

The development of a web-based, psycho-educational strategy for safe internet use amongst adolescents in the Northern Suburbs of Cape Town

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DECLARATION BY THE RESEARCHER

I declare that the dissertation ***The development of a web-based, psycho-educational strategy for safe internet use amongst adolescents in the Northern Suburbs of Cape Town*** hereby handed in for the qualification PhD in Research Psychology at the North-West University, is my own independent work and that I have not previously submitted the same work for a qualification at/in another university/faculty. The ownership of all intellectual property pertaining to and/or flowing from the dissertation (including, without limitation, all copyright in the dissertation), shall vest in the University, unless an agreement to the contrary is reached between the University and the student in accordance with such procedures or intellectual property policy as the Council of the University may approve from time to time.

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SUMMARY

The development of a web-based, psycho-educational strategy for safe internet use amongst adolescents in the Northern Suburbs of Cape Town.

Keywords: Safe internet use; psycho-educational strategy; adolescents; internet; web-based.

Within this study, a psycho-educational strategy was designed to promote online safety practices for adolescents living in the northern suburbs of Cape Town. The study made use of a mixed method methodology, including both quantitative and qualitative research. This enabled access to 183 adolescents, as well as gaining more focused and specific insights from adolescent focus groups with a total of eight focus groups.

This psycho-educational strategy was designed in the form of an interactive website. The website included information on safety practices pertaining to six areas of online safety. The information was provided in various formats, including videos, clips, slide shows and questionnaires. The six areas which were focused on included cyber bullying, pornography, social networking, online gaming, sharing of personal information and plagiarising and stealing of content. Adolescents were exposed to the website in order to test its usability and its effectiveness as a tool for education regarding online safety.

From the literature and findings of the research, it is evident that there is a dire need for age-appropriate and relevant mechanisms to address online safety among adolescents. The present research revealed; through the remarks obtained from focus groups, that adolescents could benefit from the psycho-educational strategy as it created an awareness of the possible harms of the internet; awareness that was previously limited. Specific areas of concern included cyber bullying and the reality

that they face regarding this hurtful activity. Adolescents further indicated that they lacked knowledge in areas concerning pornography, plagiarising and sharing of personal information.

By creating an awareness regarding possible harms, adolescents are enabled to safeguard themselves from potential harm, and if education is used in future, it can play a preventative role in terms of the negative consequences of online activities. The research indicated that a psycho-educational perspective holds value when addressing online safety. Lastly, the internet as a form of psycho-education was successful as the adolescents accepted and related to this means of education.

The psycho-educational strategy is an innovative tool that can be used by schools, parents and educators when engaging with adolescents about online safety.

OPSOMMING

Die ontwikkeling van 'n web-gebaseerde, psigo-opvoedkundige strategie vir veilige internet gebruik onder adolessente in die Noordelike Voorstede van Kaapstad.

Sleutelwoorde: Veilige internet gebruik; psigo-opvoedkundig; adolessente; internet; web-gebaseerd.

Hierdie studie het gepoog om veilige aanlyn-gebruik onder adolessente in die noordelike voorstede van Kaapstad deur middel van 'n psigo-opvoedkundige strategie te ontwikkel. Die studie het gebruik gemaak van gemengde metodologie deurdat die fokus beide kwalitatief en kwantitatief was. Sodoende is toegang verkry tot 183 adolessente wat in agt fokusgroepe opgedeel was en sodoende is 'n meer gefokusde uitkoms verkry.

Die psigo-opvoedkundige strategie was ontwerp as 'n interaktiewe webtuiste. Hierdie webtuiste het onder andere inligting bevat rakende veilige praktyke in ses spesifieke areas van aanlyn-veiligheid. Die inligting was verskaf in verskeie formate, onder andere video-uittreksels, vertoonblaaie en vraelyste. Die ses areas waarop spesifiek gefokus was, was ondermeer kuberboelie-gedrag, pornografie, sosiale netwerke, aanlyn-speletjies, die deel van persoonlike inligting asook plagiaat en diefstal van kuber-inligting. Tydens die studie was adolessente blootgestel aan die webtuiste. Dit het hulle die geleentheid gebied om die webtuiste te toets met betrekking tot die bruikbaarheid van die webtuiste as 'n effektiewe hulpmiddel vir voorligting rakende veilige aanlyn-gebruik.

Dit blyk duidelik uit sowel die literatuur as die bevindinge van die navorsing dat daar 'n dringende behoefte bestaan vir ouderdom-gerigte en toepaslike tegnieke om aanlyn-veiligheid onder adolessente te bewerkstellig. Uit die onderhawige navorsing blyk duidelik dat adolessente sal baat vind by so 'n psigo-opvoedkundige strategie aangesien dit 'n bewusmaking kweek van die moontlike nadele van die internet; 'n bewusmaking wat voorheen beperk was. Spesifieke areas van kommer het ingesluit kuberboelie-gedrag en die realiteit van die leed wat gely word as gevolg van hierdie gedrag. Die adolessente het verder ook aangedui dat hulle nog onkundig was in areas soos pornografie, plagiaat en die deel van persoonlike informasie.

Deur bewusmaking van die moontlike nadele word adolessente toegerus om hulle teen potensiële leed te beskerm. Voldoende voorligting in die toekoms kan 'n voorkomende rol speel in die negatiewe gevolge van aanlyn-aktiwiteite. Die navorsing het aangetoon dat 'n psigo-opvoedkundige beskouing waardevol is wat betref aanlyn-veiligheid.

Die laaste gevolgtrekking was dat internet as 'n vorm van psigo-opvoedkundige strategie suksesvol was aangesien die adolessente meegedoen het en hulself daarmee kon vereenselwig.

Die psigo-opvoedkundige strategie is 'n kragtige hulpmiddel wat deur skole, ouers en opvoeders gebruik kan word in hulle interaksie met adolessente aangaande internet-veiligheid.

TABLE OF CONTENTS

	Page
Acknowledgments	ii
Declaration by researcher	iii
Summary	iv
Opsomming	vi

CHAPTER 1

BACKGROUND, MOTIVATION AND PRACTICAL LAY-OUT OF THE STUDY

1. Background to the study, motivation and problem statement	1
2. Problem statement	4
3. Central Theoretical Framework: The Psycho-Educational Strategy and Theories.....	5
4. The Research Question	8
4.1 Primary question.	8
4.2 Secondary questions.	8
5. Aims and objectives	8
6. Method of investigation	9
6.1 Overview of the research.....	9
6.2 Literature review	10
6.3 Empirical investigation.	11
6.3.1 Design	11
6.3.1.1 Quantitative data	12
6.3.1.2. Qualitative data	13
6.3.1.3 Deductive reasoning	14
6.4 Participants.....	14

	Page
6.5 Measuring Instruments.....	15
6.5.1 The questionnaires: Gathering and Analysing of data	16
6.5.2 Focus groups: Gathering and Analysing of data	16
7. Procedures	17
8. Ethical aspects	18
9. Data analysis	20
9.1 Quantitative analysis of data	20
9.2 Qualitative analysis of data	21
10. Structure of research report	21
11. Conclusion	22

CHAPTER 2

ADOLESCENTS: DEVELOPING AND CONTACTING THE FIELD

1. Introduction	23
2. Developmental theories	24
2.1 An overview of human development	24
2.2 Change from childhood into adolescence	26
2.2.1 Brain and cognitive processes	27
2.2.2 Biological changes during adolescence	36
2.2.3 Emotional development and psychological change	37
2.2.4 Social changes: Family, society and peer relations	39
2.2.5 Identity development	42
3. Gestalt theory: Foundations, the field, cycles and disruptions during adolescence	46
4. Complexity and Systems theories.....	52

	Page
5. Conclusion	55

CHAPTER 3

THE INTERNET

1. The history of the internet	57
2. Global internet use: How many users are logging on?	61
3. Statistics of internet use in South Africa	63
4. Internet use and adolescence	64
5. Current programs for adolescents regarding internet safety	70
6. Online activities: Taking the dangers into account	73
7. Conclusion	80

CHAPTER 4

IDENTIFYING AND DISCUSSING FOCUS AREAS FOR THE PSYCHO-EDUCATIONAL STRATEGY

1. The Psycho-Educational Strategy.....	82
2. The potential risks for adolescents on the internet	83
2.1 Cyber bullying	83
2.2 Plagiarising and stealing content	90
2.3 Social networking	93
2.4 Sharing of personal information	98
2.5 Pornography	101
2.6 Online gaming	105
3. Conclusion	107

	Page
CHAPTER 5	
RESEARCH METHODOLOGY	
1. Research methodology	109
1.1 Aims and objectives of the research	109
1.2 The process of the research	110
1.3 Research methods and data gathering	114
1.3.1 Quantitative research and data gathering	114
1.3.2 Qualitative research and data gathering.....	115
1.3.3 Focus group with experts	116
1.3.4 Pilot studies	117
1.3.5 Focus groups with adolescents....	117
1.4 Trustworthiness and validity	118
1.5 Participants	120
1.6 Data analysis	121
1.7 Research questions	122
1.7.1 Primary question	122
1.7.2 Secondary questions	123
2. Definitions and motivation for a Psycho-Educational Strategy ...	123
3. Design of the strategy as interactive website	125
3.1 The website	129
4. Conclusion	131

	Page
CHAPTER 6	
FINDINGS OF THE RESEARCH	
1. Introduction	132
2. Results	133
2.1 Preliminary research	133
2.2 Conducting the research	139
2.2.1 The pilot study	140
2.2.2 Empirical research	142
2.3 Themes that emerged from the focus groups as determined through coding	143
3. Conclusion of findings	158
4. Conclusion	160
CHAPTER 7	
FINAL CONCLUSIONS, THOUGHTS AND RECOMMENDATIONS	
1. Introduction	161
2. Aims and objectives	161
3. Limitations of the study	166
4. Recommendations	166
5. General discussion	168
6. Conclusion	170
References	173

Page**LIST OF FIGURES**

Figure 2.1: Information Processing Theory	34
Figure 2.2: Cycle of information processing	35
Figure 2.3: The cycle of Gestalt formation and destruction	49
Figure 2.4: Complexity and Systems theories within the contact cycle of Gestalt	54
Figure 3.1: Internet use worldwide, 2011	61
Figure 3.2: Children’s understanding of internet traceability.....	77
Figure 4.1: Medium used to cyber bully	85
Figure 4.2: Social networking around the world	94
Figure 4.4: Percentages of adolescent activities on the internet	100
Figure 4.5: Percentage of children reporting exposure to risks on the internet.....	104
Figure 5.1: The homepage of the developed website.....	128
Figure 7.1: Complexity and systems theories within the contact cycle of Gestalt	169

LIST OF TABLES

Table 2.1: Erikson’s Eight Stages Development Model	43
Table 3.1: History of the Internet	60
Table 3.2: World internet usage and population statistics	62
Table 3.3: Children and Adolescent activities online	67

	Page
Table 3.4: Various programs pertaining to online safety amongst adolescents	71
Table 3.5: A comparison of risky behaviours of adolescents on the internet	75
Table 3.6: Risks and dangers of adolescent activities on the internet ...	79
Table 4.1: Cyber bullying categories	87
Table 4.2: Cyber bullying statistics among adolescents	88
Table 5.1: The Research Process.....	113
Table 6.1: Chapter 6 outline.....	132
Table 6.2: Results from preliminary, structured questionnaires	136
Table 6.3: Integration of findings from literature with preliminary structured questionnaire results	138
Table 6.4: Changes based on the feedback from focus groups.....	141
Table 6.5: Themes that were identified from the focus groups.....	143

ADDENDA

Addenda A Consent from Western Cape Education Department.....	196
Addenda B Adolescent Internet Use And Internet Activities Questionnaire.....	198
Addenda C Letter to participants.....	201

CHAPTER 1

BACKGROUND, MOTIVATION AND PRACTICAL LAY-OUT OF THE STUDY

1. Background To The Study And Motivation

In a recent study, findings indicated that social interaction amongst adolescents in the northern suburbs of Cape Town has changed due to factors such as social networking via the internet and cell phones (Symington, 2011). The way in which adolescents socialise and pick up on social queues has been affected by their use of new media via the internet (Cranston & Davies, 2009; Jones, Mitchell, Wolak & Finkelhor, 2013). A change in the social patterns of adolescents therefore needs to be explored to create an awareness of the accompanying potential benefits and risks. This was the inspiration behind the conducting of this specific research, i.e. to explore the adolescent and his/her connectedness with various elements of the internet.

Adolescence is a complex phase in that it is a bridging period between childhood and adulthood (Arnett, 2007; Geldard & Geldard, 2004; Louw & Louw, 2007; Maturo et al., 2011). For the purpose of this dissertation, adolescence refers to a period within human development which includes individuals between the ages of 12 and 18. In Chapter 2 this stage will be dealt with in more detail.

Adolescents access the internet regularly (Ahmed, 2011; Baker & White, 2010; Goldner, 2008; Henderson, Keogh, Rosser & Eccleston, 2013) and according to Subrahmanyam and Greenfield (2008), communication via the internet is especially popular among adolescents. Results from an international survey (Ahmed, 2011) focused on the attitudes and behaviours of both parents and adolescents

(12-13 years of age) with regards to online safety. The participating countries in this survey were South Africa, the United Kingdom, Ireland, Spain, Finland, Italy, Portugal, Turkey, Russia, Greece and Egypt. The survey indicated that 70% of the participants admitted that they utilised the internet and frequented social networking sites. Based on this, Ahmed (2011) argues that the internet has a remarkable influence concerning the method in which children form friendships and how they communicate. The Office for National Statistics in the United Kingdom reported that the age group mostly accessing the internet was between 16 and 24 (www.ons.gov.uk).

According to Subrahmanyam and Greenfield (2008), “teens (adolescents) are heavy users of new communication forms such as instant messaging, e-mail, and text messaging, as well as communication-oriented internet sites such as blogs, social networking, photo and video sharing sites” (p. 119).

When looking at the South African context, most adolescents seem to be accessing the internet via their cell phones. The age group defined as using the internet via cell phones was between 16 and 24 years; the same as in the United Kingdom (Cranston & Davies, 2009).

The main concern regarding the specific research was that if adolescents are continuously engaging with the internet, this may potentially influence their healthy development. In order for guidance and support to be given, it is important to take cognisance of the factors that might affect their development. Harmful areas should be explored, i.e. what are the risks, harmful effects and potential dangers that adolescents face when using the internet. Bearing this in mind, this study then commenced relating to adolescents and this new playground called the internet.

Bargh and McKenna (2004) described the internet as “computer-mediated

communication” (CMC) which is not conducted face-to-face and without non-verbal features of communication like tone of voice, facial expressions and other interpersonal features. Social networks, especially the internet which it stems from, were of interest because of the significant popularity that this medium has among adolescents. Amichai-Hamburger and Barak (2009) defined the internet as “a worldwide decentralized network of computers” (p. 34), or as Wessels (2010) described it, a “network of networks”, including both private and public networks such as academic, business and government networks which are used locally as well as globally. The internet can therefore be viewed as an accessible network of various networks, being both a source of information as well as a means of communication.

The internet has become a tool in a variety of domains in life, such as communication, business, economics, entertainment and many more (Bargh & McKenna, 2004; Conde, 2010; Howard, Rainie & Jones, 2001; Thelwall, 2013). It was not merely the popularity of the internet which was of interest, but also the potential risks, harms and danger the internet holds for adolescents who access it unsupervised. It was the potential danger the internet holds which actually inspired the research and the need to develop a tool for adolescents to both safeguard them from these dangers, as well as encourage and educate them to use the internet in a positive way. By developing such “tool”, dangers, risks or harms could be minimised. The strategy would make a contribution within our fast developing internet society, by becoming an aid for parents and educators in educating adolescents on the potential risks of the internet.

In order to design such a strategy, the potential risks and dangers of accessing the internet have to be understood. Various sources who address a range of dangers associated with accessing the internet were used (Elena, Laouris, &

Taraszow, 2010; Grobler, Jansen van Vuuren & Zaaiman, 2011; Mazmi, Aslam & Rajan, 2013; Sheldon, 2011). Dangers refer to all negative aspects as well as potential risks and harms associated with internet use by adolescents. Throughout the research the terms 'risk'; 'dangers' and 'harms' will be used to refer to these negative and potential negative aspects relating to the internet.

2. Problem Statement

Valcke, De Wever, Van Keer and Schellens (2011) highlighted that although some awareness campaigns concerning safe internet use do exist, there has been no decrease in dangerous activities by young children (adolescents) on the internet. They argue that more programs or models should be put in place to educate adolescents, parents and teachers on the dangers of the internet. The research discussion group pertaining to this study mentioned that "more research focusing on the responses of youngsters on internet regulations" is needed (Valcke et al., 2011, p. 1301). A survey done by GFI (2011) regarding internet safety for adolescents showed that 33% of parents did not know if the schools which their adolescent children attended offer internet safety education, while 24% of the adolescents said that either their schools do not have such a program in place or they do not know if there is one available. Programs therefore need to be put in place.

Moreno, Egan, Bare, Young and Cox (2013) stated that "several organizations ... have offered expert advice regarding internet safety, but an evidence-based approach to educate youth (adolescents) about the dangers of being online does not currently exist" (p. 1). The study by Moreno et al. (2013) is fairly recent and determined that there is a definite need for resources to be put in place to educate adolescents on internet safety. Mitchell, Finkelhor, Wolak, Ybarra and Turner (2010) argued that the internet has caused distress to the public and parents. This distress

led to child advocates and educators rushing to address these dangers. The concern of Mitchell et al. (2010) is that the hastily formulated responses may be ineffective. Research as a basis is needed when developing effective and developmentally appropriate programs.

Although safety measures are available on the internet, an individual has to search for it. As these measures are randomly scattered across cyberspace, spread across a variety of websites, it is a time-consuming task to locate them in order to address the basic needs of internet users. The assumption cannot just be made that adolescents will, in their use of the internet, specifically search for safety measures and educate themselves in terms of the constructive use of the internet. This emphasises the dire need for the development of a web-based educational tool, specifically developed for the adolescent developmental phase, addressing the possible harms, risks and dangerous realities of the internet. This tool should be easily accessible to schools and promoted amongst them in order to avoid adolescents gleaning information from untrustworthy sources.

3. Central Theoretical Framework: The Psycho-Educational Strategy And Theories

Psycho-education refers to “a holistic approach to understanding what it means to be human” (Griffiths, 2006, p. 21), and furthermore how one can be aided and educated in understanding human conditions and social situations. In this study the social situation relates to the issue of internet safety.

The psycho-educational strategy was designed in the form of a website. The website was the tool used within the strategy and provided an interactive approach for adolescents. The ideal was that schools could ultimately use this website as part of their curriculum, as a compulsory educational method for scholars. The strategy

was aimed at guiding adolescents, within the school system, through the necessary information concerning guidelines on the safe use of the internet.

Sharp and Dellis (2010) stated that since most adolescents move through the educational system, “schools are an important setting for interventions to prevent high-risk behaviours in teens (adolescents)” (p. 7). The research was therefore aimed at designing an interactive website that would appeal to an adolescent and be age-appropriate and relevant for this developmental phase. Poole, Simpson and Smith (2012) stated that, using the internet as tool for learning, within health care, has considerable potential. Poole et al. (2012) argued that using a website on the internet as psycho-educational tool will reach a larger audience as well as be cost-effective. Anderson (2013) is of the opinion that when educating adolescents about technological dangers, researchers should actively engage with the research in order to establish what their opinions are concerning technology.

Furthermore Anderson (2013) notes the importance of including adolescents in the process of education by stating that by giving them a voice, they are offered an opportunity to be more responsible for their own bodies and minds. This was the idea with the website, to create a platform for learning as well as integrating the information into the lives of adolescents.

The main focus of the strategy was the adolescent phase, seeing that in this developmental phase, adolescents are specifically experiencing conflict between becoming a unique individual versus not wanting to be isolated and different from a group (Geldard & Geldard, 2004). This is the core conflict during adolescence: not to be separated from the peer group, whilst maintaining individuality.

From the literature review it becomes evident that adolescents tend to become so enmeshed within their group, developing a group identity as a result, that

it was important to take this into account in developing an age-appropriate and relevant model for education. The study was therefore conducted through the lens of Gestalt Field theory (Mackewn, 1997; Yontef, 2005), since Gestalt views the individual as a whole within an environment. Gestalt, as a theory, views a person within a field as opposed to being apart from his or her context, i.e. his or her environmental field. According to this theory, persons can only be understood within the system of which they are an integral part (Nevis, 2000).

From the principles of Gestalt, the Field theory emerged. This theory emphasises the relationship and process of contacting the other, the field or environment (Nevis, 2000; Parlett, 2005). This in many ways resembled the Complexity theory (Morrison, 2006) and Systems theory (Laszlo & Krippner, 1998; Skyttner, 2001), where the individual forms part of larger and bigger systems which interact with and focus on connections between the individual and his/her environment. Various theories, combined with Gestalt Field theory, were incorporated, mainly to gain the needed insight into understanding the adolescent within his/her field. Gestalt theory on its own did not holistically focus on the process and development of the adolescent phase and other theories were therefore incorporated to further understand this phase. The theories that will therefore be discussed (Chapter 2) as part of the framework of the study, include:

- i. Developmental Theories (Bukatko & Daehler, 2004; Eggen & Kauchak, 2007; Larson, 2011; Sigelman & Rider, 2009).
- ii. Gestalt Theory (Mackewn, 1997; Perls, Hefferline & Goodman, 1951; Yontef, 2005).
- iii. Complexity Theory (Hardman, 2010; Morrison, 2006).
- iv. Systems Theory (Laszlo & Krippner, 1998; Skyttner, 2001).

4. The Research Question

This study, being a mixed method study, made use of various research questions and not a hypothesis. According to Creswell (2009) a mixed method study should rather incorporate several questions because that is what emphasises the content of the study. Within this mixed method study, a primary question formed the basis, but has been supported by various secondary questions to direct the research and its content.

4.1 Primary question.

What should the psycho-educational strategy for internet use and safety amongst adolescents comprise of?

4.2 Secondary questions.

- i. What is the current understanding of internet use and safety amongst adolescents in high schools in the northern suburbs of Cape Town?
- ii. What components need to be included in such a psycho-educational strategy?
- iii. How does a web-based psycho-educational strategy facilitate safer internet use amongst adolescents and growth into a self-regulating individual?

5. Aims And Objectives

The aim of this study is to develop a psycho-educational strategy in the form of a website in order to educate adolescents about safer use of the internet so as to safeguard them from the potential dangers of internet use.

The objectives for this study are:

- i. **To explore** the phase of adolescence;
- ii. **To explore** the current understanding of internet use and safety in schools in

- the northern suburbs of Cape Town;
- iii. **To investigate** how existing knowledge of the dangers of the internet and current programs for educating safe internet use contribute to internet use and safety in schools;
 - iv. **To identify** possible components of a psycho-educational strategy that will educate adolescents in using the internet safely;
 - v. **To design** a psycho-educational strategy consisting of an interactive website for adolescents to promote safe internet use; including the framework and content of the strategy;
 - vi. **To evaluate** the perceptions of adolescents regarding the psycho-educational strategy and how this strategy influences their process of growth.

A process of investigation and research were used in pursuit of the objectives.

The following section focuses on the methods that were used during the study.

6. Method Of Investigation

The process that was followed in order to collect data and analyse that data was a mixed process. The following section structures the research and the processes followed. Firstly a brief overview is given, after which each section is discussed in more detail.

6.1 Overview of the research.

The following process was followed during the research process:

- Firstly a literature review was conducted.
- After the literature review was completed, the process of gathering both quantitative and qualitative data began.
 - Quantitative data was gathered via the Adolescent Internet Use and Internet Activities Questionnaire

- The data from this questionnaire was collected and analysed
- Qualitative data was collected by pairing a focus group with a group of experts.
- The data from the focus group and group of experts were analysed through coding and used in conjunction with the literature review in starting to design the website and the content thereof.
- After the website was designed and completed, adolescents were requested to utilise the website and then provide feedback in focus groups regarding their perceptions of the website and its educational value.
- The data from the focus groups of adolescents were reviewed and coded in order to make final changes to the website, draw conclusions and provide findings.

6.2 Literature review.

A literature review was carried out in order to gather existing information on the topic. Information which was deemed relevant to the topic was explored. This was done by studying national as well as international scientific resources, such as books, journals, dissertations and other existing completed research. The content of the literature research included relevant information on the following contextual areas:

- i. The internet as a point of connection was researched as well as the following dangerous activities associated with internet access:
 - a. Online gaming (Griffiths, Davies & Chappell, 2003; Grüsser, Thalemann & Griffiths, 2007);

- b. Social networking (Conde, 2010; Okamoto, 2010; Rice, Monro, Barman-Adhikari & Young, 2010);
 - c. Cyber-bullying (Dooley, Cross, Hearn & Treyvaud, 2009);
 - d. Adolescent access to pornographic sites (DeAngelis, 2007; Ybarra & Mitchell, 2005);
 - e. Plagiarising and stealing content owned by others (e.g. video or music) (Arewa, 2010);
 - f. Online identity and information (Rahman, Feroz, Kamruzzaman & Khan, 2005).
- ii. Current strategies which aim at educating adolescents on safe internet use (Sharp & Dellis, 2010).
 - iii. The adolescent phase: especially between ages 12 and 18 (Bremner & Slater, 2003; Erikson, 1950; Geldard & Geldard, 2004; Louw & Louw, 2007).

After the literature review was conducted, the process of gathering empirical data was attempted. The following section focuses on the investigation process.

6.3 Empirical investigation.

6.3.1 Design.

This study made use of *parallel* research, incorporating a *mixed method* research design, and taking into account both quantitative and qualitative data. Parallel mixed method is the mixing of quantitative and qualitative data gathering methods simultaneously within at least one of the stages of research (Hanson, Creswell, Clark, Petska & Creswell, 2005). There may be both exploratory and confirmatory aspects to a parallel study. Both qualitative and quantitative data may be collected or quantitative and qualitative analyses may be conducted and inferences drawn (Rocco, Bliss, Gallagher & Perez-Prado, 2003).

Since the research required an understanding of the figures expressed as percentages of internet use and activities of adolescents on the internet, quantitative research was the appropriate method. However, in order to gain a more in-depth insight into the personal experience of experts and their opinion of adolescent internet use focus groups, qualitative research was also necessary and beneficial. After this information was analysed, it formed part of the designing of the website which was then explored qualitatively via focus groups with adolescents.

6.3.1.1 *Quantitative data.*

Quantitative research looks at numbers and specifics (Blaxter, Hughes & Tight, 1996), and can be defined as the process of “measuring variables for individual participants to obtain scores, usually numerical values that are submitted to statistical analysis for summary and interpretation” (Gravetter & Forzano, 2003, p. 147). Quantitative data was incorporated by initially using a questionnaire (Addendum B) which was completed by adolescents from participating schools. Their responses were recorded as quantitative data.

Quantitative data expressed the extent of internet use amongst adolescents in numerical fashion, as well as what they viewed as problem areas. This was beneficial as it aided in identifying the areas of focus within the psycho-educational strategy. A questionnaire, entitled *Adolescent Internet Use And Internet Activities Questionnaire* was distributed amongst adolescents before attempting to design the strategy.

The *Adolescent Internet Use And Internet Activities Questionnaire* was designed by the researcher based on the specific information needed in order to design the strategy, i.e. the website. The questionnaire was developed since the researcher could not find another appropriate questionnaire supplying the necessary

information applicable to this very specific study. The literature study, along with the responses from the focus group of experts, identified possible areas of concern as well as popular activities of adolescents on the internet. In order to know what was relevant for the specific population, the *Adolescent Internet Use and Internet Activities Questionnaire* was compiled with specific questions relating to the use of the internet by adolescents. The questionnaire was designed for the specific research and contained distinct questions that would aid in the understanding of the specific population. Therefore the literature review as well as the responses from the focus group of experts was incorporated into this questionnaire. The questionnaire has been attached as Addendum B.

6.3.1.2 *Qualitative data.*

Qualitative research was conducted during the previous section where a focus group was assisted by experts. After the information from the focus groups was combined with the literature review, adolescents were asked to engage with the website. Adolescents had time to view the website, ask questions on functionalities and comment on the usability of the website. Their experiences provided another set of qualitative data in the form of feedback extrapolated from within focus groups. Qualitative research provided the opportunity to gain a more in-depth understanding of the adolescents' experience, better than merely stating research findings by means of numerical value. This was important since one cannot design a program for a specific group and developmental phase without their input. Since qualitative research is more focused on understanding a social phenomenon (Leedy & Ormrod, 2005), it was therefore more appropriate for this study. Seeing that various methods of data gathering were incorporated, triangulation was used as it refers to "multiple methods" of data gathering which helps to form an understanding of the research

(Heppner, Kivlighan & Wampold, 1999, p. 250).

The various forms used to gather data enhanced the credibility of the research. Maree and Van der Westhuizen (2007) call this process “crystallisation”, which refers to using various methods to gather and analyse data in order to gain more insight into what is being studied. Maree and Van der Westhuizen (2007) defined crystallisation as the “practice of ‘validating’ results by using multiple methods of data collection and analysis” (p. 40).

As indicated previously, this was done by using a combination of qualitative methods as well as quantitative methods for gathering of data. Lastly, deductive reasoning was applied since the general premise was that certain activities on the internet can be dangerous for adolescents.

6.3.1.3 Deductive reasoning

Burney (2008) stated that deductive reasoning moves from the general to the specific. Inductive reasoning in turn works from the specific to the general (Burney, 2008). Deductive reasoning was used within this study since the general premise was that the internet contained dangers that could be harmful to adolescents. From this premise, the research questions were formulated to break down the general into the more specific. Adolescents were chosen to participate in the research. The following section focuses on the selection of participants.

6.4 Participants.

In this study the population consisted of adolescents in participating schools in the northern suburbs of Cape Town who make use of the internet.

Participants for this study were chosen via cluster sampling. Within cluster sampling; schools within the northern suburbs of Cape Town were approached and requested to participate in the study. From these schools, classes were then

randomly introduced from which participants were also randomly appointed and requested to participate voluntarily. Those who agreed were organised into focus groups. This method was used since schools provided better access to the sample of adolescents. The population is too big and it was therefore easier to first sample schools and then randomly sample adolescents within the schools (Strydom, 2011). The reason for using random sampling to choose adolescents in the northern suburbs of Cape Town was because this method truthfully portrayed the current knowledge of safe internet practices which adolescents had.

Criteria for selection of schools:

- i. Schools with pupils between the ages of 12 and 18;
- ii. Schools willing to participate voluntarily;
- iii. Schools that have computer and internet facilities;
- iv. Schools that are situated in the northern suburbs of Cape Town;
- v. English and Afrikaans medium government schools.

Criteria for selection of adolescents:

- a. Grade 8-12 (high school);
- b. Any gender;
- c. Afrikaans or English-speaking;
- d. Must attend a school in Cape Town which adheres to above-mentioned criteria.

After the criteria for selecting participants were established, the use of specific instruments to obtain data from the participants had to be explored.

6.5 Measuring instruments.

William (2006) defines measurement within social research as the process of observing and recording the observations that are collected as part of a research

effort. Various types of instruments can be used that is appropriate within a study in order to obtain the necessary data.

A structured questionnaire, along with focus groups, were used as measuring instruments to gain feedback from adolescents.

6.5.1 *The questionnaire: Gathering and analysing of data.*

Using a structured questionnaire delivered factual information about the usage and visitation of sites that are popular, how often these sites are accessed, etc. A structured questionnaire consists of closed questions with predefined answers (Hague, 2004), which was suitable for use within the adolescent group who prefer quick and easy assignments.

A structured questionnaire is also used when accessing a large population (Hague, 2004). This was beneficial for the research, since it allowed the researcher to reach a large amount of participants and therefore provided the appropriate knowledge to set up an age appropriate website in order for the adolescents to not only learn from the website but to enjoy it. These questionnaires were analysed and represented as *quantitative data*.

6.5.2 *Focus groups: Gathering and analysing of data.*

The above-mentioned questionnaire was used to obtain the necessary input from adolescents to guide the development of the website as tool within the psycho-educational strategy. After adolescents were requested to explore this strategy by having them engage with the proposed website, they then had to participate in a focus group. One focus group was held at each of the participating schools as part of the pilot study. After integrating the suggestions formulated from the pilot study, three additional focus groups from each of the two participating schools were held (Chapter 6 includes findings and procedures regarding the focus groups and the

number of participants). The feedback from the focus groups were documented and analysed qualitatively.

According to Maree (2007), focus groups provide the researcher with an opportunity to hear participants' general perspectives as well as encourage them to enter into debate regarding the specific problem. This enables the researcher to gain as many views and perceptions as possible in order to obtain answers to the research question (Gill, Stewart, Treasure & Chadwick, 2008; Maree, 2007). The focus groups provided more qualitative feedback concerning experiences and opinions of adolescents. This offered the necessary information regarding the strengths and weaknesses of the strategy to aid further development.

In order to successfully follow the above-mentioned data collection methods and have access to adolescent participants, the following procedures were put in place.

7. Procedures

The following procedures were followed during the study:

Permission was requested from and granted by the Western Cape Education Department after which schools were approached to participate (Addendum A). Participating schools in the northern suburbs of Cape Town were accessed to randomly select adolescents from grade 8-12.

Adolescents were:

- i. firstly requested to participate voluntarily;
- ii. requested to complete a voluntary questionnaire pertaining to their current internet usage (the questionnaire was structured and developed to gain insight into the current use and understanding of the internet by adolescents);
- iii. After the questionnaires were analysed and quantitatively assessed, the

randomly selected adolescents participated in focus groups. These focus groups were exposed to an interactive website with information designed to educate them on safer internet use. [The website was designed at the hand of the input from experts like computer teachers, a website designer, play therapists, social workers, counsellors and parents during a focus group.]

- iv. The focus groups formed an integral part of the study since it was an informative method of gaining understanding regarding the effectiveness and relevance of the website. The focus was on the experiences of the adolescents concerning their positive and negative opinions of the website. This was done in order to formulate findings, conclusions and recommendations.

8. Ethical Aspects

The following ethical aspects are relevant within the research and are therefore discussed accordingly:

i) Privacy and voluntary participation

The first ethical consideration is the right to privacy and voluntary participation. According to Bless and Higson-Smith (2000), this indicates that participation in a study should be voluntary and participants may refuse to give information. Privacy includes gaining direct consent from each participant as well as from adults where children are involved. With regard to the ethical implications of this study, every randomly chosen participant was individually asked whether or not they would be willing to take part in this study.

A letter explaining the expectations of the research and the study was given to each participant (Addendum C). All participants were younger than 18 years and had to obtain permission from their parents. Parents co-signed the letter, along with the

participant and the researcher, as proof that permission was granted and that participation was voluntary (Addendum C).

A letter of consent was obtained from the Western Cape Education Department as well as the directors of education from both the districts included in the study (Addendum A). Concerning confidentiality and privacy, the participants were informed that any information obtained in connection with this study, by which any individual participant could be identified, would remain confidential and would only be disclosed with permission or as required by law.

ii) Anonymity

The second aspect mentioned by Bless and Higson-Smith (2000) refers to anonymity. Anonymity in this study was maintained by not using participants' names but using a number when referring to each participant in the research report instead. No mention was made of the names of the schools. Information was locked up and only the researcher and supervisor will have access to it.

iii) Confidentiality

Bless and Higson-Smith (2000) also mention confidentiality. Confidentiality refers to the fact that data is only used for the purpose as stated by the researcher and will not be given to any other person for any other reason. Within this study, the researcher was the only one who handled the data and numbering of participants. No information will be provided to any other party.

iv) Payment

Babbie and Mouton (2001) state that all participants should be informed that they should not expect any rewards for participating in the study. This was clearly communicated before the commencement of the study.

v) No harm to participants

According to Babbie and Mouton (2001), research should never intend to harm or injure any participants in a study. The participants were not exposed to any danger. It was also emphasised that if any participant experienced any discomfort or trauma due to the study, an appropriate therapist or school counsellor would attend to them.

The research was conducted within a familiar setting at participating schools so as not to cause any anxiety of them being removed. Participating was in group format and participants were therefore never alone or individually exposed.

The dissertation also abides by the North-West University's ethical code of conduct and was approved by the Ethical Committee of North-West University. Ethical approval for the research was obtained from the North West University Ethics Committee under number **NWU-00060-12-A1**.

9. Data Analysis

Data analysis refers to the process of examining data and finding patterns, trends or relationships within the data (Rabinowitz & Fawcet, 2013). Data analysis was done by analysing data quantitatively as well as qualitatively.

9.1 Quantitative analysis of data.

Descriptive statistics gathered from the questionnaires were used. Descriptive statistics refer to the way the researcher organises and summarises data in order to create meaning (Sullivan, 2010). The questionnaires were evaluated and summarised as percentages. The data obtained from the questionnaires were used in developing an appropriate psycho-educational strategy for safe internet use. This data is contained in Chapter 6.

9.2 Qualitative analysis of data.

The responses from the focus groups were recorded and listened to afterwards in order to analyse and integrate the responses so as to improve the final strategy. All of the information obtained from the focus groups were documented and analysed through transcription, in order to see if there were emerging themes that could be identified from the feedback given from the adolescents.

The different themes or patterns obtained from the data were organised and then categorised through coding (Saldana, 2013). Coding was done along with an external researcher in order to enhance accuracy. The summaries of all transcripts were coded with colour indicators and proposed themes and then given to an external researcher who was requested to examine the themes together with the coded information. The researcher commented on and added to the themes.

10. Structure of Research Report

The results are presented in dissertation format according to the following chapters:

Chapter 1: Background, motivation and practical lay-out of the study
Chapter 2: Adolescence: Developing and contacting the field
Chapter 3: The internet
Chapter 4: Identifying and discussing focus areas for the psycho-educational strategy
Chapter 5: Research methodology
Chapter 6: Findings of the research
Chapter 7: Final discussions, recommendations and conclusions

11. Conclusion

This chapter aimed at introducing the reader to the research process and focused on the methodology and blueprint of the research. This chapter also investigated the relevant ethical considerations in order to safeguard participants. Finally, the structure and outline of the research were provided as an overview. The following chapter will explore the literature as it pertains to the study in order to explain important theories that will substantiate the research, as well as focus on the developmental theory as it relates to the phase of adolescence.

CHAPTER 2:

ADOLESCENCE:

DEVELOPING AND CONTACTING THE FIELD

“The adolescent stage has seemed to me one of the most fascinating of all themes. These years are the best decade of life ... it is a state from which some of the bad, but far more of the good qualities of life and mind arise” (Hall, 1904, p. 351).

1. Introduction

Within this chapter the phase of adolescence will be discussed by looking at Developmental, Complexity, Systems and Gestalt theories which explain the intricacies within this age group. It is important to recognise the adolescent and his/her processes, tasks, challenges and needs in order to understand the influence the internet has on the adolescent as a whole. Considering the adolescent within this phase will further enhance one’s consideration of the adolescent’s use of the internet, as well as dangerous activities associated with it. When designing a psycho-educational strategy at adolescent level, it is important to consider the process and ways in which adolescents connect with their world, as well as their developmental phase.

According to the American Academy of Child and Adolescent Psychiatry (2011), it is important to take into account that every adolescent is a person with a unique personality and special interests, likes and dislikes. Although the adolescent is an individual, Gestalt theory argues that a person cannot be viewed in isolation (Perls, Hefferline & Goodman, 1951). This forms the premise of Gestalt theory, and especially the Field theory, as well as the Complex (Hardman, 2010; Morrison, 2006)

and Systems theory (Skyttner, 2001). In order to understand the functioning of an individual, the individual's field, background and systems which he or she contacts, have to be explored. It is therefore important to view the adolescent holistically by considering all influences and aspects that impact them within this phase. A holistic view will be gained by integrating various theories as they influenced the lens through which the adolescent was observed. The next section firstly considers the phase of adolescence.

2. Developmental Theories

Developmental theories have many different theorists and phases. Within this section, developmental theory was specifically focused on; this provided insight into how the adolescent functions socially, biologically, emotionally as well as cognitively.

2.1 An overview of human development.

When looking at development within life and learning, Eggen and Kauchak (2007) explained that development is the orderly changes in individuals that result from a combination of experience, learning and maturation. Development refers to all the physical and psychological changes in an individual during the lifespan (Bukatko & Daehler, 2004; Sigelman & Rider, 2009). Development therefore refers to the growth of an individual in many spheres of life, such as emotionally, psychologically, physically as well as socially. Children develop through a combination of experience, learning and maturation (Eggen & Kauchak, 2007; Larson, 2011). This process of development is complex. Eggen and Kauchak (2007) identify specific principles of development which should be taken into account before looking at the specific areas and theories of development:

- i. Development happens through learning: during the process of learning, there is an increase in understanding and knowledge which leads to improved

- skill(s). This means that the adolescent learns from his environment and situations as he or she moves through life. The new knowledge gained enables the adolescent to have the skills or abilities to do certain tasks.
- ii. Development is enhanced through exposure to certain experiences. For example, a child growing up in a musical family has more exposure to music and might develop some basic competencies regarding music compared to another child not having the same experiences and/or musical ability.
 - iii. Social interaction can influence development. Sharing of knowledge and experiences between individuals can lead to progress in development.
 - iv. Language also influences development since it provides a medium through which thoughts, ideas and knowledge are conveyed.
 - v. Development is a process of growth and is continuous and relatively orderly. People learn and grow through experiences and do not merely find themselves suddenly knowledgeable and fully mature without the process of growth.
 - vi. Individuals develop at different rates; some people are faster learners than others.
 - vii. Development is lastly influenced by maturation, genetically controlled, age-related changes in the individual. During middle childhood certain biological and age-related changes happen before adolescence. Then during adolescence puberty follows.

The above-mentioned principles highlight many important aspects of development. Firstly, an individual is shaped by various elements such as the influence of the family system, culture, cognition, genetics, society, etc. Although developmental theorists generally look at the progress within these various spheres

of life, their focus areas and views differ from each other (Vogler, Crivello & Woodhead, 2008). Secondly, development is a process; it is not something that happens instantly. Thirdly, the changes that occur during adolescence differ from person to person.

What seems to be the underlying similarity is that adolescents develop skills and abilities socially, emotionally, cognitively and biologically as they move through adolescence into adulthood – each adolescent at his or her own pace.

The various areas of development must be explored in order to gain a holistic view of the adolescent and what he or she experiences during this phase. The following section focuses on the various areas of development that occur during the adolescent phase.

2.2 Change from childhood into adolescence.

The term adolescence has been defined in various ways. Adolescence is a phase of growth within a person's lifespan, characterised by a developmental transition which entails major, interrelated physical, cognitive and psychosocial changes (Papalia, Olds & Feldman, 2006). Adolescence is a complex phase as it is a bridging period between childhood and adulthood (Geldard & Geldard, 2004; Louw & Louw, 2007; McNeely & Blanchard, 2010). Hill and Wagner (2009) refer to this as a troublesome period which involves various crucial transitions. Theorists vary on the onset and ending of adolescence when looking at age. Louw and Louw (2007) are of the opinion that adolescence starts between the ages of 11 and 13 and ends between 17 and 21 years of age. Geldard and Geldard (2004), in turn, argue that adolescence starts between 11 and 14 and ends at 15 to 18 years of age. Arnett (2007) discussed adolescence not as only one phase but as two separate periods: early adolescence (10 to 14 years) and late adolescence (15 to 18 years). For the

sake of this study, the adolescent group that was interviewed was between 12 and 18 years of age, and therefore fit into all the above-mentioned categories in order to be classified as adolescents.

There is an array of opinions about the adolescent developmental period as well as the changes that developmental theorists believe accompany the phase of adolescence. Three spheres of changes which are focused on during adolescence are: biological, socio-emotional and cognitive changes (Bjorklund & Blasi, 2011; McNeely & Blanchard, 2010; Santrock, 2008). Eggen and Kauchak (2007) similarly discuss adolescent changes by looking at cognitive development and language acquisition, as well as personal, social and emotional development. Various sources and opinions were integrated regarding adolescents and the changes that influence them, into the following subsections:

2.2.1 *Brain and cognitive processes.*

The brain and cognitive functions form part of the development during adolescence. The two areas that will be discussed within this section will include the physical and cognitive changes in brain functioning.

a) The adolescent brain

According to Papalia et al. (2006) the adolescent brain experiences two major changes:

1. The growth and cutting of grey matter.
2. An emission in production of grey matter, including neurons, axons and dendrites which begins just before puberty and has been found to be related to hormonal changes.

These two areas of brain development indicate that there is a definite change in cognitive function during adolescence. The growth and change which take place in

the adolescent brain is situated in the prefrontal lobes, which are responsible for planning, reasoning, judgment, emotional regulation and impulse control (National Institute of Mental Health, 2011; Papalia et al., 2006). After growth has occurred, connections which are not used are cut and the connections which are used are strengthened. This prefrontal cortex is the largest and slowest area to develop and the growth process within this area undergoes the most drastic changes during adolescence (Bjorklund & Blasi, 2011; National Institute of Mental Health, 2011). Since the prefrontal cortex is relatively underdeveloped during adolescence, the brain relies on another area called the amygdala, which is linked to both fear and pleasure responses (Casey, Jones & Hare, 2008).

In the early stage of adolescence, they tend to make use of the amygdala (found within the temporal lobe of the brain) to make decisions. The amygdala has major involvement in emotional and instinctual reactions (American Academy of Child and Adolescent Psychiatry, 2011; Papalia et al., 2006). The use of the amygdala creates an inclination to react to instincts. These findings suggest that adolescents do not have the same abilities as adults when controlling impulses, anticipating consequences, and making reasoned decisions (National Institute of Mental Health, 2011). This is also seen as a possible reason why some early adolescents tend to make unwise choices, since immature brain development may permit feelings which will override reason (National Institute of Mental Health, 2011).

This aspect of brain function is important to take into account regarding the online behaviour of adolescents. This will be discussed further in Chapter 3.

Since adolescent brains are still developing, it is important for them to practise some control over their brain development by learning to order their thoughts, understand abstract concepts and control their impulses (National Institute of Mental

Health, 2011; Papalia et al., 2006).

Finally, the changes which occur in the adolescent brain substantially increase the cognitive abilities (Bjorklund & Blasi, 2011). One cannot discuss the physical changes in the brain without also discussing the cognitive changes and qualities during adolescence.

b) Cognitive development during adolescence

Mitchell and Ziegler (2007) define cognitive development as “the discipline concerned with studying the development of thinking” (p.15). Gordon and Browne (2008), refer to cognitive development as being the development of the mind, as well as the child’s growth, which includes changes in mental structures that occur as children discover and interact with the world around them. There are theories focussing specifically on the cognitive aspect of development. Theories of cognitive development include:

- a. Piaget’s cognitive developmental theory (Piaget, 1957);
- b. Vygotsky’s sociocultural cognitive theory (Vygotsky, 1987);
- c. Information-processing theory (Meece & Daniels, 2008).

These theories were the most prominent in the literature when investigating the way in which cognitive development takes place throughout life. Each of these theories will be discussed briefly as well as how they pertain to the adolescent.

i) Piaget’s Cognitive Developmental Theory:

Jean Piaget (1957) proposed that children pass through a sequence of stages, each characterised by different ways of organising information and learning (Eggen & Kauchak, 2007; Meece & Daniels, 2008; Mitchell & Ziegler, 2007). He divided development into four different stages:

Stage 1: Sensory-motor (0-2 years)

Stage 2: Pre-operations (2-7 years)

Stage 3: Concrete operations (7-11 years)

Stage 4: Formal operations (11 – Adult)

Piaget argued that each stage involves a different way of thinking about the world and that each person's cognitive abilities form a coherent whole (Arnett, 2007; Bjorklund & Blasi, 2011). In other words, the way a person thinks, when dealing with one aspect of life, should resonate in all other aspects of life as well, since all thinking forms part of the same mental holistic structure (Piaget, 1957).

The phase in Piaget's theory that is relevant to understanding the adolescent, is the stage of formal operations. Cherry (2012) explains formal operations as the ability of adolescents (from 12 years of age) to think concretely and specifically. Instead of relying on previous experiences, adolescents begin to consider possible outcomes and consequences of actions. During this phase, the child therefore develops to such an extent that he/she can think logically about abstract ideas and hypotheses as well as concrete facts (Berns, 2012; Meece & Daniels, 2008; Mitchell & Ziegler, 2007). Mitchell and Ziegler (2007) argue the latter by stating that during this phase the person has gained the ability *to reason* systematically in hypothetical manner. Not only is the adolescent able to understand abstract constructs, but the adolescents are also able to reason and think systematically. Mitchell and Ziegler (2007) mention that this is a stage which fortunate people, who have gained enough experience, should enjoy and is not necessarily available to all. Culture and experiences should be taken into account. Cultural experiences and its influence on adolescent development will be discussed below.

Roberson and Kjervik (2012) argued that the change that occurs during the formal operational stage is the shifting of the adolescent's thinking from what is

actual/real to what is possible. It can be agreed upon that the change in thinking during adolescence is important to take into account when viewing the adolescent holistically. It is however very important to view the adolescent as a whole, acknowledging uniqueness, the influence of other factors, situations and experiences which could also influence thinking and perceptions of life. In essence, although cognitive changes are important to take note of, it is merely one aspect of the complex understanding of the adolescent. Cognitive development as proposed by Piaget (Bjorklund & Blasi, 2011) has valuable insights into the functioning of the adolescent. Piaget however has been criticised for not acknowledging cultural and societal influences on cognitive development (McLeod, 2007). Cherry (2012) also noted some criticism of Piaget's theory.

Firstly Piaget is criticised for his research methods as his cultural environment entailed his own family, which he observed as basis for some of his concepts and ideas. Secondly, Piaget has been criticised for stating that a person automatically moves towards the next phase in formal operations and ignores environmental factors. Lastly, Cherry (2012) mentions that Piaget did not take children's abilities into account when verbalising his stages. Cherry (2012) does, however, praise Piaget for the interest in child development which was aroused through his research and also the impact on the educational aspects of his theories that developed from some of his ideas.

Vygotsky (1987) also focuses on cognitive growth but acknowledges the relationship it has to society and experiences within society. Vygotsky (1987) goes beyond Piaget's explanation of cognitive development by looking at other societal aspects which influence the cognitive development of the adolescent.

ii) Vygotsky's Theory of Cognitive Development:

Vygotsky's (1987) theory differed from that of Piaget in the sense that he focused more on the individual's relationship to society rather than inherent growth through experience. He argued that it is impossible to view the child in isolation and that the child cannot develop without taking the culture and social influences into account (Vygotsky, 1987). Vygotsky's main premise was that a child learns and acquires knowledge and language through contact with cultural practices and social settings (Arnett, 2007; Eggen & Kauchak, 2007; Meece & Daniels, 2008; Vygotsky, 1987).

The integration of development and social influence was termed the "zone of proximal development" (Vygotsky, 1987, p. 90). According to Vygotsky (1987) "an essential feature of learning is that it creates the zone of proximal development; that is learning awakens a variety of developmental processes that are able to operate only when the child is interacting with people in his environment and in collaboration with his peers" (p. 90). Society, parents and peers therefore have an impact on the development of the adolescent.

Vygotsky's focus on the impact that society and culture have on cognitive development was the major difference when comparing his views with that of Piaget (McLeod, 2007). This is why Vygotsky's theory is often also referred to as sociocultural theory, since his view of cognitive development is both a social and a cultural process (Arnett, 2007). Vygotsky argued that development cannot be understood without mentioning the cultural context within which it is embedded. Subsequently, mental processes in the individual have their origin in social processes (McLeod, 2007).

The influence that the cultural norms of society (as discussed above) have on an individual resonates with Systems theory (as discussed in Section 4 below) as well

as Complexity and Gestalt theory. The individual is not an isolated organism and does not develop in a vacuum. The outside world, culture, society, the field, systems and/or others influence the functioning of an organism. Vygotsky's theory along with Gestalt places emphasis on the premise that an individual develops as part of a field.

This resonates with Bronfenbrenner's theory (Bronfenbrenner, 1989) of the individual forming the centre of various systems which interact with each other. The field or system is made up out of others, experiences, culture, society, etc. It can be agreed upon that the field should be taken into account when looking at adolescents' cognitive development and ways of thinking and decision-making. Once again, although it is important to understand the field/cultural practices/ social settings in which the adolescent finds himself, one cannot just focus on these social aspects.

The adolescent is a unique person, with unique traits, experiences and individuality that should be acknowledged. The uniqueness of an individual goes beyond social aspects; it also influences the way in which the adolescent processes information and makes decisions.

iii) Information Processing Theory:

Berger (2006) is of the opinion that information processing goes beyond Piaget's stages of cognitive development and Vygotsky's cultural importance. It focuses on the mental processes which help to search for information, analyse situations and then to express information so that others can understand. This view of cognitive development can be described as a process of continuous growth (Arnett, 2007) and not specific stages as proposed by Piaget (1957). Papalia et al. (2006, p. 178) argued that the information processing theory "seeks to discover what children do with information from the time they encounter it until they use it".

According to Meece and Daniels (2008), this theory focuses more on this exact

process of discovering what to do. It especially emphasises the thinking process and how a person consists of parts that can be broken up into smaller sections which are more basic to use (Bjorklund & Blasi, 2011). The following figure clearly explains the processing of information by a person as proposed by this theory:

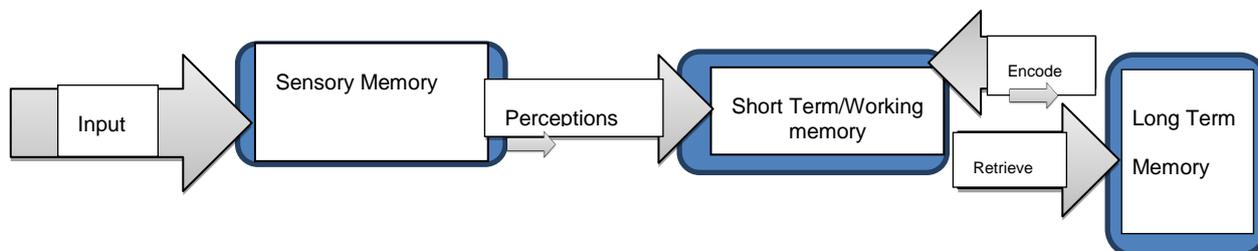


Figure 2.1: Information Processing Theory (Meece & Daniels, 2008).

Many theorists explain this theory by looking at the analogy of computer functioning (Bjorklund & Blasi, 2011). It focuses on the *process* of thinking. This resonates with the idea of the contact cycle of experience as explained in the Gestalt section that follows (Section 3). Similarities between the Gestalt cycle of experience and the information processing theory were identified. The similarity firstly lies within the understanding that processing ideas and thoughts follow a process of having a need and working through the need. When considering both theories, it explores the complexity of not only decision-making but how we organise our thoughts. In order to explain this process, the various steps were separated, explaining each one as a separate stage of thinking:

The adolescent experiences a sensory awareness (stage 1 – sensory awareness) of a situation / problem / figure that comes into the foreground; this figure is then dealt with (stage 2 – mobilisation/choice of appropriate action). The adolescent looks for the appropriate way to contact the field from his previous “perceptions”/experiences or new alternatives in order to solve or deal with the problem; (stage 3 – action) by drawing from memory in order to solve the problem.

After solving the problem, it is encoded (stage 4 – satisfaction) into the brain as part of gaining experience and then this newfound experience can be retrieved when a new Gestalt emerges in this newly created fertile void (stage 5 – withdrawal).

Furthermore, it is argued that the memory that is used during the process of cognitive thought stems from the individual's experiences, gained from his field – i.e. society and culture as well as others in the field. The cycle of information processing theory as integration between information processing and the Gestalt cycle of experiences can be visually illustrated as follows:

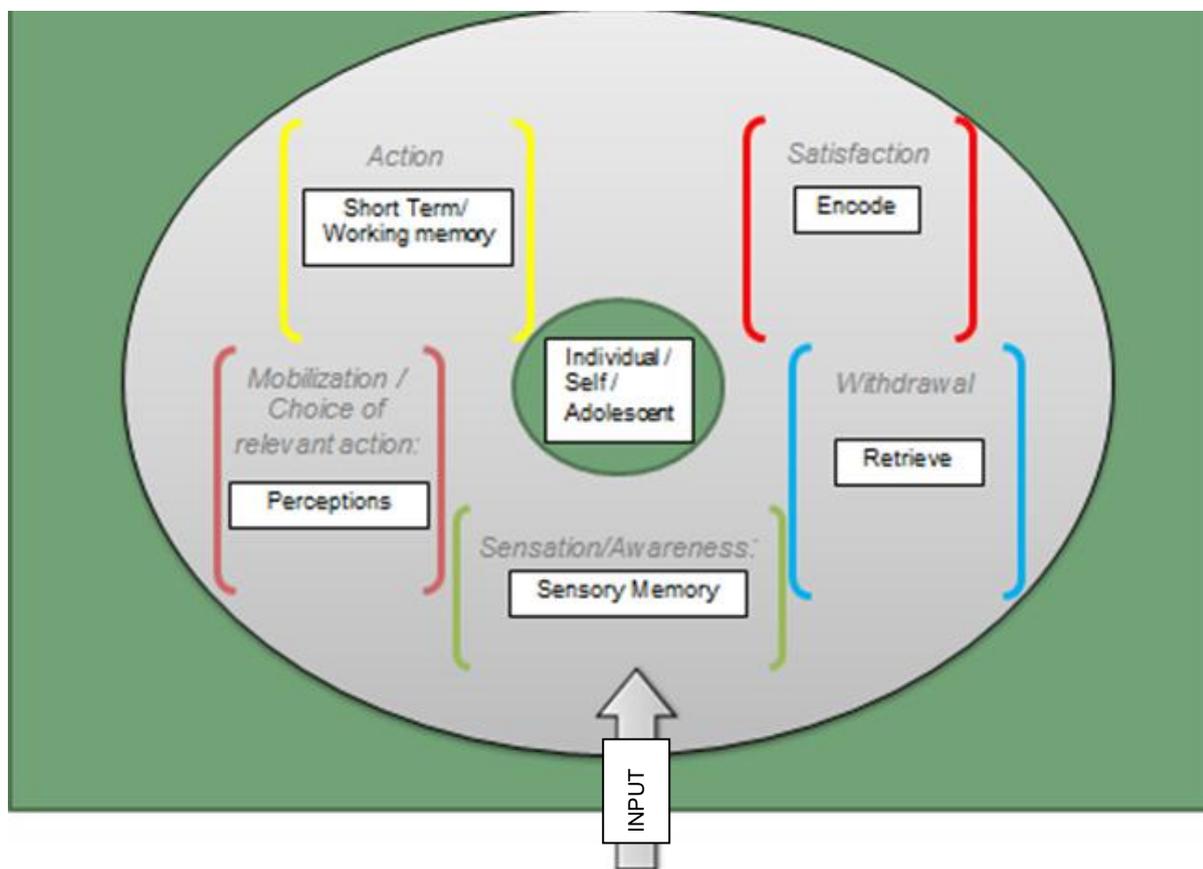


Figure 2.2: Cycle of information processing.

The idea that the individual/self/adolescent is influenced by everything that surrounds him echoes through the various discussed theories (environment/field/ society/culture etc.). It was included within this chapter and the discussion of

adolescence since it is concomitant to every aspect of development. Further, it is argued that the information processing theory as a process is much like the one proposed by Gestalt in terms of the cycle of experience. The need that arose to integrate these theories was to show *how* the adolescent's cognitive *functioning* and process of thinking and making choices *could be understood*, and to gain *perspective* into how the adolescent contacts the *field of the internet*.

In the following chapter the focus rests on the adolescent on the internet and how the adolescent interacts with this field and contacts the field. It is argued that there is a need within the adolescent to contact the field of the internet. To understand this need, it is important to understand the process that happens in the brain and thoughts as well as the factors that influence this process. These factors include the following sections of adolescent development, combined with the cognitive processes explained above.

2.2.2 Biological changes during adolescence.

Adolescence is a period which includes many biological, bodily and hormonal changes for the adolescent child. The word 'puberty' is often used when talking about adolescence. According to Meece and Daniels (2008, p. 100) puberty is much more than this however, and refers to the period in which adolescents become "capable of sexual reproduction". Gluckman, Low and Franko (2011) similarly define puberty as "the period in which a juvenile's previously inactive gonads (testes in the male; ovaries in the female) become activated, with the ensuing hormonal changes leading to physical and psychological changes allowing for reproductive competence" (p. 21). These biological changes include (Arnett, 2007; Gluckman et al., 2011, Meece & Daniels, 2008):

- Acceleration in growth and changes in appearance.

- Development of sex characteristics and hormonal changes.
- Changes in body composition.
- Changes in circulatory and respiratory systems.

Louw and Louw (2007, p. 283) also note the biological and physical changes within adolescents and focus on the fact that adolescence is characterised by “rapid and extensive body growth” as well as “the development of sexual maturity”. Not only is puberty a time of sexual maturation and biological changes, but Papalia et al. (2006) note that it is also to signal the end of childhood and that the psychological implications from puberty continue into adulthood. It is therefore evident that vast changes happen biologically for the adolescent. It is important to note that these changes have psychological effects for the adolescent and it is important to accept these physical changes which occur during adolescence (Louw & Louw, 2007).

The impact of the changes in body image was important to mention since this is an aspect that influences many social activities on the internet. Sharing photos (appropriate and inappropriate photos), sexting (sending and receiving cell phone messages with sexual wording or content), viewing pornographic websites and posting sexual innuendos online can be understood when regard is had to the above-mentioned section. It is argued that because adolescents go through the process of puberty and sexual maturation, they are drawn towards vices which include sexual content, innuendos or visual imagery, since it is a new field of experience. The sexual acts that adolescents engage in online can be related to aspects of biological development that were mentioned above. Along with biological development, adolescents experience psychological changes during this period.

2.2.3 Emotional development and psychological change.

As stated above, biological changes within adolescence are accompanied by

psychological changes (Santrock, 2008). In the phase of adolescence, emotions are heightened and are accompanied by feelings of self-consciousness, embarrassment, as well as excitement about adulthood (Pickhardt, 2010). Some adolescents express feeling less happy and angrier during this phase (Berger, 2006).

Another aspect regarding emotions during adolescence is that no matter what the emotional state is, Santrock (2008) notes that emotions are heightened. In other words, adolescents experience intense emotions since these are either very high (i.e. very happy) or very low (i.e. very sad and even depressed). Mood swings, or moodiness, is associated with adolescents and Santrock (2008) notes that this is normal during early adolescence. Pickhardt (2010) identifies some of the normal emotions experienced through adolescence, i.e. depression, loneliness, self-rejection, stress, anxiety and confusion. Pickhardt also mentions “good” emotions: pride (focusing on accomplishment), love (focusing on devotion), joy (focusing on fulfilment), interest (focusing on attraction), or gratitude (focusing on appreciation). In general, people are happy to experience these and other positive feelings.

Various reasons can be identified for the variety of emotions and the emotional changes which occur, such as biological and hormonal changes, societal pressures (such as sport and school performance) as well as the onset and difficulties of puberty. Geldenhuys (2010) is of the opinion that emotional pressure from peers and family can lead to adolescents withdrawing due to a fear of failing. However, not all adolescents view this period as a time of turbulence. According to Berger (2006, p. 527) “most adolescents, most of the time, are happy and healthy, worthy of admiration and respect, not suspicion or fear”.

In conclusion it seems evident that social and family influences are important during the adolescent’s development. Since adolescents are at the age where

emotions are sensitive, traumatic experiences online can lead to emotional distress. One aspect specifically responsible for emotional responses is acceptance by peers and other social relationships. One of the main online activities adolescents participate in, is social networking and communication; communication and socialisation with others hold value for them.

2.2.4 Social changes: Family, society and peer relations.

Berns (2010, p. 6) defines socialisation as “the process by which individuals acquire the knowledge, skills and character traits that enable them to participate as effective members of groups and society.” Geldard and Geldard (2004) refer to adolescence as a time where a major need to gain a place within their society (*field*) develops within the adolescent. Louw and Louw (2007, p. 330) similarly argue that the adolescent experiences the need of “belonging” to a group.

There are a number of social changes and social influences which help to form and shape the adolescent. Firstly, there are a number of theories. One which has been discussed is Vygotsky’s theory of social and cultural influences of development. A second theory concerning the impact from “the other”/society/the field on the adolescent is the Gestalt Field Theory (Parlett, 2005). Another theory is Bronfenbrenner’s Ecological Theory (Bronfenbrenner, 1989) arguing the impact of various outside systems like family, community and world views on the individual (Bronfenbrenner, 1989). These theories also echo the Systems Theory (Laszlo & Krippner, 1998) and Complexity Theory (Hardman, 2010). All of the above mentioned theories resonate the impact of society/community/field/situation/outside on the individual/organism/adolescent. Each of these theories adds their own value and understanding of the individual’s experiences and behaviours.

What is evident, is that society, whether family, community, culture or friend,

impacts the life of the developing adolescent. McGoldrick and Carter (2003, p. 383) note that human beings “cannot exist in isolation” and that the “most important aspects of human experience are relational”. Gibbons, Pomery and Gerrard (2008, p. 45) argue that social influence is a “dominant” force during the adolescent phase and that there are two primary sources of social influence: peers and family (mostly parents but in some cases siblings as well).

Peer groups are among the most significant social contexts during adolescence (Santrock, 2008). Along with making friends and building relationships, many adolescents want to belong to a peer group whose members share common attitudes and interests (Berger, 2006; Geldard & Geldard, 2004). According to Santrock (2008), adolescents conform more easily to the standards of their peers than they do in earlier developmental stages. Louw and Louw (2007) also emphasise adolescents’ need to conform when belonging to a peer group.

Berns (2012) refers to the time spent with peers as “hanging out”. Adolescents “like to ‘hang out’ – talk, watch television listen to music, play video games, be seen, see who else is ‘hanging’ with whom, wait for something to happen” (p. 273). When in a group, adolescents conform to the ways of the peer group. This can include the music they listen to, the clothes they wear, the places they go to, leisure activities as well as choosing partners for romantic relationships. According to Kiuru, Aunola, Nurmi, Leskinen and Salmela-Aro (2008), during adolescence individuals tend to start spending more time in peer groups, and through these interactions with their peers, they obtain certain social skills, attitudes and new experiences. Peers seem to play a crucial role in this process of social development (Pfeifer et al., 2011).

Peer influence cannot be discussed without touching on the aspect of peer

pressure during adolescence. Berger (2006) is of the opinion that interaction with peers during adolescence can be constructive as well as destructive and that peer pressure has become a stereotype of adolescence. Brown, Bakken, Ameringer and Mahon (2008) also acknowledge the use of this term “peer pressure” and how it falsely portrays a negative working in the relationships of adolescents. Brown et al. (2008) do recognise that peer pressure is a reality during adolescence, although it can be good and/or bad, as stated above by Berger (2006).

Peer pressure can however be destructive, especially during adolescence. Whether peer pressure leads to negative and delinquent behaviours or positive, healthy adjustments is determined by the group of which the adolescent is part of. Adolescents associate with other adolescents whose interests and values are similar (Berger, 2006). When the group holds high values, the individual tends to respond positively; but when the group engages in risk-taking behaviour, the adolescent might feel prompted to join in. This argument is illustrated through the following example given by Berger (2006):

One teenager (adolescent) finds friends who smoke cigarettes and drink beer, and together they share marijuana and vodka at a party. An opposite teenager example might be the teenager who chooses friends who enjoy maths, and together they join the maths club and sign up for AP calculus (p. 511).

It is therefore evident that peer pressure is not in essence a negative thing; it depends on the social group/peer group which the individual forms part of. Papalia et al. (2006) summarise the above argument concerning peer pressure by stating that attachment to peers does not necessarily forecast trouble, unless the attachment is so strong that adolescents are willing to give up things like obeying parents, doing

homework or developing his or her own self in order to gain the approval of their peer group, or to gain popularity amongst their peers.

Family influences are also important to mention within this section. Arnett (2007) found that as the individual moves from childhood into adolescence, the amount of time spent with the family decreases. Parents are still important role players during development (Arnett, 2007; Berger, 2006; Santrock, 2008), but the adolescents' previous attachment to their family start to decrease slowly. Papalia et al. (2006) state that the relationship between adolescents and their parents sometimes give way to conflict, since adolescents start growing into more independent individuals and do not want to be dictated to about what to do.

Social interaction is thus very important during the adolescent years, since this is the time when they discover their role within the family, society and within their peer group (Geldard & Geldard, 2004). As Erik Erikson (1950) stated, children identify with their parents and other loved ones as they develop, but when adolescence comes, they start reflecting on relationships and start to develop as individuals. This gives way to the process of identity development.

2.2.5 Identity development.

Kroger (2007) explains identity as "the study of who I am and how my biology, psychology and society interact to produce that subjective sense of the person who is 'genuinely me'" (p. 4). Adams and Berzonsky (2005) found that, during adolescence, a person must form a new identity which enables him/her to cope with life throughout adulthood.

Erik Erikson is probably the most influential academic in the field of adolescent development. Erikson specifically looked at adolescents' struggle with identity by saying that developing identity is like having a crisis. He divided human

development into various stages of crisis (Arnett, 2007; Berns, 2010; Papalia et al., 2006). The following figure shows the different crises that a human experiences throughout life:

Table 2.1:

Erikson's Eight Stages Developmental Model (Erikson, 1950).

Erikson's stages:	Trust versus Mistrust	Autonomy versus Shame and Doubt	Initiative versus Guilt	Industry versus Inferiority	Identity versus Identity confusion	Intimacy versus Isolation	Generativity versus Stagnation	Integrity versus despair
Developmental period:	Infancy (first year)	Infancy(1 to 3 years)	Early childhood (preschool years, 3 to 5 years)	Middle and late childhood (6 years to puberty)	Adolescence (10-20 years)	Early adulthood (20-40 years)	Middle adulthood (40-60 years)	Late adulthood (60 years onward)

Each of the stages in Erikson's theory is characterised by a specific conflict and every conflict can have two "bipolar" outcomes (Papalia et al., 2006). According to Erikson (1950), the adolescent phase forms part of the fifth psychosocial crisis of his developmental theory, namely *identity versus role confusion*. During the fifth psychosocial crisis, the adolescent's task is to establish an identity. Papalia et al. (2006) describe Erikson's view of adolescence as a task to "confront the crisis of identity versus identity confusion so as to become a unique adult with a coherent sense of self and a valued role in society" (p. 461).

Newman and Newman (2006) also argue that during adolescence there seems to be a struggle within the individual when trying to set himself/herself apart

from their world, field, society, family, peers. The adolescent's psychosocial crisis at this age is mostly "group identity versus alienation" (ACT for Youth Centre of Excellence, 2012; Newman & Newman, 2006). In other words, the adolescent's struggle is between a) not being the odd one out of the group, but at the same time, b) establishing an identity that is different to everyone else. Erikson (1950) stated that in their search for identity, adolescents tend to look for continuity and sameness of a group, and in this process they "appoint" others (peers, family, society) to "play the roles of adversaries" (p. 235), but simultaneously the adolescent has to become a "unique adult".

The psychologist James Marcia (Papalia et al., 2006) also noted the conflict within the phase of adolescence and developed four different identity statuses within which an adolescent can find himself:

- i. Identity achievement
- ii. Foreclosure
- iii. Moratorium
- iv. Identity diffusion

The four types of identity statuses as proposed by Marcia differ according to the presence or the absence of crisis and commitment, the two elements that were crucial to Erikson during identity formation (Papalia et al., 2006). In other words, in status one, the adolescent has passed through the period of crisis and has committed to a career and a value system. During status two, the adolescent is still in crisis and is investigating alternatives to his/her current state. The third status is when no crisis has yet been experienced but there is however a commitment to certain goals and values. The last and fourth status is when a crisis may or may not be present, but the adolescent is not committed to anything regardless of a crisis

(Louw & Louw, 2007).

Erikson (1950) also noted that in the search for confirmation by others, in order to establish an identity, there can be a negative opposite, i.e. role confusion. Erikson (1950) calls role confusion the “danger” of this stage of adolescence. Role confusion refers to the process where adolescents over-identify with others to a point where they lose themselves and their unique identity. Berns (2010) agrees that there can be a “dangerous” outcome during this phase. He further notes “that while young people are trying out many roles, which is a normal process, they may be unable to choose an identity or make a commitment and so will not know who they are or what they may become” (Berns, 2010, p. 47).

It is therefore argued that identity development is probably the most crucial developmental task of the adolescent. Identity and the development of “a self” echoes within Gestalt theory as well as the field theory within Gestalt. The way an individual lives in his/her environment and emerges from his/her environment forms part of the basic understanding within the Gestalt theories. Oaklander’s (2006) view regarding adolescence is supported since Oaklander noted that within adolescence:

The major developmental task of the adolescent is to separate and individuate. As we discussed earlier, this is a major struggle and is the cause of much contention in the family (p. 105).

From the above quotation it is once again clear that the adolescent is an individual, but also forms part of a larger system, family, peer group, society, culture and/or field. The interaction between the adolescent and his/her environment forms the main premise of Gestalt theory, which will be discussed in the following section.

3. Gestalt Theory: Foundations, the Field, Cycles and Disruptions during Adolescence

In order to understand Gestalt theory and how it pertains to adolescents and their experiences on the internet, it is important to explore the foundations of what Gestalt theory entails and then look at how it applies to this study.

Gestalt as a term focuses on the idea of “wholeness” (Blom, 2006, Parlett, 2005). Perls, Hefferline and Goodman (1951, p. xi) argued that “the whole determines the parts”. In other words, a person with all his attributes, experiences, changes, culture, biological nature has to be integrated in order for the one person/individual to emerge as a whole being (Parlett, 2005). Yontef and Jacobs (2011) define the idea of wholeness as “holism”.

As stated above, Gestalt is built upon the understanding of holism. Yontef and Jacobs (2011) describe holism as the human ability to inherently self-regulate and grow as one whole being with various parts; and that the individual and his symptoms cannot be understood apart from each other. Blom (2006) explained this concept of being whole by looking at a being as “an entity or whole, of which the total is more than its component parts, which has a certain degree of structure and which remains recognisable as a whole as long as the relationship between the parts remains” (p. 18).

This is where the field theory comes into play. An organism/person cannot be viewed apart from his/her field (abilities/drives/biological make-up/relationships, etc.) and therefore the individual is surrounded by these attributes which can be termed an individual's *field* (Mackewn, 1997; Nevis, 2000; Parlett, 2005). Parlett (2005) states that field theory demonstrates the holistic person's inclusion of the environment, the social world, organisations and culture. Lobb (2005) describes the

field theory as a relationship between an organism (person) and his environment (field). Yontef and Jacobs (2011) in turn look at the field as variables that contribute “to shaping a person’s behavior and experience” (p. 343). They go on to argue that the individual cannot exist or be understood without understanding their field. The field is the context of the person’s life.

It is argued that understanding the concept of the field theory can give one deep insight into the life of the adolescent. It is further proposed that during adolescence the task that the adolescent has of emerging from the field and forming a unique self, which is accepted by the field, is one of the most important factors for an adolescent to gain equilibrium in his life. This process is however crippled by the fact that the adolescent’s field becomes extremely important to him/her during this phase, especially the sections within the field where their peer group is contacted. It becomes a constant battle between wanting to be viewed as a unique self, emerging from the field, versus being accepted and being embedded in the field, especially when contacting peers.

McConville and Wheeler (2001) described adolescence as a phase where the developmental tasks of adolescents are to firstly form a separate “self” apart from their family as well as maintain a place of belonging. Adolescents, to an extent, move from a family field towards a new field consisting of new relationships with outside members (peers) (Toman & Bauer, 2005). This intertwines with the concept of peer influence within developmental theory as discussed in Section 2.2.4. Developmental theory argues that peer groups are among the most significant social contexts during adolescence (Kiuru et al., 2008; Papalia et al., 2006; Santrock, 2008). Toman and Bauer (2005) are supported, who argue that adolescents have to learn how to shift from field to field connecting and disconnecting by choice, and not to get “stuck”

within the field with peers.

The process of contacting the field and being connected can be explained by looking at Gestalt's conceptualisation of the contact cycle of experience. Blom (2006) states that Gestalt formation takes place as a cycle (of experience). Gestalt formation is the process in which a specific figure (problem/issue/situation/need) becomes central in a person's life. In other words, the need "comes into the foreground" and can only go back into the background when the need has been sufficiently met (Stevenson, 2011; Yontef, 2005). The "figure" within Gestalt therapy is that which is of "the most importance at that moment" (Blom, 2006, p. 24) and the background refers to the field of experience at that specific point in time.

The cycle of experience stems from the understanding of the figure/ground relationship. The aim of the cycle of experience was to show how an individual self-regulates needs that have to be met (Stevenson, 2011). The four stages of the contact cycle were originally described by Perls et al (1951) as fore-contact, contacting, final-contact, and post-contact (Perls et al., 1951), but according to Davenport and Korb (2008) at the Gestalt Centre of Cleveland, the following concepts are important during Gestalt formation: contact, awareness, attention and figure formation on the grounds of experience.

Blom (2006) integrated many different views, such as those mentioned above, which are of importance during Gestalt formation into a five stage model. Blom (2006) summarises Gestalt formation in five stages: sensation/awareness, mobilisation, final contact, post-contact and withdrawal.

An example of the cycle of experience as understood within Gestalt is included.

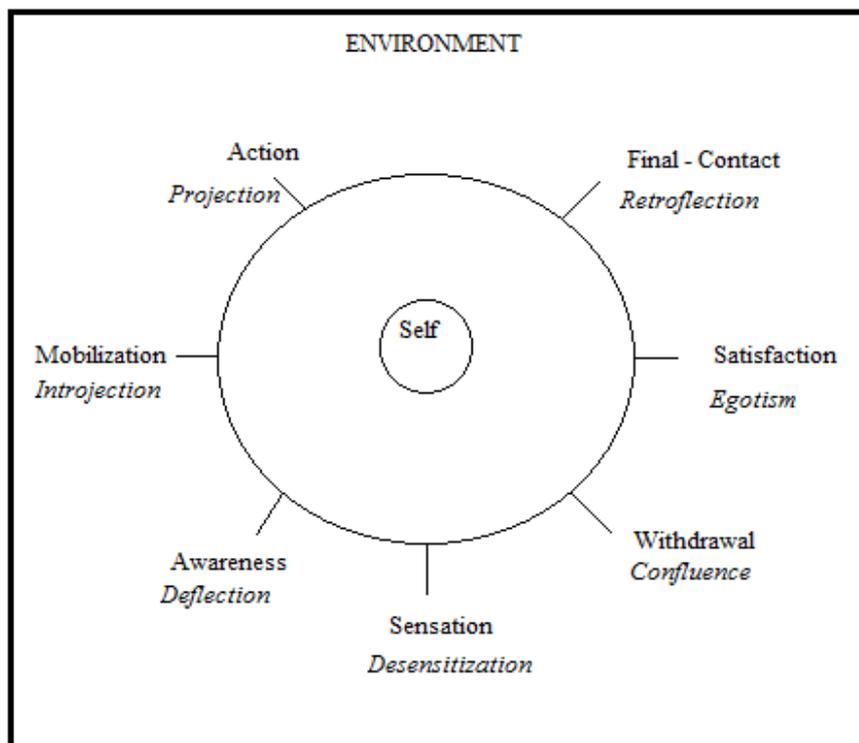


Figure 2.3: The cycle of Gestalt formation and destruction.

Each one of these stages has to be passed through in order for the figure (need/situation/problem/issue) to be met or resolved (Wexberg, 2002; Yontef, 2005). Yontef (2005) explains this process by stating that in the individual's struggle with a need, he scans for resources, then becomes absorbed in this task; and subsequently only when the need is met, does the "Gestalt" become completed and the person no longer pays attention to the figure.

This whole process of going through the stages to meet a need (dissolve a figure/Gestalt) will be discussed briefly. The stages as proposed by Reynolds (2005), as well as Blom (2006), are:

Stage 1: Awareness/Sensation

It is at this stage where the individual experiences a sensation, which can be a need or a sensory stimulus, and serves as the figure which comes into the foreground (Blom, 2006).

Reynolds (2005) similarly argues that the understanding of this stage is imperative and explains the cycle by looking at the applicability of each stage on children. She explains that the cycle begins with a primary arousal of a sensation and sensitivity within the child to an internal or external stimulus in the field (Reynolds, 2005).

This stage is the beginning of the cycle and can therefore be seen as the first moment a problem/issue/need has an effect on the individual to such an extent that there is a sensation within the individual. This sensation then leads to *awareness* of feelings or possible choices which results because of the sensation (Reynolds, 2005).

Awareness is the following experience that follows shortly after the sensation stimuli. Awareness in Gestalt theory is much more than just one of the phases of the cycle of experience.

Yontef and Simkin (1993) stated that full awareness is a process that involves contact with the most significant events in the individual/environment field with full sensori-motor, emotional, cognitive and energetic support. It is therefore the “knowing” and acknowledging of the figure. Awareness allows one to fully recognise one’s feeling, thinking and doing in the present and to identify alternatives (Joyce & Sills, 2010). Yontef (1993) states that awareness in itself is powerful enough to satisfy a need.

Stage 2: Mobilisation/Choice of relevant action

After awareness of the need is experienced, the individual is mobilised in order to satisfy the need. Davenport and Korb (2008) explain that when an individual becomes aware of the need, the person must take “direct steps” (p. 1) to satisfy the need; and if the need cannot be satisfied at that time, to accept the situation.

Reynolds (2005) argues that when awareness is adequately supported, the individual is mobilised to either, a) pursue the need or to, b) abort it.

Stage 3: Action/Final contact

Blom (2006) states that in this stage the individual becomes “fully involved” in satisfying the need. Reynolds (2005) termed this the child’s “fuller engagement” where the child actually contacts the field/environment in an attempt to satisfy the need.

Stage 4: Post-contact (Satisfaction)

After contact is made, the child experiences satisfaction since the need has been met (Blom, 2006). Blom (2006) calls this a state of “homeostasis” (p. 27). This phase is what Perls et al. (1951) called post-contact and refers to the satisfaction and completion of Gestalt (Clarkson, 2002). Clarkson (2002) describes this as the “calming down” period and the “savoring” (p. 42) of experiences.

Stage 5: Withdrawal

This is the final stage where the need has been met and has moved back into the ground. Blom (2006) defines this stage as the “state of rest” (p. 27) and the destruction of Gestalt in order to clear the way for a new Gestalt to emerge. Clarkson (2002) explains that within this stage there is a withdrawal into the “fertile void” (p. 43), in order to prepare the ground for a new Gestalt.

The contact cycle is important to understand in order to view the adolescent within his/her field. The way in which the adolescent makes contact within the field will guide one’s understanding of how the adolescent experiences his environment, the world and then specifically the world of the internet. The adolescent contacts the internet to satisfy a need, much as what is explained in the above cycle. This need for internet contact can be social, i.e. to connect with peers, to gain knowledge or to

be entertained etc. Another theory that was mentioned previously, that also proposes a mutual relationship between the field and the organism, is the Complexity theory.

4. Complexity and Systems Theories

As stated above, Gestalt theory acknowledges the individual as an organism continuously contacting their field/environment in order to satisfy a dominant need. This resonates with the Complexity theory where an organism (adolescent) responds to his/her environment/field/internet, thereby changing its environment, which changes the organism again (Morrison, 2006). The organism in a sense reacts to his/her changing field, and thereby changes its environment.

The Complexity theory was first developed within the sphere of mathematics and was then applied within the natural sciences (Hardman, 2010). It is only in the last decade that the social sciences have gradually accepted and amended the Complexity theory to describe social systems (Hardman, 2010).

When reading Morrison's (2006) explanation of the Complexity theory, it echoes the idea of holism in Gestalt theory:

Further, one cannot consider the organism without considering its environment; the emphasis is on collective, relational behaviour and holism rather than on isolationism, individualism and solipsism. The whole is greater than the sum of its parts, and these parts interact in dynamical, multifarious ways, thereby producing new realities, new collectivises and new relations (Morrison, 2006, p. 2).

In a sense the Complexity theory constitutes a mutual interaction between the organism and the environment. Manson (2001) noted that although in essence the Complexity theory sounds easy to comprehend, it is in fact difficult to follow due to the various interpretations across different disciplinary boundaries. Valle (2000)

elaborated on the characteristics of the Complexity theory.

According to Valle (2000), complexity can be characterised by:

- a great number of parallel but independent elements;
- continuous movement and responses by these elements to other agents;
- the ability of the system to adapt and adjust to new situations to ensure survival;
- self-organisation, in which the order of the system forms spontaneously;
- rules that apply to each agent; and
- “progression” in complexity so that over time, the system becomes greater and more sophisticated.

This resonates with the Systems theory which is based on the premise that the theory provides “a trans-disciplinary framework for a simultaneously critical and normative exploration of the relationship between our perceptions and conceptions and the worlds they purport to represent” (Laszlo & Krippner, 1998, p. 4). A final theory which enhanced the understanding of the adolescent process was therefore the Systems theory.

Laszlo and Krippner (1998) argued that various studies of cognitive development and perception are beginning to depend more on the systems approach. Systems theory tries to describe the complex dynamics of human bio-psycho-socio-cultural change (Laslo & Krippner, 1998). Skyttner (2001) states that the word “system” comes from the Greek meaning “a connected or regular whole” (p. 52). Skyttner (2001) further notes that when a system interacts with their environment, there is always a mutual correspondence between the two. The environment has an influence on the system and the system on the environment

(Skyttner, 2001). It is noted that the adolescent as an organism/system interacts with his/her environment which includes parents, peers, recreational activities, sport, school and ultimately also the internet. All of these dynamics had to be taken into account when researching the adolescent and his/her environment, specifically regarding the internet. It is argued that the Complexity theory and Systems theory therefore help to contribute to the understanding of the adolescent.

When looking at Figure 2.1 in the above section concerning the cycle of information processing, it was realised that the Complexity theory, Systems theory and Gestalt field theory can be integrated into the individual's process of gathering information and contacting the field. This is illustrated in the image below (Figure 2.4).

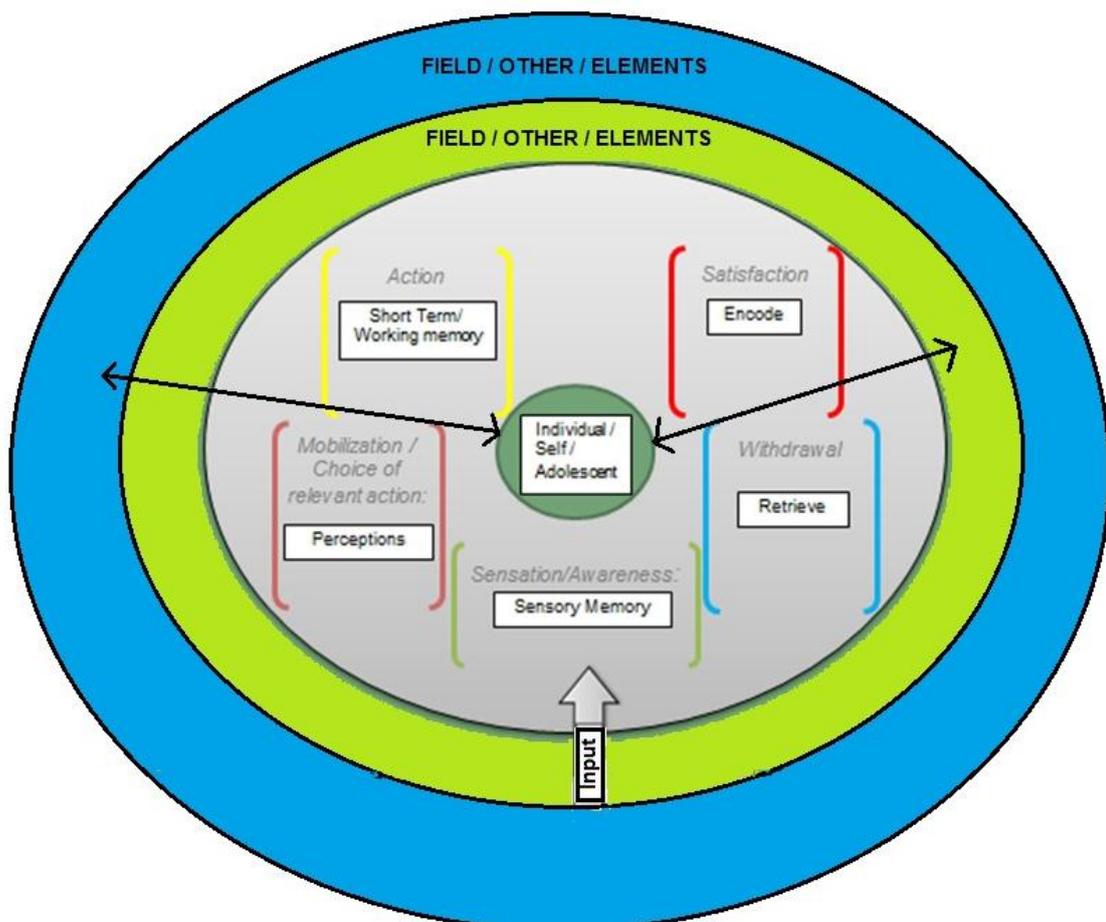


Figure 2.4: Complexity and Systems theories within the contact cycle of Gestalt.

The individual and his/her whole process makes contact with other agents/elements/the field. These separate components cannot be divided up and studied in isolation (Valle, 2000). These complex systems can naturally advance to a state where the individual becomes self-organised, and in which behaviour lies at the border between order and disorder (Valle, 2000). The attempt was made to convey the interaction of the individual with society, the field, the other or the environment. The individual adolescent has to contact these various elements in order to form his or her own understanding of both the world (group identity) and his own uniqueness (diffusion). It is argued that when the individual finds the balance in contacting and withdrawing from these elements successfully, the process of adulthood can start. It is necessary to understand that this process is on-going and that the adolescent cannot be viewed without these elements and their effects on the adolescent's healthy functioning. If one or more elements impact the adolescent in such a way that causes harm or distress, the research society explores this harmful element and aims at providing a tool to help an individual deal with the element. This was the intention that gave rise to the current research. The internet as a fairly new element in the world of the adolescent can cause harm to the adolescent interacting with it.

5. Conclusion

As discussed in the problem statement in Chapter 1, adolescents' use of the internet holds *some* concerns, although not all internet use is necessarily negative. Internet activities can have a negative outcome for people, but it is argued that, specifically amongst the age group of adolescents, the internet can be a dangerous playground (field).

This chapter indicated that adolescents are within the age group which is to be more easily influenced by their environment. The adolescent is in a fragile stage

of discovery and experimentation with the field, combined with changing biology, changing brain functions as well as cognitive thought processes. The individual as a system has his/her own complex web of experience and relations which intertwine with others/the field/the environment. The environment that was focused on in the research was the internet. It stands to reason therefore that not being aware of possible dangers on the internet can be more dangerous for adolescents than for any other age group because of the phase of development which they find themselves in. Therefore, the next chapter will specifically focus on the internet and how the adolescent uses the internet.

CHAPTER 3: THE INTERNET

The previous chapter indicated that within the adolescent phase, individuals are more likely to be influenced by their environment in order to satisfy their need for identity formation and the emergence of the self from the field. Various developmental tasks, the influence of their changing environment as well as their experimentation with the field, combined with changing biology, brain functions and cognitive thought processes, mark adolescence to be a fragile phase. Not being aware of possible dangers on the internet can be more dangerous for adolescents than for any other age group.

The internet has become a tool used in various spheres of life. Since its initial development, not only the growth in the content of the internet has expanded significantly, but also the number of internet users. This chapter will provide a brief history of the internet and its formation into the enormity of its existence in the current day and age; this will be followed by viewing the statistics regarding the amount of users worldwide, and then specifically usage within South Africa. Lastly, the connection between the internet and the adolescent as user will be discussed.

1. The History of the Internet

The internet is a frequently used term in current society. Amichai-Hamburger and Barak (2009) defined the internet as “a worldwide decentralized network of computers” (p. 34). Wessels (2010) noted that it is a “network of networks” (p. 2), including both private and public networks such as academic, business and government networks which are used locally as well as globally.

The internet can therefore be viewed as an accessible network of various networks which is both a source of information as well as a means of communication. The internet and its development stretch over a few decades. According to Du Toit, Malczyk and Van Belle (2011), the scientific community started to develop computers after the Second World War. At that stage, computers existed but were not freely available. The military had significant input and was a resource for funding of the development of APRAnet (Advanced Research Projects Agency Network) which would later evolve into the internet (Daignault, 2012; Norman, 2008). A typical computer was a central processor which filled an entire room. Various people could share a single computer through a system of terminals which was located in a different room from the computer itself (Du Toit et al., 2011). Although people could share a single computer through this system of terminals, it did not connect computers in a network. This limited the possibility of sharing processing resources between computers and of transferring information. In the United States of America during the period after the Second World War, up until 1958, efforts were made to tie military and scientific communities to increase this research (Howe, 2012).

The Advanced Research Projects Agency (ARPA) came into being in 1958. Along with other objectives, ARPA was mainly concerned with computer science (Berns, 2010). Joseph Licklider, a psychologist who was employed by ARPA, predicted that computers would be useful in many other aspects of human life (Du Toit et al., 2011; Howe 2012). He stated that an “Intergalactic Network” of computers could one day permit people to connect with one another, share information, and collaborate more efficiently. Joseph Licklider laid the foundations for the first computer networking group (Du Toit et al., 2011).

The development was slow and the internet only started to develop in roughly 1970, when it was still called ARPAnet (Howe, 2012; Norman, 2008). Initially only a limited amount of academic researchers working on mainframe computers could use it (Norman, 2008). By the 1970s, ARPAnet was opened for use by other non-military users (Norman, 2008). Later, in the mid-1970s, a communications technique called transmission control protocol (TCP) was developed and enabled many networks to assist in understanding one another and to be able to exchange data over the internet (Howe, 2012; Lesame, 2011).

By 1985 more productive local area networks and more efficient personal computers were available. After the growth in the relevant technology, networks started to emerge worldwide and gateways to the internet were being developed. These gateways made it possible for information to be shared between the networks to the internet and vice versa. By 1989 the invention of the WWW by Tim Berners-Lee was seen as a major breakthrough in internet development (Howe, 2012; Norman, 2008).

Armstrong and Casement (1998) also discuss a brief history of the internet and mention that initially the emergence of the internet meant that global communication would be possible as well as using the internet as a research tool. This has been proven to be true when looking at the research of Livingstone, Haddon, Görzig and Ólafsson (2011). Almost thirteen years after this initial prediction, of Livingstone et al.'s (2011), research indicated that the internet *is* mainly used for gaining knowledge and for social activities. Lesame (2011) summarised some of the key milestones of internet development globally. They are illustrated in the following table.

Table 3.1

History of the Internet (Lesame, 2011)

Year	Milestone
1969	<i>The internet</i> began as APRAnet.
1972	Email was developed.
1982	The term internet was coined.
1986	Software was developed which enabled transmission of news, posting and reading.
1987	The first known internet virus (known as a worm) invaded thousands of computers.
1991	World Wide Web software was invented.
1992	The first audio and video broadcasts took place.
1993	The first search engine, ALIWEB, was launched.
1994	The first commercial web browser was launched, called <i>Netscape</i> .
1995	<i>Amazon.com</i> and <i>eBay</i> were launched for trading of merchandise over the internet.
1998	<i>Google</i> was launched.
1999	<i>Napster</i> launched software for sharing MP3 music files. <i>Blogger</i> , a free blogging platform, was launched.
2003	The first version of Skype enabled users to make voice calls over the internet.
2004	Facebook, a popular social networking website, was launched.
2005	<i>YouTube</i> emerged as a portal for sharing and publishing videos online.
2006	<i>Twitter</i> was created.
2009	Actor Ashton Kutcher became the first person on Twitter to have a million followers subscribing to his tweets.

According to Mayayise (2008), the increase and expansion of the internet and

its content also meant an expansion in the users and followers of the internet globally. It is necessary to look at the global use of the internet in order to understand the enormity of this phenomenon.

2. Global Internet Use: How Many Users Are Logging On?

The internet has become part of daily life (Elena, Laouris & Taraszow, 2010). All over the world people are accessing the internet for various reasons. Mayayise (2008) as well as Louge (2006) states that the use of the internet has increased drastically over the last decade. The following chart shows the use of the internet during 2011 in various regions in the world (Internet World Stats, 2011).

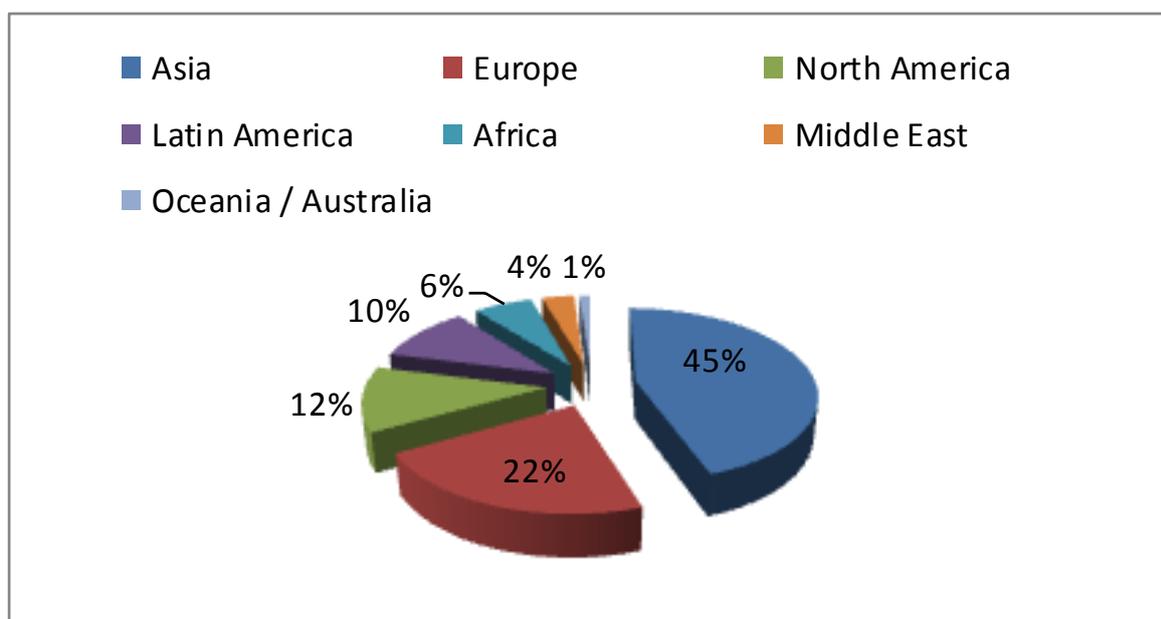


Figure 3.1: Internet use worldwide, 2011.

The above figure shows the spread of internet use worldwide according to the percentage of use per continent. According to the figure, Asia has the most extensive percentage (45%) of internet use globally. Europe is a far second with 22% and is then followed by the United States of America with 12% of the global internet use. It is interesting to note that Africa holds 6% of worldwide use. Africa is thus not up to standard when compared to Europe and Asia.

Furthermore, 6% theoretically implies that 6 out of 100 Africans, including people residing in informal settlements, are accessing the internet. In a school of 1 200 learners, it will mean that 72 of the learners will access the internet. 72 learners in one school is a significant amount, especially when one considers the dangers that will be mentioned in this chapter. In more advanced societies and countries in Africa, this number will obviously be higher. The following graph shows the exact number of users in specific countries:

Table 3.2

World internet usage and population statistics

(www.internetworldstats.com/stats.htm)

World Regions	Population (2011)	Internet Users 2000	Internet Users Latest Data	Penetration (% Population)	Growth 2000-2011	Users % of Table
Africa	1,037,524,058	4,514,400	139,875,242	13.5%	2,988.4%	6.2%
Asia	3,879,740,877	114,304,000	1,016,799,076	26.2%	789.6%	44.8%
Europe	816,426,346	105,096,093	500,723,686	61.3%	376.4%	22.1%
Middle East	216,258,843	3,284,800	77,020,995	35.6%	2,244.8%	3.4%
North America	347,394,870	108,096,800	273,067,546	78.6%	152.6%	12.0%
Latin America	597,283,165	18,068,919	235,819,740	39.5%	1,205.1%	10.4%
Oceania / Australia	35,426,995	7,620,480	23,927,457	67.5%	214.0%	1.1%
WORLD TOTAL	6,930,055,154	360,985,492	2,267,233,742	32.7%	528.1%	100.0%

The above table shows that 32.7% of the total world population access the internet. This means that approximately 1 in 3 people are using the internet. It is therefore evident that the internet is not an isolated activity practised by an elite group of people, but rather a global tool used by a vast number of people and is

therefore an important entity to look at within society. Although it is useful to see how the use of the internet is spread throughout the world, the specific focus on the South African context concerning internet use is important, since the study applies to South African adolescents.

3. Statistics of Internet Use in South Africa

Internet access became available in South Africa in 1993 when the first ISP (internet service provider) emerged. The Internet Company of South Africa and Internet Solutions brought the internet to South Africa (Lesame, 2011). Verrijdt's (2009) research showed that there were approximately three million internet users in South Africa in 2002. By the end of 2007, this number has nearly doubled to five million and continued accelerating and gaining momentum throughout 2009 (Verrijdt, 2009). South Africa's internet usage has accumulated up to 6.8 million users, as surveyed by the Internet World Stats website at the end of 2011 (www.internetworldstats.com/stats.htm). South Africa is one of the leading countries in Africa regarding internet access (Mayayise, 2008). According to the website Internet World Stats (www.internetworldstats.com) Nigeria, Egypt, Morocco, Kenya and South Africa are the top five countries in Africa when comparing internet access statistics.

World Wide Worx (2010) found that the arrival of a new undersea cable on the South African coast was only one of the factors behind the growth. They argue that the granting of Electronic Communications Network Service licences to more than 400 organisations was the most important factor. This meant that service providers who previously bought their network access from one major provider could now build their own networks (or could choose where they wanted to buy their access from) (World Wide Worx, 2010).

It is evident that the internet has a vast number of users worldwide and that South Africa is showing signs of rapid growth. This is important to take into account when exploring adolescent online use and how to safeguard and educate them concerning safe internet practices. It is also necessary to understand that internet access is becoming easier. It is not just a minority that uses the internet, and the growth in users indicates that more and more adolescents could be exposed to the internet. Seeing that adolescents are accessing the internet, it is important to look at what they are doing on the internet, what they are exposed to and what the impact of internet use is, whether it is beneficial or harmful.

4. Internet Use and Adolescence

The internet has a range of uses which help to make life easier, more convenient and even more enjoyable. The internet therefore, like other media, holds both positive and negative potential for adolescent development depending on the content and how it is used (Arnett, 2007; Kolucki & Lemish, 2011).

Subrahmanyam and Lin (2007) stated that adolescents, as a group, are the biggest users of the internet. Livingstone (2010) was also of the opinion that adolescents are usually the earliest and “most enthusiastic” (p. 348) users of information and communication technologies. Adolescents are more likely than older age groups to make use of the internet (Anderson, cited by Arnett, 2007; Purcell, 2012). Anderson states that the internet “is the medium they (*adolescents*) prefer the most, even more than music or television” (Anderson, cited by Arnett, 2007, p. 409). According to Elena et al. (2010), the highest percentage of people who access the internet ranges between ages 16-24 (96%). The Digital Agenda for Europe Scoreboard (2012) released statistics on internet use which also indicated high rates of internet use amongst the younger generation. According to their statistics, almost

all people aged 16-24 with high as well as medium formal education were regular users (98% and 93% separately) while 88% of the low educated in this age group were regular users; this was during 2011.

In South Africa, Kreutzer (2009) found that 84% of the 441 adolescents which he interviewed in his study accessed the internet daily. The assumption can therefore be made that internet use is popular amongst adolescents. The question that is posed, is therefore: Since we know that adolescents *are* accessing the internet, *why* are they accessing the internet so frequently?

Louge (2006) argued that it is critical to view the internet as a new social environment for the adolescent; and also that easy and continuous access to the internet provides remarkable opportunities for adolescent socialisation. This allows adolescents to connect with peers and strangers socially, changing the way social interaction has been viewed previously. Louge (2006) argues that:

The Internet is transforming the social world of adolescents by influencing how they communicate, establish and maintain relationships, and find social support. Therefore, it is essential to gain awareness of both the potential benefits and risks of teen (adolescent) Internet use, and provide strategies to guide safe and positive practice (p. 2).

It is important to view the internet as a means of contacting and connecting socially. It is argued that socialisation is the main reason why internet amongst adolescents is so popular as it grants them social freedom. When revisiting Chapter 2, and viewing adolescence from a developmental perspective, it has been argued that peer relationships are an extremely important aspect of adolescent development (Berger, 2006; Geldard & Geldard, 2004; Santrock, 2008).

Since the internet stimulates the relationship development amongst peers, it is

almost natural that adolescents will embrace the internet in order to satisfy their need for socialisation. Livingstone (2010) is supported since his research stated that “as young people make the transition from their family of origin toward a wider peer culture, they find that the media offer a key resource for constructing their identity and for mediating social relationships” (p. 348). These words echo the ideas of Erik Erikson (1950) concerning the paradox of the Identity versus Identity Confusion (as stated in Chapter 2). What is significant with regards to adolescence, is that they are faced with developmental pressures on a daily level, and these pressures are heightened by the internet. Some examples that are highlighted are:

- i) during adolescence there is a search for identity (Arnett, 2007; Berns, 2010; Erikson, 1950; Papalia et al., 2006); the internet provides platforms to create identities (Livingstone, 2010);
- ii) during adolescence individuals go through biological and sexual changes (Arnett, 2007; Louw & Louw, 2007; Meece & Daniels, 2008);
- iii) during adolescence, the influence of peers and spending time with peers are prominent (Arnett, 2007; Berns, 2010; Erikson, 1950; Papalia et al., 2006); on the internet, social networks satisfy a need to be instantly connected to others.

These aspects are especially significant when exploring socialisation on the internet since connecting with peers forms such an integral part of adolescent development. Louge (2006) subsequently mentions the ease of socialisation via the internet as being one of the benefits of internet use amongst adolescents and being one of the activities the internet provides.

Adolescent internet use has moved away from web surfing and chat rooms towards social networking technologies (Rice, Monro, Barman-Adhikari & Young,

2010). Livingstone et al. (2011) completed their research on children and adolescent internet use at the end of 2011. They acknowledge the use of social networks. At the same time, schoolwork still seems to be the main activity followed by social activities (see Table 3.2).

The social activities included:

- a) playing games (e.g. 83% playing against the computer),
- b) receiving content produced by others (e.g. watching video clips, 76%), and
- c) communicating via social networks (e.g. *social networking and instant messaging*, 62%).

Adolescents have “embraced” technologies *for learning* as well as for the benefit of *social interaction* (Department of Education and Early Childhood Development, 2010; Patchin & Hinduja, 2010). Livingstone et al. (2011) identified very specific activities which adolescents participated in, as indicated in Table 3.3.

Table 3.3

Children and adolescent activities online (Livingstone et al., 2011)

	9-12 year olds		13-16 year olds		All
	Boys	Girls	Boys	Girls	
% who have ...					
Used the internet for school work	79	82	87	90	85
Played internet games on your own or against the computer	86	84	88	71	83
Watched video clips	66	64	87	85	76
Visited a social networking profile	40	42	80	81	62
Used instant messaging	43	47	76	77	62
Sent/received email	42	47	74	76	61
Played games with other people on the internet	47	33	63	33	44
Downloaded music or films	27	26	61	56	44
Put (or posted) photos, videos or music to share with others	22	24	54	55	39
Used a webcam	23	25	37	38	31
Put (or posted) a message on a website	18	19	44	40	31
Visited a chat room	14	14	35	28	23

Used file sharing sites	11	8	30	22	18
Spent time in a virtual world	15	14	21	12	16
Written a blog or online diary	4	6	15	18	11

From the table above it is apparent that the internet provides an individual with various resources and activities. After the previous discussion, it is evident that adolescents are mostly accessing the internet to download information for school work and to acquire knowledge. This is obviously a very positive reason for using the internet. This activity is followed by playing games and in the third, fourth and fifth position, communication is the main activity. From the table it was also evident that there is some difference in the two age groups, i.e. 9-12 year olds versus the 13-16 year olds. It seems as if the percentages of various uses are higher in the older age group. Specifically social activities like social networking, sharing information, email, etc. are remarkably higher than in the group of younger adolescents. The area where younger adolescents showed a higher usage rate than that of their older peers, was in playing games. The younger adolescents tend to play more games online than the older group.

Seeing that education was the main reason for accessing the internet, Arnett (2007) argued that the internet has incredible “potential to enhance education in childhood and adolescence which is why schools have been so zealous about becoming connected to it” (p. 408). Dr. Brand, District Director at the Western Cape Education Department (personal communication, August 31, 2012), stated that there is currently a total of 219 schools (private and public combined) in the Western Cape. Within the 219 schools, nine do not have access to the internet. According to Dr. Brand, there are various reasons why these nine schools do not have access to internet, but that they are working towards rectifying this. The deduction can

therefore be made that almost all the schools in the Western Cape provide internet access to learners.

A positive consequence of adolescents accessing the internet is that by participating in the above-mentioned internet activities, there is a range of new skills which adolescents acquire. These skills include creating and publishing video clips (developing creative expression); collaborating on global projects; composing, recording and releasing music; editing photos; and sharing their creations with audiences worldwide; socialising on social networks and maintaining personal profiles, encouraging identity exploration, self-expression and overall youth development, decreasing social anxiety and loneliness (Department of Education and Early Childhood Development, 2010; Domeij, 2010).

The possible uses of the internet seem endless and the positive impact it can have is undeniable. It is argued that the positive educational use of the internet should be motivated, enjoyed and even celebrated within the adolescent society. The research had to incorporate a section on motivating adolescents and educating them on using the internet in such a way that they benefit from the above-mentioned activities. The psycho-educational strategy was chosen in an attempt to promote the above-mentioned activities in order for adolescents to utilise the internet optimally, since the internet is a usable and functional tool in many spheres of life.

Buckingham (2010) stated that one needs to first decide on how “technology enters into the peer group and the family, and how children get access to it, how they learn about it and how its use is regulated and controlled” (p. 136). The question of how technology is used and perceived by the adolescent and the field forms the backbone of this study. It is acknowledged that the internet can be an implausible tool as well as being exceedingly dangerous at the same time. In order to decide

what areas of internet use are functional and positive, and which areas are dangerous and need education on safety within adolescence, the current concerns about adolescent internet use has to be explored. The question is not regarding the usefulness of the internet, but rather how it is being used, specifically by adolescents. Are these uses positive, educational and constructive for adolescents, or are adolescent activities causing harm and instability during a very fragile stage of human development?

Kolucki and Lemish (2011) also stated that the internet, like other media, holds both benefits and dangers depending on how it is used. Schoolwork, gathering of knowledge and communication are continuously mentioned as the primary uses of the internet. The following discussion explores online activities and whether or not these activities are safe for adolescents. It also focuses on concerns, dangers and risks associated with adolescent internet use.

5. Current Programs for Adolescents Regarding Internet Safety

A lack of resources, specifically aimed at adolescent online safety, was identified. Although a lot of internet sources were found regarding safety, “tips” and statistics on potential harms of the internet, it could not be found in South Africa. A program as an interactive website designed specifically for adolescents does not seem to exist based on the literature study. Some of the current programs which hold some similarity, and are available on the internet, as well as the topics which they cover, are discussed below. It is necessary to know what is available, what is successful and how this can translate and form part of, or set apart, the current study. The most recent websites were accessed (i.e. since 2010).

The various programs, their country of origin, date updated and content have been summarised in the following section:

Table 3.4

Various programs pertaining to online safety amongst adolescents.

Program	Country	Date	Aimed at	Format	Content
SafeTeens.com	USA	2011	Adolescents	Website with text articles	Social networking tips Adolescent sexting tips Tips to stop cyber bullying
NSTeens	USA	2012	Adolescents	Website: Videos, Comics, Biographies, Games	Website: Basic internet safety, Cyber bullying, gaming, predators, sharing information, social networking
I-Safe	USA	2012	Parents, educators, family	Online company providing resources to the family regarding internet safety of all children. Sources are	Cyber safety

				bought.	
NetSmartz Workshop	USA	2012	Parents, guardians, educators, law enforcement, adolescents, smaller children	Website: Real- life stories (videos), Feedback from adolescents	Basic internet safety Blogging Cell phones Cyber bullying Communications technologies Gaming
Okoto	USA	2012	Section on children: Parents and Educators	Website: Text Articles	General safety articles

The above table summarised the available online resources regarding adolescent safe internet use programs. The criteria when trying to find such programs included the following:

- i. The website should have content regarding internet safety issues.
- ii. The website should be aimed at the phase of adolescence.
- iii. The website should be interactive.
- iv. The website must be recent (2010-2012).

The reasons for the above-mentioned search criteria were that these aspects are included in the psycho-educational strategy as proposed in this research (further explored in Chapters 4 and 5).

To be able to compare the aim and intention of the proposed strategy the

same criteria were needed. Unfortunately, although the above-mentioned programs have a lot of similarities, only one met the exact criteria, i.e. NSTeens (USA). The only criticism was that it was developed from an American perspective and no South African statistics and news events are included. The above-mentioned criteria focus mainly on one or two harms of internet use, and do not cover a variety of harms and dangers regarding adolescents on the internet. Furthermore, the above sights do not focus on the adolescent phase specifically, but more on parents and important role players.

In the search for a website in South Africa, an African website was found named WebSafety Africa. This site has a link for adolescents, but when trying to access this site, it stated that it was still in progress. A website aimed only at adolescents, only for the sake of educating them on online safety in South Africa, could therefore not be found. What was positive about the above-mentioned sites was that it emphasised that there are concerns regarding adolescent internet use and that researchers and companies are starting to develop web sites to combat these concerns.

6. Online Activities: Taking the Dangers into Account

From the previous section it seems that accessing the internet for school work and social activities, as well as the playing of games are the more prevalent activities by adolescents on the internet.

As mentioned in the above section, the internet is viewed as an educational tool. Buckingham (2010) however argues that:

While parents are likely to invest in computers and software with educational benefits in mind, children generally prefer to use them for playing games, and resist overtly educational activities. Many parents also lack the time and

expertise to support their children's use of computers, while the use of computers in schools, are frequently limited and there is often little dialogue between parents and teachers on the issue. For many children, using a computer seems to be regarded as a way of filling in time when they are bored and when other, more attractive activities are not available.

Nevertheless, we need to know much more about how both groups perceive and balance out the educational and entertainment aspects of these new media and indeed, the extent to which these distinctions are still possible to sustain (Buckingham, 2010, p. 136).

Buckingham (2010) therefore argues that the intention for adolescents using the internet is noble and mostly for the sake of education and gaining more knowledge. In reality this is not always true and this is definitely not the only activity adolescents partake in when accessing the internet (Buckingham, 2010).

Firstly, there are some general problems associated with the use of internet for all ages. Some of these threats are summarised by Berns (2010):

- i. There are privacy concerns regarding the illegal transferring of copyright material.
- ii. Privacy issues exist regarding the ability to track online usage patterns and gain access to personal data.
- iii. The capacity strangers have to hack into unauthorised and personal information.
- iv. Viruses and worms that can destroy data on computers.
- v. Unsolicited junk mail or "spam".

Other risks and dangers specifically associated with adolescents are widely discussed within literature. Many risks of internet can "potentially victimise everyone,

but most often the targets are under-aged children” (Elena et al., 2010, p. 68).

Staksrud and Livingstone (2009) distinguished other risks of internet use in the following three categories:

- a) content risks (where the child is a recipient of unwelcome or inappropriate mass communication),
- b) contact risks (where the child participates in risky peer or personal communication), and
- c) conduct risks (where the child acts to contribute to risky content or contact).

A comprehensive study of adolescent internet use was done by Staksrud and Livingstone (2009) for EU Kids Online. Their research reviewed over 500 research projects recently conducted in 21 European countries, concerning the experiences of adolescents online. Staksrud and Livingstone’s (2009) research has been compared to other research in the field regarding risky behaviour of adolescents on the internet. The results were grouped into the following risky adolescent behaviours on the internet.

Table 3.5

A comparison of risky behaviours of adolescents on the internet.

Risk	Staksrud & Livingstone (2009)	Other sources
<i>Giving out personal information</i>	National variations spanning 13% - 91% of adolescents	15% (Livingstone et al., 2011).
<i>Seeing pornography</i>	Ranging from 25% -80%, doubtless depending on definitions	17.79% said they had received e-mails or instant messages with advertisements or links to “X-rated” websites. (Centre for justice and crime prevention, 2011); 14% of 9-16 year olds have in the past 12 months seen images online that are “ <i>obviously sexual – for example, showing people naked or people having sex</i> ”

		(Livingstone et al., 2011).
Seeing violent or hateful content	Around 1 in 3 (33%) adolescents reported viewing violent and hateful content (fairly consistent cross-nationally)	38% reported exposure to violence online (Ybarra et al., 2008).
Being cyber bullied / harassed / stalked	20%	46.8% (Centre for justice and crime prevention, 2011); About half of the adolescents have experienced some form of cyber bullying, and 10 to 20% experience it regularly (Hinduja and Patchin, 2010).
Receiving unwanted sexual comments	10% adolescents in Germany, Ireland, Portugal; around 30% in Iceland, Norway, Sweden and the UK; rising to 50% in Poland	15% of all of the adolescents reported an unwanted sexual solicitation online in the last year. (Ybarra & Mitchell, 2005); 16.60% had been asked for sexual information about themselves (Centre for justice and crime prevention, 2011)
Meeting an online contact offline	Around 9% (1 in 11) of adolescents in most countries, rising to 1 in 5 in the Czech Republic, Poland and Sweden	30% (Livingstone et al., 2011).

The six various dangers as identified by Staksrud and Livingstone (2009) were also emphasized in other sources (as indicated above). It therefore seems evident that there are concerns about adolescents and some activities that they participate in when accessing the internet. Louge (2006) also stated that the internet causes various societal concerns about privacy, security, pornography, internet crime, and safety issues of the “virtual community” (p. 2). According to Louge (2006) the internet is easily accessible and unfortunately it is the accessibility that poses greater risks.

In Japan, a doctoral student, Tetzushi Kamakura (personal communication,

August 29, 2012) explored the understanding of children and adolescents regarding traceability on the internet. He specifically interviewed adolescents ranging between 11 and 12 as a younger generation and found that the adolescents' general understanding of being traced through the internet is that one can only be traced if an individual chose to disclose information on a profile. His findings were summarised in the illustration on the following two pages:

ICP2012 25th July Topic: "Educational" Abstract No: 2109

Children's Understandings of Internet Traceability: A Case Study from Japan

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Motivation



The age of initiation into Internet use has fallen.

However



Young children's minds have not yet been adequately developed.

Special educational methods are required to enable young children to understand information ethics.

Previous Works



Wallace, P. (1999)

Internet users have the illusion of anonymity.



Ishizuchi, K. (2008)

Education about technical traceability in the Internet will obstruct this illusion.



Raskauskas, J. & Stoltz, A. D. (2007)

Anonymity facilitates cyber bullying.

However, there are few findings about children's actual understandings.

Research 1

Research 1 attempts to reveal the extent of "the Illusion of Anonymity" among children.

Questionnaire

Date: March, 2011.

Respondents: **210** students (10~12 yrs old).

Contents: attributions, daily experiences, and their basic understandings about traceability.

As a result,

Anonymity believers were NOT a majority.

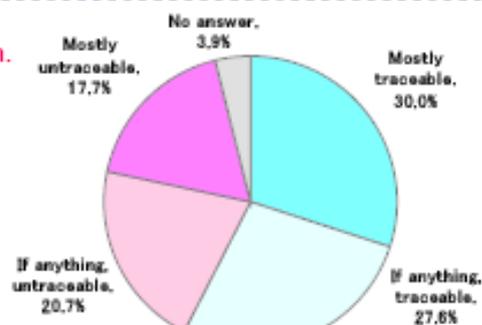


Fig.1 Responses to the question: "What do you think about traceability in the Internet?"

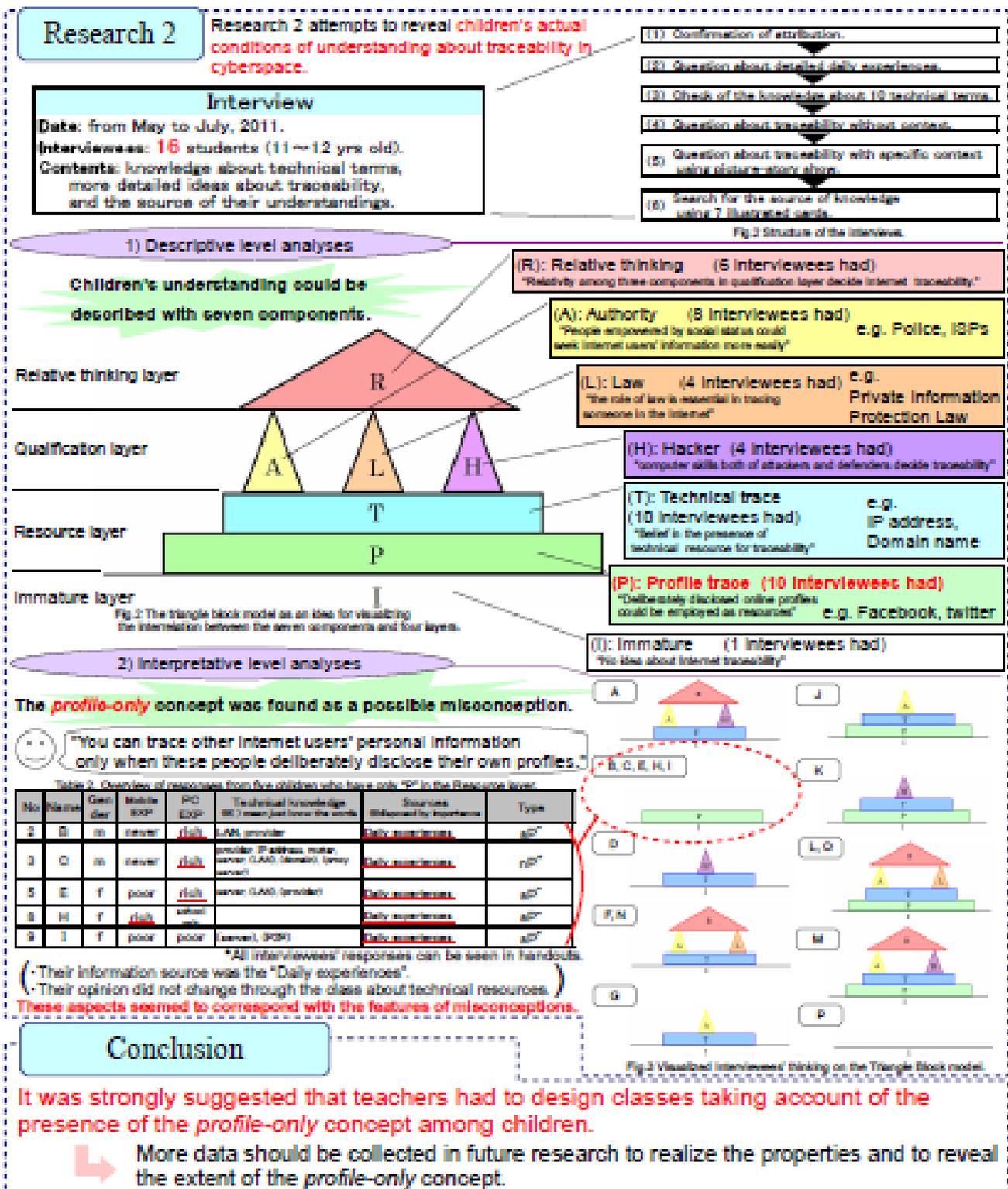


Figure 3.2: Children's understanding of internet traceability (Kamakura, 2012).

The figure focused on children's actual understanding of traceability on the internet. The research firstly indicated that children do not believe that what they do on the internet is anonymous. Children, according to Kamakura (2012) acknowledge

that an individual is traceable via the internet. When taking into account the above-mentioned perception of adolescents' view of the internet and the disclosure and traceability of information, it was interesting to note what is happening in reality. Criminal offenders are highly skilled at manipulating new modes of communication to gain access to children (Australian Communications and Media Authority, 2012).

The intention is not to prove that dangers of accessing the internet exist, but rather that there is a need to educate individuals, specifically adolescents, about these dangers, in order to limit negative consequences. Recurrent themes from literature were identified, that could be labelled as the "main concerns" of adolescents accessing the internet. The dangers had to be identified in order to know which areas to address and educate adolescents on.

Taking into account the vast amount of research that is available on the risks and dangers of adolescent activities on the internet, the activities that emerged as the main concerns, were identified in the following table:

Table 3.6

Risks and dangers of adolescent activities on the internet.

1. Online gaming (Griffiths et al., 2003; Grüsser et al., 2007).
2. Social networking (Conde, 2010; Okamoto, 2010; Rice et al., 2010).
3. Cyber bullying predators (Dooley et al., 2009).
4. Adolescent access to pornographic sites (DeAngelis, 2007; Ybarra & Mitchell, 2005).
5. Sharing of personal information and identity on the internet (Rahman et al., 2005).

The above-mentioned five areas will form part of the educational topics addressed on the website, which will be used as the avenue directed at educating

the adolescents on internet safety.

Two other areas that were also deemed important as it inevitably has a negative impact on adolescent moral development are:

6. Plagiarising and stealing content owned by others (e.g. video or music) (Arewa, 2010; Koovakkai & Muhammed, 2010).

Although the latter is more an activity than a danger, it installs a negative developmental characteristic and can ultimately be the cause of trouble for adolescents since the above-mentioned two activities are illegal. Although plagiarism in itself is not psychologically or physically harmful, the consequences of plagiarising can have an influence on an adolescent's moral development (Strom & Strom, 2009). The problem with plagiarism, according to Thomas and Sassi (2011), is that when an individual is caught plagiarising, the consequences "are often severe, ranging from failing grades on assignments to expulsion from a course or even a school" (p. 48). This emphasises the inclusion of this aspect in order to educate adolescents on the legalities concerning plagiarism.

The six main danger/risk areas for adolescents mentioned above form part of the basis of the psycho-educational strategy and are subsequently the main issues which are discussed on the interactive, multi-media website used to educate adolescents. All of these concepts incorporated in the website will be discussed thoroughly and individually in the following chapter (Chapter 4).

7. Conclusion

In conclusion, the internet is both useful and dangerous at the same time. This is why it was deemed necessary to incorporate both safe and unsafe uses of the internet when educating adolescents.

The study aims at educating adolescents on the safe use of the internet by

looking at the internet and its positive uses and benefits and simultaneously educating adolescents on dangers and how to avoid them. The following chapter will explore these concepts of safety and also the content that was used within the psycho-educational strategy. All of the content used to educate adolescents was founded in research in order to heighten adolescent awareness of risky behaviour. This chapter explored the internet as a whole, as well as the connection between the internet and the adolescent. The following chapter will discuss how content was selected, what the content comprised of and also what other strategies on safe internet use currently exist globally and its successes and limitations.

This was done in order to develop and implement an effective strategy to educate adolescents' on appropriate internet practices and keep them safe at the same time. The strategy was developed within the specific South African context. The following chapter will discuss each of the dangerous internet activities in detail, followed by Chapter 5 which will look at how this information has been presented to the adolescents as part of the psycho-educational strategy (via an interactive website).

CHAPTER 4:

IDENTIFYING AND DISCUSSING FOCUS AREAS FOR THE PSYCHO-EDUCATIONAL STRATEGY

In the previous two chapters the adolescent development phase and the internet were explored as well as the adolescent’s usage of the internet. From the literary sources, various potential harms, dangers and risks associated with adolescents accessing the internet were identified (Chapter 3).

The harms or potential risks were identified by looking at recurrent information from literature regarding potentially harmful activities on the internet; this information gave the researcher insight into the activities of adolescents and possible potential harms to explore. These activities, as identified in Chapter 3, will be discussed and explored in this chapter. These dangers, potential harms and risks formed part of the content and information that were used in designing the psycho-educational strategy.

The psycho-educational strategy will be presented as a website. Although the concept and content of the strategy and website will be explored and discussed in Chapter 5, an introduction of the psycho-educational strategy will be provided below.

Following the introduction of the psycho-educational strategy, the various focus areas of the strategy, i.e. the potential harms, risks and dangers of the internet for adolescents, will be discussed. These dangers will be explored and discussed; as this will provide the literary and academic foundation which formed the backdrop of the content for the website.

1. The Psycho-Educational Strategy

Psycho-education refers to “a holistic approach to understanding what it

means to be human” (Griffiths, 2006). Vreeland (2012) argued that psycho-education includes cognitive, behavioural and supportive therapeutic elements when trying to understand a problem. Psycho-education is an on-going process. Psycho-educational approaches are intended to increase knowledge of and insight into a specific area.

This was the aim of the study: educating adolescents on the risks of the internet; to both safeguard them from negative outcomes and encourage appropriate use. The concept and applicability of the psycho-educational approach are merely defined in this section. The reasoning behind the applicability of this approach and the exploration thereof, is explained in more detail in Chapter 5. The risks first had to be identified before being able to design a strategy. The dangers are discussed below.

2. The Potential Risks for Adolescents on the Internet

The following section focuses on the six harmful practices, risks and dangers associated with adolescents who access the internet, as identified by the literature review, the input from focus groups with the experts and the results from the questionnaires. They are discussed in no specific order.

2.1 Cyber bullying.

Cyber bullying can be defined as the activity where an individual or group use the internet, cellular phones or other technology to intentionally hurt another person or group of people (Department of Education and Early Childhood Development, 2010). Rogers (2010) similarly defines this activity by stating that cyber bullying occurs when an individual misuses technology to threaten, harass, humiliate or embarrass victims. The methods and ways in which individuals cyber bully, differ. Rogers (2010, p. 7) states that,

As access to digital communications grows, methods of cyber bullying have become more sophisticated. From nuisance phone calls to bogus websites, the victims of cyber bullies can be targeted with little effort and minimal cost to the bully, leading to widespread concerns about how children and young people (adolescents) can stay safe in a texting, twittering and social networking world. (p.7).

Trolley and Hanel (2010) agree that there are various methods and types of cyber bullying. They do, however, also state that one should be careful to refer to cyber bullying to include all negative activities on the internet. They refer to bantering between friends and arguing amongst peers as incidences that cannot be deemed as cyber bullying. Burton and Mutongwizo (2009) identified the following methods and vehicles through which adolescents cyber bully:

- i. Text messages
- ii. Picture/video clips (via mobile phone cameras)
- iii. Mobile phone calls
- iv. E-mail
- v. Chat rooms
- vi. Instant messages
- vii. Websites and blogs
- viii. Social networking sites (such as Facebook, Twitter)
- ix. Internet gaming.

O'Brien and Moules (2010) similarly researched the methods and tools used to cyber bully and their results. Within O'Brien and Moules' research, a web-based questionnaire was completed by 499 adolescents in England, aged 11-19 years; and 17 adolescents took part in focus groups aged 10-17 years. The total number of

adolescents participating in the research was 499. O'Brien and Moules' (2010) results were almost an exact reflection of the above done by Burton and Mutongwizo (2009). Burton and Mutongwizo's (2009) results are presented in the following figure:

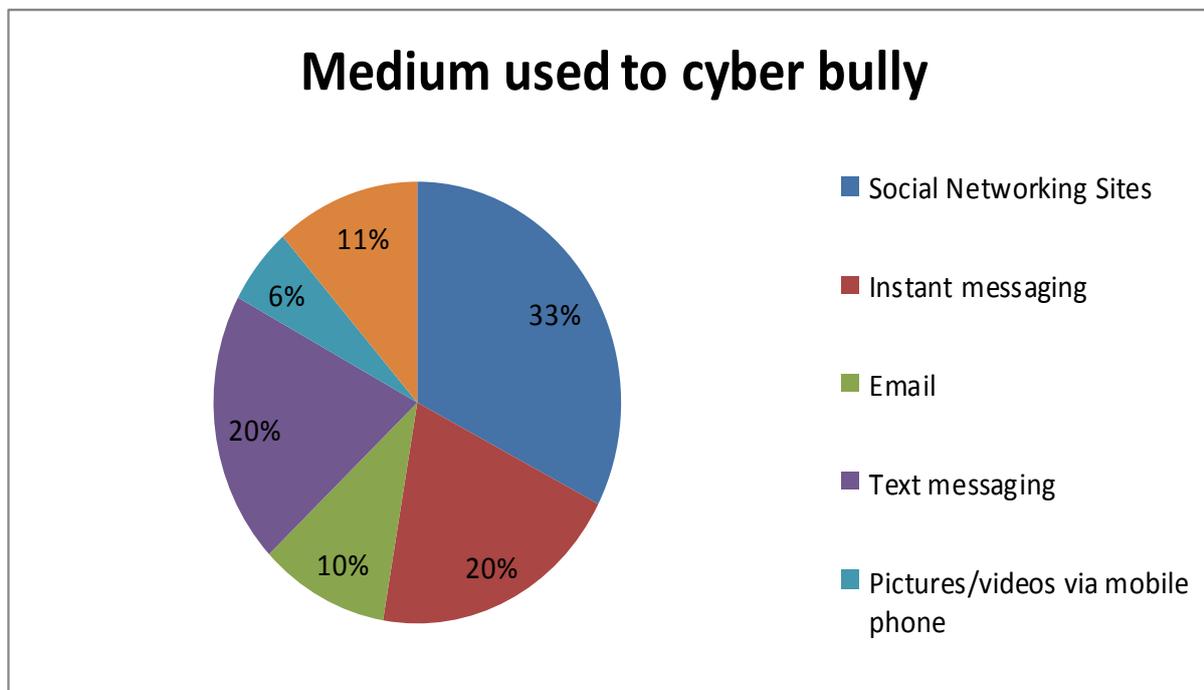


Figure 4.1 Medium used to cyber bully (O'Brien, 2010).

O'Brien and Moules (2010) indicated the various mediums that are accessed through which an individual can cyber bully. Social networking seems to be the highest ranked method of bullying. The other technologies which are accessed in order to cyber bully are therefore: text messaging, sharing pictures and video clips (via mobile phone cameras), making mobile phone calls (prank calls), using e-mail, via chat rooms, via instant messages, via websites and blogs, via social networking sites (such as Facebook, Twitter) and lastly through internet gaming. According to the Department of Education and Early Childhood Development (2010), it is not only that there are mediums through which cyber bullying occurs; they also identified various types of how adolescents cyber bully their peers through using the above-mentioned avenues:

- a) Sending threatening or discomforting text messages to a mobile phone.
- b) Making silent, hoax or abusive calls to a mobile phone.
- c) Making and sharing embarrassing images or videos via a mobile or website.
- d) Broadcasting unsuitable webcam footage that is threatening or manipulative.
- e) Leaving hurtful messages on a social networking site or sending the same message to that person's peer group.
- f) "Outing" people by publishing or disseminating confidential information online.
- g) Stealing an online identity in order to cause trouble in that person's name.
- h) Deliberately excluding people from online games or groups.
- i) Setting up hate sites or hate groups against an individual.
- j) Sending menacing or upsetting responses in chat rooms, online games or via messenger "real time" conversations.
- k) Voting for someone in an insulting online poll.
- l) Sending someone "sexts" that try to pressure them into sexual acts.

The various types of cyber bullying can therefore be used through a medium. For example, a person might steal an online identity (type) by hacking onto a social network (medium). Although there are many technologies used when cyber bullying, Trolley and Hanel (2010) state that it is more important to know when the line has been crossed from bantering and teasing to cyber bullying. Similar to the above-mentioned types of cyber bullying, these authors also grouped certain actions into categories.

The following table, as proposed by Trolley and Hanel (2010), focusses on the categories of cyber bullying.

Table 4.1

Cyber Bullying categories (Trolley & Hanel, 2010).

Name	Definition
Flaming	Online fights using electronic messages with angry and vulgar language.
Harassment	Repeatedly sending offensive and insulting messages. The online equivalent of direct bullying. This is consistent messaging and repeating the action.
Cyber stalking	Engaging in online activities that make a person afraid for his or her safety. Using technology for control in an abusive dating relationship. Includes many of the other forms of aggression. Is generally in the context of a personal relationship. This is harassment that is more serious in nature. The key is some type of threat of impending harm. Further cyber stalking generates fear with the victim.
Denigration	Sending or posting cruel gossip or rumours about a person to damage his or her reputation or friendships. The online equivalent to indirect bullying with wider dissemination.
Impersonating	Impersonating someone to make the person look bad, get into trouble or danger, or damage that person's reputation or friendships. A new form of aggression made possible by the ability to create a fake profile. This is a person who poses as someone else to retrieve sensitive or private information.
Outing	Sharing someone's secrets or embarrassing information or images online. A new form of aggression made possible by the ability to create a fake profile. This is trying to disclose someone else's information.
Trickery	Tricking someone into revealing secrets or embarrassing information,

	which are then shared. Deceiving someone online to humiliate or cause harm. A new form of aggression made possible because it is easier to deceive someone online and obtain damaging information that can be shared. This is pretending to be a friend. It includes collecting private information and then sharing it, and mocking the individual.
Exclusion	Intentionally excluding someone from an online group, like a “buddy list”. The online equivalent of relational aggression: “You are not my friend.” Not allowing someone to be part of a group. Intentionally leaving them out and not allowing them to participate in electronic communication.

It is not only important to know what one is dealing with when referring to cyber bullying, but also the extent of the problem. Statistics are widely available and research on cyber bullying has grown immensely (O’Neil, 2008). Some of the more recent studies and statistics have been combined to obtain a holistic view of the problem:

Table 4.2

Cyber bullying statistics among adolescents

International Research		
Author	Year	Statistics of adolescents who have been cyber bullied
i-safe	2005	42% (USA)
National Crime Prevention Council	2007	43 % Male 57% Female (USA)

Hinduja and Patchin	2010	20.8 % (USA)
Raskaukas and Stoltz	2007	50% (USA)
Li	2008	55% (Canada)
Lenhart and Madden	2007	32% (USA)
South African Research		
The Centre for Justice and Crime Prevention	2009	46.8%
Von Solms and De Lange	2011	36% (Port Elizabeth)

It is evident from the above-mentioned research and sources that cyber bullying is an international occurrence. In South Africa, research has also been started on cyber bullying. One of the studies mentioned above was conducted by the centre for justice and crime prevention under the leadership of Badenhorst (2011). According to Badenhorst (2011) cyber bullying has a *psychological impact* that is often more traumatising for the individual than physical bullying because of the extreme public nature of this type of bullying. O’Brien and Moules (2010) also mention that cyber bullying takes place in an extreme public space which in itself can have an influence on the adolescent.

O’Brien and Moules (2010) further acknowledge that cyber bullying is a serious problem and that some participants in his study felt that it was more serious than “traditional” bullying due to the associated anonymity. O’Brien and Moules mention that the impact of cyber bullying was worse than traditional bullying. This impact is due to its secretive nature, the invasion of personal space and “the fact that potentially harmful messages can be sent to large groups in a short time” (O’Brien & Moules, 2010, p. 11).

Badenhorst (2011) further mentions psychological consequences which

include anxiety, depression and even suicide in extreme cases. Hinduja and Patchin (2010) concluded that cyber bullying causes more than mere hurt feelings in that the consequences can permanently damage the psyche of adolescents.

From the above-mentioned sources it seems that not only is cyber bullying a worldwide phenomenon, but it also has some severe psychological consequences as the adolescent is already in a sensitive stage of psychological development (Koovakkai & Muhammed, 2010). It is argued that further strain on psychological development can have an impact on the healthy development of the adolescent moving from childhood into adulthood.

Another area of concern identified within the research, as well as via the focus groups with experts, was the occurrence of plagiarising and the stealing of online content. Just like cyber bullying, it seems that adolescents are unaware of the fact that they are plagiarising and stealing content and that this could lead to severe consequences.

2.2 Plagiarising and stealing content.

Although plagiarism in itself is not psychologically or physically harmful, the consequences thereof can have an influence on an adolescent's moral development (Strom & Strom, 2009). The problem with plagiarism according to Thomas and Sassi (2011) is that when an individual is caught plagiarising, the consequences "are often severe, ranging from failing grades on assignments to expulsion from a course or even a school" (p. 48). This emphasises the inclusion of this aspect in order to educate adolescents on the legalities concerning plagiarism.

According to Roberts (2008), plagiarism refers to the activity where an individual uses another person's work without acknowledging the author. Strom and Strom (2009, p. 381) state that plagiarism is "copying what somebody else has

written or taking someone else's idea and trying to pass it off as original.”

Du Toit et al. (2011) explain that when plagiarising from sources of the internet, it is easy to copy and paste content, but that content has an original author and republishing information is *stealing*. Furthermore they argue that this is true “even if you rewrite the content in your own words. Using your own words to present someone else's ideas as if they are your own, is plagiarism” (Du Toit et al., 2011, p. 11). Adolescents should be encouraged to either be creative and come up with new ideas, or when doing research, be taught how to reference. It is argued that with the increase of the internet as a research source, time should be spent on educating adolescents on plagiarism.

According to research conducted by the Department of Education and Early Childhood Development (2010), teachers and students develop an appreciation of the intellectual property rights of others when posting their own content online. In addition it is argued that there is also a risk that children and young people may become obsessed with new technology, or spend too much time online, because it is so easily available and also easy to download (The Department of Education and Early Childhood Development, 2010; Unicef, 2011).

Rogers (2010) highlights the reasons why individuals plagiarise:

- Lack of research skills and writing skills
- Problems evaluating internet sources
- Confusion about how to cite sources
- Misconceptions about terminology
- Pressure, poor time management and organisational skills
- Product-orientated writing assignments.

Since the internet holds more than documents and research, other files can

also be “stolen” and should be mentioned as part of this section on plagiarism and stealing content. The Department of Education and Early Childhood Development (2010) mentions the sharing of schoolwork, and the downloading of music and games. According to Arewa (2010), the downloading of music has had an impact on the music industry:

Music listeners today increasingly engage with music in digital form through file sharing and social networking sites. Unauthorized downloads have become pervasive: recording industry representative IFPI estimated that 95% of all music tracks downloaded in 2008, were downloaded without users paying for content. Although authorized single track downloads increased by 24% between 2007 and 2008, reaching 1.4 billion downloads, and by 10% in 2009, reaching 1.5 billion downloads, these figures pale in comparison with the estimated unauthorized file sharing of forty billion files in 2008. The recording industry has argued that file sharing has caused their sales to decline (Arewa, 2010, p. 440).

Walsh (2008) reported on the results of research done by Microsoft Corporations. The survey that they conducted indicated adolescents are less likely to illegally download content from the internet when they know the laws for downloading and sharing content online. Microsoft reported about half of the adolescents who participated indicated they were not familiar with these laws, and only 11% of them clearly understood the rules for downloading images, literature, music, movies and software. The survey also indicated that adolescents who were familiar with the rules of downloading received information regarding this from their parents, television or articles in magazines and newspapers, as well as websites; not from their schools (Walsh, 2008). Strom and Strom (2009) also reported that

adolescents are plagiarising from the internet and that schools are struggling to encourage originality.

When educating adolescents on the legalities of plagiarism and downloading of content, the above research suggests that it will reduce plagiarism online. It is therefore important to include information on the severity of plagiarising and the stealing of content in this strategy as it pertains specifically to activities of the adolescent on the internet, which could potentially have a negative influence on their development. The following section is one of the other areas of internet use that influence the social development of adolescents, i.e. social networking.

2.3 Social networking.

According to Lenhart and Madden (2007), online social networks are places on the internet where an individual can create a profile of themselves through which they connect with other users' profiles. Du Toit et al. (2011) define social networks by stating the various functions of social networks. According to Du Toit et al. (2011), a social network is a website that allows its members to:

- i. Create an online "profile" that contains information about its creator, and can often be personalised.
- ii. Find other people on that social network, and keep track of one another by creating their own lists of contacts.
- iii. Communicate with fellow members through a variety of technologies, including chat rooms, online forums, email or instant messaging (Du Toit et al., 2011, p. 264).

Kluemper, Rosen and Mossholder (2012, p. 3) similarly described the purpose of social networking sites as "to connect individual users with others. The linking mechanisms made available at these sites may differ, but most allow the posting of

personal information, which reveals tastes in pictures, music, and videos; keeping blogs; and sharing links”. Mayayise (2008) noted that Facebook and MySpace are the most well-known of these sites and are very popular. When looking at the worldwide accessing and popularity of social networking sites, the following image illustrates the top ten countries and their use of social networking sites:



Figure 4.2 Social networking around the world (NM Incite, 2011).

The focus was however directed towards adolescents on social networks rather than all individuals. The above image depicts the popularity of social networking worldwide, but focus is on adolescents' use of the internet. One of the major reasons adolescents access the internet is for the purpose of social

networking. According to O’Keeffe (2011), the number of adolescents using such sites has increased dramatically. 55% of all online American adolescents (12-17 years) use social networks, concurrently 55% of online adolescents have a profile on a social network online (Lenhart & Madden, 2007). Online social networking and communication via the internet is becoming more popular with adolescents (Allen, Evans, Hare, Mikami & Szvedo, 2010). O’Keeffe (2011) research indicated that 22% of adolescents log onto a chosen social networking site more than ten times daily, and more than half of adolescents log onto a social site more than once daily.

Lenhart and Madden (2007) also focused on adolescent patterns on social networks and concluded that age is a particularly important factor for understanding their use of social networks. For 12 to 13 year old adolescents the use of social networks is not as prominent as for older ones. 41% of younger adolescents access these sites. Once adolescents move on to high school, the number increases to 61% of adolescents between 14 and 17 years using online social networks.

Concerning social networking amongst adolescents in South Africa, Unicef’s (2011) research found that the increased access to internet via cell phones has had a substantial effect on South African online users. Unicef (2011) stated that the last decade included the emergence and use of various social networking sites in Western countries, including Facebook, MySpace and Twitter. South Africa mainly embraced a mobile-based applications network, called MXit, which was created in South Africa in 2004. MXit is a free messaging service as well as a social networking application. Adolescents 13 years and older can access MXit through multiple mobile and computer platforms (Unicef, 2011). Along with its own standard protocol, MXit can also be connected to Yahoo, ICQ, Google Talk, Facebook, AIM, or Windows Live Messenger (Unicef, 2011).

Since adolescents are making use of social networks, it is important to see what they do on these networks as well as what dangers social networks hold.

Niegowski, Evans and Epstein's (2010) research showed the following concerning adolescents' use of social network sites:

- a) 32% of online adolescents have been contacted by strangers online.
- b) 21% of adolescents who have been contacted by strangers have engaged an online stranger acquire more information about that person (7% of all online adolescents).
- c) 23% of adolescents who have been contacted by a stranger online say they felt scared or uncomfortable because of the online encounter (7% of all online adolescents).

When investigating not only the growth and popularity of social networking, but also the prevalence among adolescents, the main concern is the risks that accompany the use of social networking. As social networking is a popular activity amongst adolescents, it was one of the more prominent online activities to be included in the development of strategy for safe internet use. Social networking in itself is not a dangerous activity but can lead to dangerous outcomes (American Academy of Child and Adolescent Psychiatry, 2011).

The American Academy of Child and Adolescent Psychiatry (2011) summarise the benefits and risks of social networking among adolescents as follows:

2.3.1 Potential benefits include:

- a) Staying connected to friends.
- b) Developing new social contacts with peers having similar interests.
- c) Sharing content of self-expression such as art work, music and political views.

- d) Developing and expressing your individual identity.

2.3.2 Online social networking can include risks such as:

- a) Bullying online, “cyber bullying”.
- b) Sharing too much information.
- c) Vulnerability to predatory adults.
- d) Sharing photos or videos that lead to regret later on.
- e) Exposure to large amounts of commercial advertisements which may not be age appropriate.
- f) Risk of identity theft.
- g) Reduced amount of time for physical activity (The American Academy of Child and Adolescent Psychiatry, 2011).

O’Neil (2008) also discusses the possible dangers associated with social networks such as Facebook, MySpace, and Bebo. O’Neil (2008) argues that social networks encouraged the development of adolescent aggressive behaviours. These may include “flaming” (overt attacks on a person), harassment, cyber stalking (use of the internet to “stalk”, threaten or harass), denigration (putdowns), masquerade, “outing” (publicising that someone is gay), trickery and exclusion (p. 21).

Another unhealthy aspect of social networking among adolescents is mentioned by Niegowski et al. (2010) who found that the average adolescent has between 200 and 500 friends on a social networking profile. Niegowski et al. (2010) acknowledged the increase in friends and argues that having an audience helps to validate adolescents and their perception that their life is public with everyone watching and judging them. When revisiting developmental theory and the phase of adolescence, one is reminded of the task of identity development of an adolescent. This is an important developmental task in itself and it is suggested that social

networking heightens and magnifies this task. Lenhart and Madden (2007, p. 1) summarise the marriage of adolescent identity development and social networking in the following insert:

Psychologists have long noted that the teenage (adolescent) years are host to a tumultuous period of identity formation and role development. Adolescents are intensely focused on social life during this time, and consequently have been eager and early adopters of internet applications that help them engage with their peers. In our first national survey of teenagers' internet use in 2000, we found that teens (*adolescents*) had embraced instant messaging and other online tools to play with and manage their online identities. In our second major study of teens (*adolescents*) in 2004, we noted that teenagers had taken to blogging and a wide array of content creation activities at a much higher rate than adults. Teens (*adolescents*) who adopted these tools were no longer only communicating with text, but they were also developing a fluency in expressing themselves through multiple types of digital media – including photos, music and video (p. 1).

It is this disclosure of the adolescent self and exposing of his/her personal identity online which brought about the inclusion of the following focus area for the strategy, i.e. the sharing of personal information.

2.4 Sharing of personal information.

The American Academy of Paediatrics (2011) found that the main risk to pre-adolescents and adolescents online today are risks from each other. They mention the risks associated with a lack of privacy, sharing too much information, or posting false information about themselves or others.

These types of behaviours put their privacy at risk. Niegowski et al.'s (2010)

argument echoes the above-mentioned opinion and states that adolescents frequently share personal information because of their “imaginary audience”. They further explain that when an adolescent feels that others have an interest in his/her life, the adolescent will be compelled to make use of social media to meet the demand for personal information, but also to display an accepted image of him-/herself.

According to Lenhart and Madden (2007), statistics on information sharing among adolescents show the following:

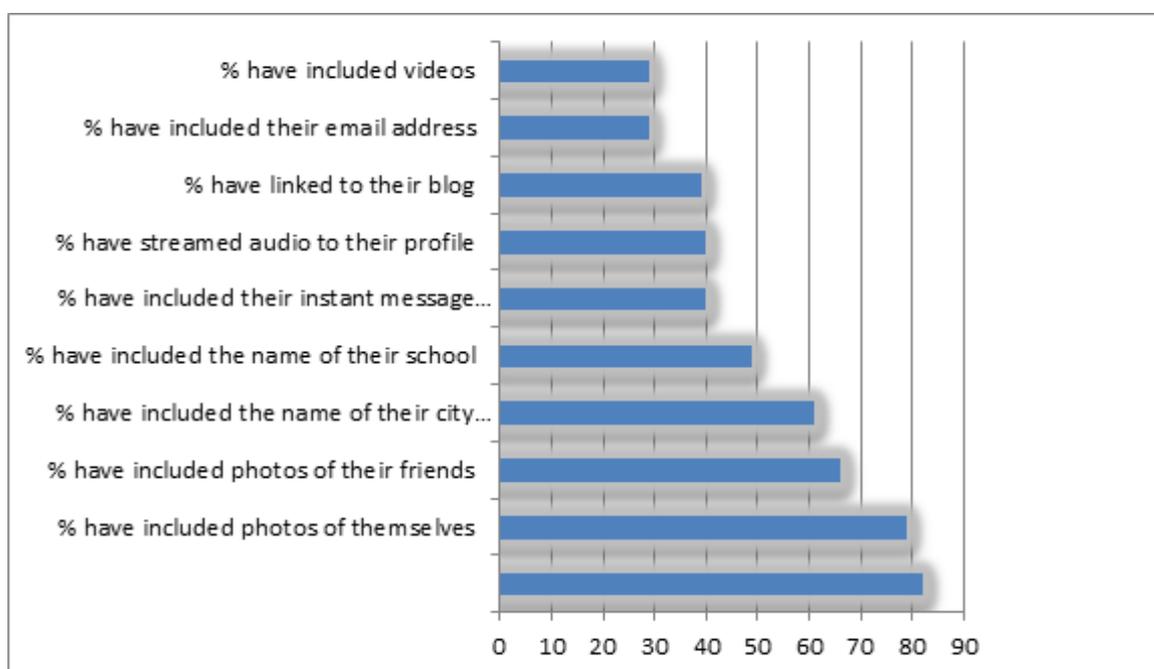


Figure 4.3: Statistics on information sharing amongst adolescents (Lenhart & Madden, 2007)

Lenhart and Madden (2007) discuss the above-mentioned statistics by arguing that there is a range of views among adolescents about privacy and disclosure of personal information. Some adolescents are aware of the risks of sharing personal information but not all adolescents (Lenhart & Madden, 2007). O’Neil (2008) voices his concern by stating that “the sharing of self-revealing

information is a risk: it can be used as a weapon of immense psychological damage through the spreading of gossip and negative rumours” (p. 16). Since 2007 technology has grown ever still and a very recent study conducted by Edith Cowen University under the leadership of Dr. Julian Dooley showed the following alarming results (Dooley et al., 2009, p. 1):

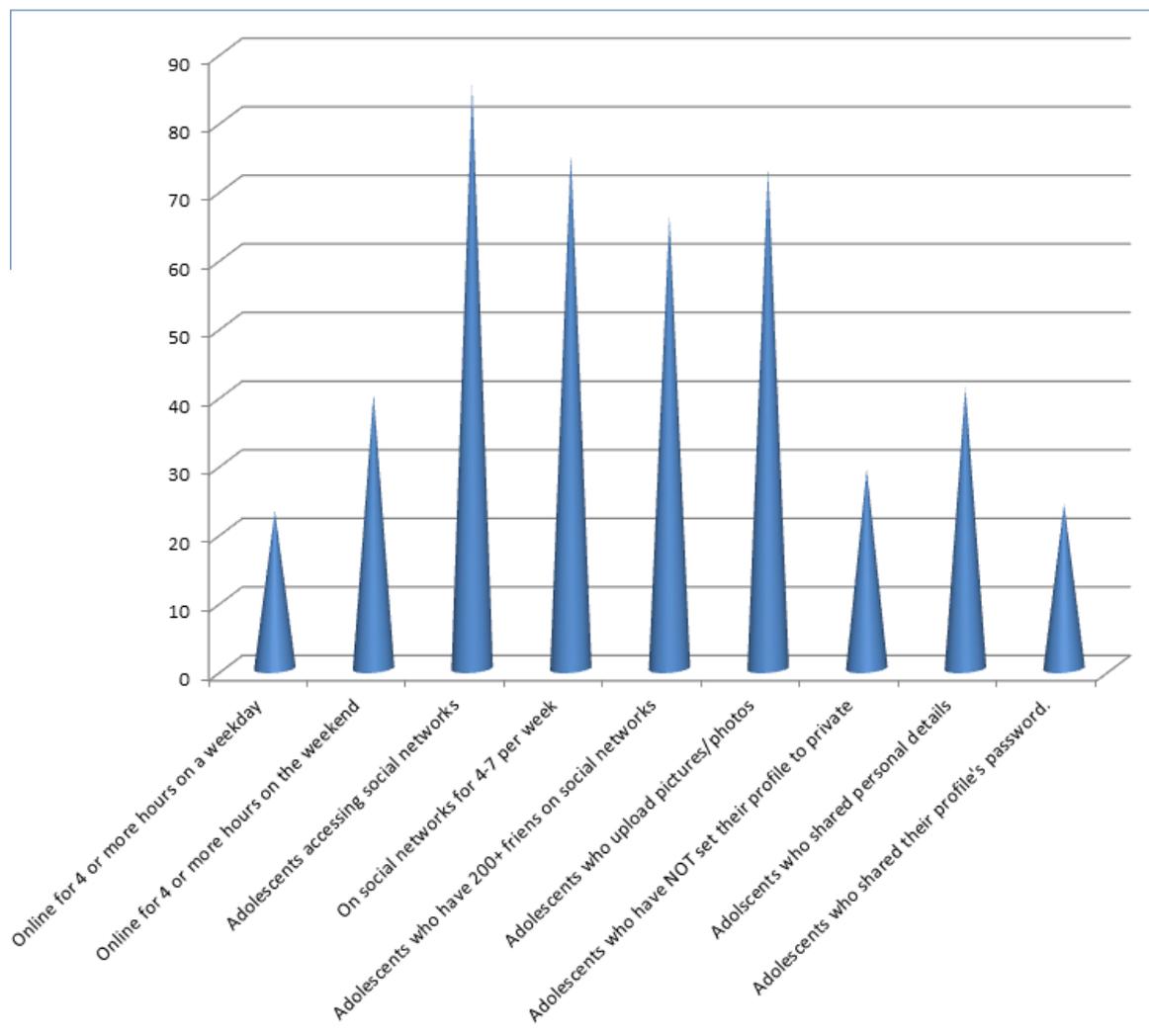


Figure 4.4: Percentages of adolescent activities on the internet (Dooley et al., 2009, p. 1).

Dr. Dooley concluded by stating that: “Although many students indicated that privacy was important to them, the high percentage who shared their password shows that we still have much work to do in this area” (Dooley et al., 2009, p.1). The

internet anti-virus software company, McAfee (2012), conducted research on the online behaviour of adolescents. Their research indicated the following constructs that are shared by adolescents via the internet:

- Photos 72%
- Email 62%
- Name of school 53%
- Intimate details 32%
- Cell number 29% (McAfee, 2012).

It is because of these results that education on the sharing of personal identity was included, to both educate and warn adolescents of the possible dangers. The sharing of personal information is a danger that has received a lot of attention due to its severity. Another danger which has received a lot of attention is the ease and access of viewing pornography on the internet.

2.5 Pornography.

Chetty and Basson (2006) define pornography as “images or visual presentations of explicit sexual conduct, regardless of whether or not such images satisfy the definition of ‘pornography’ for the purpose of obscenity laws” (p.9). Koch (2011) in turn states that pornography refers to “any sexually explicit material created principally for the purpose of inciting sexual arousal or providing erotic pleasure” (p.7). Flood (2007) is of the opinion that children and adolescents view pornography online and this is sometimes done accidentally but in other cases some individuals search purposefully for pornographic material online. Flood (2007) and Koch (2011) further argue that the internet is an easy access way for adolescents to view pornography since it is instantly and widely available.

Chetty and Basson (2006) conducted research amongst adolescents in South

Africa involving learners aged 13 to 17 years in schools in Cape Town, Durban and Johannesburg. Their results indicated that 64% of learners stated that they had seen pornographic images on the internet. What was interesting, is that 70% of respondents noted that pornographic sites were accessed mainly through “pop-ups” and typing search words, while “surfing” the internet. Another significant statistic showed that 43% reported being exposed accidentally (Chetty & Basson, 2006).

The above research shows that adolescents are indeed exposed to pornography online, whether on purpose or accidentally. Parents have various controls that they could apply to computers, but Petrou (2011) reports that a study interviewed 1 570 parents from five different countries, and found that while 97 percent of them used parental control software to block access to adult websites, 12 percent of their adolescent sons or daughters succeeded in uninstalling or unlocking this software. The fact that children are finding a way around these controls is hardly surprising, considering the government doesn't know what to do about the situation (Petrou, 2011, par. 3).

Valcke et al. (2011, p. 1292) further noted that parental and teacher control hardly increase and hardly seem to impact the level of unsafe internet behaviour. Sabina, Wolak and Finkelhor (2008) state that there are diverse opinions concerning the negative impact that the viewing of pornography can have on the adolescent. It is important to know that there are concerns, but the dangers do not apply to all users. Koch (2011) also mentions this important aspect and states that the way in which an adolescent reacts to exposure can be traced back to family life and personality traits (Baumgartner, Valkenburg & Jochen, 2011). Koch (2011) in summary states that, “if an adolescent is predisposed to committing violent acts, including violent sexual acts, then exposure to pornography can increase the likelihood of those acts actually

coming to fruition, but it is not likely to be the root cause of the violence” (p.15). Koch (2011) also mentions the possible consequences of adolescent exposure to pornography. Adolescents who view an excessive amount of pornography are inclined to have more condescending attitudes about love and sexual pleasure. This can cause little or no warmth towards partners.

Koch (2011) lastly mentions negative factors such as a personality disorder, misogynistic feelings, or violence in the home that can be associated, along with other factors, to exposure to pornography. Leigh (2010) also indicates that there is a link between viewing pornography and emotional and sexual harm. She further notes that adolescents use their limbic system when making decisions.

This area in the brain is used for feeding, fleeing, fighting and sexual reproduction. Without a more mature brain, the intense emotional arousal of pornography could leave the adolescent feeling that pornography is a true representation of what sex, relationships and intimacy should be (Leigh, 2010).

Staksrud and Livingstone (2009) reported on adolescent views of risks on the internet. It was interesting to note that the highest percentage on the chart below was in relation to pornography. This surpasses risks such as bullying, viewing violence and meeting online contacts.

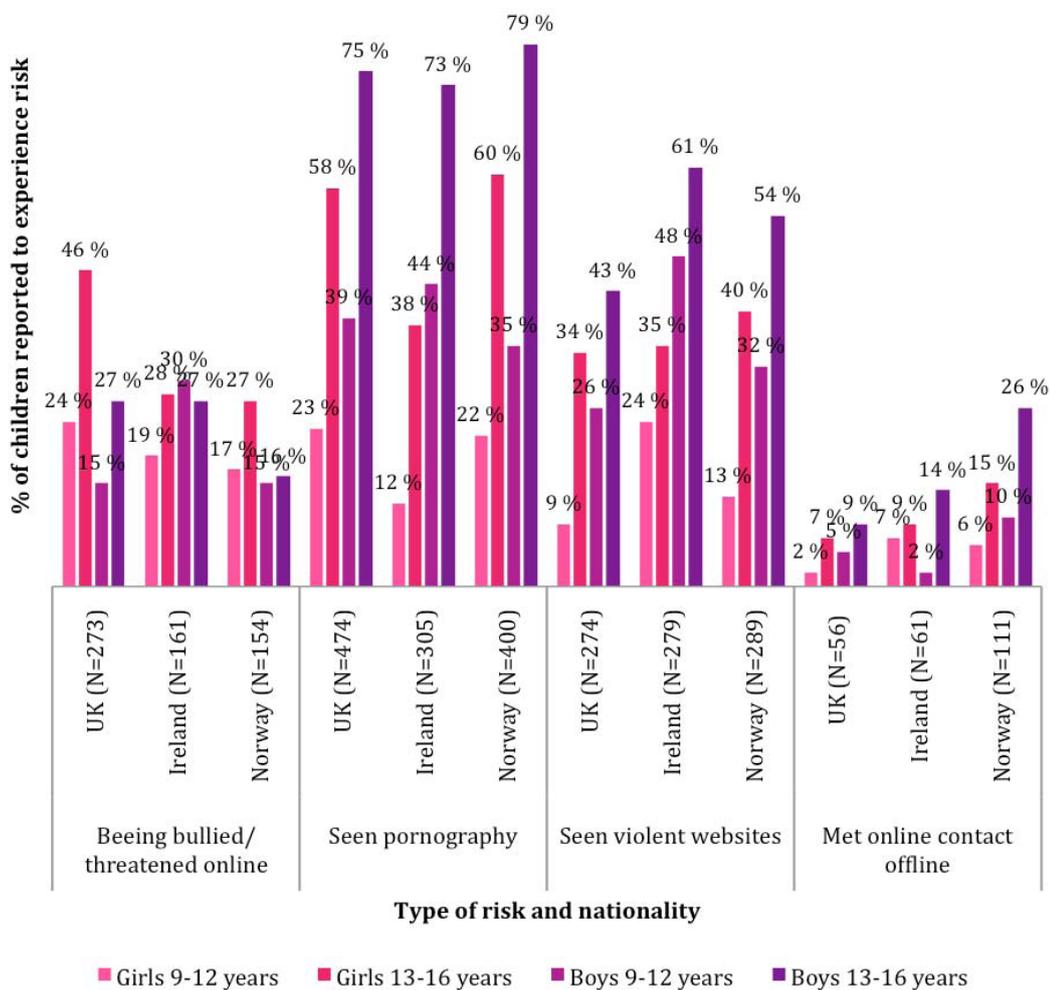


Figure 4.5: Percentage of children reporting exposure to risks on the internet.

In conclusion, the frequency of adolescent exposure to pornography is acknowledged. Although some researchers stated that there are dangers associated with viewing pornography, others are of the opinion that is not as risky, it was not expected that adolescents would view this as a risk. They seem to experience it as frightening. Furthermore, adolescents’ developmental phase had to be taken into account, seeing that this is a phase where sexual and biological changes occur; the topic of pornography should be a relevant topic for this stage and phase.

The final risk that has been included in the study concerning online dangers for adolescents, is online gaming.

2.6 Online gaming.

Kuss and Griffiths (2012) recently published the results from their research focusing on online gaming among adolescents. According to their research, it appears that “gaming, and particularly online gaming, is an integral element of children and adolescents’ leisure time activities” (Kuss & Griffiths, 2012, p. 14).

Furthermore, Kuss and Griffiths (2012) argued that adolescents’ game play has changed from a real world perspective to the online world of gaming. According to the respondents’ study, the most popular online game is Sims3 followed by World of Warcraft’s Wrath of the Lich King. These games emulate real life situations, especially Sims, which is a game where the player creates a human being and guides this character through normal life, i.e. choosing a career, working, making money, buying a house, furnishing the house, choosing a partner etc. These “Simulation Games” and “Massively-Multiplayer Online Role-Playing Games” (MMORPGs) are popular with online gamers (Van Rooij, Schoenmakers, Vermulst, Van den Eijnden & van de Mheen, 2010). These games allow players to:

- i) inhabit game worlds concurrently
- ii) develop virtual alter egos, namely avatars, and
- iii) play with others all over the world anytime and anywhere.

As identity formation forms part of the development of adolescents, it is argued that they enjoy playing simulation games because that speaks to their need for identity formation. (Erikson, 1950).

Once again the aspect of playing games on the internet is not a dangerous activity, but it can foster dangerous outcomes when participated in excessively; and have outcomes including the following technological risks, as mentioned by Hayes (2008, p. 1):

- a) risks from social interactions with strangers who may trick you into revealing personal or financial information;
- b) risks from computer intruders exploiting security vulnerabilities;
- c) risks from online and real-world predators;
- d) risks from viruses, Trojan horses, computer worms, and spyware.

Lastly, researchers are now acknowledging online gaming addiction as a clinical disorder. Chind-Sheng Wan and Chiou (2006) argued that a significant percentage of adolescent online gamers spent more time in cyber cafés than they did going to school and completing schooling activities; and therefore online gaming addiction has become an issue that should be researched more extensively. Addiction can occur since online games include continuous scoring, promotion, immediate feedback, and achievement of self-satisfaction, which Chind-Sheng Wan and Chiou (2006) argue build adolescent self-esteem.

Guan and Subrahmanyam (2009) also include online gaming as one of the dangers of internet use amongst adolescents. According to their research, online gaming is one of the contributing activities that could potentially lead to internet addiction. Various sources have found the same: i.e. online gaming is one of the most addictive activities on the internet (Griffiths et al., 2003; Guan & Subrahmanyam, 2009). Chind-Sheng Wan and Chiou (2006) summarise some of the findings on online gaming from various literary sources:

Chen et al. (2005) discussed online gaming-related crimes such as theft and fraud, while Lo, Wang and Fang (2005) highlighted how increased online gaming has led to deteriorating interpersonal relationships and increased levels of social anxiety in college-age online gamers. Ng and Wiemer-Hastings (2005) showed that young online gaming addicts displayed

symptoms similar to substance addiction, including dropping out of school as well as family and relationship problems (p. 162).

Online gaming, therefore, has some definite consequences and concerns, which is why it was deemed as important for inclusion in the psycho-educational strategy.

3. Conclusion

This chapter explained the reasoning behind including the six focus areas that will be included in the psycho-educational strategy. The above-mentioned are areas that are potential concerns and pathways to harm when adolescents access the internet and participate in these activities.

The internet holds an array of benefits and resources intended to simplify one's life. Various actions, however, could rather be harmful than beneficial. Adolescents are maturing and developing emotionally, as well as socially and cognitively. They experiment and enjoy contact with peers and forming relationships and an own identity. The combination of harmful consequences of the internet and the adolescents' need to contact and explore could be detrimental to their psychological and even physical health. The proposition is that if adolescents are made aware of these areas of concern and the potential danger, it might reduce the potential harm. The internet can therefore be enjoyed as it was intended to do.

The following chapter will focus on the research methodology and the psycho-educational strategy in itself. It will focus on the reasons for the strategy as a tool and how it was used to design a web-based program to educate adolescents on safe internet use.

CHAPTER 5:

RESEARCH METHODOLOGY

As discussed in the previous chapter, there currently seems to be various internet programs and resources written for teachers, parents and health care professionals. There however seems to be a limited amount of programs available for adolescents.

Furthermore, the existing internet safety programs are not written from a South African perspective. As South Africa's culture is unique and diverse, this cultural aspect should be incorporated. As stated in Chapter 2, culture forms part of the holistic view and understanding of the adolescent. Mayayise (2008, p. 19) noted that "no specific internet safety awareness programs cited by the authors were available in South Africa". Patchin and Hinduja (2010, p. 1820) found that when looking at educating adolescents on internet safety, "promoting education and awareness about these issues – as opposed to increased punitive legislation or reactive technological solutions – is the best preventative tack to take among this population".

Finally, as stated in Chapter 1, Valcke et al. (2011) along with GFI (2011) and Moreno et al. (2013) all found that there is a definite need for programs to be put in place to educate adolescents, parents and teachers on the dangers of the internet. The research discussion from Valcke et al. (2011) specifically mentioned that "more research focusing on the responses of youngsters on Internet regulations" is needed (Valcke et al., 2011).

The aim was to design a psycho-educational strategy consisting of an

interactive website for adolescents to promote safe internet use. In order to do this, a program where the adolescent could interact with relevant and easily accessible information concerning safety guidelines for internet use was created. This program was designed for the phase of adolescence; and finally also intended to incorporate an element of enjoyment, making it a fun learning experience. A web-based strategy was developed which aimed at providing a tool for adolescents to make them aware of the dangers of the internet so as to educate them. The strategy was designed based on a psycho-educational approach.

This chapter will therefore focus specifically on the process and methodology of the research, a parallel mixed method study that was undertaken. Secondly, the concept of psycho-education will be focused upon. Lastly, the medium used within the psycho-educational strategy (i.e. the website) will be discussed.

1. Research Methodology

Within this study the research design formed the blueprint of the research, which guided and enabled it to be conducted in an appropriate way. Firstly it was necessary to recognise the aims and objectives of the study before defining the process of the research.

1.1 Aims and objectives of the research.

The aim of this study is to develop a web-based psycho-educational strategy in order to educate adolescents about safer use of the internet in order to safeguard them from the potential harms of internet use. The proposed strategy aims to function via an interactive web-site with educational information to be viewed by adolescents.

The objectives for this study are:

- vii. **To explore** the phase of adolescence;

- viii. **To explore** the current understanding of internet use and safety in schools in the northern suburbs of Cape Town;
- ix. **To investigate** how existing knowledge of the dangers of the internet and current programs for educating safe internet use contribute to internet use and safety in schools;
- x. **To identify** possible components of a psycho-educational strategy that will educate adolescents on using the internet safely;
- xi. **To design** a psycho-educational strategy consisting of an interactive website for adolescents to promote safe internet use; including the framework and content of the strategy;
- xii. **To evaluate** the perceptions of adolescents regarding the psycho-educational strategy and how the strategy influences their process of growth.

After the objectives were determined, the process of research could start.

1.2 The process of the research.

The aims and objectives served as the backdrop against which a plan had to be drafted in order to reach the set out aims and objectives. This study was a mixed method study incorporating both quantitative and qualitative data (Creswell, 2012; Flick, 2009). Within this study, the online behaviour of adolescents were explored in order to create a tool to both safeguard them from the harms and highlight the benefits of the internet. This insight was gained by using both quantitative and qualitative methods. Various definitions of mixed methods are available in the literature. Creswell, Klassen, Plano Clark and Smith (2011) described mixed methods research as a research approach or methodology:

- focusing on research questions that call for real-life contextual understandings, multi-level perspectives, and cultural influences;

- employing rigorous quantitative research assessing magnitude and frequency of constructs and rigorous qualitative research exploring the meaning and understanding of constructs;
- utilising multiple methods;
- intentionally integrating or combining these methods to draw on the strengths of each;
- and framing the investigation within philosophical and theoretical positions.

The above-mentioned aspects of mixed method study were all important within the research as the focus was on the research questions and the applicability to the real-life situation of adolescents on the internet. Also quantitative research was used via the structure questionnaire to access a large group in order to understand the use of the internet amongst adolescents. Multiple methods were used since using purely quantitative would not have given the necessary insight into the adolescents' perceptions of the psycho-educational design. Although the quantitative research via questionnaires was a quick and efficient way to gain data from numerous adolescents, the verbal feedback from the focus groups provided an in-depth understanding of the strengths and weaknesses of the strategy. The combination of the two methods, qualitative and quantitative research, strengthened the study and its outcomes and was grounded within the theoretical framework as discussed in chapter 2. Venkatesh, Brown and Bala (2012) state that this is the reason why researchers make use of mixed method research, because it draws on the strengths of both qualitative and quantitative research. The strength of the research lies within the combined strengths. Within this study this was the case as the strength of having access to a larger population was obtained via the use of a quantitative questionnaire, whereas the insight from face-to-face interaction with

adolescents was achieved via focus groups.

More specifically *parallel* mixed method research was used by applying both qualitative and quantitative methods concurrently. Within mixed method research there are two strands; one is sequential mixed method design and the other, parallel (concurrent) mixed method design (Venkatesh, Brown & Bala, 2012; Hanson, Creswell, Clark, Petska & Creswell, 2005). Sequential research according to Creswell (2009) is used when the researcher aims to elaborate or expand findings with another method of research. In other words, a more in-depth look into the research was necessary and this depth could not be achieved by only using either qualitative or quantitative methods. Sequential also implies that the research happens as a process (i.e. in sequence) (Cameron, 2009).

Parallel mixed method is the mixing of quantitative and qualitative data gathering methods simultaneously within at least one of the stages of research (Creswell, Klassen, Plano Clark & Smith, 2011). There may be both exploratory and confirmatory aspects to a parallel study. Both qualitative and quantitative data may be collected or quantitative and qualitative analyses may be conducted and inferences drawn (Rocco, Bliss, Gallagher & Perez-Prado, 2003). Venkatesh et al. (2012) was of the opinion that the inferences drawn when using mixed method research is stronger than using only a single method. Within the research parallel, mixed method seemed more appropriate since both qualitative and quantitative methods were used for gathering as well as analysis of data. The process of data gathering also did not happen in a sequence but concurrently. Questionnaires were sent out to adolescents, a focus group was held with experts and after the strategy was designed, there were more focus groups with adolescents. There was therefore a usage of combined techniques. Since a mixed method study has so many

variables and different aspects, it was necessary to firstly give a layout of the research as a whole before discussing each step separately.

The research process was conducted according to the following stages:

Table 5.1

The research process (Mixed method design)

Steps	Quantitative or Qualitative	Type of research
Step 1:	Qualitative Research	Literature study (Preliminary study to determine problem)
Step 2:	Quantitative Research: Data gathering	Administering structured questionnaires to 183 adolescents (Quantitative data gathering)
Step 3:	Qualitative Research: Data gathering	Focus group with experts (Qualitative data gathering)
Step 4:	Analysing quantitative and qualitative data results against existing literature	Literature review and research on current interventions
Step 5:		Design of the strategy and evaluating with pilot studies
Step 6:	Qualitative Research: Data gathering	Focus groups with adolescents to determine their perceptions of the strategy.
Step 7:	Qualitative Research: Analysing data	Analysing data of recordings from focus groups: - Coding

		<ul style="list-style-type: none"> - Grouping emerging themes - Identifying themes
Step 8:		Results and findings
Step 9:		Conclusions and recommendations

The steps in research were conducted through the use of various research methods and data gathering techniques which will be elaborated upon accordingly.

1.3 Research methods and data gathering.

As stated previously, mixed method research was applied as the method for gathering data. The following focuses on the each of the methods used.

1.3.1 Quantitative research and data gathering.

Quantitative research has regard to numbers and specifics (Blaxter, Hughes & Tight 1996), and can be defined as the process of “measuring variables for individual participants to obtain scores, usually numerical values that are submitted to statistical analysis for summary and interpretation” (Gravetter & Forzano, 2003, p. 147). The focus is therefore on the measuring of a construct. The advantage of quantitative research is that a large number of participants can be accessed in a short period of time, and that the data has a high degree of generalisability (Flick, 2009). The disadvantage is that it is not necessarily relevant for all participants (Flick, 2009). This is why it is beneficial to combine quantitative research with the qualitative experience that provides an in-depth understanding of the human experience (Marshall & Rossman, 2010).

The quantitative research was done via structured questionnaires. These questionnaires were made available to all participants volunteering at the two

participating schools. After the questionnaires were completed, a total of 183 questionnaires were returned and recorded as quantitative data.

Quantitative data provided a numerical understanding of the extent of internet use amongst adolescents as well as what they viewed as problem areas. This was beneficial as it aided in identifying the areas of focus within the strategy. From the initial literature review, certain areas regarding adolescents and the internet emerged recurrently. The quantitative questionnaire was designed based on the specific information gathered from the literature review in accordance to the information that was needed from adolescents in order to design an appropriate strategy. The literature study identified possible areas of concern; as well as identified popular activities of adolescents on the internet.

To determine what was relevant for the specific population, a questionnaire was developed which asked specific questions relating to internet use by adolescents. The questionnaire has been attached as Addendum A. The results of the questionnaire are discussed in Chapter 6.

1.3.2 Qualitative research and data gathering.

As mentioned previously, the study also incorporated qualitative research methods. Qualitative research attempts to understand and explore behaviour or social systems based on the researcher's field of interest (Creswell, 2009; Nieuwenhuis, 2007). The research specifically focused on the social tendency of adolescents on the internet and the risks associated with the access. Therefore, qualitative research was a relevant way of gaining data for such a social concern. Creswell (2009) also states that qualitative reliability is important in a study and refers to the researcher's approach to the research. Creswell (2009) is of the opinion that the qualitative reliability of research should be consistent across different fields

and researchers. According to Creswell et al. (2011, p. 4), the strength of qualitative research “is its focus on the contexts and meaning of human lives and experiences for the purpose of inductive or theory-development driven research”.

Leedy and Ormrod (2005) also state that qualitative research has regard to the understanding of a social experience; or as Marshall and Rossman (2010, p. 2) describe it, qualitative research focuses on the ‘lived experiences of people’. The research is therefore based on actual experience. Flick (2009), in turn, looks at the disadvantages of qualitative research. According to this author, qualitative research is difficult since it entails time and effort spent in contacting potential participants and gaining access to participating institutions. Furthermore Flick (2009) mentions how the biases of the researcher could influence the research.

Qualitative research was done with the use of focus groups. Firstly, a focus group was conducted with experts (as explained below) and during the empirical research, focus groups were conducted with adolescents to explore their experience of the psycho-educational strategy.

1.3.3 Focus group with experts.

The first application of qualitative research was attempted by organising a focus group with individuals in the field of adolescence, technology and education. Experts in the field of adolescence, education and internet were asked to participate in a focus group. Focus groups, in turn, refer to a research method which collects data through group interactions based on a specific topic determined by the researcher (Greeff, 2011).

The experts included two educators working with adolescents daily, an IT programmer with technical insight regarding the internet, two parents of adolescents, a play therapist engaging with adolescents emotionally within the school systems,

and a professional psychiatric nurse involved with youth ministries. Insight was gained from the experts concerning their experiences of adolescents on the internet, problems with adolescent behaviour on the internet as well as their opinions regarding the feasibility of a psycho-educational strategy teaching safe internet use, via the focus groups. The questionnaires filled in by the adolescents along with the responses of the experts provided the necessary backdrop to start the design of the website. The website as medium was designed and adolescents were requested to engage with the website.

1.3.4 Pilot studies.

After the website had been designed, adolescents were asked to view the website and then participate in focus groups. Their experiences were provided as feedback. Pilot studies were conducted with two focus groups of adolescents. The pilot studies aimed at evaluating the strategy and gaining insight from the adolescents. Suggestions, recommendations and criticism were taken into account and adjustments were made to the strategy. This was done in preparation for the focus groups which formed part of the empirical research.

1.3.5 Focus groups with adolescents.

Qualitative research provided the opportunity to gain a more in-depth understanding of the adolescents' experience, rather than merely stating research findings by means of numerical value. This was important as the strategy pertained to adolescence as a phase.

Focus groups were conducted at two participating schools in the northern suburbs of Cape Town. These focus groups allowed the viewing of adolescents' reactions to the website, followed by conversations concerning their opinions and experiences of the website. A total of eight focus groups were conducted. Two

groups formed part of the pilot study while six were part of the empirical research. The focus groups, in which an interview schedule was used, were conducted until a point of saturation was reached. Mason (2010) indicates that saturation in research occurs when new data do not provide new information. According to Tuckett (2004), in a qualitative study the research is not focused on the amount of data but rather on the richness of the data. This is what saturation entails. As soon as the responses of the focus groups started to repeat and overlap, the focus groups could end, as saturation point was reached.

Triangulation, which also enhances validity, was used within this study. Triangulation can be defined as a process of combining research findings in order to make data more accurate (De Vos, 2011) or, as Mouton (2001) explains it, triangulation is the inclusion of different sources of data collection and potentially increases validity. Since triangulation was applied in the study by using both quantitative and qualitative measuring instruments, as well as data gathering and analysing methods, the trustworthiness and validity of the study were enhanced further.

1.4 Trustworthiness and validity.

Major and Savin-Baden (2010) note that research has previously been deemed valid based on aspects of validity. The term 'validity' however is being substituted and sometimes replaced with 'trustworthiness' (Major & Savin-Baden, 2010). According to Afzal, Rana and Mehmood (2008), validity attempts to measure truthfully what it intended to measure at the onset of the study. Therefore the truthful nature of the research adds to the value of the research. Major and Savin-Baden (2010) state that a study can be deemed to be trustworthy if the research shows credibility, transferability, dependability and conformability. Furthermore, Golafshani

(2003) states that in order for the researcher to guarantee validity and trustworthiness, he/she should be able to generalise research.

It is therefore the responsibility of the researcher to make sure that findings are accurate and representative of the participants' experiences. This was achieved by attempting to generalise findings by integrating previous literature into the empirical findings of this study. This was done by identifying themes in Chapter 6, where all the findings were measured against existing literature. This was done to ensure that the findings were not viewed in isolation, but could be explained by integrating literature.

Creswell (2009) mentions strategies to enhance validity. They are discussed as they pertain to this research: Firstly, Creswell mentions triangulation, which was used in this study. Triangulation can be defined as being a process of combining research findings in order to make data more accurate (De Vos, 2011) or, as Mouton (2001) explains, it is the inclusion of different sources of data collection and potentially increases validity. Triangulation was used in this study since it increases validity and trustworthiness because of the fact that qualitative and quantitative research methodologies were used.

Creswell (2009) further mentions the clarification of the researcher's bias. The bias of a researcher refers to his or her preconceived ideas or opinions with regard to a specific wanted outcome of the research. This should be avoided in order for research to be a true reflection of the participants' opinions and not the researcher's biased opinion. This was done through the explanation and rationale for the study, stated in Chapter 1. An external coder was also used to help identify themes from the research.

Finally, it is also necessary to mention that when a researcher conducts a

study, he or she also plays a part in the trustworthiness and validity of the study. Research literature often mentions the fact that the interviewer's perceptions and opinion may influence the interview and its outcome. One way of controlling this is to make use of the same interviewer to conduct all the interviews (Breakwell, Fife-Schaw & Hammond, 2000). Within the context of this study, one interviewer was indeed used to conduct all the interviews.

The participants that were used for these interviews were chosen from specific criteria, which are discussed in the following section.

1.5 Participants.

The population of a sample refers to the participants of the study with which the research problem is concerned (Gravetter & Forzano, 2003). Strydom (2011, p. 194) argued that the population is the "totality" of people, or events, or units, or records with which the research problem is concerned. In this study the population consisted of adolescents in participating schools in the northern suburbs of Cape Town.

Participants for this study were chosen via cluster sampling. According to Ahmed (2009), cluster sampling refers to "a group of population elements, constitutes the sampling unit, instead of a single element of the population" (p. 2). Within cluster sampling, schools within the northern suburbs of Cape Town were approached and asked to participate in the study. From the schools who agreed to participate, classes were randomly introduced. Adolescents were randomly sampled and then invited to participate voluntarily. Those who agreed were organised into focus groups. This was done since schools provided better access to the sample of adolescents. The population is too big and it was therefore easier to first sample schools via cluster sampling and then randomly sample the individual adolescents

within the schools (Strydom, 2011). The reason for using random sampling to choose adolescents in the northern suburbs of Cape Town, was because this allowed a truthful understanding of adolescents' current knowledge of safe internet practices.

The criteria for the selection of schools were the following:

- i. Schools with pupils between the ages of 12 and 18.
- ii. Schools willing to participate voluntarily.
- iii. Schools equipped with computer and internet facilities.
- iv. Schools situated in the northern suburbs of Cape Town.
- v. English and Afrikaans medium, government schools.

Criteria for selection of adolescents:

- a. Grade 8-12 (high school)
- b. Any gender, and Afrikaans or English speaking
- c. Must attend a school in Cape Town who adheres to above-mentioned criteria.

The participants in the study formed part of the process of data gathering. The data were then analysed.

1.6 Data analysis.

According to Creswell (2009), the process of data analysis includes making sense of text and visual data, as well as preparing data for a more comprehensive understanding of what the data represent. This is done in order to make an interpretation of the meaning of the data (Creswell, 2009). An examination of the data collected was conducted at the research site as notes were taken and common themes and ideas expressed by the participants were written down. The data was analysed away from the site after the collection of data was completed. Audio files obtained from the interviews were transcribed and read through numerous times in

order to identify corresponding themes. The different themes or patterns gained from the data were organised and then categorised through coding (Nieuwenhuis, 2007). Specific codes were used to represent specific themes and ideas identified in the data (Creswell, 2009).

According to Greeff (2011), the data obtained and themes observed have to be tested by searching through the data and challenging the understandings that have developed. Negative aspects that might occur as patterns in the study must also be considered. The themes that emerged were highlighted, grouped together and then organised under the theme headings. An external coder was asked to view the transcripts and help to identify emerging themes. The coder is a peer researcher and granted objectivity and limited any biased responses.

The themes were identified by comparing answers from the interviews and focus groups, and connecting themes that emerged from the interviews. The results thereof will be discussed in the following chapter (Chapter 6). The aspects that are relevant in the adolescents' field were re-visited in order to further understand the results of the research. This was done by considering the developmental theory, Gestalt theory, Systems and Complexity theory, as explained in Chapter 2. The theoretical framework, literature findings and empirical findings were reviewed and integrated. The findings are represented in Chapter 6.

1.7 Research questions.

As mentioned in Chapter 1, the research questions were proposed in order to clarify the intent of the research regarding the outcomes of the study:

1.7.1 Primary question.

What should the psycho-educational strategy for internet use and safety amongst adolescents comprise of?

1.7.2 Secondary questions.

- i. What is the current understanding of internet use and safety amongst adolescents in high schools in the northern suburbs of Cape Town?
- ii. What components need to be included in such a psycho-educational strategy?
- iii. How does a web-based psycho-educational strategy facilitate safer internet use amongst adolescents and growth into a self-regulating individual?

The research methodology has been revisited and explored. The following section will focus on the psycho-educational strategy.

2. Definitions and Motivation for a Psycho-Educational Strategy

Vreeland's (2012) research explained psycho-education as an aid in helping with mental illness. Psycho-education is an on-going process and such a process also stimulates an increase in knowledge and insight into a specific area (in this study the area would be internet use amongst adolescents). Psycho-education refers to "a holistic approach to understanding what it means to be human" (Griffiths, 2006, p. 21). According to Griffiths (2006), there are three main sections when referring to individual psychology, the first being dynamic psychology, focusing on emotional aspects; secondly, how the individual learns and obtains new knowledge and skills; and lastly, Griffiths refers to developmental psychology (which has already been discussed in Chapter 2). He does however also acknowledge that social interactions are essential in the delivery of psycho-education. Finally, he mentions the impact of cognitive psychology in psycho-education, since it involves challenging maladaptive thinking processes and suggesting alternative adaptive patterns of thinking. All of the

above aspects, namely developmental psychology, social interaction and cognitive development, have all been discussed as part of the phase of adolescence in Chapter 2. It resonates with the argument that adolescents would benefit from a psycho-educational strategy since it speaks to the phase of development which adolescents are in.

Vreeland (2012) alternatively argued that psycho-education includes cognitive, behavioural, and supportive therapeutic elements which enable the understanding of a problem. Donker, Griffiths, Cuijpers and Christensen (2009) stated that psycho-educational interventions can vary from passive materials such as leaflets, e-mails or informational websites to active multisession group intervention with exercises and therapist guidance. Psycho-educational interventions are usually less expensive, more easily managed and potentially more accessible than conventional psychological interventions (Donker et al., 2009).

Grey et al. (2012) found that “several clinical trials demonstrating the efficacy of psycho-educational interventions in transitioning youth (adolescents)” are available (p. 769). It is this transition in thinking about internet safety that made the psycho-educational strategy an appropriate one to use. Colom (2011) stated that psycho-education is not merely giving information to a person regarding a medical or psycho-social condition, but refers to “empowering training targeted at promoting awareness” and “proactivity, providing tools to manage, cope and live” (Colom, 2011, p. 339).

It was essential to be realistic about the adolescent’s need to be educated. Many adolescents are unaware of the dangers and therefore will not seek ways to be safe. An environment had to be chosen where they were exposed to this information, where the information was presented in such a way that it grabbed their attention

and forced them to face the potential dangers of the internet. It was proposed that introducing such a psycho-educational strategy within schools would provide exactly the platform for the awareness of safe internet use amongst adolescents. Sharp and Dellis (2010) stated that, since most adolescents move through the educational system, “schools are an important setting for interventions to prevent high-risk behaviours in teens (adolescents)”. Rice and Meyer (1994) also noted that schools should be used with psycho-educational strategies as they provide a way of reaching a large portion of the adolescent phase.

By involving schools, more adolescents could be reached. Schools can also choose to implement this as a compulsory task for adolescents to complete. If schools use psycho-educational strategies to create awareness, it will force adolescents to be aware of internet safety as opposed to teachers or parents suggesting that they make themselves aware of safety “tips”. The following section focuses on the strategy and how it is aimed at educating the adolescent about internet safety.

3. Design of the Strategy as Interactive Website

The psycho-educational strategy was designed in the form of an interactive website. The reason a website was chosen as a connecting point was to bring about an understanding that the internet is not a forbidden tool, but rather a powerful tool that can have positive uses as well as dangerous outcomes.

Ruzek et al. (2011) reviewed 80 websites focused on internet based education and intervention strategies. According to their research, internet based interventions have shown to be effective in a variety of areas and problems. Ruzek et al. (2011) also found that the wide range of informational websites that do exist do not always contain the correct information. Their study indicated that 42% of

websites contained inaccurate information (Ruzek et al., 2011). This shows that although the effectiveness of programs via the internet has been proven, there also seem to be inaccurate websites available. This was another reason why it was deemed necessary to design a website with academic research and information as opposed to some websites with tips instead of academic information regarding safe internet use.

Since the accessing of the internet is popular amongst adolescents (as stated in Chapter 3), it was decided that using the internet as medium to educate would heighten the interest of the adolescent. Grey et al. (2012) indicated various advantages of using the internet to intervene in social situations. Grey et al. (2012, p. 775) also argued that internet based interventions:

- i) standardise program content,
- ii) can then be directed to specific ages and developmental phases,
- iii) allow for social interaction,
- iv) can be easily updated, and
- v) have the potential for wide dissemination.

The above outcomes of using an internet-based strategy suited the aim of the research. The website was aimed at a specific age group. Taking their developmental phase into account, it provided a platform for sharing program content that was accurate and recent. Furthermore, it has the potential for wide dissemination as it can easily be accessed by schools all over South Africa.

Crutzen et al. (2008) conducted a study specifically focused on internet interventions for the adolescent phase. According to their findings, the following should be considered when developing a website for adolescents:

- i. Adolescents should be able to associate themselves with the look and feel of

the website.

- ii. The uses of visual materials are important (e.g. graphs, videos, pictures etc.).
- iii. The uses of interactive features are important (e.g. tests, forums, games etc.).
- iv. Activities should allow the user to stop and continue at any time.
- v. Navigation should be easy (Crutzen et al., 2008)

The above-mentioned findings were taken into consideration designing the website. The findings were integrated with the website in the following way:

- i. The look and feel of the website was designed with the adolescent phase in mind. Pictures and photos of adolescents were incorporated to make the website appropriate for adolescents. A variety of visual materials was used, including a logo, pictures, colours and videos as well as relevant educational videos obtained via YouTube.
- ii. The interactive features include a reflective questionnaire and a creative assessment activity; a fun page with games as well as a blog where adolescents can express their experience.
- iii. All of the activities can be interrupted and continued at a later stage. The videos have a pause, rewind and fast forward function.
- iv. Navigation has been made easy in that all of the various functions were available on the homepage in order for a viewer to immediately see where the various sections are. There is also a clip on “How to use this site”, explaining the navigation of the website.

The following is a screen shot of the website’s home page as an example of how the above-mentioned findings were practically integrated:



Figure 5.1: The homepage of the developed website

In conjunction with the above-mentioned suggestions for making a website suitable for adolescents, Crutzen et al. (2008) found that time was an important factor. This demands that activities should not take up a lot of time and not include too many reading activities. On this website, reading was kept to a minimum; there are no textual sources to download or read. The only textual information there is, forms part of the videos and the videos have an average viewing time of four to ten minutes each. The adolescent can therefore concentrate in the allocated time and when getting tired of viewing and reading the videos, they can stop and return to the website at a later stage. They also have the option to pause and resume watching later on.

In addition a questionnaire could be provided to tailor feedback (Crutzen et al. 2008), and the website includes a reflective questionnaire to aid the adolescent in

considering the various areas of internet safety.

All of the above-mentioned suggestions of Crutzen et al. (2008) were procured, combined with the research from Chapters 2 through to 5, and only then was an attempt made to design a website as a psycho-educational strategy.

3.1 The website.

A website as medium for the psycho-educational strategy was used. As indicated in the previous section, this involved combining research on each of the aspects of internet safety (Chapters 3 and 4) with the developmental phase of the adolescent (Chapter 2). If one has regard to the adolescent once again and the importance of the developmental phase, one could revisit the theoretical framework which guided the study. As discussed in Chapter 2, the various theories used to investigate the adolescent was important to take into account when designing an appropriate website. The website could not merely be designed by including content and elements that did not form part of the adolescent field.

Referring back to Figure 2.4: Complexity and Systems theories within the contact cycle of Gestalt, the attempt was made to convey the interaction of the individual (adolescent) with the field/the other/the environment (Internet). In this case the website becomes the 'other' or the place of contact. By contacting the website, there is an impact on the individual/adolescent. As stated in Chapter 2, the individual adolescent has to contact various elements in order to form his or her own understanding of both the world (group identity) and his own uniqueness (diffusion). It is argued that when the individual finds the balance in contacting and withdrawing from these elements successfully, the process of adulthood can start. If the website as point of contact can provide the adolescent with awareness that leads to the understanding of the dangers of the internet, balance might be struck in the

successful and healthy use of the internet. These theories therefore guided the research as it suggested that the healthy interactive activities of the website would serve as a point of contact where the adolescent can contact and withdraw from the internet in a healthy way. Although the foundation of theory was essential when discussing the reason why the website would be good, fertile ground for healthy internet interaction, the practical steps will also be mentioned.

The steps that were taken into account in designing the website, included:

Table 5.2

The design of the website

Step 1	<p>Firstly the adolescence phase was taken into account as well as developmental and psychological aspects of adolescence (Chapter 2). This was achieved by doing a needs analysis with adolescents via a structured questionnaire as part of a preliminary study (results are discussed in Chapter 6). Thereafter a focus group was held with experts including a play therapist, educators, parents, a computer programmer and a school counsellor to determine the extent of the problem with adolescent behaviour on the internet.</p> <p>Literature research was done concerning the risks, exploring the risks and the relation of internet use to adolescence (Chapter 3-4).</p>
Step 2	<p>Secondly, after the harmful areas of internet activities (as identified in Chapter 4) were explored via literature research (Chapter 3 and 4), it was then moulded into video clips containing all the relevant information concerning the seven dangerous areas (namely cyber bullying, sharing of personal information, accessing pornography, general safety, social networking, plagiarising and online gaming).</p>

Step 3	After the website was designed, a pilot study was done with two adolescent focus groups from two separate schools. These groups of adolescents suggested changes which were then applied to the website.
Step 4	Lastly, adolescents were divided into seven focus groups, and the focus groups were exposed to the website. Each focus group had the opportunity to give feedback, stating their opinion and experience of the website, as well as discuss what they have learnt from it. Finally, the focus groups also provided insight into the feasibility of the project as psycho-educational strategy for adolescents in schools.

The above mentioned steps were followed during the course of the research. The following section will conclude with general remarks concerning this chapter. Please see my comments at the top of Chapter 2 regarding the design of the website.

4. Conclusion

This chapter focused on the methodology that was used to conduct the research. The process of the research was explained and explored in order to gain a clear view of the procedures.

Psycho-education in terms and as a strategy has also been discussed, as well as the effectiveness thereof. The medium used to design the psycho-educational strategy was internet-based since it was developed into a website. The chapter discussed the effectiveness of using the internet for education in a psychological field, but with a truthful and academically based information basis.

The following chapter will focus on the findings of the research. These findings were coded, and through coding, themes emerged. These themes and the integration thereof with literature is discussed in Chapter 6.

CHAPTER 6: FINDINGS OF THE RESEARCH

1. Introduction

Chapter 5 discussed the research methodology as well as the psycho-educational strategy. This chapter will explore the relevant findings from the study. The research strategy, the preparation conducted for the research, the process of gathering the data as well as the data analysis will be discussed. Developmental theory, Gestalt theory, Complexity and Systems theory have been integrated into the findings to contextualise the data. The following schematic representation provides an outline of the chapter:

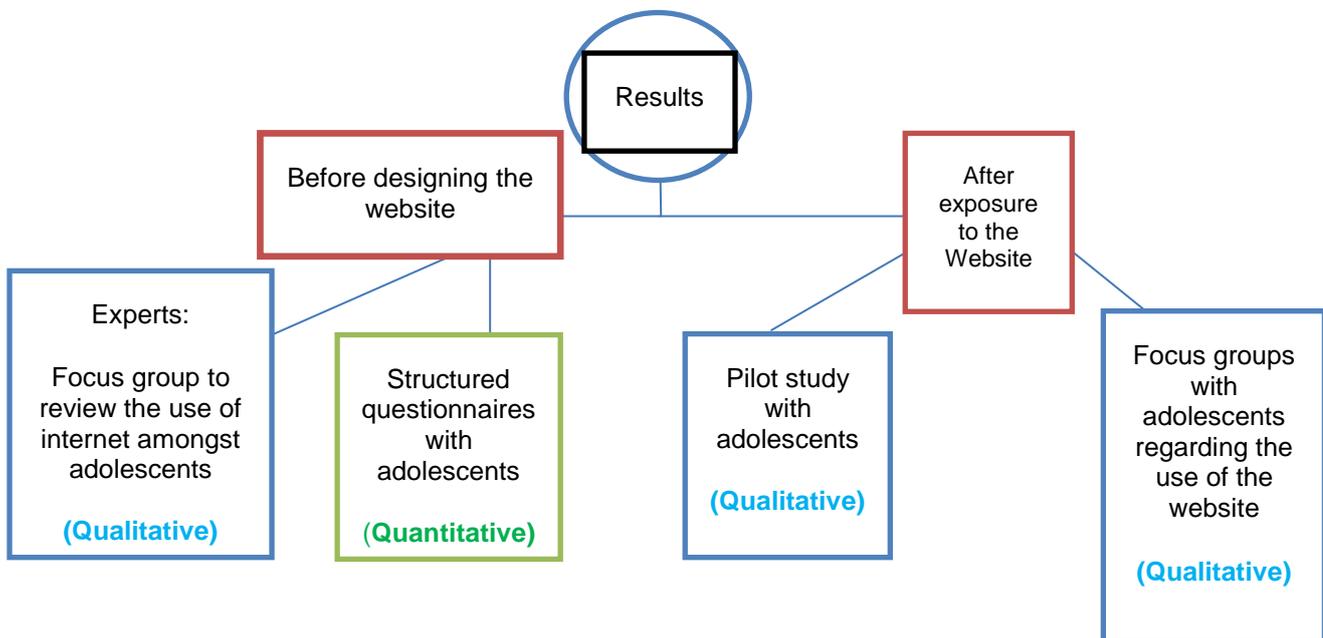


Figure 6.1: Chapter 6 outline

Firstly, the process and results of the preliminary study will be discussed, after which the results and findings of the empirical research will follow. Feedback concerning the psycho-educational model by means of the designed website will

conclude the chapter.

2. Results

The results from the research are summarised below along with the discussion of the sample that participated within each section of the research.

2.1 Preliminary research.

Preliminary research is “one of concept formulation and definition of objectives, often leading on to piloting” (Ebrahim, 2012, p. 196). A preliminary study was included in order to determine the feasibility of the proposed research and also as a guide to define concepts, decide on specific objectives and enhance the outcome of the study.

The preliminary study included two activities. The first was in the form of a focus group with experts in the field of adolescence. The group consisted of parents with adolescent children, teachers, a school counsellor, an IT programmer and youth leader from a local church. All of the group members’ social or occupational roles were either in the area of childhood development and mentoring, education or computer-orientated areas. It was important to include members who could understand and contribute to the main pillars within the study: i.e. adolescents, internet and the education of adolescents. The group was informed of the proposed study and its aims.

The medium of a focus group was used as a tool to explore perceptions from these role players regarding the feasibility of a psycho-educational strategy for safe online use amongst adolescents. Opinions, input, suggestions and criticisms concerning the feasibility of a psycho-educational website amongst adolescents were discussed. The feedback from the group was mostly positive and the general response was that the proposed program could be used to enhance awareness.

From this focus group, comments were made, which included:

Comment 1: "It won't help you to prepare a lesson for teenagers (adolescents) saying ... mmm ... safe internet use will be taught on Mondays from 9:00-10:00. It is not going to happen, rather if you make them aware of these things through a medium that they anyway engage with, I think you will just reach them better."

Comment 2: "It is very nice that there is a place where they can go on a website, say for example they have a problem with cyber bullying, to physically go and look in their personal time and space, and to say, you know what, I have a problem with this."

Comment 3: "Well, it opened my eyes; I didn't realise that some children physically kill themselves due to stuff (dangers associated with the internet) like this ... it opened my eyes."

Comment 4: "I like something like this; one has to be honest with them (adolescents)."

Comment 5: "With something like this the children can have a look for themselves, some parents may think it's a bit too much, but there are things children are doing that parents aren't aware of, which is much worse, this is something that teaches them how to use the internet in the correct way."

Comment 6: "I think this is a very, very good idea."

Some criticism and suggestions were also made by the group, including:

- 1) A respondent mentioned that at 12 years of age, children are already familiar with the internet and that it might be too late. One should rather focus on a younger age group.

- 2) A respondent mentioned that every concept should firstly be identified with a definition before viewing the videos.
- 3) A third respondent mentioned that the research has to make them aware what these dangers are, because the difference between their perception of cyber bullying and the reality may differ considerably..
- 4) Another suggestion was to place greater emphasis on the consequences of each of the dangers.

The focus group was conducted to gain insight into the reality of unsafe internet use amongst adolescents. The experts (as identified previously) provided real life insight into the process of adolescence, the realities regarding the dangers of the internet as well as provided a professional opinion regarding the need and feasibility of a psycho-educational strategy focusing on online safety. The main purpose of the focus group was to get confirmation from important role players that the study will be addressing a need.

Although the experts work with adolescents daily, adolescents themselves had to be included in the study to gain a truthful understanding of their current online use. Engaging with the adolescents was necessary in order to design an age-appropriate and relevant strategy which they could benefit from. The second activity in the preliminary stage of the study was in the form of structured questionnaires (Addendum A), of which 200 were distributed within two high schools in the northern suburbs of Cape Town. The questionnaires were distributed to learners ranging between 13 and 18 years of age. A total of 183 questionnaires were correctly completed and returned. The following table summarises the results:

Table 6.2

Results from preliminary, structured questionnaires.

Adolescents who:	Percentage [N=183]
access internet daily	76
access internet weekly	93
access the internet via a cell phone	94
have a profile on a social network	83
think they spend a lot of time on the internet	56
state that they enjoy accessing the internet	87
dislike accessing the internet	10
claim to have experienced bullying via the internet	22
use real names on the internet	80
admit to lying about their age on the internet	38
have posted their phone number online	33
have posted their address on the internet	19
clear their browsing history after use	66
are open to their parents about online activities	75
lied to their parents about online activities	28
have free internet access at home	59
use the internet at school	54
access the internet at school for academic purposes	45
are scared to go online because a specific peer is also logged on	18
admit to inappropriate activities online at school	37
admit to using the school's internet for an activity that is not permitted	17

have contacted a stranger via internet	20
have been contacted by a stranger online	47
have met an online stranger face to face	31
admit to posting negative comments online	32
stated that they were exposed to sexual content online	40
play online games	52
found the internet to be dangerous	39

Some of the results were alarming; 33% of the adolescents admitted to posting a personal cell phone number on the internet, 19% posted an address; 28% lie to their parents about online activities and 18% is scared to go online when a specific peer is also online. These results are concerning as it provides opportunities for potential harm and negative exposure. Furthermore, adolescents themselves identified the internet as a dangerous playground as 39% agreed to this..

A further confirmation for the necessity of education within the field of online safety was the fact that 93% access the internet on a weekly basis, which is determined as frequent. Lastly, although not all of the adolescents have internet at home or access it at school, 94% access the internet via their cell phones. This is a significant number of adolescents who literally have the internet literally at the disposal of their fingertips.

From the above-mentioned results it was noted that some concerns echoed the literature (as explored in Chapters 3 and 4) concerning safe online use amongst adolescents. These concerns were incorporated into the six areas contained in this study. The focus was also on whether the specific areas were relevant within the adolescent age group. The study was conducted through the integration of literature

and the data obtained from the questionnaire. The following table portrays the integration:

Table 6.3

Integration of findings from literature with preliminary structured questionnaire results.

Area	Literature	Findings of preliminary quantitative research via a structured questionnaire.
Cyber bullying	Badenhorst (2011); Burton and Mutongwizo (2009); Department of Education and Early Childhood Development (2010); O'Brien (2010); O'Neil (2008); Rogers (2010); Trolley and Hanel (2010)	<ul style="list-style-type: none"> • 22% of the respondents stated that they had experienced cyber bullying (41 respondents in total). • 18% of the respondents were afraid to go online due to someone else also being on the internet.
Online gaming	Chind-Sheng Wan and Chiou (2006); Guan and Subrahmanyam (2009); Hayes (2008); Kuss and Griffiths (2012); Van Rooij et al. (2010)	52% of the respondents play games online. Discussing the dangers of online gaming would therefore be relevant seeing that half of the respondents fell in this category.
Plagiarising	Arewa (2010); Department of education and early childhood development (2010); Du Toit et al. (2011); Roberts (2008); Strom and Strom (2009); Thomas and Sassi (2011); Wash (2008)	45% of respondents claim to use the internet for academic purposes and therefore an element like plagiarising in school work and projects would be a relevant topic to discuss.
Sharing information	American Academy of Paediatrics (2011); ECU (2012); Lenhart and	<ul style="list-style-type: none"> • 33% posted phone numbers online. • 19% posted their address online.

	Madden (2007); Niegowski et al. (2010); O’Niel (2008)	<ul style="list-style-type: none"> • 20% contacted a stranger online. • 47% were contacted by a stranger online.
Social networking	Allen et al. (2010); American Academy of Paediatrics (2011); Du Toit et al. (2011); Kluemper et al. (2012); Lenhart and Madden (2007); Mayayise (2008); Niegowski et al. (2010)	83% make use of social networks.
Pornography	Chetty and Basson (2006); Flood (2007); Koch (2011); Leigh (2010); Petrou (2011); Sabina, Wolak and Finkelhor (2008); Staksrud and Livingstone (2009)	40% were exposed to content of a sexual nature.

These activities within the preliminary phase enabled the formulation of the research problem as well as what the content of the website should include. It further gave direction towards accessing the relevant and appropriate information and sources needed in conducting the study.

2.2 Conducting the research.

The second section of the research occurred after the preliminary study was completed and after the literary study was conducted. Knowledge obtained from previous studies (as mentioned within Table 6.2) and literature (Chapters 3 and 4) was used and combined with the findings from the results of the preliminary study. What emerged from the latter was the psycho-educational strategy which was presented as a website (Chapter 5).

Two steps were taken within the field work (research). Firstly, a pilot study was conducted, after which the main empirical research was done.

2.2.1 The pilot study.

The focus groups were conducted by having one focus group at each of the two participating schools. The first focus group consisted of six adolescents and the second of seven. The focus groups formed part of the pilot study section of the research. According to Blaxter et al. (1996), the pilot study is the process where the proposed program or study is attempted on a section of the sample. This is done to see whether the intended program or study is feasible and will be successful within practice. This also enables the researcher to make modifications before attempting the actual study.

The pilot study provided an opportunity to evaluate the interview schedule, gain feedback from adolescents regarding the age appropriateness of the website and the general opinion within the sample group regarding the proposed research. One of the most prominent benefits of a pilot study is that it helps to iron out potential problems that might occur during the actual empirical research (Blaxter et al., 1996).

By conducting a pilot study, the research can be modified and adjusted to make the empirical research more successful and valid. The focus groups from the pilot study brought about the following changes as proposed by the adolescents:

Table 6.4

Changes based on the feedback from focus groups

The changes that were suggested by the two pilot studies via two focus groups:	The positive feedback provided included the following:
<ul style="list-style-type: none"> - The slides should have less text for reading. - Colours that are plain and simple should be used. - The slides run too quickly, it should run slower. - Many adolescents will not use the section: “How to use this site.” - The website should be more colourful. - The slides should include more humour (adolescents liked the wording of some of the headings). 	<ul style="list-style-type: none"> - Adolescents liked the music that was used. - They enjoyed the fun-corner. - They enjoyed the video format (the fact that one can pause, rewind, etc. was beneficial). - Adolescents thought the assignments were appropriate and that they would be able to complete them. - They enjoyed the functionality of the website (the fact that everything was available and accessible on one page). - Only some would use the blog; not everyone. - Many enjoyed the statistics and newspaper articles. - Many commented that they liked the humour of the pornography slides. - They enjoyed the relevant pictures on the top of every opened screen.

It was necessary to take the negative and positive feedback into account in order to make the necessary adjustments to the psycho-educational strategy. The proposed adjustments were made in order to be prepared for the empirical section of the research process.

2.2.2 Empirical research.

According to the American Educational Research Association (2006, p. 36), “empirical studies typically entail some process of data selection, reduction, or translation to enable analysis and reporting of outcomes”. The method of data collection that was used, were focus groups.

Three focus groups from each school were conducted ranging between five and six adolescents per group. The focus groups consisted of adolescents who were not previously used within the study. A total of six groups consisting of 8 boys and 24 girls participated in the focus groups. Girls were more eager to be involved, which could have an influence on the outcome regarding gender biases pertaining to girls and which aspects they would find attractive as opposed to different elements which boys might have enjoyed. The focus groups included adolescents from different ethnic groupings, including 22 white, 1 black, 8 coloured and 1 Korean adolescent. Although the focus groups were all conducted in English, this was not necessarily the home language of all the participants. After the sixth group, a point of saturation was reached.

According to Mason (2010), saturation is reached when new data do not necessarily provide new information. In other words, data begins to be repeated and nothing new is being introduced within the focus groups. The point of saturation was determined through the process of transcription and coding. Transcription was completed along with field notes.

After the feedback was transcribed, an independent researcher was requested to aid in identifying emerging themes through coding. This researcher was also required to assist in safeguarding the research responses against contaminating factors such as bias. Through the process of coding, various themes emerged from the interviews. These themes were grouped together. Triangulation was used as one of the various methods of data gathering. Triangulation refers to “multiple methods” of data gathering, helping to form an understanding of the research (Heppner et al., 1999, p. 250). The various forms used to gather data enhanced the credibility of the research, thus leading to crystallisation. More insight was gained through the use of various methods as it validated results. Maree (2007) defined crystallisation as the “practice of ‘validating’ results by using multiple methods of data collection and analysis” (p. 40). As indicated previously, this was done by using qualitative and quantitative methods for data gathering; as well as structured questionnaires and focus groups. The feedback from the focus groups will therefore be discussed under the following emerging and recurrent themes.

2.3 Themes that emerged from the focus groups as determined through coding.

The themes that emerged from the focus groups were grouped together to form the following five main themes:

Table 6.5

Themes that were identified from the focus groups

Theme 1: Relevance and age-relatedness
Theme 2: Increased awareness
Theme 3: Cyber bullying as the prominent area of concern
Theme 4: Danger areas that were of concern to adolescents

Theme 5: The preventative nature of the website

Theme 1: Relevance and age-relatedness.

What emerged from the focus groups were the opinions regarding the physical features of the website. This was important since as it was indicative of whether or not adolescents would enjoy accessing the site and could be encouraged to do so. In order for the website to be a successful tool for adolescents to use, their age and developmental phase had to be taken into account. When designing a tool for a specific group, the tool must be appropriate and relevant and address the needs of the group. Since the accessing of the internet is popular amongst adolescents (as stated in Chapter 3), it was decided that using the internet as medium to educate would heighten the interest of the adolescents.

As mentioned in Chapter 5, Crutzen et al. (2008) found that the following is important to consider when engaging in online activities with adolescents:

- i. Adolescents should be able to associate themselves with the look and feel of the website.
- ii. The uses of visual materials are important (e.g. graphs, videos, pictures, etc.).
- iii. The uses of interactive features are important (e.g. tests, forums, games, etc.).
- iv. Activities should allow the user to stop and continue at any time.
- v. Navigation should be easy.

It is argued that the majority experienced the points mentioned above while viewing the site. The following are examples of comments made:

Group 1:

Liked the music, but would rather not have words, only backing music.

Liked the language used – the fact that the wording was more informal.

“The website is friendly and relaxed.”

“It is nice that South African examples are used.”

Group 2:

“I get a warm feeling.”

“I like the pictures.”

“The buttons look cool.”

“I like the buttons.”

Group 3:

It is adolescent-friendly.

The fact that the website uses videos and not textbooks is good.

It’s better than using a textbook for information.

Group 4:

“It is simple.”

“It’s not complicated.”

“It’s very simple.”

“User-friendly.”

“It’s very simple.”

“It’s very nicely laid out.”

“I like it.”

“I like the little button thingies.”

“I just want to press it.”

“With the videos it’s easier.”

“With the articles and stuff it makes it more realistic.”

“In a book you see a case study, but with this it was a real person.”

Group 6:

“It’s very attractive.”

“I like the home and contact buttons.”

“And they contact you if we want to use that.”

It is also noted that not all the responses were positive. Some of the respondents made comments and suggestions regarding elements that needed modification:

- 1) Use of another colour than red, orange and black. [Blue was suggested.]
- 2) One respondent mentioned that the website looked too formal and business-like.
- 3) The website could have more moving elements than just the static webpage. Visual movement is needed.
- 4) There should not be too much text to read, but rather more pictures.
- 5) The website will not be accepted by all adolescents; some will ignore the message that is being conveyed.

As stated in Chapter 5, it was necessary to design a strategy that adolescents could relate to. Insight into the world of the adolescent was achieved through the exploration of their level of development. This was done in Chapter 2 by studying the developmental theory. Furthermore, other websites that were designed for adolescents were viewed (Chapter 4) and finally, the above-mentioned instructions from Crutzen et al. (2008) were followed.

All of the above-mentioned enabled the development of a website that adolescents could relate to, was age-appropriate and interesting. This was important in order to obtain the goals and objectives of the study. The next section will summarise all of the above findings.

Theme 2: Increased awareness.

Awareness is a very important concept within Gestalt theory (Blom, 2006; Reynolds, 2005; Yontef & Simkin, 1993). Awareness helps an individual to satisfy certain needs in order to maintain a healthy emotional balance (Blom, 2006). By achieving awareness regarding safe internet use, it could enable and empower adolescents to become more balanced and healthy when using the internet.

Awareness was mentioned in general:

- Respondent (Group 1): If we are such a small group and it's already affected us so much it will definitely ... it will make people think twice.
- Respondent (Group 1): It gives you a reality check.
- Respondent (Group 1): Because you don't actually realise that the internet is like big, like even if you sit in like Bangladesh in the middle of a farm and someone has Wi-Fi, they will be able to get to you. Like it just makes you realise that like everyone knows about it, but we all think, ag, you know we all know about this stuff, but you don't actually realise the importance of it. People just push it aside, but it actually is an issue.
- Respondent (Group 2): The feeling it creates is just enough to make you aware in order to be more careful.
- Respondent (Group 4): It makes us more aware of what to look out for.
- Respondent (Group 5): It actually makes you more aware.
- Respondent (Group 5): It makes you more aware and that you mustn't do it.
- Respondent (Group 1): Uhm, ja, it did open your eyes to like being safer on like your internet.

It is argued that awareness is a very important outcome of this study. As stated in Chapter 1, the Council for Scientific and Industrial Research (CSIR) and the University of Venda, conducted by Grobler et al. (2011), found that a need exists in South Africa for awareness programs or strategies regarding internet use. Mayayise (2008, p. 19) similarly found that “no specific internet safety awareness programs cited by the authors that were available in South Africa” existed. Awareness regarding online safety focusing on adolescent internet usage should therefore be created within the South African context. According to Yontef and Simkin (1993), awareness is one of the primary goals of the Gestalt perspective. These authors define awareness as the experience of being in touch with one’s own actions, feelings and overall existence. Awareness then implies knowing that an individual can control his actions because he is aware. . Awareness provides an opportunity for change (Yontef & Simkin, 1993) and is the ultimate goal and path of Gestalt.

It is acknowledged that one of the potential uses of this psycho-educational strategy is to create awareness. From the above-mentioned responses, it is clear that many respondents experienced heightened awareness during the process of engaging with the psycho-educational strategy.

Theme 3: Cyber bullying as a prominent area of concern.

As mentioned in Chapter 4, cyber bullying is a widespread and worldwide issue amongst adolescents. According to two studies in South Africa, cyber bullying has been experienced by 46,8% of adolescents in South Africa (Badenhorst, 2011) and in the Nelson Mandela Metropole, the figure was around 36% (Von Solms & De Lange, 2011). In research in the northern suburbs of Cape Town, this figure is 22%. Although these numbers vary, it is clear that cyber bullying is a reality amongst adolescents in South Africa. In all of the six focus groups, cyber bullying was

mentioned as a relevant and on-going activity happening amongst the adolescents. One of the parents in the initial expert group actually mentioned that her child was accused of cyber bullying. She stated that she was called in to the school and that her son did not realise that his actions were considered to be cyber bullying.

From the focus groups it emerged that although most of the respondents were informed about cyber bullying, they were not aware of the impact and implications thereof. In Focus Group 4, a girl disclosed that she had experienced cyber bullying. That was also the case in Group 5. When asked about the impact of the site on their understanding of internet safety, their opinion about the site, as well as what stood out for them, the following comments were recorded from the various focus groups:

- Respondent (Group 1): Yes, cyber bullying, I realised people are being bullied over the internet and social networks and stuff, but I didn't realise how bad it is and what it causes the victims to do like kill themselves.
- Respondent (Group 2) Cyber bullying, I really did not know that comments against others could be seen as cyber bullying.
- Respondent (Group 2): It changed my opinion. I didn't know cyber bullying is such a big thing. People don't talk about it and even the smallest things you must say.
- Respondent (Group 3): Cyber bullying, I was not aware of it.
- Respondent (Group 3): I agree, I also didn't know about cyber bullying.
- Respondent (Group 3) Yes, I kind of got worried, because I didn't know there were so many incidences of cyber bullying.
- Respondent (Group 5): Cyber bullying actually stood out for me; I didn't know it could be a crime.

Cyber bullying can occur in a number of different ways, as discussed in Chapter 4. One of the comments illustrated this:

Respondent (Group 5): The boys in our grade like they're not ... they always like put girls in categories of like really, really pretty and then slutty girls and just like nerdy ...

Interviewer: And they share this then via ...?

Respondent: Yes. Yes.

As stated in Chapter 4, cyber bullying has become a major area of concern. According to Mishna, Saini and Solomon's (2009) research, literature provides evidence of the psycho-social and academic effects of cyber bullying. Mishna et al. (2009) report that students who were cyber bullied indicated that they experienced feelings of sadness, anxiety and fear. Students also indicated an inability to concentrate on academic performance. Statistics are widely available and research on cyber bullying has grown immensely (O'Neil, 2008). When looking at the statistics in Chapter 4, it is clear that cyber bullying is an international occurrence, and the results confirm that adolescents experience it in South Africa as well. Although cyber bullying was the most prominent construct discussed during the focus groups, other dangerous areas were also elaborated upon and the adolescents showed interest in many of those as well.

Theme 4: Danger areas that were of concern to adolescents

As mentioned above, some areas were repeatedly discussed during the focus groups, one of which was plagiarism.

i. Plagiarism.

One of the more unexpected themes that emerged was that many adolescents were unaware that downloading of content and plagiarising of the

internet was illegal. In research done by Microsoft Corporations, Microsoft (2008) reported that in their survey, they found that adolescents are less likely to illegally download content from the internet when they are aware of the regulations with regard to downloading and sharing of content online. They further reported that about half the number of adolescents who participated were not aware of these regulations, and that only 11% of them were fully informed of the rules regarding downloading images, literature, music, movies and software. This is why it was important to raise awareness. Some of the comments from respondents included the following:

Respondent (Group 1) It made me want to go to amazon.com instead of going in waptrick where the songs are anyway bad quality.

Respondent (Group 2) I'll be more careful when downloading stuff.

Respondent (Group 3): Yes, about the music that you can download that you may not, I did not know that.

Respondent (Group 3): The download of music, I did not know and I always do it.

Respondent (Group 2): I'll be more careful when downloading stuff.

Group 5:

Interviewer: Do you think that after viewing this site it will help you to know what to do should something happen to you?

Group Ja ... yes ... yes (in unison).

Interviewer Like what?

Respondent: (laughing) Don't plagiarise!

Group laughs

After a discussion about plagiarism with Group 2, one of the boys jokingly stated, "What will I do now?", because he has always copied and pasted information

from the internet for his school work. As stated in Chapter 4, plagiarism in itself is not harmful psychologically or physically. However, the consequences of plagiarising can have an influence on an adolescent's moral development (Strom & Strom, 2009). The problem with plagiarism, according to Thomas and Sassi (2011), is that when an individual is caught plagiarising, the consequences "are often severe, ranging from failing grades on assignments to expulsion from a course or even a school" (p. 48). This emphasises the inclusion of this aspect in order to educate adolescents on the legalities with regard to plagiarism. It was evident from the interviews that many of the participants were unaware of the consequences of plagiarising and that they learnt more about this construct via the psycho-educational strategy.

Other areas that were mentioned, were less talked about, but some comments about each did emerge from the focus groups. Comments from respondents regarding the pornography are discussed below:

ii. Pornography.

Group 2, 4 and 5 spoke about pornography and everybody acknowledged that adolescents do access pornographic sites. Some groups noted that it was mostly boys. Pornography, as explored in Chapter 4, refers to sexual materials, whether videos, photos or pictures. Flood (2007) is of the opinion that children and adolescents view pornography online, sometimes accidentally, but in other cases purposefully. Flood (2007) and Koch (2011) further argued that the internet is an easy access way for adolescents to view pornography since it is instantly and widely available. Within the preliminary study, 40% of participants noted that they had been exposed to sexual content online.

Respondent (Group 5): I found the pornography one quite interesting.

- Respondent (Group 2): I don't think your brain is ever ready for pornography.
- Respondent (Group 2): The youngest children access it, they say that they are 18 and then their brain is technically not ready for it and as they grow older it only impacts them then ...
- Interviewer (Group 2): Do you think teenagers (adolescents) in general access pornographic sites?
- Response: [All voiced loudly.] Yes (in unison).

It is proposed that the phase of adolescence (as discussed in Chapter 2), plays a role in the prevalence of viewing pornography. Biologically adolescents develop and experience hormonal changes during puberty. According to Meece and Daniels (2008, p. 100), puberty is much more than this, however, and refers to the period in which adolescents become "capable of sexual reproduction". Gluckman et al. (2011) similarly define puberty as "the period in which a juvenile's previously inactive gonads (testes in the male; ovaries in the female) become activated, with the ensuing hormonal changes leading to physical and psychological changes allowing for reproductive competence" (p. 21). Having sexual stimulation via pornography is understandable when considering their sexual development.

Another prominent task during adolescence is establishing and maintaining peer relationships (Geldard & Geldard, 2004). One of the ways adolescents keep in contact with their peers, are via social networks where they share profiles. This could lead to sharing information with a large audience which should actually be considered as private.

iii. Sharing of personal information

As stated in Chapter 4, the American Academy of Paediatrics (2011) found that currently, the main risks for pre-adolescents and adolescents online are risks

created by each other. These risks include risks associated with a lack of privacy, sharing too much information, or posting false information about themselves or others. O'Neil (2008, p. 16) voices her concern by stating that "the sharing of self-revealing information is a risk: It can be used as a weapon of immense psychological damage through the spreading of gossip and negative rumors." Once again, seeing that adolescents are within the age of emotional development, such psychological damage might have severe implications. Some of the respondents noted this in their comments:

Respondent (Group 1): ... a lot of girls post pictures, but if you walk up to her at school and show her the picture and say wow you're looking so good, she might think you're a stalker, but it is actually her fault.

Respondent (Group 1): It made me, well uhm, I was a little, not afraid, a little sceptical when I put my phone number on Facebook, just because my grandma and them wanted my phone number and stuff like that. And I was very sceptical putting it on there, and this website makes me want to go there and take it off ...

Respondent (Group 1): Uhm, the one I liked that you said you liked that once you post something, like it's never going to come off because someone else can like take that picture for themselves and send it to someone else. Like, you need to realise what you are doing, like that girl, when she tried to take it off she couldn't take it off, cause it still can be copied and posted on someone else's profile.

- Respondent (Group 4): It makes you see what not to do, like don't update status on where you're going and stuff like that.
- Respondent (Group 4): Think about what you posting ... will it give away information to a person I don't want the information to go to?
- Respondent (Group 5): Don't put personal information on the internet.
- Respondent (Group 1): The fact that once you post something it's never going to go off. Like, you need to realise what you're doing.

The sharing of personal information can also occur via social networks. Social networking is a popular activity amongst adolescents.

iv. Social networking

Social networking in itself is not a dangerous activity but can have dangerous outcomes (American Academy of Child and Adolescent Psychiatry, 2011). Some of these dangers were noted by the respondents:

- Respondent (Group 1): Facebook is great for your friends and stuff like that but it is also great for stalkers and sexual targeters and funny dudes.
- Respondent (Group 2): There are a lot of people who say that people phone them 2 a.m. at night and they got their numbers from Facebook.
- Respondent (Group 2) I don't think my number is on Facebook?

Group 5 elaborated about stalking via social networks. When asked for suggestions on how to improve the strategy, stalking was mentioned as a construct which could be added. Some of the comments made were:

“Stalking is a big thing.”

“People BBM-ing you like, you know, and they are very like, know your stuff and they kind of know where you are going ...”

“When you say no, they still keep on talking to you.”

The social networks which were mentioned in the focus groups, were Twitter, Facebook, Youtube, Whatsapp, BBM. (Interestingly, various respondents stated that Mxit is not as popular as it was before). Social networking is a popular activity amongst adolescents (Moreno et al., 2009). The activities involved with social networking largely include communication with peers. According to developmental theory, adolescents are within the age group where social connections with peers are very important (Geldard & Geldard, 2004; Gibbons et al., 2008; Louw & Louw, 2007; Santrock, 2008). It is argued that due to the developmental task of engaging with peers, the popularity of social networks is increasing amongst adolescents. Social networks provide them with a quick, easy and inexpensive tool to be continuously connected to their peers. The establishment of clear boundaries in sharing information and establishing peer relationships, specifically on social media, seems to be quite a challenge in the adolescent developmental phase.

The way in which the designed website could be instrumental in deterring possible problems was also discussed in the groups.

Theme 5: The preventative nature of the website

Another theme that emerged was that adolescents will try to avoid the discussed dangers. This indicates that the psycho-educational strategy is preventative in nature. Adolescents shared that they would refrain from certain activities due to the content that they engaged in on the website:

Respondent (Group 1): If we are such a small group and it’s already affected us so much it will definitely ... it will make people think twice

about these things.

Respondent (Group 1): I think there's enough information, it gives a number you can call.

Interviewer: What stood out for you?

Respondent (Group 1): How cautious you should be on the internet. Because like, I watched a show yesterday, how someone can have your email address and get access to your bank accounts and web pages and stuff like that and that can influence your life ...

Respondent (Group 2): I'll be more careful when downloading stuff.

Respondent (Group 4): It makes you see what not to do, like don't update status on where you're going and stuff like that.

Respondent (Group 4): Yes, I think now you'll know to block it ... be friends with people in your circle of friends.

Respondent (Group 4): I'd rather get to know the person.

Respondent (Group 4): Think about what you posting ... will it give away information to a person I don't want the information to go to.

Respondent (Group 5): It makes you more aware of what you mustn't do.

It is suggested that this theme summarises the value of the psycho-educational strategy. Vreeland (2012) argued that psycho-education includes cognitive, behavioural, and supportive therapeutic elements which aids in the understanding of a problem. If adolescents are admitting that they will be more careful, or change current behaviours after being exposed to the website, it indicates that they understand the problem (online dangers) and that this understanding was

enhanced due to the strategy. It can therefore be viewed as a supportive tool as it safeguards and warns adolescents about potential harms of the internet.

As stated in Chapter 5, psycho-educational interventions are usually less expensive, more easily managed and potentially more accessible than conventional psychological interventions (Donker et al., 2009). Grey et al. (2012) found that “several clinical trials demonstrating the efficacy of psycho-educational interventions in transitioning youth (adolescents)” are available (p. 769). It is this transition in thinking about internet safety that made the psycho-educational strategy an appropriate one to use.

Colom (2011) stated that psycho-education is not merely giving information to a person regarding a medical or psycho-social condition, but can also refer to “empowering training targeted at promoting awareness” and “proactivity, providing tools to manage, cope and live” (Colom, 2011, p. 339). When looking at the verbatim comments regarding awareness and the changes in opinion regarding internet safety, it is suggested that the website can be used as a support mechanism. The website educates adolescents, and in so doing, might influence decision-making regarding harmful activities on the internet.

3. Discussion of Findings

Adolescents are within the phase of human development, where various areas of their being are challenged: biologically, socially, cognitively and emotionally (Chapter 2). Furthermore, these changes have an impact on their identity and how they develop into adulthood and also the type of adults that they become. It is held by both Systems theory and Complexity theory that outside influences affect the individual and form part of the individual’s experiential world (Chapter 1). The individual lives through his experiences with others, his surroundings, situations and

other outside elements. All of these various systems together with the biological and emotional structure of the individual form a holistic view of an individual. Gestalt field theory also emphasises that the individual should be seen as a whole and that the various parts within the whole cannot be separated from each other (Chapter 1).

The internet as an activity could be seen as one of these outside influences that form part of the lives of adolescents. As stated in Chapter 3, adolescents are one of the most eager groups of users compared to other age groups. As the internet evolves and changes, new developments in technology continuously occur. This makes it difficult for parents and educators to also be knowledgeable about the content and potential harms that are associated with internet use. Adolescents, however, engage with the internet on a regular basis (94% via cell phones, 76% daily), thus they are exposed to all and any benefits as well as potential risks associated with internet use.

According to the findings, there are in fact valid concerns regarding adolescents on the internet (Chapter 3 and 4). This chapter focused on the results from the study, a study aimed at educating adolescents about online safety.

From the results, the themes that were identified indicated that adolescents experienced a sense of awareness concerning internet dangers. The participants specifically mentioned cyber bullying as one of the more prominent concerns within their age group, along with some other dangers like the viewing of pornography, sharing personal information and the consequences of plagiarism.

The discussions that were held during the focus groups indicated that a definite need regarding online education does exist. Furthermore, the results also indicated areas of concern and further development within the area of adolescent online safety.

4. Conclusion

From the results, insight was gained regarding the feasibility of the psycho-educational strategy via the website. Overall there were a lot of positive comments and experiences regarding this strategy. The word “awareness” formed one of the major themes and was recorded in each session with a focus group. It is therefore clear that the website raises awareness about online safety amongst adolescents. The following chapter will discuss both the successes of the research and the limitations and recommendations for further research.

CHAPTER 7:

FINAL DISCUSSIONS, RECOMMENDATIONS AND CONCLUSIONS

1. Introduction

In this chapter the aim and objectives of the study that were mentioned in Chapter 1 are discussed along with the achievement of the initial objectives. Chapters 2 to 4 provided literature foundations for the research and proposed a psycho-educational strategy. The concept of psycho-education and the method used in this study, i.e. a website, was explored in Chapter 5. The previous chapter, Chapter 6, focused on the findings from the study by discussing respondents' responses regarding the psycho-educational model and the themes that emerged through the coding of focus groups.

This chapter will explore the objectives of the study and whether these objectives were achieved. Secondly, the limitations of the study are mentioned along with recommendations for further study. Thirdly, a discussion will follow regarding the general suppositions from the findings. The aim and objectives of the study are reviewed in the following section.

2. Aim and Objectives

This section highlights the aim and objectives of the study. A discussion in terms of the context of the study will follow. Each objective will be critically discussed considering the success and limitations within each objective.

The aim of this study was to develop a web-based psycho-educational strategy to educate adolescents about safer use of the internet to safeguard them

from the potential dangers of internet use. To achieve the above-mentioned aim, the following objectives were formulated:

Objective 1: To explore the phase of adolescence.

Objective 2: To explore the current understanding of internet use and safety in schools.

Objective 3: To investigate how existing knowledge of the dangers of the internet and current programs for educating safe internet use contribute to internet use and safety in schools.

Objective 4: To identify possible components of a psycho-educational strategy that will educate adolescents on using the internet safely.

Objective 5: To design a psycho-educational strategy consisting of an interactive website for adolescence to promote safe internet use; including the framework and content of the strategy.

Objective 6: To evaluate the psychological impact of a psycho-educational strategy on adolescents in their process of growth.

The objectives were achieved in the following ways:

Objective 1: To explore the phase of adolescence.

Understanding the phase of adolescence provided a framework and background concerning the normative functioning of the age group. Chapter 2 focused on the adolescent and his/her development through life. The psychological, biological, emotional and cognitive functions of the developmental phase were discussed. The phase of adolescence was explored by including and elaborating on concepts regarding developmental theory. As the participants involved in the study are within the adolescent development phase, knowledge regarding these facets is important.

It was further important to understand the adolescent within his or her phase in order to know how to develop a program which was age-related, relevant and appropriate. The phase was adequately explored and the objective reached. Although developmental theory was important when exploring the phase of adolescence, the conceptual framework of the study included Gestalt theory, Complexity theory as well as Systems theory (Chapter 2). These theories view the individual as an organism which is part of a larger field, system or group of interactions. The adolescent cannot be viewed in isolation, but needs to be viewed holistically. The factors inherent in the field, system or interactions of an adolescent will impact him/her to a certain extent. It was therefore important to have regard to the adolescent as a whole, field, systems as well as interactions in the development of such a tool. Objective 2: To explore the current understanding of internet use and safety in schools in the northern suburbs of Cape Town.

Chapter 3 focused on the definitions of the internet, its history and development as well as the dangers found within literature and research. Chapter 3 also explored the relationship between the adolescent, the internet and the prevalence of internet use by adolescents. This objective was achieved through the literature research and discussion of Chapter 3.

Objective 3: To investigate how existing knowledge of the potential harms of the internet and current programs for educating safe internet use contribute to internet use and safety in schools.

The above objective was attained in Chapter 4 and 5. Firstly, the various harms associated with adolescents utilising the internet were explored. The most prominent risks were highlighted and discussed through literature (Chapter 4). In order to design a psycho-educational strategy on the potential dangers or harms of

the internet, these dangers had to be explored. Furthermore, the specific elements which had to be included in the psycho-educational strategy had to be identified.

This was important in order to heighten the awareness in adolescents.

Objective 4: To identify possible components of a psycho-educational strategy that will educate adolescents on safe use of the internet.

The above objective was achieved via two methods:

- 1) Preliminary study (including structured questionnaires and a focus group of experts)
- 2) Secondly, through the research of literature, insights were obtained concerning the most prominent areas of concern for adolescents utilising the internet.

Objective 4 was mainly focused on each of the areas of concern and the research regarding the areas (as opposed to Objective 3 which focused on current programs and not content). In Chapter 5, various programs with similar aims and content were identified and compared within a table. The existing knowledge and programs regarding online safety provided a guideline regarding strengths and weaknesses within programs. This allowed the development of a unique and focused strategy, also discussed in Chapter 5.

Objective 5: To design a psycho-educational strategy consisting of an interactive website for adolescents to promote safe internet use; including the framework and content of the strategy.

This objective was achieved by combining all of the findings from the preliminary studies and the literature research; and incorporating this into content for a website. A website programmer then developed the website and utilised all the information. This objective was achieved by finalising the website and before

commencing with the focus groups which formed part of the empirical research (Chapters 5 and 6).

Objective 6: To evaluate the psychological influence of a psycho-educational strategy on adolescents in their process of growth.

It is argued that this was achieved mainly through the discussion of the findings in Chapter 6. Chapter 6 reflects the influence of the psycho-educational strategy and the positive empowerment created by it. The themes that emerged from the empirical research, included: the construct of “awareness”; cyber bullying as a prominent area of concern; other dangers regarding internet use; the age-appropriateness of the strategy and also “the preventative nature” of the website. These themes indicated that adolescents could gain insight from the strategy and help them realise that there are concerns on adolescent online use as well as ways to address these concerns. This was ultimately the reasoning behind using the psycho-educational strategy. Grey et al. (2012) found that “several clinical trials demonstrating the efficacy of psycho-educational interventions in transitioning youth (adolescents)” are available (p. 769). It is this transition in thinking about internet safety that made the psycho-educational strategy an appropriate one to use. Colom (2011) stated that psycho-education is not merely giving information to a person regarding a medical or psycho-social condition. Psycho-education refers to “empowering training targeted at promoting awareness” and “proactivity, providing tools to manage, cope and live” (Colom, 2011, p. 339).

As the responses indicated that participating adolescents experienced a change in their perceptions regarding online safety, the last objective therefore has been achieved (Chapter 6).

Although the research objectives were successful, some limitations were

identified and will be discussed in the following section.

3. Limitations of the study

The study also had some limitations that were restrictive to its generalisability.

These limitations are explored below.

- The research focused on two high schools in the northern suburbs of Cape Town and did not include participants from any other provincial areas. This could limit the ability to generalise both in other areas of Cape Town as well as nationally.
- The interviews with the focus groups indicated that adolescents wanted more knowledge about a specific danger, namely cyber bullying.
- Through the review of current literature, it appeared that sound academic resources for parents and educators regarding online safety were not freely available. Within the schools there seemed to be a lack of knowledge among parents and educators. As this program addressed only adolescents, it did not speak to the needs of parents and educators.
- Recent and academic information regarding online gaming, specifically in South Africa was very limited. More research is needed in this area.

Recommendations to possibly address these limitations are included in the following section.

4. Recommendations

During the study certain areas that might need to be developed in future research were noted. The following recommendations emerged from the findings of the research:

- 1) Research regarding online dangers should be explored in the larger community of Cape Town as well as in the whole of South Africa. More research about online behaviour is needed in the country as a whole..

- 2) A qualitative case study approach could also be used to explore adolescents and their understanding of online behaviour. This could give insight into thoughts and opinions held in this phase.
- 3) Cyber bullying was an aspect which arose continuously. It is argued that interventions on a large scale are necessary for adolescents. In all of the groups, cyber bullying received most of the talk time where other dangers were mentioned and acknowledged but did not have such an impact. Further research and intervention for cyber bullying could be explored.
- 4) Education for parents and teachers regarding internet safety should be implemented in schools as it seems that, although help is available, it has to be requested by a parent or teacher. When parents and teachers are unaware of online activities and harms, they will not know that help is available in the form of the internet. A mandatory workshop or information session for parents and educators could be launched in schools to procure more awareness.
- 5) Academic research regarding online gaming and its addictive nature were very limited. More research could be focused on the activity of gaming and the consequences thereof.
- 6) Current and local information regarding programs aimed at adolescent online safety were also very limited. By designing more psycho-educational strategies pertaining to this developmental phase, greater intervention could be achieved.
- 7) During the focus group with parents, many parents were of the opinion that the adolescent phase is already too late for psycho-education. Parents as well as educators felt that psycho-education should start during middle childhood. Research and interventions could be done for online use of smaller

children, i.e. middle childhood.

- 8) Stalking via internet-based media amongst adolescents was also a construct that emerged unexpectedly from the research. This is an area that could be explored by having regard to stalking via internet-based social networks along with mobile networks, specifically BBM (instant messaging system of BlackBerry).
- 9) Preventative concepts can be integrated into the curriculum within schools. It would provide a perfect opportunity for regular exposure to preventative measures and could be dealt with during the Life Orientation period.

5. General Discussion

The study focused on the online safety of adolescents. Adolescents were chosen since they are one of the more active age groups accessing and using the internet for various activities. From the literature review and the preliminary studies, associated dangers and potential risks of exposure to the internet were identified. These risks included the social dilemma surrounding cyber bullying, the addictive nature of online gaming, the consequences of plagiarising from the internet and stealing content, the effects and consequences of social networking sites and finally, the potential risks of sharing personal information online. These harms were explored and discussed to show the potential detriment it could lead to.

What was further prominent within this study, was that there was an increase in potential online risks during the adolescent phase. Chapter 2 indicated that the cognitive development, along with biological, social and emotional changes within adolescents make this a sensitive age group. The characteristics of the age group along with the combined potential harms of the internet make online activities among adolescents a concern. Furthermore, when looking at Field, Complexity and Systems

theory, it is further evident how the new activity of engaging online should have an influence on the individual. When something within the field changes, it impacts the individual (Gestalt theory); or when a system changes, it has an effect on the individual. This formed the basis of the study. Since adolescents are influenced by changes and experiences within their field or environment, the popularity of the internet amongst them will therefore have an influence. When revisiting the proposed theoretical framework, as illustrated in Chapter 2 and below, the following conclusions were made:

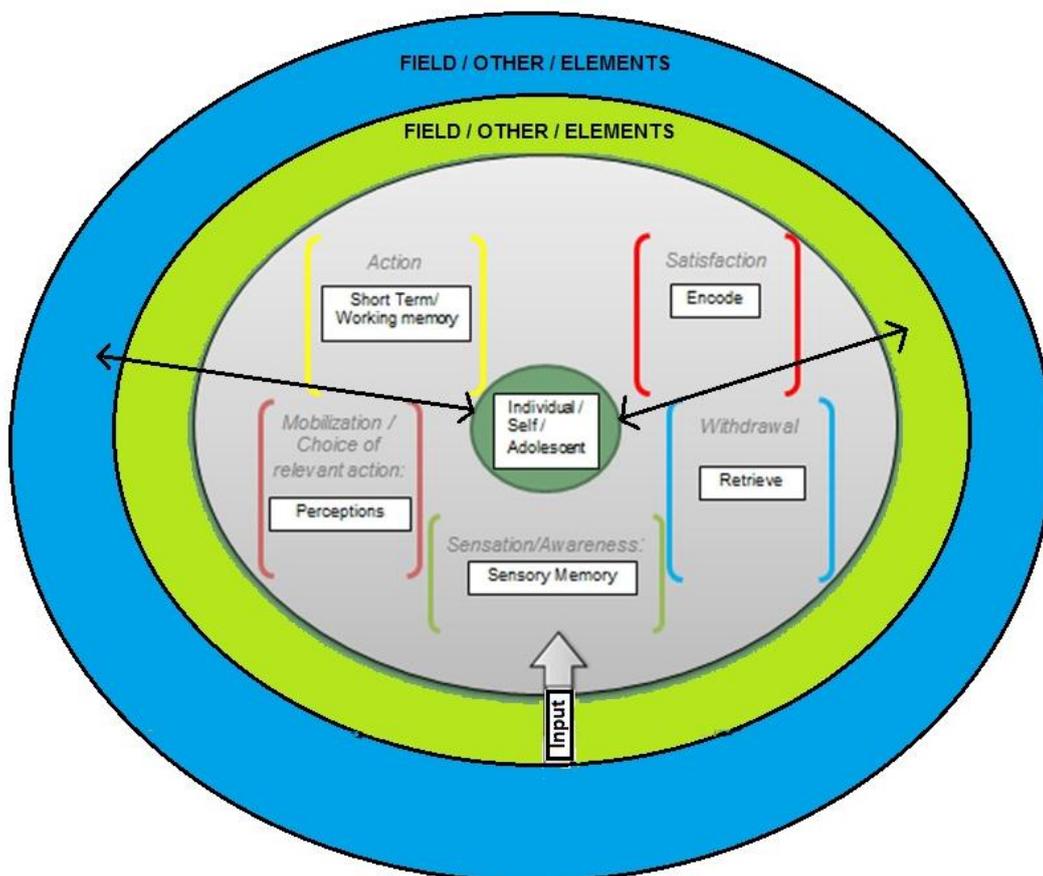


Figure 7.1 Complexity and Systems theories within the contact cycle of Gestalt.

The internet is a portal or field that is being accessed for various activities. Some of these activities include recreational purposes, social stimulation, the

enhancement of academic research, as well as enjoyment. Although the above-mentioned seem harmless, there are however consequences and potential risks that could occur when engaging in these activities (as mentioned previously).

The way in which the adolescent then contacts the field of the internet should therefore in turn have an influence as suggested by Complexity, Systems and Gestalt field theory. The concern was that if left without any intervention, the healthy functioning of the online adolescent was in danger. A means of intervention was therefore proposed. The intervention occurs through learning about these potential harms in an attempt to not only create awareness of these dangers, but to supply tools and coping techniques that will assist the adolescent should one of these harms become prevalent.

Finally, as indicated within the results, the proposed method of education, a psycho-educational strategy via an interactive website, had a positive effect on most of the participating adolescents. Awareness was one of the major themes which emerged from the study along with acquiring knowledge about the harms and dangers of the internet.

It is suggested that more research should be conducted within this field as it seems that psycho-education is an empowering tool to safeguard adolescents and support parents and educators in this fairly unfamiliar field of the internet. The internet is ever evolving and changing and contemporary research will aid in verbalising precautions and supporting adolescents who access the internet.

6. Conclusion

This study attempted to develop a web-based psycho-educational strategy to educate adolescents about safer use of the internet in order to safeguard them from the potential dangers of internet use. The qualitative and quantitative methods used

to accomplish this were described in Chapters 1 and 5. The web-based psycho-educational strategy was devised as a result of the findings accumulated throughout the research process and was presented in Chapter 6. As a result of these research endeavours, a number of conclusions were formulated.

From the literature and findings it is evident that a dire need exists for age-appropriate and relevant mechanisms to address online safety among adolescents. The present research revealed that adolescents could benefit from the psycho-educational strategy as it created awareness of the possible harms of the internet. Specific areas of concern included cyber bullying and the reality that they face regarding this hurtful activity. Adolescents further indicated that they lacked knowledge in areas concerning pornography, plagiarising and the sharing of personal information.

In providing awareness regarding possible harms, adolescents will be equipped to safeguard themselves and it can play a preventative role in terms of the negative consequences of online activities. The research indicated that a psycho-educational perspective holds value when addressing online safety. Lastly, the internet as a form of intervention was successful as the adolescents eagerly accepted and related to this means of education rather than using a school textbook.

The psycho-educational strategy and research contributes by **firstly** laying an academic foundation for educators, parents and other professionals to gain the appropriate knowledge about the potential risks, dangers or harms the internet might hold. **Secondly**, the website in itself can serve as a tool that could be accessed directly by adolescents to motivate and educate positive and safe use of the internet. **Thirdly**, the study contributes data to the greater research society by indicating areas of concern for further research in a new and developing field of technology;

and **finally**, the research is aimed at raising an awareness of the excessive use of the internet amongst adolescence.

References

Adams, G. R. & Berzonsky, M. D. (2005). *Blackwell handbook of adolescence*.

Malden, MA: Blackwell.

Afzal, S., Rana, T. F. & Mehmood, S. (2008). Determinants of depression in female adolescents and youth. *Professional Medical Journal*, 15(1), 137-142.

Ahmed, S. (2009). *Methods in sample surveys: Cluster sampling*. Baltimore, MD: Dept. of Biostatistics, School of Hygiene and Public Health, Johns Hopkins University.

Ahmed, S. A. (2011). Facebook: Advice for parents. *Dahabshiiil*. Retrieved June 6, 2011 from <http://wardheernews.com/> .

Allen, J. P., Evans, M. A., Hare, A. L., Mikami, A. Y. & Szewedo, D. E. (2010). Adolescent peer relationships and behavior problems predict young adults' communication on social networking websites. *Developmental Psychology*, 46(1), 46-56. doi: 10.1037/a0017420.

American Academy of Child and Adolescent Psychiatry (2011). *Children and social networking*. Retrieved from http://www.aacap.org/galleries/FactsForFamilies/100_children_and_social_networking.pdf

American Academy of Paediatrics. (2011). *Talking to Kids and Teens About Social Media and Sexting*. Retrieved from <http://www.aap.org/en-us/about-the-aap/aap-press-room/news-features-and-safety-tips/pages/Talking-to-Kids-and-Teens-About-Social-Media-and-Sexting.aspx>.

American Educational Research Association. (2006). Standards for reporting on empirical social science. *AERA Publications. Educational Researcher*, 35(6), 33-40.

Amichai-Hamburger, Y. & Barak, A. (2009). Internet and well-being. In Y. Amichai-

- Hamburger (Ed.), *Technology and psychological well-being* (pp. 34-76).
Cambridge: Cambridge University Press.
- Anderson, T. J. (2013). Tweens and their in-betweens: Giving voice to young people when exploring emerging information practices associated with smart devices. *Information Research*, 18(1). Retrieved from <http://informationr.net/ir/18-1/paper565.html>.
- Arewa, O. B. (2010). YouTube, UGC and digital music: Competing business and cultural models in the internet age. *North-Western University Law Review*, 104(2), 431-476.
- Armstrong, A. & Casement, C. (1998). *The child and the machine: Why computers may put our children's education at risk*. Toronto: Key Porter Books.
- Arnett, J. J. (2007). *Adolescence and emerging adulthood: A cultural approach* (3rd ed.). Upper Saddle River, NJ: Pearson Prentice.
- Australian Communications and Media Authority. (2012). *Communications Report 2011-2012*. Retrieved from http://www.acma.gov.au/webwr/_assets/main/lib550049/comms_report_2011-12.pdf
- Babbie, E. & Mouton, J. (2001). *The practice of social research*. Cape Town: Oxford University Press.
- Badenhorst, C. (2011). Legal responses to cyber bullying and sexting in South Africa. *CJCP Issue Paper* (10)1-20. Retrieved from http://www.childlinesa.org.za/index2.php?option=com_docman&task=doc_view&gid=221&Itemid=64.
- Baker, R. K. & White, K. M. (2010). Predicting adolescents' use of social networking sites from an extended theory of planned behaviour perspective. *Computers*

- in Human Behavior*, 26, 1591-1597.
- Bargh, J. A. & McKenna, K. Y. A. (2004). Internet and social life. *Annual Review of Psychology*, 55, 573-590.
- Baumgartner, S. E., Valkenburg, P. M. & Jochen, P. (2011). The influence of descriptive and injunctive peer norms on adolescents' risky sexual online behavior. *Cyberpsychology, Behaviour and Social Networking*, 14(12). doi: 10.1089/cyber.2010.0510.
- Berger, K. S. (2006). *The developing person through childhood* (5th ed.). New York, NY: Worth.
- Berns, R. M. (2010). *Child, family, school community* (8th ed.). Belmont, CA: Cengage Learning.
- Berns, R. M. (2012). *Child, family, school community* (9th ed.). Belmont, CA: Cengage Learning.
- Bjorklund, D. F. & Blasi, C. H. (2011). *Child and adolescent development: An integrated approach*. Belmont, CA: Cengage Learning.
- Blaxter, L., Hughes, C. & Tight, M. (1996). *How to research*. Buckingham: Open University Press.
- Bless, C. & Higson-Smith, C. (2000). *Fundamentals of social research methods: An African perspective* (3rd ed.). Landsdowne: Juta.
- Blom, R. (2006). *Handbook of Gestalt play therapy: Practical guidelines for child therapists*. London: Jessica Kingley Publishers.
- Brand, H. (2012). District Director at the Western Cape Education Department
Personal communication, August, 31.
- Breakwell, G. M., Fife-Schaw, C. & Hammond, S. (2000). *Research methods in Psychology*. London: Sage.

- Bremner, A. & Slater, G. (2003). *An introduction to developmental psychology*.
Malden, MA: Blackwell.
- Bronfenbrenner, U. (1989). The ecological systems theory. *Annals of Child
Development, 6*, 87-250.
- Brown, B. B., Bakken, J. P., Ameringer, S. W. & Mahon, S. D. (2008). A
comprehensive conceptualization of the peer influence process in
adolescence. In M. J. Prinstein & K. A. Dodge (Eds.), *Understanding peer
influence processes in adolescence* (pp. 17-44). New York, NY: Guilford.
- Buckingham, D. (2010). New media, new childhoods: children's changing cultural
environment in the age of digital technology. In M. J. Kehily (Ed.), *An
introduction to childhood studies*. (2nd ed). (pp. 124-138). Maidenhead: Open
University Press.
- Bukatko, M. W. & Daehler, M. H. (2004). *Child development: A thematic approach*.
Boston, MA: Houghton Mifflin.
- Burney, S. M. A. (2008). *Inductive and deductive research approach*. [Power Point
Slides] Retrieved from
<http://www.drburney.net/INDUCTIVE%20&%20DEDUCTIVE%20RESEARCH%20APPROACH%2006032008.pdf>
- Burton, P. & Mutongwizo, T. (2009). Inescapable violence:
Cyber bullying and electronic violence against young people in South Africa.
CJCP Issue Paper (8). 1-2.
- Cameron, R. (2009). A sequential mixed model research design: Design, analytical
and display issues. *International Journal of Multiple Research Approaches*,
3(2), 140-152.
- Casey, B. J., Jones, R. M. & Hare, T. (2008). The adolescent brain. *Annals of the*

New York Academy of Sciences, 1124, 111-126.

Cherry, K. (2012). Formal operational stage of cognitive development. *New York Times*. Retrieved from <http://psychology.about.com/od/piagetstheory/p/formaloperation.htm>

Chetty, I. & Basson, A. (2006). *Report on internet usage and the exposure of pornography to learners in South Africa schools*. (Research report). Retrieved from <http://www.info.gov.za/view/DownloadFileAction?id=81355>.

Chind-Sheng Wan, M. S. & Chiou, W. (2006). Psychological motives and online games addiction. *Cyberpsychology and Behaviour*, 9(3).

Clarkson, D. (2002). *Gestalt counselling in action*. London: Sage.

Colom, F. (2011). Keeping therapies simple: Psychoeducation in the prevention of relapse in affective disorders. *British Journal of Psychology*, 198, 338-340. doi: 10.3402/ejpt.v2i0.7278.

Conde, Z. J. (2010). *Adolescents' cyberconnections: Identity definition and intimacy disclosure on a social networking site*. Ames, IO: Iowa State University.

Cranston, P. & Davies, T. (2009). A review of social networking, today, tomorrow and beyond. *Communication for Social Change Consortium*. Retrieved from: <http://www.communicationforsocialchange.org/publications/future-connect?Articleid=19>.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Los Angeles, CA: Sage.

Creswell, J. W., Klassen, A. C., Plano Clark, V. L., Smith, K. C. (2011). *Best practices for mixed methods research in the health sciences*. The Office of Behavioral and Social Sciences Research (OBSSR). National Institutes of Health. Retrieved from http://obssr.od.nih.gov/mixed_methods_research

- Crutzen, R., De Nooijer, J., Brouwer, W., Oenema, A., Brug, J. & De Vries, N. K. (2008). Qualitative assessment of adolescents' views about improving exposure to internet-delivered interventions. *Health Education, 108*(2), 105-116.
- Davenport, J. & Korb, J. P. (2008). *Gestalt formation & completion*. Retrieved from <http://www.afn.org/~gestalt/gestalt.htm>
- DeAngelis, T. (2007). Web pornography's effect on children. *Monitor on Psychology, 38*(10), 50. Retrieved from <http://www.apa.org/monitor/nov07/webporn.aspx>
- Department of Education and Early Childhood Development. (2010). *Connecting People: Digital Learning Platforms Research Series Paper No. 2*. (Research Report). Retrieved from <http://www.eduweb.vic.gov.au/edulibrary/>.
- Diagnault, J. (2012). Website safety for kids and teens. *Okoto*. Retrieved from <http://world.okoto.com/website-safety-for-kids-teens/>
- Domeij, S. S. (2010). Teen internet use. Is it all negative? The benefits of teen online socializing. *The Examiner*. Retrieved from <http://www.examiner.com/article/teen-internet-use-is-it-all-negative-the-benefits-of-teen-online-socializing>
- Donker, T., Griffiths, K. M., Cuijpers, P. & Christensen, H. (2009). Psychoeducation for depression, anxiety and psychological distress: a meta-analysis. *BMC Medicine, 7*(79). doi:10.1186/1741-7015-7-79.
- Dooley, J. J., Cross, D., Hearn, L. & Treyvaud, R. (2009). *Review of existing Australian and international cyber-safety research*. Child Health Promotion Research Centre. Perth: Edith Cowan University.
- Du Toit, M., Malczyk, A. & Van Belle, J.-P. (2011). *Internet super-user textbook*. Cape Town: GetSmarter.
- Ebrahim, G. J. (2012). Qualitative field research: Mother and Child Health. *Journal of*

- Tropical Pediatrics. Retrieved from
http://www.oxfordjournals.org/our_journals/tropej/online/ce.html
- Eggen, P. & Kauchak, D. (2007). *Educational psychology: Windows on classrooms*. Englewood Cliffs, NJ: Merrill Prentice Hall.
- Elena, A., Laouris, Y. & Taraszow, T. (2010). *Identifying and ranking internet dangers*. Paper presented at the SALL 2010: Social Applications for Lifebug Learning Patras, Greece. Retrieved from
<http://orion.westgate.gr/sall2010/documents/SALL%202010.pdf>
- Erikson, E. H. (1950). *Childhood and society*. London: WW Norton.
- European Commission. (2012). *The Digital Agenda for Europe Scoreboard*. Retrieved from <https://ec.europa.eu/digital-agenda/en/scoreboard>.
- Flick, U. (2009). *An Introduction to Qualitative Research* (4th ed.) London: Sage.
- Flood, M. (2007). Exposure to pornography among youth in Australia. *Journal of Sociology*, 43(1), 45-60.
- Geldard, K. & Geldard, D. (2004). *Counselling adolescents*. London: Sage.
- Geldenhuys, O. (2010). *Ondersoek na die belewenisse van adolessente wat met die emo-subkultuur identifiseer: 'n Gevallestudie* (Master's thesis). University of South Africa: Pretoria.
- GFI. (2011) Parent-Teen. Internet Safety report. Retrieved from
http://www.gfi.com/documents/GFI%20_2011_parent_teen_internet_safety_report_june.pdf
- Gill, P., Stewart, K., Treasure, E., & Chadwick, B. (2008). Methods of data collection in qualitative research. *British Dental Journal*. 204,291-295.
- Gibbons, F. X., Pomery, E. A. & Gerrard, M. (2008). Cognitive social influence: Moderation, mediation, modification, and ... the media. In M. Prinstein & K. A.

- Dodge (Eds.), *Understanding peer influence in children and adolescents* (pp. 45-71). New York, NY: Guilford.
- Gluckman, P., Low, F. & Franko, K. (2011). Puberty and adolescence: Transitions in the life course. In P. Gluckman (Ed.), *Improving the transition: Reducing social and psychological morbidity during adolescence* (pp. 19-33). Auckland: Office of the Prime Minister's Science Advisory Committee.
- Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The Qualitative Report*, 8(4). 597-607. Retrieved from <http://www.nova.edu/ssss/QR/QR8-4/golafshani.pdf>
- Goldner, K. R. (2008). *Self-disclosure on social networking websites and relationship quality in late adolescence*. (Doctoral dissertation). Pace University, New York, NY.
- Gordon, A. & Browne, K. (2008). *Beginnings and beyond: Foundations in early childhood education* (7th ed.). New York, NY: Thomson Delmar Learning.
- Gravetter, F. J. & Forzano, L. B. (2003). *Research methods*. Belmont, CA: Wadsworth.
- Greeff, M. (2011). Information collection: interviewing. In A. S. de Vos, H. Strydom, C. B. Fouché & C. S. L. Delport (Eds.), *Research at grass roots for the social sciences and human service professions* (4th ed., pp. 341-375). Pretoria: Van Schaik.
- Grey, M., Whittemore, R., Liberti, L., Delamater, A., Murphy, K. & Faulkner, M. S. (2012). A comparison of two internet programs for adolescents with type 1 diabetes: Design and methods. *Contemporary Clinical Trials*, 33, 769-776.
- Griffiths, C.A. (2006). The theories, mechanisms, benefits and practical delivery of psychosocial educational interventions for people with mental health

- disorders. *International Journal of Psychosocial Rehabilitation*. (11), 21–28.
- Griffiths, M. D., Davies, M. N. O. & Chappell, D. (2003). Breaking the stereotype: The case of online gaming. *CyberPsychology & Behavior*, 6(1), 81-91.
- Grobler, M., Jansen van Vuuren, J. & Zaaiman, J. (2011). *Evaluating cyber security awareness in South Africa*. Pretoria: Council for Scientific and Industrial Research and the University of Venda.
- Grüsser, S. M., Thalemann, R. & Griffiths, M. D. (2007). Excessive computer game playing: Evidence for addiction and aggression. *CyberPsychology & Behavior*, 10(2), 290-292.
- Guan, S. A. & Subrahmanyam, K. (2009). Youth internet use: Risks and opportunities. *Current Opinion in Psychiatry*, 22, 351-356.
- Hague, P. (2004). *Market research in practice*. London: Kogan Page.
- Hall, G. S. (1904). *Adolescence: Its psychology and its relation to physiology, anthropology, sociology, sex, crime, religion, and education* (Vols. I - II). Englewood Cliffs, NJ: Prentice-Hall.
- Hardman, M. A. (2010) *Learning to teach in urban complex schools*. Paper presented at the British Educational Research Association (BERA) conference. Warwick, UK.
- Hayes, E. J. (2008). *Playing it safe: Avoiding online gaming risks*. Cambridge, MA: Berkman Center for Internet & Society at Harvard University.
- Henderson, E.M., Keogh, E., Rosser, B. A. & Eccleston, C. (2013). Searching the internet for help with pain: Adolescent search, coping, and medication behaviour. *British Journal of Health Psychology*, (18), 218-232.
- Heppner, P. P., Kivlighan, D. M. & Wampold, B. E. (1999). *Research design in counseling*. Belmont, CA: Wadsworth.

Hill, M. & Wagner, F. (2009). From childhood to youth: children's own. Perspectives on social-spatial transitions. *International Journal of Transitions in Childhood*, 3.

Hinduja, S. & Patchin, J. W. (2010). Bullying, cyberbullying, and suicide. *Archives of Suicide Research*, 14(3), 206-221.

Howard, P., Rainie, L. & Jones, S. (2001). Days and nights on the Internet: The impact of a diffusing technology. *American Behavioral Scientist*, 45(3), 383-404.

Howe, W. (2012). *A brief history of the Internet*. Retrieved from www.walthowe.com/navnet/history.html

Internet World Stats. (2011). Retrieved from www.internetworldstats.com.

Jones, L.M., Mitchell, K. Wolak, J., & Finkelhor, D. (2013). Online harassment in context: Trends from three youth Internet safety surveys (2000, 2005, 2010). *Psychology of Violence (Special Issue)*,3(1), 53-69.

Joyce, P. & Sills, C. (2010). *Skills in Gestalt counselling and psychotherapy*. London: Sage.

Kiuru, N., Aunola, K., Nurmi, J. E., Leskinen, E. & Salmela-Aro, K. (2008). Peer group influence and selection in adolescents' school burnout: A longitudinal study. *Merrill Palmer Quarterly*, 54, 23-55.

Kluemper, D. H., Rosen, P. A. & Mossholder, K. W. (2012), Social Networking Websites, Personality Ratings, and the Organizational Context: More Than Meets the Eye? *Journal of Applied Social Psychology*, (42), 1143-1172. doi: 10.1111/j.1559-1816.2011.00881.x

Koch, S. J. (2011). *The effects of pornography on adolescent development*. Paper presented at the Graduate Faculty University of Wisconsin-Platteville,

Wisconsin.

- Kolucki, B. & Lemish, D. (2011). *Communicating with children: Principles and practices to nurture, inspire, excite, educate and heal*. New York, NY: Unicef.
- Koovakkai, D. & Muhammed, S. (2010). Internet abuse among the adolescents: A study on the locale factor. *Webology*, 7(1).
- Kreutzer, T. (2009). Internet and Online Media Usage on Mobile Phones among Low-Income Urban Youth in Cape Town. Pre-conference workshop at the International Communication Association (ICA) Conference. Chicago, Illinois. 20 – 21 May 2009. Retrieved from http://mobileactive.org/files/file_uploads/final-paper_kreutzer.pdf.
- Kroger, J. (2007). *Identity development: Adolescence through adulthood* (2nd ed.). Newbury Park, CA: Sage.
- Kuss, D. J. & Griffiths, M. D. (2012). Online gaming addiction in adolescence. A literature review of empirical research. *Journal of Behavioural Addiction*, 1(1), 1-20.
- Larson, R. (2011). Adolescents' conscious processes of developing regulation: Learning to appraise challenges. In R. M. Lerner, J. V. Lerner, E. P. Bowers, S. Lewin-Bizan, S. Gestsdottir & J. B. Urban (Eds.), *Thriving in childhood and adolescence: The role of self regulation processes: New directions for child and adolescent development*. San Francisco, CA: Jossey-Bass.
- Laszlo, A. & Krippner, S. (1998). Systems theories: Their origins, foundations, and development. In J. S. Jordan (Ed.), *Systems theories and a priori aspects of perception* (pp. 47-74). New York, NY: Elsevier.
- Leedy, P. D. & Ormrod, J. E. (2005). *Practical research planning and design* (5th ed.). Englewood Cliffs, NJ: Pearson Merrill Prentice Hall.

- Leigh, J. A. (2010). Your teen's porn brain. *Psychology Today*. Retrieved from <http://www.psychologytoday.com/blog/guide-teen-girls/201002/your-teens-porn-brain>.
- Lenhart, A. & Madden, M. (2007). Teens, privacy and online social networks. Pew internet and American life project 1615. Retrieved from http://www.google.co.za/search?sourceid=navclient&aq=f&oq=risks&ie=UTF-8&rlz=1T4RNRN_enZA447ZA447&q=risks&gs_upl=0I0I0I1005IIIIIIII0
- Lesame, Z. (2011). The internet and the information society. In Z. Lesame, B. Mbatha & S. Sindane (Eds.), *New media in the information society*. Pretoria: Van Schaik.
- Livingstone, S. (2010). Internet, children and youth. In R. Burnett, M. Consalvo & C. Ess (Eds.), *The handbook of internet studies*. (pp. 348 -368). Sussex: Blackwell Publishing.
- Livingstone, S., Haddon, L., Görzig, A., and Ólafsson, K. (2011). *Risks and safety on the internet: The perspective of European children*. London: EU Kids Online.
- Lobb M. (2005) .Classical Gestalt therapy theory. In A. L. Woldt & S. M. Toman (Eds.), *Gestalt therapy: History, theory and practice* (pp. 21-39). Thousand Oaks, CA: Sage.
- Louge, N. (2006). Adolescents and the internet. *ACT for Youth Center of Excellence. Research facts and findings*. New York: Cornell University. Retrieved from <http://www.actforyouth.net/documents/Oct061.pdf>.
- Louw, A. & Louw, D. (2007). *Child and adolescent development*. Bloemfontein: Psychology Publications.
- Mackewn, J. (1997). *Developing Gestalt counselling*. London: Sage.

- Major, C. & Savin-Baden, M. (2010). *An Introduction to Qualitative Research Synthesis: Managing the Information Explosion in Social Science Research*. London: Routledge.
- Maree, K. (2007). *First steps in research*. Pretoria: Van Schaik.
- Maree, K. & Van der Westhuizen, C. (2007). Planning a research proposal. In K. Maree (Ed.), *First steps in research* (pp. 24-44). Pretoria: Van Schaik.
- Marshall, C., & Rossman, G. B. (2010). *Designing qualitative research*. Sage Publications, Incorporated.
- Mason, M. (2010). Sample Size and Saturation in PhD Studies Using Qualitative Interviews. *Forum of Qualitative Research*. 11 (3). Retrieved from <http://www.qualitative-research.net/index.php/fqs/article/view/1428/3027>.
- Manson, S. M. (2001). Simplifying complexity: A review of complexity theory. *Geoforum*, 32(3), 405–14.
- Maturo, D., Powell, A., Major-Wilson, H., Sanchez, K., De Santis, J. P. & Friedman, L. B. (2011). Development of a protocol for transitioning adolescents with HIV infection to adult care. *Paediatric Health Care*, 25(1),16-23.
- Mayayise, T. O. (2008). *The impact of the internet on Gauteng high school learners*. (Master's thesis). Retrieved from <http://upetd.up.ac.za/thesis/available/etd-02262009-155614/unrestricted/dissertation.pdf>
- Mazmi, M. A., Aslam, H. & Rajan, A. M. (2013). The influence of technology on children's health. International Conference on Technology and Business Management. Retrieved from <http://www.icmis.net/ictbm/ictbm13/proceedings/pdf/D3230-done.pdf> .
- McAfee (2012). *The Digital Divide*. Retrieved from <http://www.mcafee.com/uk/resources/misc/digital-divide-study.pdf>.

- McConville, M. & Wheeler, G. (2001) *The heart of development: Gestalt approaches to working with children, adolescents and their worlds (Vol. 2)*. Adolescents. Hillside NJ: Analytic Press.
- McGoldrick, M. & Carter, B. (2003). The family life cycle. In F. Walsh (Ed.), *Normal family processes: Growing diversity and complexity* (pp. 375-398). New York, NY: Guilford.
- McLeod, S. (2007). Vygotsky. *Simply Psychology*. Retrieved from <http://www.simplypsychology.org/vygotsky.html>
- McNeely, C. A. & Blanchard, J. (2010). *The teen years explained: A guide to healthy adolescent development*. Baltimore, MD: Johns Hopkins Bloomberg School of Public Health.
- Meece, J. L. & Daniels, D. H. (2008). *Child & adolescent development for educators* (3rd ed.). New York, NY: McGraw-Hill Higher Education.
- Microsoft (2008). *Teen attitudes survey*. Retrieved from <http://www.microsoft.com/en-us/news/press/2008/feb08/02-13msipsurveyresultspr.aspx>
- Mishna, F., Saini, M. & Solomon, S. (2009). Ongoing and online: Children and youth's perceptions of cyber bullying. *Children and Youth Services Review*, doi:10.1016/j.chilyouth.2009.05.004 (print version in press).
- Mitchell, K. J., Finkelhor, D., Wolak, J. D., Ybarra, M. L. & Turner, H. (2010). Youth internet victimisation in a broader victimisation context. *Journal of Adolescent Health*. 48, 128-134.
- Mitchell, P. & Ziegler, F. (2007) *Fundamentals of development: The psychology of childhood*. Florence, KY: Psychology Press.
- Moreno, M. A., VanderStoep, A., Parks, M. R., Zimmerman, F. J., Kurth, A. &

- Christakis, D. A. (2009). Reducing at-risk adolescents' display of risk behavior on a social networking web site: A randomized controlled pilot intervention trial. *Archives of Pediatric and Adolescent Medicine*, 163(1), 35-41.
- Moreno, M.A., Egan, K.E., Bare, K., Young, H.A. & Cox, E.D. (2013). Internet safety education for youth: stakeholder perspectives. *BMC Public Health*. 13:543.
- Morrison, K. R. B. (2006). *Complexity theory and education*. Paper presented at APERA Conference, Hong Kong.
- Mouton, J. (2001). *How to succeed in your master's and doctoral studies: A South African guide and resource book*. Pretoria: Van Schaik.
- National Crime Prevention Council. (2008). *Teens and cyberbullying*. HarrisPoleInc. Retrieved from <http://www.ncpc.org/resources/files/pdf/bullying/Teens%20Cyberbullyihng%20Research%20Study.pdf>
- National Institute of Mental Health. (2011). *The adolescent and adult brain*. Retrieved from <http://www.nimh.nih.gov/health/publications/the-teen-brain-still-under-construction/the-adolescent-and-adult-brain.shtml>
- Nevis, E. C. (2000). *Gestalt therapy*. Cambridge: Gestalt Press.
- Newman, B.M. & Newman, P.R. (2006). *Development through life. A psychosocial approach*. USA: Thompson Learning Inc.
- Niegowski, S. B., Evans, D. C. & Epstein, E. (2010). *Adolescent egocentrism and social media: Does the psychology align?* Retrieved from http://psychster.com/library/PSYCHSTER-MCDM_Whitepaper_Adolescent%20Egocentrism_SaraNiegowski_Oct2010.pdf
- Nieuwenhuis, J. (2007). Introducing qualitative research. In K. Maree (Ed.), *First*

- steps in research* (pp. 47-66). Pretoria: Van Schaik.
- Norman, K. L. (2008). *Cyber psychology: An introduction to human-computer interaction*. New York, NY: Cambridge University Press.
- NM Incite. (2011). State of the media: *The social media report*. Retrieved from <http://www.cn.nielsen.com/documents/Nielsen-Social-Media-Report-Final-090911.pdf>
- Oaklander, V. (2006). *Hidden treasure: A map to the child's inner self*. London: Karnac.
- O'Brien, N. & Moules, T. (2010). *The impact of cyber-bullying on young people's mental health*. Chelmsford: Anglia Ruskin University. Retrieved from http://www.ncb.org.uk/media/111007/cyber-bullying_report.pdf.
- O'Keeffe, G.S. & Clarke-Pearson, K. (2011). Clinical Report—The impact of social media on children, adolescents, and families. *Paediatrics*, 127(4), 800-804. Doi: 10.1542/peds.2011-0054
- Okamoto, J. (2010). Social network influences on depressive symptoms among Chinese adolescents. (Master's thesis) .California: University of Southern California Graduate School, California.
- O'Neil, S. (2008). *Bullying by tween and teen girls: A literature, policy and resource review*. Kookaburra Consulting Inc. Retrieved from www.sacsc.ca/Literature%20Review_finalSON.pdf
- Papalia, D. E., Olds, S. W. & Feldman, R. D. (2006). *Human development* (10th ed.). Upper Saddle River, NJ: McGraw-Hill Higher Education.
- Parlett, M. (2005). Contemporary Gestalt therapy: Field theory. In A. L. Woldt & S. M. Toman (Eds.), *Gestalt therapy: History, theory and practice* (pp. 41-64). London: Sage.

- Patchin, J. W. & Hinduja, S. (2010). Changes in adolescent online social networking behaviors from 2006 to 2009. *Computers and Human Behavior*, 26, 1818-1821.
- Perls, F., Hefferline, R. F. & Goodman, P. (1951). *Gestalt therapy: Excitement and growth in the human personality*. London: Souvenir Press.
- Petrou, A. (2011). *Vast majority of children view online porn: Get around the parental controls*. Retrieved from <http://news.techeye.net/security/vast-majority-of-children-view-online-porn#ixzz27qvzXhMc>
- Pfeifer, J. H., Masten, C. L., Moore, W. E., Oswald, T. M., Mazziotta, J. C., Lacoboni, M. & Dapretto, M. (2011). Entering adolescence: Resistance to peer influence, risky behavior, and neural changes in emotion reactivity. *Neuron*, 69(5), 1029-1036.
- Piaget, J. (1957). *Construction of reality in the child*. London: Routledge & Kegan Paul.
- Pickhardt, C. (2010). Adolescence and emotion. *Psychology Today*. Retrieved from <http://www.psychologytoday.com/blog/surviving-your-childs-adolescence/201007/adolescence-and-emotion>
- Poole, R., Simpson, S. A. & Smith, D. J. (2012). Internet-based psychoeducation for bipolar disorder: A qualitative analysis of feasibility, acceptability and impact. *BMC Psychiatry*, 12, 139. doi: 10.1186/1471-244X-12-139.
- Purcell, K. (2012). *Teens 2012: Truths, trends and myths about teens' online behaviour*. [PowerPoint Slides]. Retrieved from <http://pewinternet.org/Presentations/2012/July/Teens-2012-Truth-Trends-and-Myths-About-Teen-Online-Behavior.aspx>
- Rabinowitz, P., & Fawcett, S. (2013). *Collecting and Analyzing Data*. University of

- Kansas. Retrieved from
<http://ctb.ku.edu/en/tablecontents/chapter37/section5.aspx>.
- Rahman, S., Feroz, A., Kamruzzaman, M. & Khan, A. (2005). Online identity theft and its prevention using threshold cryptography. *International Journal of Computer Science and Network Security*, 10(9), 18-25.
- Raskaukas, J. & Stoltz, A.D. (2007). Involvement in traditional and electronic bullying among adolescents. *Developmental Psychology*. 43(3), 564-575.
- Reynolds, C. (2005). Gestalt therapy with children. In A. L. Woldt & S. M. Toman (Eds.), *Gestalt therapy: History, theory and practice* (pp. 153-178). London: Sage.
- Rice, K.G., & Meyer, A.L. (1994). Preventing depression among young adolescents: Preliminary process results of a psycho-educational intervention program. *Journal of Counseling and Development*.73, 145-152.
- Rice, E., Monro, W., Barman-Adhikari, A. & Young, S. D. (2010). *Internet use, social networking, and HIV/AIDS risk for homeless adolescents*. Los Angeles, CA: School of Social Work, University of Southern California.
- Rocco, T. S., Bliss, L. A., Gallagher, S. & Perez-Prado A. (2003). Taking the next step: Mixed methods research in organizational systems. *Information Technology, Learning and Performance Journal*. 21(1), 19-29.
- Roberson, A. J. & Kjervik, D. (2012). Adolescents' perceptions of their consent to psychiatric mental health treatment. Retrieved from
<http://www.hindawi.com/journals/nrp/2012/379756/>
- Roberts, T. S. (2008). *Student plagiarism in an online world*. New York: Information Science Reference.
- Rogers, V. (2010). *Cyber-Bullying*. London: Jessica Kingsley Publishers.

- Ruzek, J. I., Hoffman, J., Ciulla, R., Prins, A., Kuhn, E. & Gahm, G. (2011). Bringing Internet-based education and intervention into mental health practice: afterdeployment.org. *European Journal of Psychotraumatology*, 2, 7278.
- Sabina, C., Wolak, J. & Finkelhor, D. (2008). The nature and dynamics of internet pornography exposure for youth. *CyberPsychology & Behavior*, 11(6), 691-693.
- Saldana, J. (2013). *The coding manual for qualitative researchers*. (2nd ed). Sage Publications.
- Santrock, J. W. (2008). *Adolescence* (12th ed.). Upper Saddle River, NJ: McGraw-Hill Higher Education.
- Sharp, C. & Dellis, A. (2010). *Risky teens: Intervention science and its application to the South African context*. South African Responsible Gambling Foundation. Retrieved from <http://responsiblegambling.co.za/content.asp?id=11>
- Sheldon, M. (2011). Kids flirting with danger online. *The Cape Argus*, 10 February.
- Sigelman, C. K. & Rider, E. A. (2009). *Life-span human development* (6th ed). Boston, MA: Cengage Learning.
- Skyttner, L. (2001). *General systems theory: Ideas and applications*. River Edge, NJ: World Scientific.
- Staksrud, E. & S. Livingstone (2009). Children and online risk: Powerless victims or resourceful participants? *Information, Communication & Society*, 12(3), 364-387.
- Stevenson, H. (2011). *Emergence: The Gestalt approach to change*. Cleveland consulting group. Retrieved from <http://www.clevelandconsultinggroup.com/articles/emergence-gestalt-approach-to-change.php>
- Strom, P. & Strom, R. D. 2009. *The digital divide: How the online behavior of teens is*

- getting past parents*. Retrieved from
<http://www.mcafee.com/us/resources/misc/digital-divide-study.pdf>
- Strydom, H. (2011). Sampling in quantitative paradigm. In A. S. de Vos, H. Strydom, C. B. Fouché & C. S. L. Delport (Eds.), *Research at grass roots for the social sciences and human service professions* (4th ed.), (pp. 222-234). Pretoria: Van Schaik.
- Subrahmanyam, K. & Greenfield, P. (2008). Online communication and adolescent relationships. *The future of children*, 18(1), 119-146.
- Subrahmanyam, K., & Lin, G. (2007). Adolescents on the Net: Internet use and well-being. *Adolescence*, 42, 659–677. *Adolescence*, 42(168), Winter.
- Sullivan, M. (2010). *Statistics: Informed decisions using data* (3rd ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Symington, S. (2011). *The influence of social networking on the social interaction patterns among adolescents in the northern suburbs of Cape Town*. (Master's thesis). University of South Africa: Pretoria.
- Thelwall, M. (2013). Chapter 4: Society on the web. In W. Dutton (Eds.). *The Oxford Handbook of Internet Studies*. (pp. 69-85). UK: Oxford University Press.
- Thomas, E. E. & Sassi, K. (2011). An ethical dilemma: Talking about plagiarism and academic integrity in the digital age. *English Journal*, 100(6), 47-53.
- Toman, S. M. & Bauer, A. (2005). Adolescents: Development and practice from a Gestalt orientation. In A. L. Woldt & S. M. Toman. *Gestalt Therapy: History, theory, and practice*. (pp. 179-200). Thousand Oaks: SAGE Publications.
- Trolley, B., & Hanel, C. (2010). *Cyber kids, cyber bullying, cyber balance*. Thousand Oaks, CA: Corwin.
- Tuckett, A. (2004). Qualitative research sampling: The very real complexities. *Nurse*

Researcher, 12(1), 47-61.

Unicef. (2011). *From "What's your ASLR?" to "Do you wanna go private?"* Retrieved from http://www.unicef.org/southafrica/SAF_resources_mxistudy.pdf

Valcke, M., De Wever, B., Van Keer, H. & Schellens, T. (2011). Long term study of safe internet use of young children. *Computers & Education*, 57(1), 1292-1305.

Valle, V. (2000). Chaos, complexity and deterence. In C. Murdock, (Ed.), 5605 Core Course (pp. 1-12). National War College. Retrieved from <http://www.au.af.mil/au/awc/awcgate/ndu/valle.pdf>.

Van Rooij, A. J., Schoenmakers, T. M., Vermulst, A. A., Van den Eijnden, R. J. J. M. & Van de Mheen, D. (2010). Online video game addiction: Identification of addicted adolescent gamers. *Addiction*, 106(1), 205-212.

Venkatesh, V., Brown, S.A. & Bala, H. (2012). Bridging the qualitative quantitative divide. *MIS Quarterly Vol. X No. X*, pp. 1.

Verrijdt, A. (2009). Exploring adolescents' views of the impact of computer-mediated communication (cmc) on their lives. (Master's Thesis). Stellenbosch: Stellenbosch University. Stellenbosch.

Vogler, P., Crivello, G. & Woodhead, M. (2008.) Early childhood transitions research: A review of concepts, theory, and practice. *Working Paper No. 48*. The Hague, The Netherlands: Bernard van Leer Foundation.

Von Solms R & De Lange M, (2011). Children at Risk of online bullying, *Mail & Guardian*. Retrieved from <http://mg.co.za/printformat/single/2011-02-04-children-atrisk-of-online-bullying/>

Vreeland, B. (2012). An evidence-based practise of psycho-education for schizophrenia. *Psychiatric times*. 29 (2). Retrieved from

<http://www.psychiatrictimes.com/display/article/10168/2028895>.

Vygotsky, L. S. (1987). *The collected works of L. S. Vygotsky: Vol. 1. Problems of general psychology*. New York, NY: Plenum.

Walsh, R. (2008). Teens less likely to download illegally when they know the laws. Microsoft Survey Finds. Retrieved from <http://www.microsoft.com/en-us/news/press/2008/feb08/02-13msipsurveyresultspr.aspx>.

Wessels, B. (2010), *Understanding the Internet: a socio-cultural perspective*. Basingstoke: Palgrave.

Wexberg, S. S. (2002). A developmental model with applications for working with young children. In G. Wheeler & M. McConville (Eds.), *The heart of development* (pp. 311-330). Hillsdale, NJ: Gestalt Press.

William, M.K. (2006). Measurement. Web Centre for Social Research Methods. Retrieved from <http://www.socialresearchmethods.net/kb/measure.php>

World Wide Worx. (2010). Retrieved from <http://www.worldwideworx.com>.

Ybarra, M. L., Diener-West, M., Markow, D., Leaf, P.J., Hamburger, M. & Boxer, P. (2008). Linkages between internet and other media violence with seriously violent behavior by youth. *Pediatrics*, 122(5), 929-937.

Ybarra, M. L. & Mitchell, K. J. (2005). Exposure to internet pornography among children and adolescents: A national survey. *Cyberpsychology & Behavior*, 8(5), 473-486.

Yontef, G. (1993). *Awareness dialogue & process: Essays on Gestalt therapy*. Hillsdale, NJ: Gestalt Journal Press.

Yontef, G. M (2005) Gestalt therapy theory of change. In A.L. Woldt & SM Toman (Eds), *Gestalt Therapy: History, Theory and Practice*. (pp. 81-100). London: Sage.

Yontef, G. & Jacobs, L. (2011). Gestalt therapy. In R. J. Corsini & D. Wedding (Eds.),
Current psychotherapies (pp. 342-382). Belmont, CA: Wadsworth.

Yontef, G. & Simkin, J. (1993). An introduction to Gestalt therapy. Behavior online.
Retrieved from <http://www.behavior.net/gestalt.html>

Addendum A:



Metro East Education District
Office: Director

Reference:
Enquiries: M Caroline

Ms Serahni Symington

Dear Ms Symington

PERMISSION TO CONDUCT RESEARCH

Permission is hereby granted to you to conduct research at [REDACTED]

Please be informed that your research must not infringe on the contact time of learners.

Kind Regards


MW CAROLINE
DIRECTOR: METRO EAST EDUCATION DISTRICT
DATE: 2022-08-31

c/o Naniensfontein Road & Belhar Drive, Kull's River, 7500 / Private Bag X23, Kullstvet, 7579

tel: +27 21 900 7005 fax: +27 21 903 9484
Safe Schools: 0800 45 46 47

Employment and salary enquiries: 0861 92 33 22
www.westerncape.gov.za



Metro North Education District

Reference:
Enquiries: HA Brand

Ms S Symington

Proposed Research: [REDACTED]

The District hereby supports and grants permission for your proposed research at [REDACTED] School.

I value your topic and focus and trust that your research will provide not only evidence of the impact of cyber-bullying but also provide joy and fulfilment.

My best wishes for this study.

A handwritten signature in black ink, appearing to read "Dr HA Brand". The signature is fluid and cursive.

Dr HA Brand
DIRECTOR: METRO NORTH EDUCATION DISTRICT
DATE: 2012-02-16

Timmerman Street, Parow, 7501
tel: +27 21 938 3133 fax: +27 21 938 3180
Safe Schools: 0800 45 46 47

Private Bag X45, Parow, 7500
Employment and salary enquiries: 0861 92 33 22
habrand@pgwc.gov.za

Addendum B: Adolescent Internet Use And Internet Activities Questionnaire

Please answer the following questions as truthful as possible. THIS IS ANONYMOUS:

Proposed interview schedule for initial questionnaire:

Please circle

- | | |
|--|----------|
| 1. Do you access the internet daily? | Yes / No |
| 2. Do you access the internet weekly? | Yes / No |
| 3. Do you have access to the internet on your mobile phone? | Yes / No |
| 4. Do you have a profile on a social networking site like
Facebook/Twitter? | Yes / No |
| 5. Do you think you spend a lot of time on the internet? | Yes / No |
| 6. Do you mostly enjoy accessing the internet? | Yes / No |
| 7. Do you mostly dislike using the internet? | Yes / No |
| 8. Have you ever been bullied via a social network or the internet? | Yes / No |
| 9. Have you ever posted your real name and surname on the internet
or on a profile? | Yes / No |
| 10. Have you ever lied about your age while you were conversing
online? | Yes / No |
| 11. Have you ever given your phone number or posted it online? | Yes / No |
| 12. Have you ever posted your address on a profile or online? | Yes / No |
| 13. Have you ever cleared your browsing history? | Yes / No |
| 14. Are you open to your parents about your activities online? | Yes / No |
| 15. Have you ever lied to your parents about any of your online
activities? | Yes / No |

16. Do you have free computer-based access to the internet at your home? Yes / No
17. Do you have internet access at your school? Yes / No
18. Does your school give you access to go onto the internet for academic work? Yes / No
19. Have you ever been scared to go on the internet because of someone else also being logged on? Yes / No
20. Have you ever engaged in an activity online, while at school, which you knew was inappropriate? Yes / No
21. Have you ever used the internet at your school to engage in activities you know the school would not approve of? Yes / No
22. Have you ever contacted a stranger via the internet? Yes / No
23. Have you ever been contacted by a stranger via the internet? Yes / No
24. Have you ever met someone in person, who you initially met via the internet? Yes / No
25. Have you ever posted any negative comments about someone you know on a website/social network? Yes / No
26. Have you ever been exposed to sexual content on the internet? Yes / No
(Purposively or accidently)
27. Do you play games online? Yes / No
28. If yes, list some of the games you play:

29. What is your favourite website?

30. What is your favourite activity(ies) on the internet?

31. What is your general opinion of teenagers using the internet?

32. Does the internet hold any dangers for you?

Yes/No

33. If your answer was yes, name the dangers that you feel exposed to?

34. I am a: boy / girl (circle correct one)

35. I am in grade: _____

Addendum C: Letter to participants

CONSENT TO PARTICIPATE IN RESEARCH

The development of a web-based psycho-educational strategy for safe internet use amongst adolescents in schools

You are asked to participate in a research study conducted by Serahni Symington, a PhD student in Psychology from the *Institute for Child, Youth and Family studies* at North-West University.

1. PURPOSE OF THE STUDY

The purpose of the research is to develop a psycho-educational website to educate learners about safe internet practices.

2. PROCEDURES

If you volunteer to participate in this study your participation will include two activities:

1. To access an educational website; and
2. To form part of a focus group, in which you will discuss your opinion of the website, which was accessed.

3. POTENTIAL RISKS AND DISCOMFORTS

If you feel uncomfortable or have any questions or have the need to discuss and work with any aspect of your life after the sessions, I will bring you in contact with members of the counselling team at the school or refer to an outside counsellor if the school does not have internal support.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

By participating in the study you might gain a better understanding of safe use of the internet.

5. PAYMENT FOR PARTICIPATION

You will not receive any payment for your involvement.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of not using your names and using a number when referring to you in the research report. The name of the school will not be mentioned anywhere. I will keep all information locked and only I will have access to it.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you do not want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact me, Serahni Symington at 021 982 8084 or 074 142 0708, or my study supervisor, Dr. Munita Dunn at mdunn@sun.ac.za.

9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study.

SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

The information above was described to _____ [by Serahni Symington in [*English*] and *I am* in command of this language or it was satisfactorily translated to [*me/him/her*]. I, _____ was given the opportunity to ask questions and these questions were answered to *my* satisfaction.

[I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may participate in this study.] I have been given a copy of this form.

Name of Participant

Signature of Participant/Legal Representative/*Parent/Guardian*
(in case of participant being younger than 18)

_____ Date

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to _____ [*name of the subject/participant*] and/or [his/her] representative _____ [*name of the representative*]. [He/she] was encouraged and given ample time to ask me any questions. This conversation was conducted in [*Afrikaans/English*] and *no translator was used*.

Signature of Investigator

Date