, etc), which progressed to an overview of new media and how these have diffused and been adopted by adolescents in particular. In the exploratory research phase on new media usage and media diffusion it was also evident that most research among children applied survey (quantitative) techniques while quantitative methods (eg focus groups and in-depth interviews) are most commonly found in research studies targeting much younger children. This study follows a quantitative pilot survey approach using five judgementally selected secondary (high) schools located within the geographic area of the City of Tshwane. In adhering to the SAMRA Code of Conduct (SAMRA 2001) for interviewing children³, the permission of the Gauteng Department of Education as well as the headmasters of the relevant schools was obtained. This supported the construction of a comprehensive research method and model of which the design is explained in detail in this chapter.

2.2 SAMPLING PLAN DESIGN

The steps in designing the sampling plan for the pilot survey are explained in detail below.

³ The SAMRA Code of Conduct (section G) spells out clear responsibilities to and requirements of the research practitioner. Clause G9 states that: *Before a child is interviewed, asked to complete a questionnaire, or the subject of a validity back-check, the permission of a parent, guardian, teacher, or other person on whom the parent has conferred responsibility, should be obtained. Consent is only required for school-going or younger children.*

2.2.1 Defining the population of interest

Adolescents schooled at five judgmentally selected schools (sample units) located in the City of Tswane were selected as sample elements for the study. More specifically, the population was classified as follows:

- The sample units included two former or ex-model C schools and two ex-DET schools located in the City of Tshwane.
- The sample elements included school pupils in grade 8 and 10 to 12, ranging between 13 and 21 years of age.

2.2.2 Data collection methodology

A self-administrated survey approach was applied whereby learners completed the questionnaire themselves during school time and returned it via educators/teachers to the YRU for editing and verification.

2.2.3 Sample size

The sample size ($n = 490$) by school type was as follows:

- Ex-model C schools: 67 % of the total sample
- Ex-DET schools: 33 % of the total sample

2.2.4 Sampling methodology

A nonprobability judgmental sampling approach was used in selecting the five schools in the City of Tshwane.

2.2.5 Sampling plan execution

After permission was granted by the Gauteng Department of Education, the YRU approached the headmasters of the five judgementally selected high schools for

participation in the research study. With the assistance of the teachers the questionnaires were distributed to learners enrolled for grade 8 and 10 to 12 at the respective schools. One class in each grade (grades 8, 10 and 12) was included. The questionnaires were completed during class time under supervision of an educator/teacher. Learners were requested to self-complete the questionnaire and return it via the educators/teachers to the YRU.

2.3 RESEARCH INSTRUMENT DESIGN

The research questionnaire was developed with the assistance and input of the three stakeholder groups sponsoring the syndicate research project. This process facilitated the buy-in of research users and largely contributed to the design of a research instrument featuring topical matters relevant to industry. Following this approach, largely secured the development of a research instrument built on practical application value in support of future business planning and strategising. More specifically, the questionnaire addressed the following contemporary research topics:

- access to and adoption, ownership and usage of the Internet and cellphones as major new communication media types
- adoption and usage of new media features such as social networking facilities (eg MySpace, FaceBook and MXit) and gaming
- access to and adoption and usage levels of other media such as iPods, MP3 players as well as traditional media, including broadcasting (television and radio) and print (magazines and newspapers) media as well as cinema
- adoption of and participation in communication networks
- advantages experienced due to the diffusion of new media
- factors impacting on adoption or rejection of new media communication practices
- the extent to which the use of new media is consistent with adolescents' expectations, values, norms, image or status profiles

Besides these aspects, the research instrument also explored the adolescent as an economic entity by investigating new media purchase behaviour with specific reference to brand choices, preferred media service providers, as well as the amount spent on new media and their respective features. Finally, the questionnaire also examined the factors impacting on adolescents' purchase decisions and brand choices of new communication media as well as their preferences of advertisements published through new media channels.

During the initial planning stages the questionnaire was pre-tested as part of the interviewing procedure at the first selected school. This process was completed with hardly any problems, which resulted in the pilot study also being rolled-out to the other four schools.

The questionnaire consisted of 60 questions and took about 20 minutes to complete.

2.4 DATA EDITING, CODING, CAPTURING AND STORING

Once the questionnaires were completed and retrieved from the five schools, the questionnaires were edited to ensure that they meet the desired sampling requirements. This process was concluded by the YRU who conducted follow-ups on all outstanding and uncertain responses. Following the editing process, the data on the questionnaires were edge-coded with the help of a carefully designed coding manual. Finally the data was captured in electronic format and stored for analysis purposes. The data analysis of the survey findings are presented in chapter 3.

2.5 CONCLUSION

This chapter presented an overview of the research methodology applied in the pilot study among 490 learners enrolled at five judgmentally sampled secondary schools located in the City of Tshwane. As will become evident from the discussion of the survey results in chapter 3, this preliminary study generated sufficient data to obtain a

better understanding of the adoption of new media and how new media diffusion is impacting on the communication and social behaviour of adolescents. Although the sample is not representative of all high school learners in Tshwane nor Gauteng or South Africa, consistency checks in the survey data revealed high levels of confidence to support the view that the results obtained present the media behaviour of greatest likelihood of adolescents residing in metropolitan or urban areas.

CHAPTER 3

ANALYSIS OF FINDINGS

3.1 INTRODUCTION

This chapter presents the outcome of the survey findings among approximately 490 adolescents enrolled at five judgementally selected secondary schools in the City of Tshwane. The discussion starts with an analysis of the traditional media communication usage levels of adolescents as these 'older' media types are not only still effective communication tools within the marketing communication industry of South Africa, but are nowadays presumably threatened by new media. In fact, nowadays, mixing of traditional and new media is also no foreign phenomenon. Thus, investigating the one without considering the other, would be a rather futile and incomplete exercise. Thus, studying the traditional in tandem with the modern, presents an ideal opportunity to investigate the research question whether the new is surpassing the old or whether this is merely an illusion. Or does the one complement the other and is the combined effect more than the individual effects separately? Alongside these research questions, the survey also explores the extent to which new media have diffused among adolescents in the City of Tshwane and to what extent media have been adopted and impact on adolescents' communication and social and economic behaviour.

3.2 TRADITIONAL MEDIA

The research instrument included various questions on television viewing, radio listening as well as newspaper and magazines readership levels of adolescents. The research results on the usage of these traditional media types are discussed in more detail in this section. It should be noted that the analysis differentiates between ex-model C schools and ex-DET⁴ schools in an attempt to also investigate a possible digital divide between different socioeconomic areas. Whereas learners from ex-model C

⁴ DET: Department of Education and Training

schools can typically be classified as those who reside in middle to upper socioeconomic areas, learners from ex-DET schools tend to be from a lower to middle socioeconomic class.

3.2.1 Television viewing

Table 3.1 reflects the television viewing patterns of participating learners by school type. The table reflects the television channels or stations that adolescents watched during the seven days preceding the interview.

TABLE 3.1

TELEVISION CHANNELS VIEWED BY SCHOOL TYPE

Television channel	Ex-model C schools	Ex-DET schools	Total
	%	%	%
eTV	39.1	63.4	48.5
DSTV	79.9	26.0	61.8
SABC 1	25.8	73.3	44.0
SABC 2	38.4	49.6	43.6
SABC 3	32.3	45.0	38.4

It is clear from table 3.1 that the subscription channel DSTV was viewed by most (61.8 %) of the learners. The tables also reflect the healthy economic status of the families of the adolescents participating in the study (approximately 67 % of these adolescents were enrolled at ex-model C schools, reside in middle to higher income households). In fact, a much higher proportion of ex-model C schools view DSTV, namely 79.9 % when compared to only a quarter of learners enrolled at ex-DET schools.

It is also evident from table 3.1 that open channels such as eTV, SABC1 and SABC2 are also viewed by approximately two in five learners. SABC1 seems most popular among ex-

DET school learners. Approximately seven in 10 ex-DET school learners watch SABC1 as opposed to only a quarter of ex-model C school learners.

When asked about their favourite television channel, different results were obtained from the survey participants. The findings emanating from this investigation shows that emotion and behaviour does not always coincide in adolescents. Table 3.2 reflects the favourite television channel of participating learners.

TABLE 3.2

FAVOURITE TELEVISION CHANNEL

Television channel	Ex-model C schools	Ex-DET schools	Total
	%	%	%
eTV	5.0	24.2	11.3
DSTV	84.4	15.3	59.9
SABC 1	6.5	52.4	23.1
SABC 2	1.9	5.6	3.2
SABC 3	2.3	2.4	2.5
Total	100.0	100.0	100.0

It is clear from table 3.2 that DSTV is by far the most favourite television channel chosen by almost 85 % of the ex-model C school learners. In turn, most (52.4 %) ex-DET school learners prefer SABC1. eTV is the favourite television channel for a quarter of ex-DET school learners.

Besides listing their favourite television channel, adolescents were also asked to mention their favourite programme on television. A total of 94 different programmes were mentioned indicating a wide range of preferences. Although the number of mentions seems high, the actual percentage of ex-model C and ex-DET school learners who listed their favourite television programme, is relatively low by programme. This is evident from the following television stations listed as most favoured among ex-model C and ex-DET school learners (table 3.3).

TABLE 3.3**TOP FIVE FIRST-MENTIONED TELEVISION STATIONS BY SCHOOL TYPE**

Ex-model C schools	Ex-DET schools
Prison Break (16.9 %)	Generations (26.7 %)
Greys Anatomy (8.0 %)	Rhythm City (10.0 %)
7de Laan (7.1 %)	Soccer (3.3 %)
Generations (6.2 %)	7de Laan (2.3 %)
CSI (3.1 %)	News (2.3 %)

Most of the programmes listed above can be categorised as belonging to the 'soap opera' genre, indicating the interpersonal nature of programme preference of the respondents.

In evaluating the favourite television channels it is also important to take cognisance of the wide variety of programme preferences. A total of 75 different television programmes were listed by 225 (or 80.6 %) of the 279 ex-model C school learners. In turn, 50 different television programmes were listed by 120 (or 91.6 %) of the 131 ex-DET school learners. This reflects a very high percentage for television viewership among adolescents in general.

It should also be noted that of all participating learners, 15.4 % indicated that they watch all of the television stations measured by the survey (eTv, DSTV, SABC1, SABC2 and SABC3). A high 92.2 % indicated that they watch at least one television station. A low 7.1 % of the respondents indicated that they do not watch television at all. A slightly higher proportion of ex-DET school learners (8.4 %) do not watch television at all when compared to ex-model C schools (5.7 %).

3.2.2 Radio listenership

For radio listenership, the same '*past seven-days*' methodology as with television viewership measurement was used. The research question included to measure radio listenership instructed adolescents to *list the radio stations that they had personally listened to during the past seven days*. A total of 47 different radio stations were listed of which 35 (or 74.4 %) were first mentions. Respondents were able to list at most three radio stations personally listened to. Almost 90 % of learners who participated in the study listed at least one radio station. This reflects a fairly high level of radio listenership among the adolescents surveyed.

In order to determine the relative importance of radio station listenership, the first mentioned stations listed by the respondents were weighted with a factor of '3', the second with '2' and the third with a weight of '1'. This assumption is based on the fact that the first-mentioned station is the one most often listened or more important than any other listed. After allocating relative weights to each station, the weighted index for each station was computed by multiplying the number of mentions (frequencies) for each station with its weighted score. The radio station with the highest weighted score was finally allotted an index score value of 100 to denote the station listened to most frequently. Hereafter, the weighted scores for each of the other radio stations mentioned were expressed as a factor of the highest weighted score (index = 100) to finally establish the relative importance of each radio station to the one most frequently listened to. The weighted index scores for the top 10 radio stations are depicted below. The table also reflects the proportion of learners according to first-, second- and third-mentioned radio station (table 3.4).

TABLE 3.4**TOP 10 RADIO STATIONS**

Radio station	Index score	% First mentioned	% Second mentioned	% Third mentioned
Metro FM	100.0	18.7	14.3	5.4
Jacaranda 94.2	78.3	11.2	14.1	8.7
TUKS FM 107.2	65.4	14.7	5.6	3.5
YFM 99.2	50.5	8.5	7.7	4.6
Highveld Stereo 94.7	44.9	7.3	7.3	4.1
Motsweding FM	29.3	4.6	4.4	3.9
5 FM	22.4	3.3	3.9	2.3
iKwekwezi FM	20.0	3.9	2.1	2.1
Thobela FM	16.6	2.5	2.7	2.1
TUT FM 96.2	10.6	1.7	1.2	2.1

It is clear from the above index scores that Metro FM, Jacaranda 94.2 and TUKS FM are the three radio stations most frequently listened to. It should also be noted that the top two radio stations mentioned above are the same top radio stations in South Africa, with 2.2 million and 4.4 million adults listening to each respectively (SAARF 2007). In addition, participating high school learners also indicated that they listen to local stations, including the two university stations (TUKS FM and TUT FM). It is also interesting to note that iKekwezi FM and Thobela FM were mentioned among the top 10 radio stations. This holistic outcome raised suspicions that the radio station listenership for ex-model C and ex-DET school learners differs somewhat and that even larger sample sizes (favouring ex-model C schools) would not provide an accurate reflection for especially ex-DET schools. To account for this bias, the following top five first-mentioned radio stations for both ex-model C and ex-DET schools are shown in table 3.5.

TABLE 3.5**TOP FIVE FIRST-MENTIONED RADIO STATIONS BY SCHOOL TYPE**

Ex-model C schools	%	Ex-DET schools	%
TUKS FM 107.2	24.0	Metro FM	28.2
Jacaranda 94.2	15.8	YFM 99.2	12.2
Highveld Stereo	12.5	iKwekwezi FM	11.5
Metro FM	9.7	Motsweding FM	9.9
YFM 99.2	6.1	Thobela FM	9.2

It is clear from the analysis presented above that ex-model C school learners prefer listening to TUKS FM (24.0 %) while ex-DET school learners show radio listening preference for Metro FM (28.2 %). Almost one in 10 ex-model C school learners also listed Metro FM as their first mention.

3.2.2.1 Favourite radio station

When asked about their favourite radio station, a slightly different pattern emerged from the study. These discrepancies, once again, emphasise the difference between behaviour and media preference. The most popular radio stations listed by participating learners are reflected in table 3.6.

TABLE 3.6**TOP FIVE RADIO STATIONS BY SCHOOL TYPE**

Ex-model C schools		Ex-DET schools		Total sample	
Station	%	Station	%	Station	%
TUKS FM 107.2	25.4	Metro FM	34.4	Metro FM	21.2
Highveld Stereo 94.7	16.1	iKwekwezi FM	12.2	TUKS FM 107.2	15.4
Metro FM	10.4	YFM 99.2	11.5	Highveld Stereo 94.7	9.3
Jacaranda 94.2	8.6	Motsweding FM	9.2	YFM 99.2	8.9
YFM 99.2	6.8	Thobela FM	6.9	Jacaranda 94.2	6.8

The figures above reflect the proportion of learners for the top five favourite radio stations mentioned. Almost a third of ex-DET school learners prefer Metro FM (34.4 %) while TUKS FM is most favoured by approximately a quarter of ex-model C school learners.

3.2.2.2 Most popular radio programme

Besides recording their favourite radio station, respondents were also requested to mention their favourite radio programme. In total 50 programmes were listed of which the most prominent are reflected in table 3.7.

TABLE 3.7

TOP FIVE RADIO PROGRAMMES BY SCHOOL TYPE

Ex-model C schools		Ex-DET schools		Total sample	
Programme	%	Programme	%	Programme	%
The rude awakening	4.3	Traffic Joke	4.6	Music 24/7	3.5
Total Radio Take Over	3.6	Just Plain Breakfast	3.8	Breakfast with Thomas	3.1
Music 24/7	3.2	Music 24/7	3.8	The rude awakening	2.7
Whackhead	3.2	Simply Darren	3.8	Total Radio Take Over	2.7
Breakfast with Thomas	2.9	Top 40	3.8	Just Plain Breakfast	2.1

It is important to note that only 35.8 % of the ex-model C school learners were able to mention their favourite radio programme while six in every 10 (61.1 %) ex-DET school learners were able to mention their favourite radio programme. Compared herewith, at least 80 % of the ex-model C and ex-DET school learners were able to mention their preferred radio station. Overall, the response on specific radio programmes (44.6 %) was relatively limited.

It should, once again, be noted that almost nine in 10 (88.2 %) of the participating learners listed up to three radio stations that they listened to. On the other hand, one in 10 (11.0 %) indicated that they do not listen to radio at all. When compared to ex-

model C schools (10.8 %), a slightly higher proportion of participating ex-DET school learners (11.5 %) indicated that they do not listen to radio at all.

3.2.3 Magazine reading

To ascertain which magazines are read most often by learners, the learners were requested to *list the magazines read/browsed through during the past seven days*. A phenomenal 141 different magazines were mentioned by the respondents. A total of 75 magazines were listed first, while 36 and 30 magazines were listed second and third respectively. The high frequency of magazine readership is probably a reflection of adolescents' interest in people and relationships between people in particular.

Using the weighted index method (see section 3.5.2), the top 10 magazines mentioned are shown in table 3.8.

TABLE 3.8

TOP 10 MAGAZINES

Magazine	Index score	% First mentioned	% Second mentioned	% Third mentioned
<i>Bona</i>	100.0	6.6	2.7	2.9
<i>Drum</i>	93.4	3.9	6.4	1.7
<i>Move!</i>	88.2	5.6	2.9	2.3
<i>Huisgenoot</i>	77.9	4.4	3.3	2.3
<i>True Love</i>	76.5	2.9	5.4	2.1
<i>Heat</i>	72.8	4.8	2.3	1.7
<i>SA Sports Illustrated</i>	57.4	3.7	1.9	1.2
<i>You</i>	52.9	3.3	2.1	0.8
<i>People</i>	52.2	1.7	3.5	2.7
<i>FHM</i>	47.1	2.5	2.5	0.8

It is clear from the top 10 magazines listed, that learners mostly prefer *Bona*, *Drum* and *Move!* When comparing the first mentions of ex-model C and ex-DET school learners, *Heat* and *Huisgenoot* top the list among ex-model C learners while *Bona* and *Move!* top the list among ex-DET school learners. As first

mention, *Bona* is read most by ex-DET school learners. These comparisons are highlighted in table 3.9.

TABLE 3.9

TOP FIVE FIRST-MENTIONED MAGAZINES BY SCHOOL TYPE

Ex-model C schools	%	Ex-DET schools	%
<i>Heat</i>	7.5	<i>Bona</i>	20.6
<i>Huisgenoot</i>	7.5	<i>Move!</i>	13.7
<i>SA Sports Illustrated</i>	6.1	<i>You</i>	6.1
<i>Seventeen</i>	3.6	<i>Drum</i>	5.3
<i>Car</i>	3.2	<i>True Love</i>	3.8

Approximately seven in 10 of all participants indicated that they read magazines (78.3 %). A total of 21.7 % do not read magazines at all. A slightly higher proportion of ex-DET school learners do not read magazines (23.7 %) as opposed to 20.8 % of ex-model C school learners.

3.2.4 Newspaper reading

To measure newspaper readership patterns among the youth, adolescents were also asked to *list the newspapers they had read/browsed through during the past seven days*. A total of 54 newspapers were listed with 31 first mentions, 18 additional newspapers mentioned second and 5 additional newspapers mentioned third. Compared with magazines, far fewer newspapers were listed than magazines.

Applying the weighted index approach, the top newspapers are shown in table 3.10.

TABLE 3.10**TOP 10 NEWSPAPERS**

Newspapers	Index score	% First mentioned	% Second mentioned	% Third mentioned
<i>Daily Sun</i>	100.0	23.7	8.5	1.7
<i>Beeld</i>	76.2	20.1	3.3	1.2
<i>Sunday Times</i>	46.8	7.3	8.1	3.9
<i>Sowetan</i>	39.4	4.1	8.5	5.8
<i>Business News</i>	35.2	4.6	6.0	5.8
<i>Cape adds</i>	27.3	3.5	6.4	1.0
<i>Cape Argus</i>	17.4	1.9	3.7	2.5
<i>City Press</i>	9.0	1.5	1.0	1.7
<i>Sunday World</i>	8.8	0.8	1.5	2.5
<i>The Times (London)</i>	6.3	1.5	0.6	0.0

It is clear from table 3.10 that *Daily Sun* and *Beeld* are the most frequently read newspapers. Comparing ex-model C and ex-DET learners by first-listed newspaper, it is clear that *Beeld* is more favoured by a third (33.7 %) of ex-model C school learners while the *Daily Sun* is read by approximately 50 % of ex-DET school learners. These findings are reflected in more detail in table 3.11 below.

TABLE 3.11**TOP FIVE FIRST-MENTIONED NEWSPAPERS BY SCHOOL TYPE**

Ex-model C schools	%	Ex-DET schools	%
<i>Beeld</i>	33.7	<i>Daily Sun</i>	50.4
<i>Daily Sun</i>	7.5	<i>Sunday Times</i>	9.2
<i>Sunday Times</i>	6.5	<i>Sowetan</i>	6.9
<i>Business News</i>	6.1	<i>Business News</i>	3.8
<i>Cape adds</i>	6.1	<i>City Press</i>	3.8

Although not reflected above, it is interesting to note that overseas publications such as *The Times* of London, as well as the *New York Times*, and African newspapers such as *The Daily Nation* in Kenya, *The Daily Times* from Malawi, and *The Herald* from Zimbabwe were also mentioned by some respondents.

Approximately seven in 10 of all participants indicated that they read newspapers (78.0 %). This finding is similar to that for magazines.

It is also important to note that almost a quarter (22.0 %) of learners do not read newspapers at all. Interestingly, a much higher proportion of ex-model C school learners do not read newspapers (26.9 %) as opposed to ex-DET school learners (11.5 %).

Based on these findings, the participating learners of the five schools involved in the study are seemingly less avid newspaper readers than magazine readers.

3.2.5 Cinema viewing

The study was also designed to capture cinema viewership by establishing whether learners *had visited a cinema during the past month?* Almost six in 10 respondents affirmed that they go to the cinema on a regular (monthly) basis. Table 3.12 reflects that more ex-model C school learners go to the cinema when compared to ex-DET school learners. Whereas six in every 10- model-C school learners go to the cinema, the same proportion of ex-DET school learners do not go to the cinema. The proximity of cinemas is a major factor impacting on especially ex-DET school learners who are much more likely to travel much further to go to the cinema.

TABLE 3.12**CINEMA VIEWERSHIP BY SCHOOL TYPE**

	Ex-Model C Schools		Ex-DET Schools		Total	
	n	%	n	%	n	%
Yes	172	61.6	54	41.2	226	55.1
No	107	38.4	77	58.8	184	44.9
Total	279	100	131	100	410	100

In summary, it is clear that the adolescents surveyed in this study are fairly actively involved in using and enjoying the traditional media types investigated in the study. Notable is the wide range and choice of material they are exposed to.

In the sections to follow, new media types and how they have diffused among adolescents in the City of Tshwane are explored in more detail. Use of the new media is also compared to use of the traditional media explored in this section. To ensure a logical structure of presenting the survey findings, the same chronological sequence used to describe the new media types in chapter 1 is followed.

3.3 THE INTERNET

In the light of the relatively low access to the Internet in South African society (10.3 %) amongst adults 16 years and older (SAARF 2007), it is important to gain an idea of the nature and extent of Internet usage amongst adolescents. In this section, access to and usage of the Internet among the sample population are discussed.

3.3.1 Access to the Internet

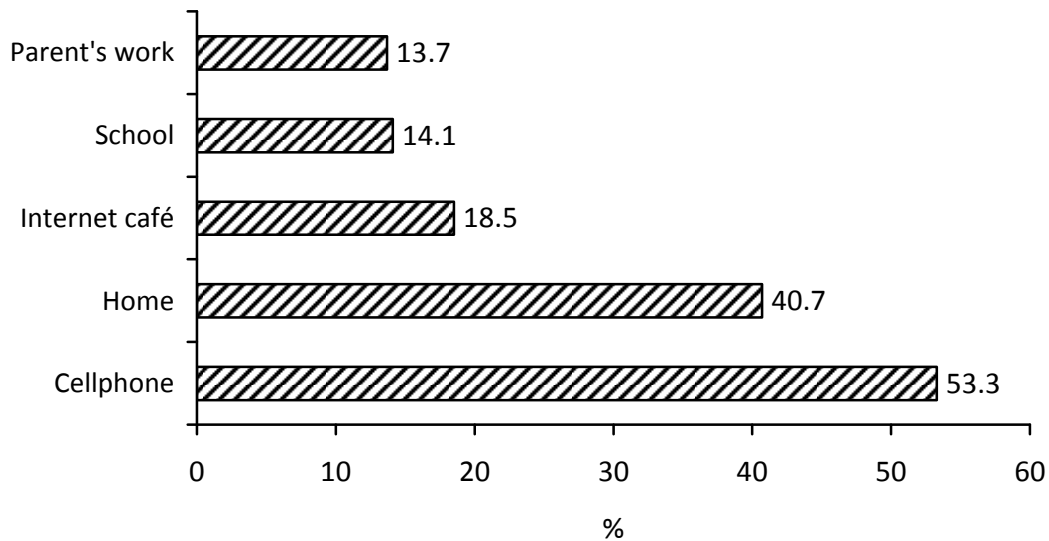
In contrast to the reported Internet access of adults, more than 85 % of the participants of the survey reported that they had had access to the Internet during the past month. This high access level is largely due to participating learners residing mainly in upper socioeconomic areas. Whereas nine in 10 ex-model C school learners claimed to have

had access to the Internet during the past month (90.5 %), only seven in ten (72.6 %) ex-DET school learners claimed to have had access to the Internet during the past month.

In figure 3.1, learners' response to the question: *How do you mostly access the Internet?* is reflected.

FIGURE 3.1

INTERNET ACCESS MODES



It is notable from figure 3.2 that the majority of respondents reported that they access the Internet by means of their cellphones (53.3 %). Slightly more (55.6 %) ex-model C school learners indicate that they access the Internet via cellphone when compared to ex-DET school learners (39.7 %).

Figure 3.1 further reflects that approximately one in four (40.7 %) learners use a computer at home. Just more than half (56.6 %) of the ex-model C school learners access the Internet from home while a low 13.0 % of the ex-DET school learners access the Internet from home. Lower cellphone and home PC ownership is probably reason

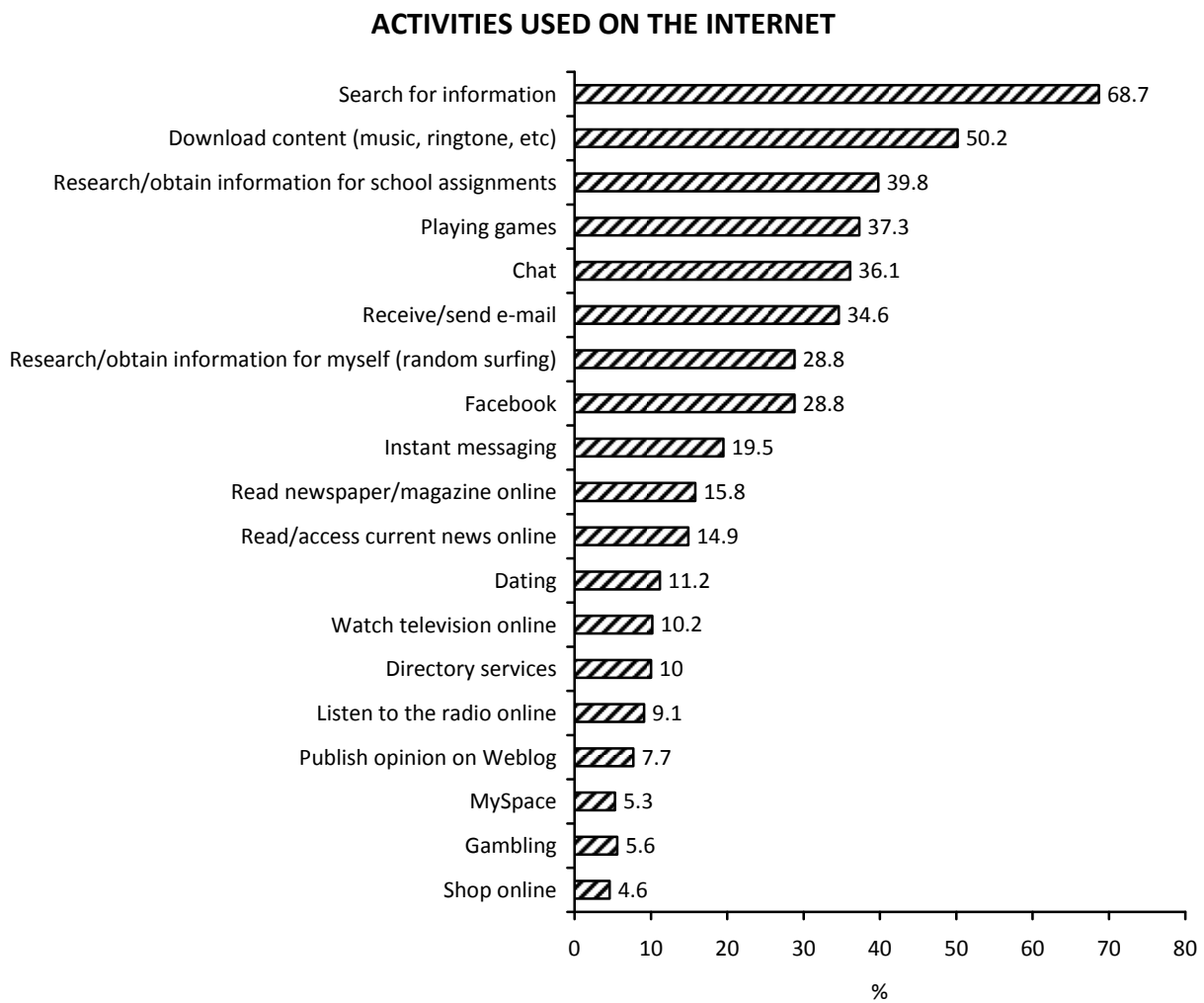
for the lower proportion of ex-DET school learners accessing the Internet via cellphone or from a home PC.

Access to the Internet via an Internet café was also mentioned by approximately one in every five participating learners (see figure 3.1).

3.3.2 Internet usage

Learners were presented with a list of activities on the Internet to indicate the extent to which they participate in these activities. These results are reflected in figure 3.2.

FIGURE 3.2



It is clear from figure 3.2 that the Internet is generally used as a tool to access information (68.7 %). The Internet is also used as a source of information for school assignments (39.8 %) and for accessing '*personal information for myself*' (28.8 %). In addition, the Internet is also used by approximately half the participating learners to download content (50.2 %) and for playing games (37.3 %). It is interesting to note from figure 3.2 that 5.6 % of learners indicated that they use the Internet to gamble (despite gambling being illegal for the under aged). Almost one in 10 learners indicated that they shop online (7.7 %). Besides these activities, receiving and sending e-mails (34.6 %), 'chatting' (31.1 %) and using 'Facebook' (28.8 %) were mentioned as Internet activities of adolescents.

More than a third of ex-model C school learners use the Internet for the following purposes:

- Search for information (72.4 %)
- Download content (54.1 %)
- Facebook (43.0 %)
- Receive/send e-mail (42.7 %)
- Research/obtain information for school assignments (39.8 %)
- Chatting (35.1 %)
- Playing games (34.8 %)
- Research/obtain general information/surfing (34.8 %)

In turn, more than a third of ex-DET school learners use the Internet for the following purposes:

- Search for information (53.4 %)
- Content downloads (35.9 %)
- Playing games (33.6 %)
- Chatting (31.3 %)

It is also interesting to note that a higher proportion of ex-DET school learners uses the Internet for dating and listening to online-radio when compared to ex-model C school learners.

3.3.3 Social networking sites

The research study also focused on learners' use of social networking sites such as Facebook, MySpace, and YouTube, each with a series of activities. The outcome of the survey results are presented in table 3.13.

TABLE 3.13

USE OF SOCIAL NETWORK SITES

Activities	Facebook	MySpace	YouTube	Other	Total
Upload photos	29.0	12.0	7.7	7.1	55.8
Post opinion	21.8	11.4	4.8	4.6	42.5
Obtain latest social news (fashion, current, etc)	22.2	9.5	6.4	5.6	43.8
Post videos	16.0	10.0	13.5	5.8	45.2
Join groups & chat with group friends	34.0	8.3	2.5	6.6	51.5
Download (ringtones, wallpaper, software, etc)	10.8	11.6	12.2	12.0	46.7
Learn more about people met	30.7	9.1	2.7	4.6	47.1
Exchange general messages	30.1	8.7	2.9	5.2	46.9
Exchange private messages	28.4	9.1	1.9	6.0	45.4
Store photos	27.4	14.5	4.4	6.8	53.1

It is clear from table 3.13 that the most preferred social network site for all activities measured was Facebook. On average, approximately 25 % of the participating learners used Facebook for the activities reflected in table 3.13. Facebook is mostly used to chat with friends, learn more about people and to exchange general messages.

MySpace was the second most preferred site for all activities except 'downloads' and 'posting videos'. For these activities, YouTube emerged as second most preferred after Facebook. YouTube is mostly used for posting videos (13.5 %) and downloads (12.2 %).

Overall, uploading (55.8 %) and storing (53.1 %) photos are more regular activities in which adolescents engage through social networks such as Facebook, MySpace and YouTube.

More than four in 10 ex-model C school learners use Facebook to upload photos, chat with group friends, learn about other people, exchange general and private messages and store photos.

A further interesting analysis observed from the data is that ex-DET school learners tend to show greater preference for MySpace than Facebook. A higher proportion of ex-DET school learners use MySpace more than Facebook for all activities listed in table 3.13 except for obtaining the latest social news, chatting with group friends and learning about other people. The top three activities for which ex-DET school learners use MySpace are:

- Store photos (19.1 %)
- Photo uploads (16.0 %)
- Downloads (15.3 %)

3.3.4 Interpersonal communication on Internet

On the issue of interpersonal communication, three questions were asked in the research study. These included:

- *Have you ever made a 'cyber friend' with whom you communicate regularly?*
- *Have you ever been approached by anyone for anything that upset you?*
- *Have you ever exchanged any personal information, such as your address with somebody that you do not know, whom you met on the Internet?*

A third (36.3 %) of the respondents who responded to the first question affirmed that the role of the Internet to make new friends is fairly popular. Nearly half (42.4 %) the learners who responded to the second question answered in the affirmative. This reflects substantial exposure of adolescents to dangers via the Internet. A relatively small percentage of learners (15.4 %) indicated that they share personal information on the Internet.

3.3.5 **Weblogs**

The research on Internet usage was also broadened to investigate the following question on Weblogs: *Do you have your own Weblog - a site where you provide commentary or news on a particular subject?*

Almost one in five learners (17.1 %) showed a positive response to this question. Taking into account that the respondents are high school children, the results seem to be overstated for both ex-model C school learners (18.3 %) and ex-DET school learners (15.6 %). Of those who do not own their personal Weblog, most indicated that they are not familiar with setting-up a Weblog or simply do not have the time to provide commentary or share news on a Weblog.

3.3.6 **Websites**

To determine the usage of Websites by learners, respondents were asked to mention those visited most often. Out of the 83 different Websites mentioned, Google was the most popular site with a total of 181 first, second and third mentions. A third (35.6 %) of learners listed Google as the most frequently visited Website. This was followed by Facebook (134 mentions or 27.8 % of all participating learners), Waptrick (56 mentions or 11.6 % of all participating learners) and MXit (37 mentions or 7.7 % of all participating learners).

The most popular Websites among ex-model C and ex-DET school learners are reflected in table 3.14.

TABLE 3.14

TOP FIVE POPULAR WEBSITES BY SCHOOL TYPE

Ex-model C schools		Ex-DET schools	
Website	%	Website	%
Facebook	21.9	Google	13.0
Google	18.3	Waptrick	6.9
Photoerotica	5.0	Mxit	4.6
mytubs.com	2.2	Nabster	2.3
Supersport	2.2	Webking	2.3

Respondents were also requested to rate the Website's features in the choice of communication/Website in order of importance. The feature statements listed in order of popularity are shown in table 3.15.

TABLE 3.15

WEBSITE FEATURE RATINGS

Features	Weighted index
Ability to contact all friends	100.0
Safety of site to use	93.7
Restriction of access to members only	78.6
Provision on the site to remain anonymous	78.2
Ability to contact new overseas friends	67.8

It is notable that participating learners rated ability to contact friends and safety as the most important.

In summary, the information with regard to the Internet in the five-school survey, points to a much greater access to and usage of this communication medium when compared to adults. However, the higher usage levels among adolescents should be

contextualised against the background of a large portion of the target population falling within the medium to high socioeconomic class category. It is also clear that these adolescents are familiar with the Internet as communication medium, and have clear ideas as to how and when to use it, specifically as a medium used to communicate with their friends.

3.4 **CELLPHONES**

Exploration of the next 'new' media type focuses on cellphone exposure, usage and financing. This section reveals the findings on these aspects as perceived by the participating learners in the City of Tshwane pilot study.

3.4.1 **Exposure and usage**

Access to and usage of cellphones were measured in the research instrument by the following two questions, namely:

- *Do you personally own a cellphone?*
- *Do you have the use of a cellphone?*

The outcomes of the research findings related to these questions are reflected in tables 3.16 and 3.17.

TABLE 3.16

CELLPHONE OWNERSHIP BY SCHOOL TYPE

	Ex-model C schools	Ex-DET schools	Total
	%	%	%
Yes	98.2	89.1	95.3
No	1.8	10.9	4.7
Total	100.0	100.0	100.0

It is clear from table 3.16 that the majority (95.3 %) of the adolescents in the five-school survey own a private cellphone. A higher proportion of ex-model C school learners (98.2 %) own a cellphone when compared to ex-DET school learners (89.1 %).

Approximately 40 % of learners also indicated that they have another SIM card in addition to the one currently in their cellphone. More ex-model C school learners (43.2 %) than ex-DET school learners (37.1 %) have more than one SIM card. Of all survey participants, 18.0 % indicated that their 'other' SIM card is linked to Vodacom. Corresponding figures for Cell C, MTN and Virgin Mobile are 13.9 %, 12.9 % and 3.5 %. On investigating the cellphone networks in more detail, it appeared that most of the SIM cards are used on a prepaid basis. The most prominent reasons cited by learners for having more than one SIM card is for backup-purposes, free talk-time as well as to make calls and send SMSs.

Table 3.17 reflects the access levels of learners to cellphones.

TABLE 3.17

CELLPHONE ACCESS BY SCHOOL TYPE

	Ex-model C schools	Ex-DET schools	Total
	%	%	%
Yes	98.6	93.0	96.8
No	1.4	7.0	3.2
Total	100.0	100.0	100.0

Compared to the proportion of cellphone owners (table 3.16) a slightly higher percentage (96.8 %) of learners indicated that they have access to a cellphone (table 3.17). This is particularly evident among ex-DET school learners of which 89.1 % own a cellphone and 93.0 % have access to a cellphone.

In analysing the cellphone ownership and access levels of adolescents, it seems fairly obvious that the cellphone as new media type has diffused well among and has been adopted by most adolescents.

Part of the research focus on cellphone usage included the cellular network used, as well as the phone brand and model ownership. The preferred cellular network operators are reflected in table 3.18.

TABLE 3.18

PREFERRED CELLPHONE NETWORK OPERATORS

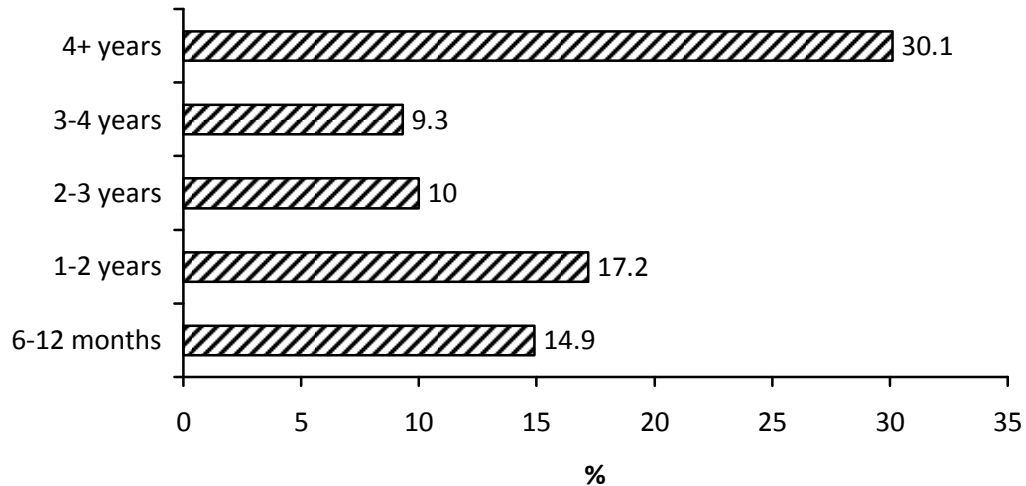
Network	Ex-model C schools	Ex-DET schools	Total
	%	%	%
Vodacom	63.0	51.3	59.5
MTN	21.9	40.9	27.6
Cell C	14.0	7.0	11.8
Virgin Mobile	1.1	0.0	0.8
Other	0.0	0.9	0.3
Total	100.0	100.0	100.0

The results in table 3.18 indicate that Vodacom is the best supported network. This is evident among both ex-model C (63.0 %) and ex-DET schools (51.3 %). Vodacom is followed by MTN (27.6 %) and Cell C (11.8 %). It is interesting to note that MTN is more popular among ex-DET school learners (40.9 %) than ex-model C school learners (21.9 %). Twice as many ex-model C school learners (14.0 %) are with Cell C when compared to ex-DET school learners (7.0 %).

The length of cellphone ownership by learners is captured in figure 3.3.

FIGURE 3.3

LENGTH OF CELLPHONE OWNERSHIP

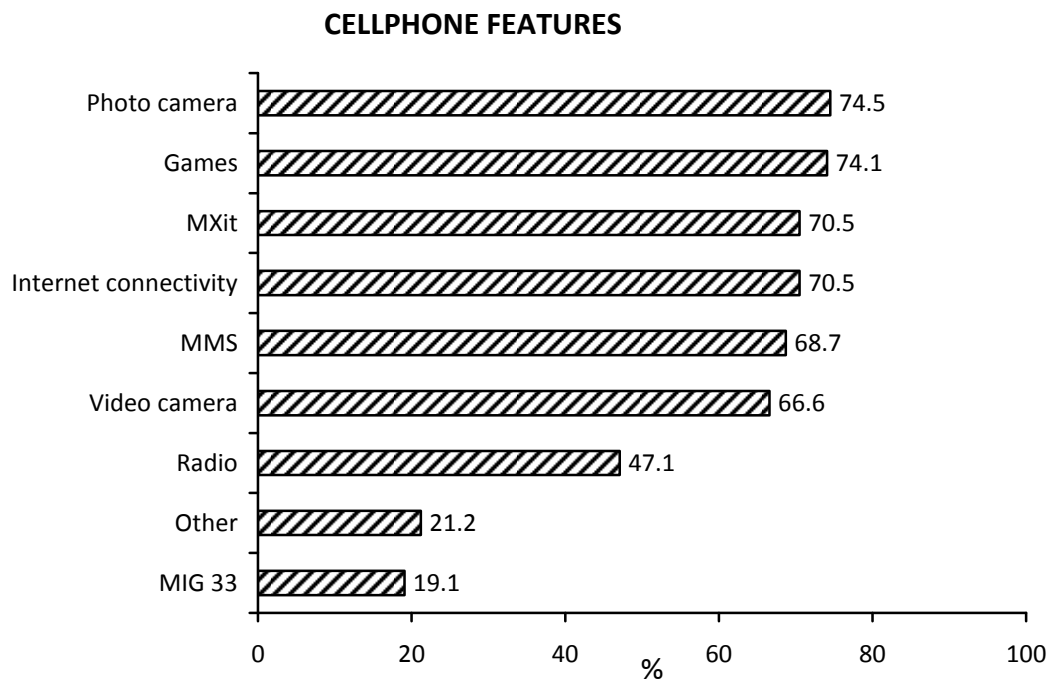


It is clear from figure 3.3 that approximately a third of the learners (30 %) have had their cellphones for more than four years. In general, ex-model C school learners have had a cellphone for longer than ex-DET schools learners.

Almost one in five learners (17.2 %) indicated that they had had their cellphones for longer than one year but less than two years. The fact that approximately 15 % of the respondents had had their cellphones for 12 months or less, probably indicates that these adolescents are typical '*innovators*' who replace their cellphones as soon as newly branded cellphones are introduced to the market. This argument is further substantiated by the fact that one in five (21.3 %) learners indicated that they change/upgrade their cellphone at least once in a year (almost 10 % change/update their cellphones once in six months). Almost all (90.4 %) the ex-model C learners change/upgrade their cellphones every 24 months. This figure is somewhat lower for ex-DET school learners of who only four in 10 change/upgrade their cellphones once in two years.

The study results also revealed that cellphones are not only used to engage with someone else telephonically. This suggests that other cellphone features also contribute to the success of diffusion and adoption of this communication medium. In this regard the research outcome for the response to the question: *'Besides offering outgoing and incoming calls, what other features does your current phone offer?'* is illustrated in figure 3.4.

FIGURE 3.4



It is clear from figure 3.4 that approximately seven out of every 10 respondents mentioned that their cellphones have a camera, games facility, MXit and Internet connectivity. Three quarters of the respondents had an MMS feature or video camera. In addition, just less than half the learners indicated that they use their cellphone radio.

More than 80 % of ex-model C school learners use MXit through their cellphones as well as the phone camera and Internet connectivity. Among ex-DET school learners cellphone games are the most popular cellphone feature used by 71.0 % of ex-DET school learners.

Expanding on the actual usage of the cellphone, three additional questions were investigated in the study. These include:

- *Where (the actual location) is the cellphone used?*
- *What activities do learners engage in with their cellphones?*
- *What content is usually downloaded onto cellphones?*

The outcome of the responses to the questions highlighted above is reflected in tables 3.19 – 3.20. It should be noted that five locations were pre-identified where cellphones are used, namely in a car, at home, at school, while walking and other. These results are shown in table 3.19.

TABLE 3.19

REGULARITY OF CELLPHONE USAGE IN SELECTED LOCATIONS

Location	Always	Often	Sometimes	Rarely	Never
	%	%	%	%	%
In the car	12.1	22.6	41.5	15.3	8.5
At home	64.5	25.6	8.4	0.9	0.7
At school	7.5	12.1	27.4	29.4	23.5
While walking	12.3	18.3	30.8	23.9	14.7
Other	21.7	21.2	25.9	6.6	24.5

As can be deduced from table 3.19, cellphones are mostly being used (always, often) at home. Although cellphone usage is controlled by most schools, it is interesting that more than half the adolescents reported that they do 'sometimes' or 'rarely' use their cellphones at school. The expected reluctance of using their cellphones in the company of parents or adults is illustrated by the responses of using the cellphone in the car. One in four learners (41.5 %) 'sometimes' use their phones in the car, while only 22.6 % of learners do this 'often'. Instead, learners could probably be using the MXit feature

(which parents or adults could not hear or see). More extensive discussion on MXit is presented in section 3.4.7.

3.4.2 Cellphone activities

A second measure of use of cellphones included the measurement of cellphone activities. Seventeen pre-defined activities were listed in the questionnaire and respondents were requested to estimate their use of each of these activities on a scale of daily use, weekly use, monthly use, annual use, or never used. The results are reflected in table 3.20.

TABLE 3.20

ENGAGEMENT IN CELLPHONE ACTIVITIES

Activities	Daily (%)	Weekly (%)	Monthly (%)	Yearly (%)	Never (%)
Send SMS	57.7	31.1	6.7	1.4	2.4
MXit	57.5	15.8	4.3	2.1	20.3
Send a please call me	53.8	21.2	10.3	3.2	11.6
Play games on the cellphone	30.5	25.7	15.9	8.2	19.6
Send and receive MMS	12.1	25.8	33.5	8.8	19.8
Send or receive e-mail from cellphone	4.5	5.7	9.2	7.1	73.5
Use Vodaphone live	7.3	4.9	9.2	6.8	71.8
Browse and or surf the Internet on the cellphone	15.0	24.8	23.7	7.3	29.3
Download a ringtone or logo to your cellphone	4.0	14.5	26.6	11	43.9
Download/listen to music excluding radio on the cellphone	33.7	22.8	13.3	5.8	24.4
Make calls	58.0	31.9	6.2	3.0	0.9
Receive calls	76.3	16.8	2.3	4.4	0.2
Watch TV on the cellphone	2.8	1.4	6.4	1.9	87.4
Listen to the radio via cellphone	17.2	18.4	12.5	5.2	46.8
Use cellphones to take pictures	32.6	34.2	16.2	4.4	12.7
Use cellphone to buy things over the Internet	32.6	34.2	16.2	4.4	12.7
Download and watch video clips on the cellphone	11.7	16.1	22.4	8.9	40.9

It is noteworthy that receiving calls on a daily basis is the most frequent cellphone activity (76.3 %) that learners engage in. In turn, making calls on a daily basis (58.0 %) is second highest activity. However, the electronic messaging systems are not far behind,

with sending SMSs and MXit both achieving around 57 % participation rates as a daily activity. Three other activities are also noteworthy. These include the use of the cellphone to take pictures (used by 66.8 % on either a daily or weekly basis); downloading and listening to music excluding radio (56.5 % on either a daily or weekly basis) and browsing or surfing the Internet on the cellphone (39.8 % on either a daily or weekly basis).

It is also clear from table 3.20 that watching television via a cellphone, using Vodaphone live and sending/receiving e-mails are features never used by more than 70 % of the participating learners.

The survey results also revealed that the following cellphone activities are used by more than half the ex-model C school learners on a daily basis:

- Receive calls (77.8 %)
- Send SMS (69.4 %)
- MXit (67.2 %)
- Make calls (59.3 %)
- Send a 'please call me'

Least popular activities participated in by less than 10 % of the ex-model C school learners on a daily basis are:

- Downloading ringtones/logos (1.9 %)
- View television (2.3 %)
- Send/receive e-mail (2.3 %)
- Online shopping (2.3 %)
- Send/receive MMS (8.7 %)
- Use Vodaphone live portal (8.9 %)

In turn, more than half the ex-DET school learners participate in the following activities on a daily basis:

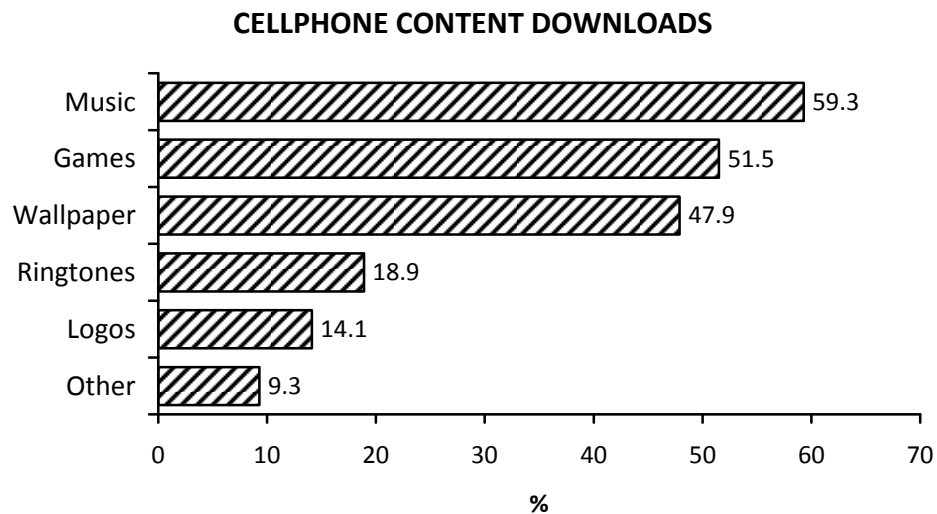
- Receive calls (72.0 %)
- Send 'please call me' (68.6 %)

The lowest daily participation rates among ex-DET school learners were recorded for:

- Watching television (1.1 %)
- Use Vodaphone live portal (5.7 %)
- Downloading ringtones/logos (7.4 %)
- Send/receive e-mail (8.6 %)

The type of content that the respondents usually download on their cellphones is reflected in figure 3.5.

FIGURE 3.5



As can be deduced from figure 3.5, downloading music (59.3 %) is the most popular activity while games and wallpaper were mentioned as second and third most popular download activities (51.5 % and 47.9 % respectively).

Music is the most popular download among both ex-model C (62.4 %) and ex-DET school learners (47.3 %). It is interesting to note that a higher proportion of ex-DET school learners download ring tones (47.3 %) and logos (13.7 %) when compared to ex-model C school learners (44.4 % and 12.9 % respectively).

3.4.3 Personal feelings about and attitudes to cellphones

Two questions on a personal level were asked about sharing cellphone content and being disturbed by information received. These include:

- *Do you share content (ie ring tones, wall papers, music etc) with your friends?*
The response gained from this question clearly illustrated adolescents' need for social interaction. This is affirmed by the fact that a full 79.2 % of the learners affirmed that they share cellphone content with friends. A higher proportion of ex-model C learners (87.5 %) indicated that they share cellphone content with friends as opposed to 59.6 % of ex-DET school learners.
- *Have you ever received any information on your cellphone that made you feel upset/uncomfortable?* Nearly half (46.3 %) the learners answered in the affirmative to this question. Slightly more ex-DET school learners (48.2 %) claimed to receive upsetting/uncomfortable information when compared to ex-model C school learners (45.6 %).

To determine the attitudes of the respondents towards their cellphones, four additional questions were asked.

- *What is 'cool' about your cellphone?*
- *What is 'cool' about services you use on the cellphone?*
- *What do you dislike the most about your cellphone?*
- *What do you dislike the most about the services you use on the cellphone?*

A wide range of responses (43 different responses) were received for the first question: *What is 'cool' about your cellphone?* Music players, MP3s and cellphone camera features topped the list in this regard. Just about every feature of cellphones was mentioned as being cool among the top five features listed.

The second question, *What is 'cool' about services you use on the cellphone* also elicited a wide range of responses (38 different responses). Topping the list in this regard include cheap Internet and MXit. Free and fast downloads and the particular cellphone network used also featured among the top 'cool' cellphone services.

A total of 45 different responses were recorded to the question: *What do you dislike the most about your cellphone?* Three main dislikes were identified, namely:

- small memory
- short battery life
- apparatus too big and/or too old fashioned

Other technical problems identified were:

- cellphone graphics are inadequate
- cellphones keep switching off
- slow performance
- cellphones 'freeze'

Negative responses received by learners regarding the services offered on cellphones were mostly that there is sometimes no reception. To a lesser extent, learners also indicated that phones are slow. In contrast, however, the largest single response (66 respondents) was that 'nothing' is disliked about services.

Finally, 17 predetermined statements were included in the questionnaire to establish which personal benefits cellphone ownership/access holds. The outcome of these findings is highlighted in table 3.21. It should be noted that the agreement scale used to capture the perceived benefits from cellphone ownership/access ideally lent itself to the computation of indices. The index method is ideal to compare the relative importance of each statement and supports a more detail comparative analysis. Against this background table 3.21 also presents the rankings for all 17 statements based on their weighted index scores.

TABLE 3.21

PERSONAL BENEFITS GAINED BY CELLPHONE OWNERSHIP

Statements	Ex-model C Schools		Ex-DET Schools		Total	
	Index	Rank	Index	Rank	Index	Rank
A cellphone makes it easier to make plans with my friends	100.0	1.0	100.0	1.0	100.0	1.0
Its practical to have a cellphone	89.7	2.0	83.3	4.0	87.8	2.0
I'm very interested in cellphones	71.0	4.0	86.9	3.0	77.2	3.0
Its cool to have a cellphone	61.9	6.0	93.2	2.0	73.0	4.0
I feel safe when I have a cellphone	71.3	3.0	72.9	7.0	72.4	5.0
Its important that a cellphone has the latest features	66.2	5.0	74.4	6.0	69.5	6.0
A cellphone can give me new friends	49.6	8.0	82.7	5.0	60.1	7.0
You are popular when you have the latest cellphone	53.3	7.0	71.7	8.0	59.5	8.0
You are popular when you have a cellphone	48.0	9.0	63.0	10.0	52.8	9.0
You have more friends when you have a cellphone	41.4	13.0	65.3	9.0	50.2	10.0
I get a bit jealous if one of my classmates has got the coolest cellphone	44.4	11.0	52.9	11.0	49.4	11.0
I would rather have a cellphone that my friends think is cool	46.4	10.0	51.0	12.0	47.9	12.0
You are more in if you have a cellphone	43.0	12.0	50.7	14.0	45.8	13.0
There is no reason for children at my age to have a cellphone	36.5	15.0	51.0	13.0	42.1	14.0
I have a cellphone because everybody else has one	40.3	14.0	42.7	17.0	40.9	15.0
A good cellphone is always expensive	33.5	16.0	48.2	15.0	39.2	16.0
I know someone who was bullied because he/she doesn't have a cellphone	33.5	17.0	48.2	16.0	39.2	17.0

In general, cellphones are perceived as attractive devices that support adolescents in their planning, cellphones have practical utility value, they elicit general interest as technological devices and evoke a 'feel good' (cool) and 'safe' feelings.

In summary, the results of the section on personal feelings about cellphones show that this new medium is not merely a new communication medium used by adolescents. Nowadays cellphones also form an important part of adolescents' lives, as noted from the responses received from the participating high school pupils surveyed at the five schools in the City of Tshwane. Learners are clearly emotionally involved with this medium, and have strong feelings about the merits and demerits of cellphones and the uses thereof.

3.4.4 Cellphone branding and financing

Based on the number of mentions, the following brands were listed by learners:

- Nokia (112 mentions)
- Samsung (99 mentions)
- Motorola (65 mentions)
- Sony Ericsson (38 mentions)

The two single cellphone brand models used most by adolescents included the Motorola V360 and the Samsung E250 (35 respondents and 36 respondents mentioned these cellphone brands respectively). Other brand models listed among the top five include Nokia 6500 and 5200 and the Motorola V3. The top listed cellphone brands by school type are reflected in table 3.22.

TABLE 3.22

TOP FIVE LISTED CELLPHONE BRANDS BY SCHOOL TYPE

Ex-model C schools		Ex-DET schools	
Brand	%	Brand	%
Samsung E250	7.9	Motorolla V360	12.2
Motorolla V360	4.7	Nokia 6500	4.6
Samsung U700	2.9	Samsung E250	4.6
Samsung D900i	2.5	HTC Tytn II	3.1
Sony Ericsson W880i	2.5	Motorolla V3	3.1

When considering most preferred cellphone brands, learners' preferences deviated slightly from their generally used brand. This finding is clear from a comparison of table 3.22 and figure 3.6.

FIGURE 3.6

PREFERRED CELLPHONE BRAND

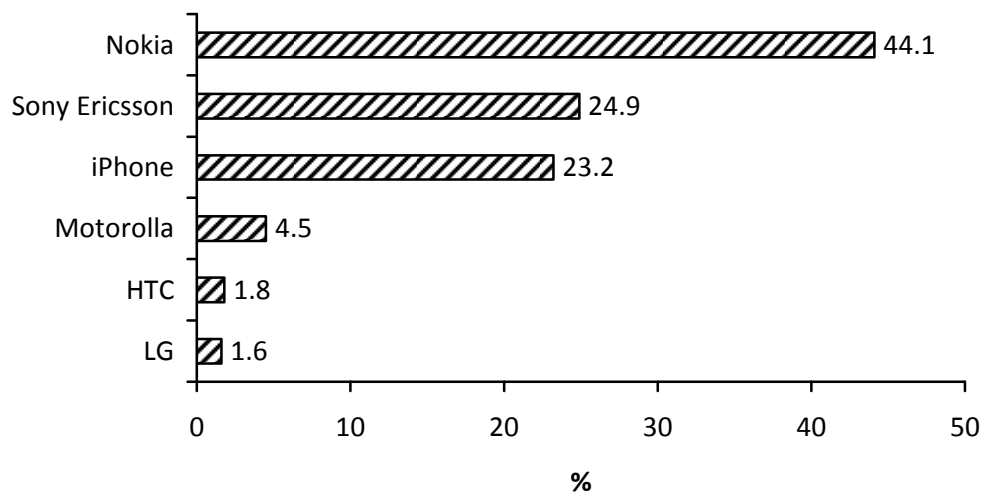


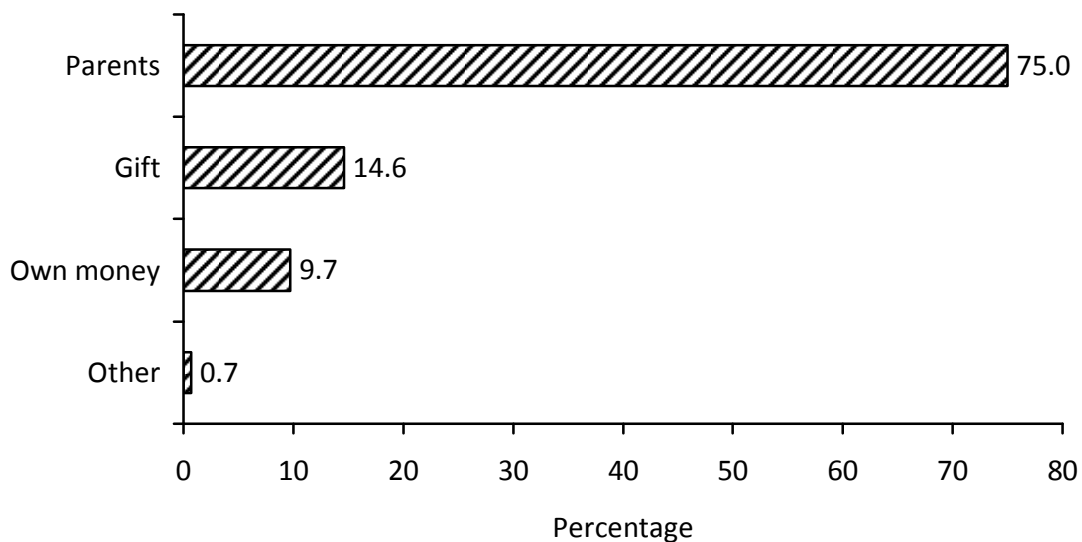
Figure 3.6 shows that Nokia was mentioned as most preferred brand by one in four learners. This finding is discernible among both ex-model C (42.7 %) and ex-DET school learners (35.1 %). It is interesting to note that more ex-DET school learners (26.7 %) prefer Sony Ericsson when compared to ex-model C school learners (21.9 %).

Furthermore, more ex-model C school learners prefer the new iPhone (29.7 %) than the Sony Ericsson.

3.4.5 Cellphone acquisition

It is evident from figure 3.7 that most of the respondents (75.0 %) acquired a cellphone from their parents. A small percentage (14.6 %) of learners indicated that they received a cellphone as a gift while a low 9.7 % used their own money to purchase a cellphone.

FIGURE 3.7
CELLPHONE ACQUISITION



3.4.6 Cellphone expenditure

The means of financing cellphone costs was a further important aspect measured by the research. By either having a contract with a monthly payment, a prepaid or top-up subscription, the cost of using a cellphone is largely manageable. According to the respondents of the five schools involved in the pilot survey, almost half (49.6 %) indicated that they have a prepaid subscription. Table 3.23 reflects cellphone contract options by school type.

TABLE 3.23**CONTRACT OPTIONS BY SCHOOL TYPE**

Contract options	Ex-model C schools	Ex-DET schools	Total
	%	%	%
Contract	36.2	8.4	26.3
Prepaid	38.7	68.7	49.6
Top-up	24.0	9.2	18.5

It is clear from table 3.23 that prepaid contracts are used most prominently by ex-DET school learners.

Nearly 30 % of learners indicated that they have contracts (26.3 %) while just less than 20 % (18.5 %) indicated that they have a top-up subscription with their cellphones.

It is also evident from the survey data that, in most cases, parents pay for all three methods of financing cellphone costs. There are, however, interesting differences in this regard. For example, of those learners who responded to the question, 89.9 % of cellphone contracts are paid for by parents, while 61.4 % of the learners indicated that parents finance top-up airtime purchases. However, prepaid airtime is only paid for by 36.4 % of parents. Approximately four in 10 learners pay for their own airtime (42.2 %).

The estimated average monthly cost of using a cellphone is summarised in table 3.24.

TABLE 3.24**AVERAGE MONTHLY EXPENDITURE ON CELLPHONE BY COST ITEM AND SCHOOL TYPE**

Expenditure item	Ex-model C schools	Ex-DET schools	Total
	Average (Rand)	Average (Rand)	Average (Rand)
Calls	68.63	46.22	62.14
Downloads	18.21	21.05	20.10
MXit	12.98	12.27	12.42
SMS	41.52	13.47	33.20
Contract/top-up	113.16	41.88	109.10
Other (eg Internet)	14.64	12.57	14.67
Total	178.93	76.99	147.34

As can be seen, the average subscription cost (R109.10 per month) and the average cost of cellphone calls (R62.14 per month) were estimated by learner participants to be the major cost items of cellphone usage/ownership. The relatively low cost estimates for MXit usage emphasises how inexpensive this mode of text communication is, especially when taking into account the substantial time spent on MXit (see section 3.4.7).

Overall, learners spend an average of almost R150.00 per month on cellphones. Ex-model C school learners spend 2.3 times more on cellphones when compared to ex-DET school learners. Based on the average monthly pocket money/allowance received by adolescents (R410.00 – ranging from R180.00 for ex-DET school learners to approximately R435.00 for ex-model C school learners), approximately 40 % of monthly pocket money/allowances is spent on cellphones by both ex-model C and ex-DET school learners.

In summary, two major facts emerged from the pilot study on branding and the costs involved in cellphone ownership. These included:

- cellphone brands are extremely important to adolescents
- parents still play the most important role in the financing of cellphones and related cost

3.4.7 MXit

An alternative 'new' media type explored by the City of Tshwane five-school pilot study is MXit. As mentioned in chapter 1, MXit is a low-cost facility used to send and receive written text via a cellphone. As mentioned in chapter 1, this medium is perceived as very popular in South Africa. However, limited data about the usage and time spent on MXit is available. Consequently, the study was designed to fill part of this information gap. The results of the study regarding the usage levels of MXit among learners are discussed in more detail below.

3.4.7.1 Incidence

To establish the incidence of MXit usage as cellphone communication medium, two questions were asked in the research study. These included:

- *Are you aware of MXit?*
- *Have you ever used MXit?*

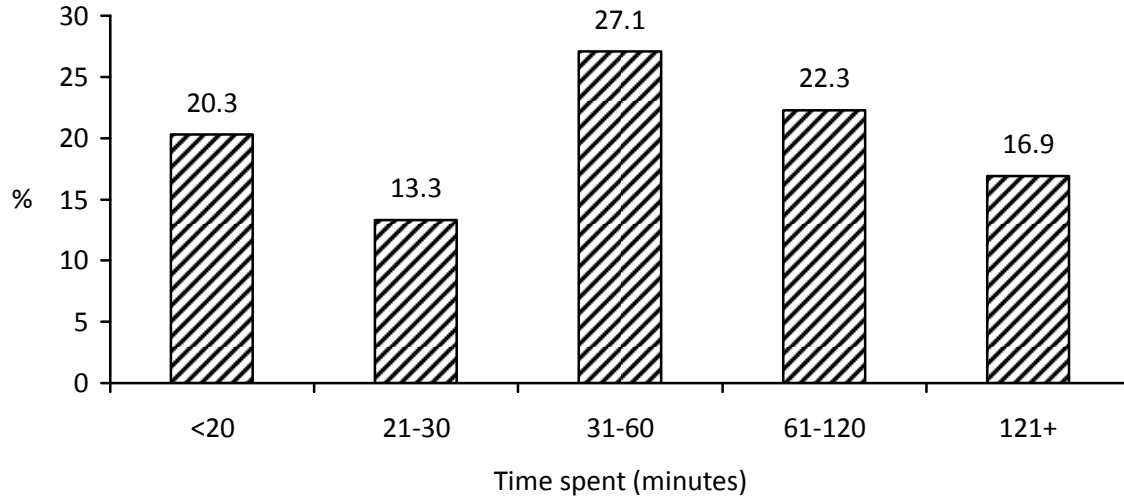
Responses received from learners to both these questions were extremely positive, with 90.2 % affirming awareness and 81.4 % affirming usage of MXit. It is also interesting to note that a high 98.5 % and 92.3 % of ex-model C learners claim to be aware of and to have used MXit. Corresponding and slightly lower figures for ex-DET school learners are 70.7 % and 55.7 % respectively.

3.4.7.2 Time spent on MXit

The average time (minutes) spent on MXit per day is reported in figure 3.8.

FIGURE 3.8

AVERAGE DAILY TIME SPENT ON MXit BY TIME CATEGORY



It is clear from figure 3.8 that the majority of learners (27.1 %) spend, on average, between 30 minutes to an hour on MXit per day. However, it is interesting to note that 22.3 % of the respondents indicated that they spend between one and two hours per day on MXit. An additional 16.9 % of learners indicated that they spend more than 121 minutes per day on this new communication medium.

The fairly high utilisation rate of MXit (especially among ex-model C school learners) reflected in figure 3.8 probably justifies the following question:

With whom do learners spend this communication time?

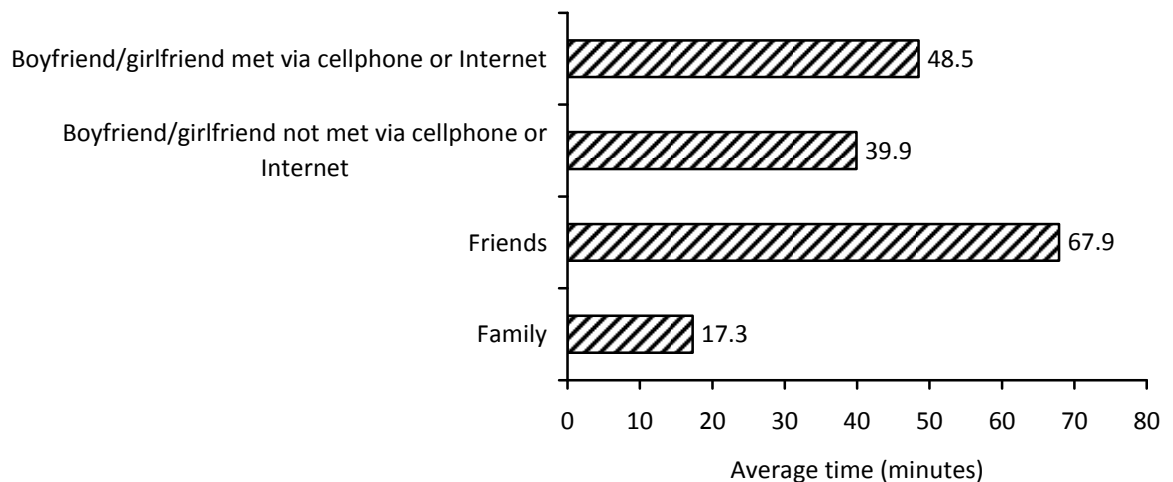
For the study four pre-determined categories of people were identified. These included family, friends, boyfriend/girlfriend not met through cellphone and Internet and boyfriend/girlfriend met through cellphone and Internet. Learners were able to mention an average of almost 50 friends and five family members as MXit contacts. On average, just under 10 contacts were listed for both boyfriend/girlfriend not met or met

through cellphone contact and the Internet. On average, ex-DET school learners identified more boyfriends/girlfriends met through cellphone contact and the Internet (approximately 15 on average) when compared to ex-model C schools (fewer than 10 contacts in this regard). On average, ex-model C school learners could identify fewer friends and family members as MXit contacts (eg approximately 20 as opposed to 50 friends).

Furthermore, respondents were asked to estimate the average time (minutes) they spend per day on MXiting their family (mom, dad, siblings); friends; boyfriend/girlfriend met or not met via cellphone contact and the Internet. Figure 3.9 highlights the outcome of these research findings.

FIGURE 3.9

AVERAGE TIME (IN MINUTES) SPENT WITH DIFFERENT INDIVIDUALS



It is clear from figure 3.9 that communicating with friends takes the bulk of the time (almost an average of 68 minutes) spent on MXit per day. Compared to this, learners spend an average of 17 minutes per day communicating with family members (mom, dad and siblings) via MXit. The nearly 49 minutes per day spent on communicating with

a boyfriend/girlfriend met via the cellphone or Internet emphasises the importance of networking amongst adolescents.

A closer analysis of the data also indicated that ex-DET school learners MXit for longer time-periods than ex-model C school learners. For example, ex-DET school learners spend an average of 74 minutes on MXit with friends while ex-model C school learners spend an average of 64 minutes MXiting with friends.

3.4.7.3 Number of contacts on MXit

To ascertain how many contacts are usually contacted daily by learners, the following question was included in the survey:

With how many people did you MXit yesterday?

The outcome of the response to this question is presented in table 3.25.

TABLE 3.25

NUMBER OF DAILY MXit CONTACTS

Number of people contacted	%
<20	78.2
21-30	9.4
31-60	10.2
61-120	2.3
Total	100.0

As can be seen from table 3.25, more than 78 % of the adolescents contacted up to 20 individuals on a 'yesterday-recall' basis. The average daily contacts amounted to approximately 15 people. This indicates fairly extensive contact via the use of MXit as a communication tool.

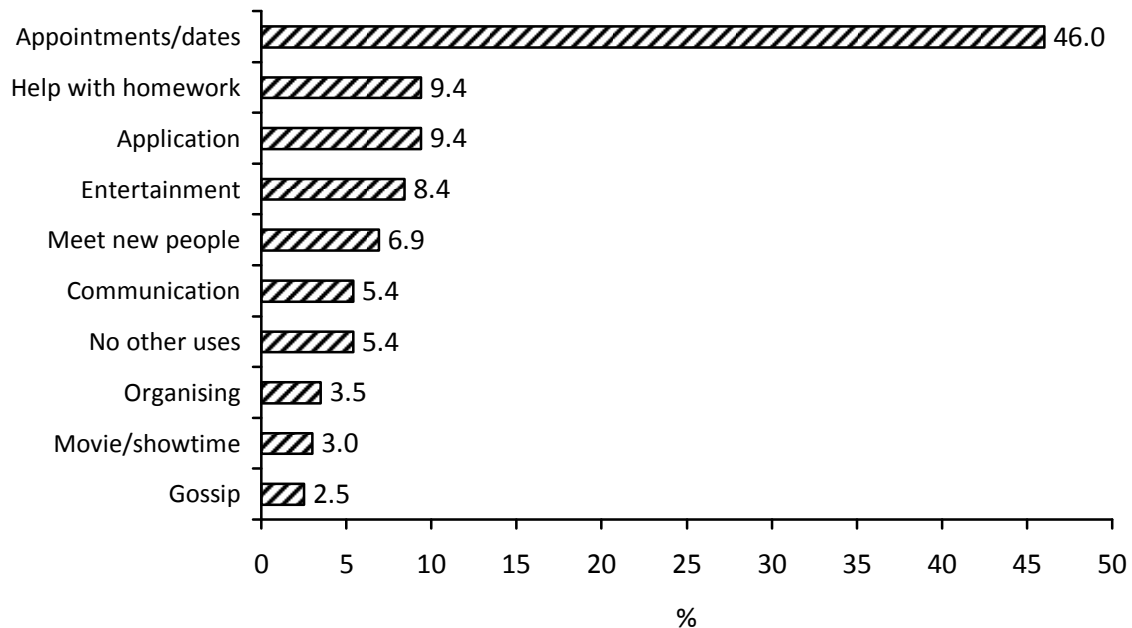
Against this background it is clear not only that high school children contact a large number of people via MXit, but also that interpersonal communication on a daily basis via this new medium has become a standard feature of their lives.

3.4.7.4 Other uses of MXit

This method of text communication is not only used for interpersonal communication, but also for entertainment, making appointments/dates and obtaining help with homework. These findings are presented in figure 3.10.

FIGURE 3.10

OTHER USES OF MXit

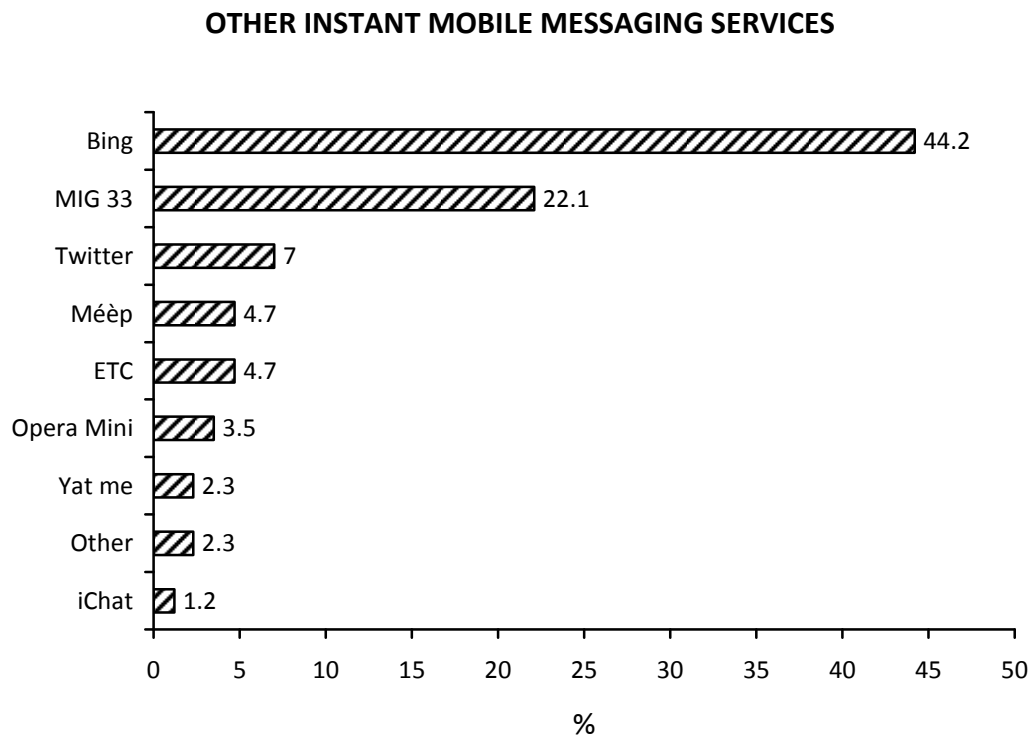


As noted from figure 3.10, using MXit to make appointments/dates is by far the most important additional use of this new medium. It is important to note that the figures reflected in figure 3.10 only relate to those learners who responded to this section of the questionnaire.

3.4.7.5 Other instant mobile messaging services

MXit is not the only instant messaging service that can be used on a cellphone. The survey results to the open-ended question: *What other instant mobile messaging services do you use to communicate on your cellphone?* are recorded in figure 3.11.

FIGURE 3.11



Of those who responded to this question (38 or 44.2 % of the 86 learners), the majority mentioned Bing (44.2 %), and MIG 33 (22.1 %) as alternative mobile messaging services. Against this background, it is evident that MXit is by far the dominant instant messaging service used by the respondents. Thus, MXit is seen as an instant messaging service used widely by learners and it is regarded as a major player in the communication bouquet of Tshwane teenagers participating in the study.

3.5 GAME CONSOLES AND MUSIC APPARATUS

Part of the new media that high school children are exposed to nowadays, is the playing of computer-derived games on various consoles. Against this background, the study also aimed to measure exposure to and usage levels of game consoles and music apparatus. Respondents were firstly asked how often they play games on the cellphone and the Internet. The scale anchors used to record learners' responses included always, often, sometimes, rarely and never. The outcome of findings related to game consoles used is presented in table 3.26.

TABLE 3.26

FREQUENCY OF PLAYING GAMES ON A CELLPHONE AND THE INTERNET

Frequency	Cellphone			Internet		
	Ex-model C schools	Ex-DET schools	Total	Ex-model C schools	Ex-DET schools	Total
Always	13.3	32.8	20.9	5.3	4.3	5.1
Often	19.3	8.8	15.8	9.9	6.4	8.8
Sometimes	20.4	46.4	28.4	17.6	27.7	20.5
Rarely	20.7	6.4	15.4	22.1	9.6	19.1
Never	26.3	5.6	19.6	45.0	52.1	46.5

It is clear from table 3.26 that games played on the cellphone (always or often) applied to approximately a third (36.7 %) of the respondents. The equivalent figure for games played on the Internet was 13.9 %. Overall, table 3.26 reflects a lower usage rate of the Internet than cellphones to play games.

An analysis of contemporary media developments shows that various types of apparatus are used for playing games. Handheld devices and consoles measured in the research study and usage levels among participating learners are reflected in table 3.27.

TABLE 3.27**HAND-HELD GAMES DEVICES/CONSOLES**

Device	Ex-model C schools	Ex-DET schools	Total
	%	%	%
Playstation 2	36.2	51.9	40.7
Playstation 3	12.5	12.2	12.2
Nintendo Wii	7.5	5.3	7.7
PC	42.3	45.8	44.6
Xbox	11.5	9.9	11.0
Gameboy	15.8	11.5	14.3
PSP	22.9	15.3	20.1
Gamecube	3.9	2.3	3.5
Other	6.8	4.6	7.1
Never Play	17.6	27.5	19.9

Table 3.27 shows that, as expected, the personal computer (PC) is the most popular (60.0 %) game console used by participating learners in especially ex-model C schools. Playstation3 is used more by ex-DET school learners.

3.6 MUSIC DEVICES

The study also revealed that the modern means of listening to music have become increasingly popular among adolescents. In this regard, access to and ownership of music devices are listed in table 3.28.

TABLE 3.28**DEVICES FOR LISTENING TO MUSIC**

Device	Ex-model C schools	Ex-DET schools	Total
	%	%	%
Own MP3	68.8	50.5	62.1
Access to MP3	80.9	75.5	77.6
Own iPod	58.0	32.1	47.9
Access to iPod	63.4	48.8	56.5

It is clear from table 3.28 that a fairly high proportion of the adolescents (62.1 %) indicated that they own an MP3 player. Almost half the participating learners (47.9 %) own an iPod. Higher ownership is also evident among ex-model C school learners.

It is also important to note that access to the musical devices listed in table 3.28 is higher than ownership levels for both ex-model C and ex-DET school learners. For example, 77.6 % of learners have access to an MP3 player and 56.5 % have access to an iPod.

As deduced from the discussion above, music forms a very important aspect of the life of adolescents at high school level. In general, the ease of adaptation to and eagerness to use new technologies is clearly illustrated by the results found in this study.

3.7 **ECONOMIC BEHAVIOUR**

Besides aiming to measure traditional and new media usage among the youth, the study was also designed to measure the economic/purchase behaviour of the youth in relation to media communication purchases. More specifically, the following four elements/dimensions of economic/purchase behaviour were investigated by the study:

- influencing factors impacting on purchase decisions
- acceptance levels of advertisements used on cellphones
- brand considerations when buying cellphones, clothes and computers
- advertising media and media content preferences

The outcome of the findings of the City of Tshwane pilot study that relates to these four economic/purchase dimensions are discussed in detail below.

3.7.1 Influences on buying decisions

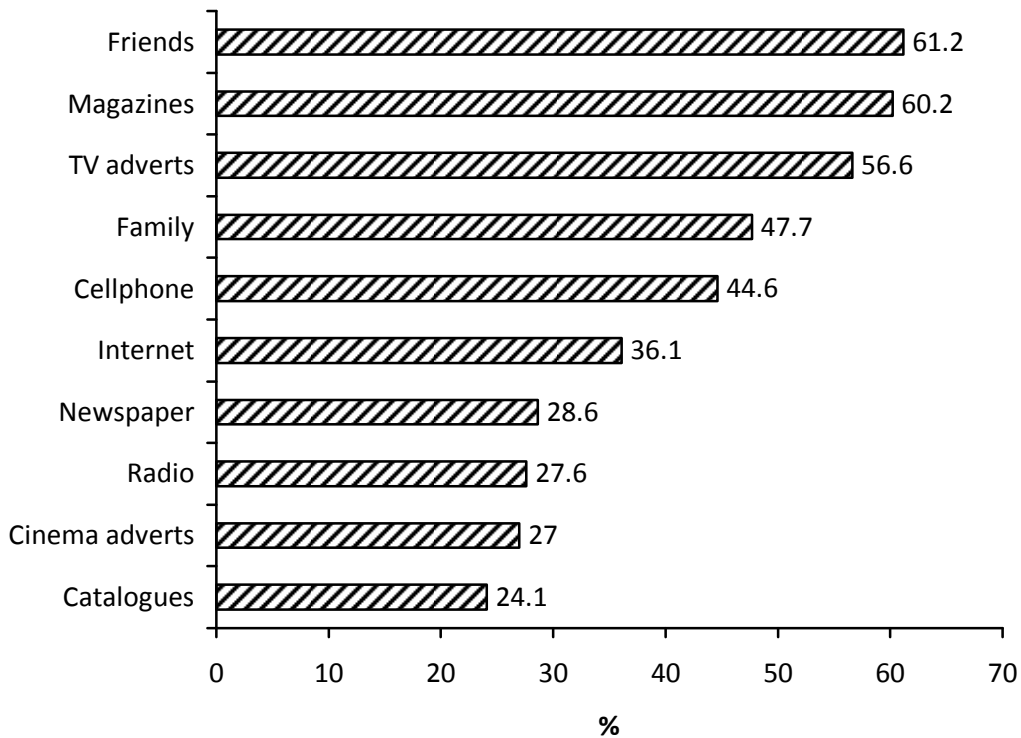
To determine factors impacting on the youth's buying decisions, high school learners were asked the following question:

What influences your buying decisions?

Ten predetermined options were presented to participants, the outcome of which is reflected in figure 3.12.

FIGURE 3.12

FACTORS IMPACTING ON THE YOUTH'S PURCHASE DECISIONS



It is apparent from figure 3.12 that friends (61.2 %), magazines (60.2 %), television advertisements (56.6 %) and family (47.7 %) are seen as the most important elements influencing the youth's purchase decisions. Although the relatively strong influence of cellphones (44.6 %) and the Internet (36.1 %) are notable, the traditional media

(specifically magazines and television) seem to be regarded as more important ‘influencers’ of adolescents than the new media.

Also important to note are the discrepancies between ex-model C and ex-DET school learners. These are highlighted in table 3.29.

TABLE 3.29

FACTORS INFLUENCING PURCHASE DECISIONS OF ADOLESCENTS BY SCHOOL TYPE

Factor	Ex-model C schools	Ex-DET schools	Total
	%	%	%
Catalogues	26.5	13.0	24.1
Cinema advertisements	31.5	13.7	27.0
Radio	21.9	35.1	27.6
Newspaper	21.1	37.4	28.6
Internet	38.0	28.2	36.1
Cellphone	45.2	40.5	44.6
Family	48.4	45.0	47.7
TV advertisements	56.3	54.2	56.6
Magazines	59.5	55.7	60.2
Friends	65.5	53.4	61.2

It is clear from table 3.29 that catalogues and cinema advertisements have more impact on ex-model C school learners than ex-DET school learners. In turn, newspapers and radio have a bigger impact on the purchase decisions of ex-DET school learners. Clearly, across school categories, traditional media such as television and magazines rather than new media such as the Internet and cellphones have a stronger influence on purchase decisions of adolescents in general.

3.7.2 Acceptance of premium advertisements on cellphones

To ascertain whether advertisements on cellphones are acceptable to the youth, the following question was included in the research study:

Would you prefer to receive advertisements on your cellphone if you were given free and discount rates for airtime, SMS and download content (music, games, etc)?

The outcome of the survey results related to the above question is reflected in table 3.30. The table reflects the proportion of learners who affirmed that they would prefer receiving advertisements on their cellphone when offered free or discount rates.

TABLE 3.30

ACCEPTANCE LEVELS OF PREMIUM ADVERTISING ON CELLPHONE

Device	Ex-model C schools	Ex-DET schools	Total
	%	%	%
Airtime	68.6	77.4	72.5
SMS	59.8	64.5	61.4
Download content (music, games, etc)	42.2	65.7	49.9

Table 3.30 reflects high positive responses for airtime discount and free SMSs. Downloading free cellphone content is especially notable among ex-DET school learners.

3.7.3 Brand considerations

The importance of brands for adolescents was tested in the research study by asking the following question:

Would you consider a brand when buying the following products: a cellphone, clothes, and a computer?

The research outcomes affirming that brands are considered for each of the purchase categories are shown below. Please note that the figures in brackets reflect the proportion of ex-model C and ex-DET school learners respectively:

- Cellphones: 89.2 % (88.9 % and 88.2 %)
- Clothes: 73.9 % (68.6 % and 84.4 %)
- Computer: 71.0 % (68.3 % and 72.2 %)

Based on the fairly high figures, brands seem to be very important to adolescents when considering purchases of especially cellphones. Ex-DET school learners seem to be more brand conscious when compared to ex-model C school learners.

3.7.4 Advertising media and media content preferences

Four broad categories of media content and seven media types were researched, as can be seen in table 3.31.

TABLE 3.31

CATEGORIES OF MEDIA CONTENT

Type	Advertisements (%)	News (%)	Gossip (%)	Promotions (%)
TV	38.1	25.2	26.4	10.3
Radio	18.1	37.2	31.7	13.0
Magazine	20.9	14.1	54.6	10.4
Newspaper	13.0	64.0	14.7	8.4
Billboards	61.6	6.9	8.1	23.4
Cellphone	21.4	11.3	43.4	23.9
Internet	24.1	29.5	23.4	23.1
Other	26.0	18.2	15.6	40.3

It is clear from table 3.31 that traditional media such as television are regarded as more appropriate for flighting advertisements than new media (cellphones and the Internet). Also, traditional media such as newspapers and magazines seem to be regarded as more appropriate for news and gossip when compared to new media. However, new media are regarded as more appropriate than traditional media for promotions (below-the-line advertising), which offer a much cheaper form of communication.

3.8 PERIPHERAL RESEARCH ITEMS

Besides the scope of the research on traditional and new media, some additional aspects were included in the study with a view to better understand the behaviour of adolescents. These aspects include the following:

- Favourite DJ
- Favourite place to hang out
- Role models
- Place of entertainment

Table 3.32 reflects the outcome of the survey results for the additional variables measured in the study.

TABLE 3.32

TOP DJs, FAVOURITE PLACES, ROLE MODELS & FORM OF ENTERTAINMENT

Selected variables	Ex-model C schools	Ex-DET schools	Total
Favourite DJ (67 mentions)	DJ Fressh	DJ Sbu	DJ Fressh
	DJ Cleo	DJ Cleo	DJ Sbu
	DJ Sbu	DJ Fressh	DJ Cleo
	DJ Sammy	Glen Lewis	DJ Sammy
	Jeremy Mansfield	Greenday	Glen Lewis
Favourite place to hang out (54 mentions)	Menlyn Mall	Menlyn Mall	Menlyn Mall
	Home	Home	Home
	Emperors Palace	Park	Mall
	Brooklyn	Mall	Emperors Palace
	Mall	Cinema	Park
Role models (92 mentions)	Parent	Parent	Parent
	Pierre Spies	Siblings	Pierre Spies
	Siblings	Oprah Winfrey	Siblings
	Armstrong	Shaun Pollock	Oprah Winfrey
	Jonty Rhodes	Rafael Nadal	Shaun Pollock
Form of entertainment (37 mentions)	Hang out with friends	Fishing	Braai
	Watch TV	Gym/training	Fishing
	Watch movies	Hang out with friends	Golf
	Play sports	Music	Gym/training
	Party	Mxit	Hang out with friends

3.9 CONCLUSION

This chapter presented the research results of the study among 482 adolescents at five high schools in the City of Tshwane. The discussion focused on traditional and new media usage among a sample of ex-model C and ex-DET school learners. The information obtained from the learners seems to have a high face validity that can be built upon in broader future studies conducted on the new media and the youth. As explained in chapter 1, the empirical research findings have immense potential for the private and public sector and are ideally suited to guide planning in terms of marketing communication, marketing and market segmentation strategies. Although the data have been analysed solely by differentiating by school type, alternative analysis by age group, school grade, gender, home language, designated or non-designated group or geographic area could be explored. The current analysis presented in this report contains a wealth of information which is to be explored on a much broader basis in 2009 when the study is extended across Gauteng and South Africa.

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

4.1 INTRODUCTION

Within the context of the findings resulting from the literature review and empirical pilot study in the City of Tshwane on new media usage among the youth, a few points of discussion are required and reserved for the end of this report. This discussion is also deemed necessary in order to build on the research model designed for the Tshwane pilot study, which is to be extended and used as a basis for further research on new media trends.

4.2 SUMMARY

Four main findings on adolescents and the new media were identified in the overview of the international literature presented in chapter 1. These included the following:

- young people will continue to use new media faster and they will become more familiar with the new technologies than adults
- in general, reading of printed material seems under threat with young people
- socioeconomic factors are essential in understanding the usage of new media by young people and children
- for young people the new media are more than just communication media, they are also psycho-developmental, helping them with their psychological growth through adolescence

In contextualising the outcome of the City of Tshwane pilot research study in relation to the international trends highlighted above, the following is noteworthy:

- It does not seem that traditional media such as print media are under threat but rather complemented by new media. The fact that printed media are still holding their own is probably due to, among others, still limited broadband access in South Africa. It was interesting to note the higher involvement of adolescents in broadcasting media when compared to print media in the Tshwane study. However, among print media, magazines are still popular among many adolescents participating in the Tshwane study.
- New media have certainly diffused at a high rate among City of Tshwane adolescents in particular who are anticipated to continue to adopt new innovative media developments at a faster pace than adults. Increasing access to and enthusiastic usage of the new media by adolescents proves that, not only are they the innovators in this area, but they are also changing their life styles to adapt to the new media and to use them to their own benefit.
- Socioeconomic factors indeed need to be considered when investigating new media trends among the youth - the Tshwane study revealed a clear digital divide between ex-model C and ex-DET school learners.
- The Tshwane study revealed that new media also have psychological/emotional dimensions and are not merely communication media. Arguably, cellphones in particular have developed not merely as a functional tool to assist adolescents to communicate more and better, but they also serve as a psychosocial tool in supporting them in their development as adolescents and moving towards adulthood.

Against the backdrop of the relatively low penetration of the Internet in South African society as highlighted in chapter 1, the finding in this Tshwane pilot study that more than 85 % of the respondents had access to the Internet during the past month, is significant. Also significant in this regard is the fact that approximately half the participating learners accessed the Internet via their cellphones. Interpersonal communication via the Internet is, as with cellphones, a very important mode of

communication to inform and educate the youth in general. The Internet is used to make new friends, to join 'chat groups', to exchange private messages - all activities that are part of adolescent development. In addition to using the Internet to obtain information, interpersonal communication seems to be the main objective in using the system. This coincides with the trends identified by Livingstone (1998) and Broddason (2006), which point to a shift from using the new media mainly as a source of information for study and research at school, to using it as an interpersonal communication tool.

As mentioned, the use and importance of the older media such as television, radio and printed media are still relevant in the lives of adolescents. Remarkably, access to and reading of magazines and newspapers are still important to the youth. This phenomenon was not only notable among ex-model C schools but television viewership, newspaper readership and radio listenership are all fairly prominent in the lives of adolescents enrolled at ex-DET schools of Tshwane as well. In addition, some of the results found in the five-school Tshwane study also indicated a preference among adolescents for 'interpersonal' content, such as 'soapies' on television as well as in the choice of certain types of magazines (those concentrating on lifestyle and interpersonal relationships). Music, of course, is the main reason why adolescents listen to the radio and use iPods and MP3 players.

A further relevant comment on the Tshwane study relates to the finding that friends have a slightly stronger influence in purchase decisions than television and magazine advertisements. The children's awareness of cellphones and the Internet as carriers of advertisement messages is worth noting from a marketing communication perspective with specific reference to promotions (below-the-line advertising). A further very positive response emanating from the Tshwane study relates to the credit of airtime and SMSs for premium advertisements.

The complexity of new media such as cellphones in particular and the extra features/functions available on the most recent cellphones are apparently very important to the learners who participated in the Tshwane pilot survey. In fact, approximately 40 % of monthly pocket money/allowances of adolescents is spent on cellphones. Internet connectivity, games and cameras on cellphones are a common phenomenon and nothing new to adolescents. Adolescents use their cellphones virtually everywhere - even at school. In fact, cellphone ownership has become an extension of being an adolescent. Adolescents use cellphones as a major tool to access music, information, the Internet and as a medium to socialise with their friends and family. The latter proved to be particularly important. It was also found that more than three quarters of the respondents share content (ring tones, music, etc). In fact, the research findings clearly emphasised adolescents' emotional relationship towards cellphones as a new medium.

Compared to the Film and Publication Board's (FPB) research in South Africa (Chetty & Basson 2006) this Tshwane pilot survey indicated even higher cellphone ownership levels than three years ago when the Chetty and Basson survey was conducted. The Tshwane pilot survey recorded 96 % cellphone ownership compared to 88 % in the FPB study. Against this background it could be assumed that most high school children in urban areas of South Africa have access to own cellphones - implying a very high diffusion rate of this new medium among adolescents.

As mentioned, MXit is a South African-developed instant messaging system using cellphones and the Internet, largely used by adolescents. In this five-school Tshwane pilot survey, most respondents had access to MXit. The fact that almost 40 % of the adolescents spend more than an hour per day on this low cost text messaging system, emphasises the importance of the system to adolescents psychologically in helping them through an emotionally challenging phase in their development.

As expected, the importance of brands in the purchasing of cellphones, clothes and computers were also confirmed by the Tshwane pilot study. In this regard, ex-DET school learners seemed more brand conscious than ex-model C school learners.

4.3 **CONCLUDING REMARKS**

This preliminary study involving five schools in Tshwane (three former model C schools and two ex-DET schools), is limited in nature but provided worthwhile and interesting insights into the role of media, especially the new media, in the lives of adolescents. The importance of the new media (cellphones and the Internet) is beyond contention. These media will have an escalating impact on the lives of adolescents in South Africa as well as future marketing, marketing communication, market segmentation and competitive business strategies in support of sustainable business. For the telecommunication industry, the information is particularly relevant in designing new products and considering product features and alternative marketing communication avenues within a competitive business environment that needs to survive in challenging economic conditions.

4.4 **FUTURE RESEARCH**

Extensive research involving more schools and a nationwide survey will be undertaken in 2009 to determine trends and regional differences. Firstly, the research study will be replicated among 15 schools in Gauteng. Simultaneously, the new media study will also be broadened across South Africa with the specific aim of investigating new media usage and the digital divide between different socioeconomic settings (urban versus rural areas). Alongside these research initiatives, the Youth Research Unit (YRU) of the BMR plans to conduct an in-depth qualitative study among adolescents in Gauteng to gain a more thorough understanding of media values and needs of adolescents.

BIBLIOGRAPHY

- Bayley, D. 2008. *Tapping into the gaming market*. Marketingweb. (19 August). [Online]. Available: <http://www.marketingweb.co.za/marketingweb>
- Bing Home Webpage. 2009. [Online]. Available: <http://www.bing.im/en>
- Broddason, T. 2006. Youth and new media in the new millennium. *Nordicom Review* 2:105-118.
- Chetty, I & Basson, A. 2006. *Report on Internet usage and the exposure of pornography to learners in South African schools*. Houghton: Film and Publication Board (Research Report, November 2006.)
- Dictionary.com. 2009. Aliteracy. [Online]. Available: <http://dictionary.reference.com/browse/aliteracy>
- Eagle, L Bulmer, S & De Bruin, A. 2003. Marketing communications implications of children's new electronic media use: A survey of parental opinions and perceptions. *Journal of Marketing Communications* 9:126-146.
- Eurogamer. 2009. [Online]. Available: <http://www.eurogamer.net/>
- Fox, J. 2007. You're Among Friends: College favorite Facebook begins to conquer social networking's final frontier-grownups. *Time*, July 16:39.
- Game Planet. 2009. *Platforms*. [Online]. Available: <http://www.gameplanet.co.za>
- Gross, EF. 2004. Adolescent Internet use: What we expect, what teens report. *Journal of Applied Developmental Psychology* 25:633-649.
- International Telecommunication Union. 2008. [Online]. Available: http://www.itu.int/newsroom/press_releases/2008/29.html. Accessed 24 March 2009.
- Internet World Stats. 2009. [Online]. Available: <http://www.internetworldstats.com>. Accessed 24 March 2009.
- Intoweb Marketing. 2007. Internet history. *eTraffic*. [Online]. Available: <http://www.intowebmarketing.co.za>
- Intoweb [sa]. Mobile web development. [Online]. Available: <http://www.intoweb.co.za/articles-mobile-web-dev.html>. Consulted: 19 March 2009.

Ishii, K & Wu, C. 2006. A comparative study of media cultures among Taiwanese and Japanese youth. *Telematics and Informatics* 23(2), May:95-116.

ITU, see International Telecommunication Union.

Johnsson-Smaragdi, U, d'Haenens, L, Krotz, F & Hasebrink, U. 1998. Patterns of old and new media use among young people in Flanders, Germany and Sweden. *European Journal of Communication* 13(4):479.

Justin, H. 2007. SA Rocks. (Blog Posting). [Online]. Available: <http://sarocks.co.za/2007/03/08/youtube-in-south-africa/>

Kelly, B. 2007. Social networking lifting off. *Finweek*. (21 June.)

Kelly, T. 2000. *Africa joins the Internet age*. The African Internet and Telecom summit. Banjul, The Gambia. (5-9 June.)

Koekemoer, L. 1998. *Promotional strategy: Marketing communications in practice*. Kenwyn: Juta.

Lenhart, A, Madden, M & Hilton, P. 2005. *Teens and technology: Youth are leading the transition to a fully wired and mobile nation*. Washington DC: Pew Internet & American Life Project.

Liang, G. 2005. Surveying Internet usage and impact in five Chinese cities. *The CASS Internet Survey Report, 2005*. Beijing. Chinese Academy of Social Sciences, Research Center for Social Development.

Lingham, V. 2007. Facebook hits the #1 spot in South Africa. *Synthasite*. (30 October.)

Livingstone, S. 1998. Mediated childhoods: A comparative approach to young people's changing media environment in Europe. *European Journal of Communication* 13(4):435-456.

Martensen, A. 2007. Tweens and mobile phones: Needs, motives and values. (Unpublished document).

Mèèp Webpage. 2009. [Online]. Available: <http://www.mymeep.co.za>

MobileIN.com. 2009. *Short message service*. [Online]. Available: <http://www.mobilein.com/sms.htm>

Montgomery, KC. 2001. Digital kids: The new on-line children's consumer culture, in *Handbook of children and the media*, edited by DG Singer & JL Singer. Thousand Oaks, CA: Sage:635-650.

Ndawond, P. 2008. South African TV goes digital. (31 October). *BuaNews*. [Online]. Available: <http://www.buanews.gov.za>

PCMAG.COM. 2009. Definition of: video game console. [Online]. Available: http://www.pcmag.com/encyclopedia_term/0,2542,t=video+game+console&i=53848,00.asp

Reece, C. 2007. Facebook fever grips SA. *Nes 24*. (14 June.)

Rogers, EM. 1963. The adoption process: Part I. *Journal of Extension* 1(1). [Online]. Available: <http://www.joe.org/joe/1963spring/index.html>

Rogers, EM. 2003. *Diffusion of innovations*. 5th ed. New York: Free Press.

SAARF, see South African Advertising Research Foundation.

SAMRA, see South African Advertising Research Foundation.

Search engine people [sa]. Mobile web development. [Online]. Available: <http://www.intoweb.co.za/articles-mobile-web-dev.html>. Consulted: 19 March 2009.

Sharpened.net. 2000. *Definitions of computer terms*. [Online]. Available: <http://www.sharpened.net/glossary/definition.php?email>

South African Advertising Research Foundation. 2007. *All Media and Products Survey, 2007b*. Bryanston.

South African Advertising Research Foundation. 2008. *Code of Conduct*. (June 21.)

TechTarget. 2007. *SearchSOA.com Definitions: Definition: A blog*. (8 November.) [Online]. Available: <http://searchwebservices.techtarget.com/dictionary/definition/what-is-blog.html>

TechTerms.Com. 2009a. *Bluetooth*. [Online]. Available: <http://www.techterms.com/definition/bluetooth>

TechTerms.Com. 2009b. *iPod*. [Online]. Available: <http://www.techterms.com/definition/ipod>

Thomas, R. 2007. Facebook vs MySpace: The debate keeps moving ahead. *Social Networking*, 2 July.

Thomas, R. 2008a. Worms attack facebook – MySpace users running Microsoft Wondows. *Social Networking*, 8 August.

Thomas, R. 2008b. What does 7.5 million MXit users mean to Parents. [Online]. Available: <http://netucation.co.za/2008/05/what-does-75-million-mxit-users-mean-to-parents/>

Valkenburg, PM & Peter, J. 2007. Preadolescents' and adolescents' online communication and their closeness to friends. *Developmental Psychology* 43(2):267-277.

Van der Voort, THA, Beentjes, JWJ, Bovill, M, Gaskell, C, Koolstra, CM, Livingstone, S & Marseille, N. 1998. Young people's ownership and usage of new and old forms of media in Britain and the Netherlands. *Journal of Communication* 13(4):457-477.

Van Vuuren, DP. 2004a. Die SAUK se televisiedienste, in *Televisie – skyn en werklikheid. Die omstrede medium*, onder redaksie van JB du Toit. Kaapstad: Tafelberg.

Van Vuuren, DP. 2004b. Televisiegeweld: Is dit 'n probleem in Suid-Afrika? *Tydskrif vir Geesteswetenskappe* 44(4):358-371.

Webopedia. 2009. [Online]. Available: <http://www.webopedia.com/TERM/b/blog.html>

Wellman, B. 2001. Physical place and cyberplace: The rise of personalized networking. *International Journal of Urban and Regional Research* 25(2):228-252.

Wikipedia. 2009a. *Blog*. [Online]. Available: <http://en.wikipedia.org/wiki/Blog>

Wikipedia. 2009b. *MXit*. [Online]. Available: <http://en.wikipedia.org/wiki/MXit>

Wikipedia. 2009c. *Twitter*. [Online.] Available: <http://en.wikipedia.org/wiki/Twitter>

WordNet. 2006. Glossary of terms. Princeton University. [Online]. Available: <http://wordnetweb.princeton.edu/perl/webwn?s=e-mail>

World Stats. 2007.

World Wide Worx. 2008. *South Africa: Internet usage and marketing report*. (29 December). [Online]. Available: <http://www.worldwideworx.com>

RESEARCH REPORTS PUBLISHED SINCE 2000**No****Published 2000**

- 272 Forecast of economic indicators and retail sales by product group for 2000 by DH Tustin
- 273 South Africa: Economic and socio-political expectations for 2000 by GHG Lucas
- 274 Population estimates for South Africa by magisterial district, metropolitan area and province, 1996 and 2000 by HA Steenkamp and H de J van Wyk
- 275 Income and expenditure by product and type of outlet of middle and upper class black households in Gauteng, 1999 by JH Martins
- 276 The South African provinces: population and economic welfare levels, 2000 by AA Ligthelm, JH Martins and H de J van Wyk
- 277 Household expenditure in South Africa by province, language group and product, 2000 by JH Martins
- 278 Minimum and supplemented living levels in the main and other selected urban areas of the RSA, March 2000 by JH Martins and ME Maritz
- 279 Personal disposable income in South Africa by population group, income group and district, 2000 by H de J van Wyk

Published 2001

- 280 Liquid fuel consumption in South Africa as a spatial growth indicator by AA Ligthelm
- 281 Forecast of economic indicators and retail sales by product for 2001 by DH Tustin
- 282 A projection of the provincial South African population, 1996-2006 by JL van Tonder
- 283 South Africa: Economic and socio-political expectations for 2001 by GHG Lucas
- 284 Economic growth prospects for SMMEs in the Greater Johannesburg Metropolitan Area by DH Tustin
- 285 Population estimates for South Africa by magisterial district, metropolitan area and province, 1996 and 2001 by HA Steenkamp
- 286 A study on current and future SMME skills needs: Eastern Free State by DH Tustin
- 287 Estimated undercount of the white population during the 1996 population census for the Randburg Magisterial District by CJ van Aardt and HA Steenkamp

- 288 Minimum and supplemented living levels in the main and other selected urban areas of the RSA, March 2000 by JH Martins and ME Maritz
- 289 Expenditure of households in Gauteng by expenditure item and type of outlet, 2000 by JH Martins
- 290 Income and expenditure patterns of households in Gauteng, 2000 by JH Martins
- 291 Small-scale enterprise development in the Tshwane Metropolitan Municipality: Problems and future prospects by AA Ligthelm
- 292 Indicators of the relative size of regional markets for consumer goods in South Africa by H de J van Wyk
- 294 New vehicle sales as indicator of regional growth in South Africa by AA Ligthelm
- 296 A comparison of household income and expenditure in selected areas and countries by JH Martins
- 297 Household income and expenditure in Gauteng by Living Standards Measure group, 2000 by JH Martins

Published 2002

- 293 Economic and sociopolitical expectations of top business leaders in South Africa for 2002 and beyond by H de J van Wyk and CJ van Aardt
- 295 Forecast of economic indicators and formal retail sales by product group for 2002 by DH Tustin
- 298 Constraints on growth and employment of large manufacturers: Greater Johannesburg Metropolitan Area by DH Tustin
- 299 National personal income of South Africa by income and population group, 1960-2005 by H de J van Wyk
- 300 Income and expenditure patterns of households in the Cape Peninsula, 2001 by JH Martins
- 301 Population estimates for South Africa by magisterial district, metropolitan area and province, 1996 and 2002 by HA Steenkamp
- 302 Constraints on growth in rural SMEs: Evidence from two SME firm surveys by AA Ligthelm, K Schoeman and F Njobe
- 303 Marketing communication strategies in support of brand image building in South Africa by DH Tustin
- 304 Expenditure of households in the Cape Peninsula by expenditure item and type of outlet, 2001 by JH Martins

- 305 Characteristics of spaza retailers: Evidence from a national survey by AA Ligthelm
- 306 Trends in household expenditure in South Africa by JH Martins
- 307 Minimum and supplemented living levels in the main and other selected urban areas of the RSA, March 2002 by JH Martins and ME Maritz
- 308 Liquid fuel consumption in South Africa as a spatial growth indicator by AA Ligthelm
- 309 Household income and expenditure in the Cape Peninsula by Living Standards Measure (LSM) group by JH Martins
- 310 The demographic impact of HIV/AIDS on provinces and Living Standards Measure (LSM) groups in South Africa, 1996 to 2011 by CJ van Aardt

Published 2003

- 311 Business success factors of SMEs in Gauteng: A proactive entrepreneurial approach by AA Ligthelm and MC Cant
- 312 Forecast of economic indicators and formal retail sales by product group for 2003 by DH Tustin
- 313 A forecast of economic and sociopolitical issues in South Africa in 2007 by H de J van Wyk
- 314 Population estimates for South Africa by magisterial district, metropolitan area and province, 1996 and 2003 by HA Steenkamp
- 315 Small business skills audit in peri-urban areas of Northern Tshwane by DH Tustin
- 316 Income and expenditure patterns of households in the Durban Metropolitan Area, 2002 by JH Martins
- 317 Linking South Africa's foreign trade with manufacturing development: The Spatial Implications by AA Ligthelm
- 318 Household income and expenditure in the Durban metropolitan area by Living Standards Measure (LSM) group, 2002 by JH Martins
- 319 Minimum and supplemented living levels in the main and other selected urban areas of the RSA, March 2003 by JH Martins and ME Maritz
- 320 Behavioural aspects of users of E-commerce in South Africa by CJ van Aardt and AN Moshoeu
- 321 Total expenditure of households in the Durban metropolitan area by expenditure item and type of outlet, 2002 by JH Martins
- 322 Total household expenditure in South Africa by province, population group and product, 2003 by JH Martins

- 323 Size, structure and profile of the informal retail sector in South Africa by AA Ligthelm and T Masuku

Published 2004

- 324 Forecast of economic indicators and formal retail sales by product group for 2004 by DH Tustin
- 325 The projected economic impact of HIV/AIDS in South Africa, 2003-2015 by CJ van Aardt
- 326 Total household expenditure in South Africa by income group, life plane, life stage and product, 2004 by JH Martins
- 327 Income and expenditure patterns of households in Gauteng, 2003 by JH Martins
- 328 An evaluation of economic and sociopolitical issues in 2004 and 2007 compared with 2003 by HdeJ van Wyk
- 329 Total expenditure of households in Gauteng by expenditure item and type of outlet, 2003 by JH Martins
- 330 A projection of the South African population, 2001 to 2021 by CJ van Aardt
- 331 Population estimates for South Africa by magisterial district, metropolitan area and province, 2001 and 2004 by HA Steenkamp
- 332 Household income and expenditure in Gauteng by living standards measure (LSM) Group, 2003 by JH Martins
- 333 National personal income of South Africans by population group, income group, life stage and lifeplane, 1960-2007 by HdeJ van Wyk
- 334 Minimum and supplemented living levels in the main and other selected urban areas of the RSA, March 2004 by JH Martins and ME Maritz
- 335 Informal markets in Tshwane: Entrepreneurial incubators or survivalist reservoirs? by AA Ligthelm
- 336 Economic review of the SADC regional market by AA Ligthelm
- 337 Corporate citizenship: A marketing strategy by DH Tustin
- 338 Loyalty-based management in South Africa: An exploratory study by P Venter and M Van Rensburg
- 339 Linkages between the formal and informal sector in South Africa: an input-output table approach by P Naidoo, CJ van Aardt and AA Ligthelm

Published 2005

- 340 Forecast of economic indicators and formal retail sales by product group for 2005 by DH Tustin
- 341 Income and expenditure patterns of households in the Cape Peninsula, 2004 by JH Martins
- 342 Population estimates for South Africa by magisterial district, metropolitan area and province, 2001 and 2005 by HA Steenkamp
- 343 Total expenditure of households in the Cape Peninsula by expenditure item and type of outlet, 2004 by JH Martins
- 344 A class-based population segmentation model for South Africa, 1998 to 2008 by CJ van Aardt
- 345 Household income and expenditure in the Cape Peninsula by LSM group, 2004 by JH Martins
- 346 Regional growth patterns in South Africa: Evidence from private sector building activities by AA Ligthelm
- 347 Total household cash expenditure in South Africa by Living Standards Measure (LSM) group and product, 2005 by JH Martins
- 348 Forecast of the adult population by Living Standards Measure (LSM) for the period 2005 to 2015 by CJ van Aardt
- 349 Measuring the size of the informal economy of South Africa by AA Ligthelm
- 350 An exploratory study on influencer marketing in South Africa, 2005 by DH Tustin, DP van Vuuren and JPR Joubert
- 351 Projection of future economic and sociopolitical trends in South Africa up to 2025 by HdeJ van Wyk

Published 2006

- 352 Forecast of economic indicators and formal retail sales by product group for 2006 by DH Tustin
- 353 South African Metropolitan consumers' perceptions of corporate citizenship and ethical consumer behaviour by DH Tustin and R Hamann
- 354 Income and expenditure patterns of households in the Durban metropolitan area, 2005 by JH Martins
- 355 Household income and expenditure in the Durban metropolitan area by Living Standards Measure (LSM) group, 2005 by JH Martins
- 356 Total expenditure of households in the Durban metropolitan area by expenditure item and type of outlet, 2005 by JH Martins

- 357 Population estimates for South Africa by magisterial district and province, 2001 and 2006 by CJ van Aardt
- 358 Structure and growth of intra-SADC trade by AA Ligthelm
- 359 The impact of retail growth strategies in emerging markets on small township retailers by AA Ligthelm
- 360 Business Intelligence in South Africa by DH Tustin and P Venter
- 361 Personal income of South Africans at national and provincial levels by population group, income group, life stage and life plane, 1990-2007 by HdeJ van Wyk

Published 2007

- 362 The role of executionals in television commercials by JPR Joubert and DH Tustin
- 363 Forecast of economic indicators and formal retail sales by product group for 2007 by DH Tustin
- 364 Population and household projections for South Africa by province and population group, 2001 – 2021 by CJ van Aardt
- 365 Small business sustainability in a changed trade environment: The Soweto case by AA Ligthelm
- 366 The changing market dynamics of South Africa, 1996 to 2010 by CJ van Aardt
- 367 Population estimates for South Africa by magisterial district and province, 2007 by EO Udjo

Published 2008

- 368 Forecast of economic indicators and formal retail sales by product group for 2008 by DH Tustin
- 369 Personal income of South Africans by municipality, 2006 by HdeJ van Wyk and CJ van Aardt
- 370 Income and expenditure patterns of households in Gauteng, 2006 by CJ van Aardt, MC Coetzee and HdeJ van Wyk
- 371 Perceived influence of adolescents on purchase decision behaviour of metropolitan households in South Africa by DH Tustin
- 372 The impact of Soweto shopping mall developments on consumer purchasing behaviour, 2007 by DH Tustin
- 373 Emotionality in television advertisements by JPR Joubert
- 374 Retail Service Quality (RSQ) perceptions in the grocery industry of Gauteng by DH Tustin and A Strasheim
- 375 The demographics of the emerging Black middle class in South Africa by EO Udjo

- 376 Evaluating the population, economic and demographic aspects of the 2007 Community Survey by EO Udjo and CJ van Aardt
- 377 Small business success and failure in Soweto: A longitudinal analysis (2007-2008) by Prof AA Ligthelm
- 378 Personal income by province, population group, sex, age and income group, 2007 and 2008 by Prof CJ van Aardt and Ms M Coetzee
- 379 Forecast of economic indicators and formal retail sales by product group for 2009 by Prof DH Tustin
- 380 Population estimates for South Africa by magisterial district and province, 2008 by Prof EO Udjo

ALL RESEARCH REPORTS ARE OBTAINABLE FROM
The Bureau of Market Research
P O Box 392
UNISA
0003
Tel (012) 429-3338
Fax (012) 429-3170

LIST OF MEMBERS

- 01 Income and expenditure research
 02 Behavioural and communication research
 03 Economic research
 04 Demographic research

	Divisions sponsored			
	1	2	3	4
ABSA GROUP	X	X	X	X
ACNIELSEN MARKETING & MEDIA (PTY) LTD	X	X	X	X
ADS24	X	X	X	X
AFRICA ANALYSIS TEAM CC	X			X
ALAN GRAY LIMITES	X			
BP SOUTHERN AFRICA (PTY) LTD	X			
BRAIT SA LTD	X			
BRITISH AMERICAN TOBACCO (SA) LTD	X	X	X	X
BUSINESS PARTNERS LTD	X		X	
CAXTON PUBLISHERS & PRINTERS LTD	X	X	X	X
CITY OF TSHWANE	X	X	X	X
CITY OF JOHANNESBURG (CoJ)	X			
CLEAR CHANNEL INDEPENDENT (PTY) LTD				X
CLOVER SA LTD	X	X	X	X
COCA-COLA SOUTH AFRICA		X	X	
CRODA CHEMICALS (SA) (PTY) LTD			X	
CROSSROADS DISTRIBUTION (PTY) LTD			X	
DEPARTMENT OF NATIONAL TREASURY	X			
DEVELOPMENT BANK OF SA	X	X	X	X
DIR GOV PROG IMPL & MONITORING	X	X	X	X
DISTELL	X	X	X	X
DOUGLAS PARKER ASSOCIATES (X2 Reports)	X	X	X	X
ECONOMETRIX (PTY) LTD	X			X
EDCON	X	X	X	X
ESKOM	X	X	X	X
EXPRESS PERSONNEL SERVICES SA			X	X
EYE BUY (ONECOR)	X			
FINCOR LEASING (PTY) LTD (PRIMEDIA)	X		X	
FNB - HOME LOANS	X	X	X	X
GIBS (Gordon Inst of Business Science)			X	
GLOBAL INSIGHT SOUTHERN AFRICA	X		X	X
GLEN STEYN & ASSOCIATES	X		X	X
IKLWA TRADING (PTY) LTD	X			
INDEPENDENT NEWSPAPERS P/L	X	X		
INDUSTRIAL DEVELOPMENT CORP OF SA	X	X	X	X
INTERSERV MARKET RESEARCH			X	
INVESTEC PRIVATE BANK	X			
INVESTEC SECURITIES	X			
INVEST NORTH WEST			X	
JDG TRADING (PTY) LTD	X		X	
JP MORGAN EQUITIES LTD	X			
KAGISO BROADCASTING (PTY) LTD	X	X	X	X

	Divisions sponsored			
	1	2	3	4
LIBERTY LIFE	X			
MACQUARIE FIRST SOUTH SECURITIES			X	
MARKDATA (EDMS) BPK	X		X	X
MARKINOR (PTY) LTD	X	X	X	X
MERCANTILE BANK LTD			X	
METROPOLITAN HLDGS LTD			X	X
MINISTRY OF FINANCE & ECONOMIC AFFAIRS – KIMBERLEY	X	X	X	X
MPUMALANGA PROV GOVERNMENT – DEPT OF ECONOMIC DEVELOPMENT AND PLANNING			X	
NATIONAL DEPT OF HOUSING	X			X
NEDBANK LTD	X	X	X	X
NESTLE (SA) (PTY) LTD	X	X	X	X
NOKIA SIEMENS NETWORKS	X	X	X	X
OLD MUTUAL	X	X	X	X
PHUMELELA GAMING & LEISURE	X		X	
PIONEER FOODS (PTY) LTD	X	X	X	X
PLAN MEDEWERKERS				X
PRIMEDIA FACE 2 FACE P/L	X	X		X
QUALITY SUGARS (DIV OF TSB)			X	
QUANTEC RESEARCH (PTY) LTD	X	X	X	X
RADMARK (PTY) LTD	X	X		
RELYANT TRADING (PTY) LTD	X		X	X
(ELLERINE GROUP HOLDINGS)				
RESEARCH INTERNATIONAL SA			X	X
SA REKLAME NAVORSINGSTIGTING		X		X
SA RESERVE BANK (RESEARCH DEPT)	X			X
SABC LTD	X	X	X	X
SANLAM	X	X	X	X
SANTAM LTD	X	X	X	X
SAPPI LTD			X	
SASOL INFONET	X	X	X	X
SHOPRITE CHECKERS (PTY) LTD	X			
STANDARD BANK OF SA LTD	X	X	X	X
STRATEGIC PLANNING & DEVELOPMENT DEPT OF THE PREMIER	X		X	X
SYNOVATE	X			
't MOEDE HOOFT P/L - t/a Quality Professionals		X		
TBWA/HUNT/LASCARIS/DURBAN	X	X	X	X
THE GREEN-HAT RESEARCH	X			
TELKOM SA LTD	X	X	X	X
TIGER BRANDS (PTY) LTD	X	X	X	X
TMS RESEARCH	X			
TNS RESEARCH SURVEYS	X	X	X	X
TRADE & INVESTMENT LIMPOPO	X		X	
TRANS UNION CREDIT BUREAU			X	
UBS SOUTH AFRICA	X			
UNILEVER SA FOODS	X		X	X
WHOLESALE & RETAIL SETA (W & R SETA)			X	

BMR PERSONNEL

RESEARCH	
Head	Prof DH Tustin, DCom
Professors	Prof AA Ligthelm, DCom Prof EO Udjo, PhD Prof CJ van Aardt, DBA Prof JPR Joubert, DCom
Research Fellows	Dr DP van Vuuren, PhD
Senior Researcher	Mr J Kembo, MSC
Researchers	Mr ME Masemola, BCom (Hons), Postgrad Dip: Marketing Management Ms AN Moshoeu, BA (Hons), Postgrad Dip: Marketing Management
Junior Researcher	Mr A Risenga, BCom (Hons), BAdmin, Postgrad Dip: Marketing Management
Internship Student: YRU	Ms GS Shai, BSc (Hons) Psychology
RESEARCH SUPPORT AND ADMINISTRATION	
Senior Computer Scientist	Ms MC Coetzee, BCom
Librarian/Editor	Ms CA Kemp, BA, HED, Postgrad Dip: Translation
Financial Officer	Ms S Burger
Senior Research Coordinator/Departmental Secretary	Ms P de Jongh
Senior Research Coordinators	Ms EM Koekemoer, National Certificate Secretarial Ms M Nowak, BA, National Diploma Secretarial Ms M Goetz, National Diploma Secretarial (Office Administration)
Research Assistant	Ms M Nwovhe, Diploma: MS Office & Security Risk Management
Student Administrators	Ms EM Nell, Cert: Marketing and Marketing Research Ms JA Postma
General Administrative Staff	Mr AC Mnguni, Cert: Ministry and Community Service. Cert: African Christian Leadership; Diploma of Biblical Studies
Administrative Officer	Mr SB More, Cert: Marketing and Marketing Research Ms JE Barnard, National Certificate Secretarial

