Exploring adolescents' perceptions of the impact of Information and Communication Technologies on parent-adolescent relationships

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KEY WORDS

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ABSTRACT

The proliferation of new ways in communication, gathering and disseminating information and entertainment through digital technologies, such as cellular phones and the Internet, commands the attention of social scientists. Researchers' disagreement over whether these and the older technologies, such as computer games and television, are harmful to the psycho-social well being of users, underscores the difficulty in understanding how these technologies impact on the psyche of people. This study is a qualitative exploration of adolescents' perceptions of their parents' attitudes and use of information and communication technologies (ICTs). In comparing these perceptions with how the adolescents in this study view and use ICTs, this research aims to delineate the possible impact of these technologies on the parent-adolescent relationship. Three focus groups were conducted with 23 grade ten learners attending schools in the Cape Peninsula. These schools were randomly selected. Purposive sampling was used to select the participants. The transcriptions were analysed by means of qualitative content analysis.
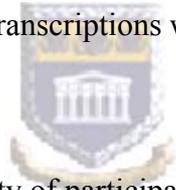
The results indicated that the majority of participants' parents are reported to be less skilled in the use of ICTs than the adolescents themselves. Whilst some participants expressed frustration around this, others were more tolerant and offered reasons why their parents are not comfortable in using of ICTs. In addition, it was found that these technologies offer opportunities for constructive interaction between parents and teenagers, as parents often seek the assistance of the adolescent when using ICTs. It was also found that parents are concerned about the adolescent's social life, but have a more lenient and permissive attitude towards adolescents' use of ICTs. Without contextual information on the parent-adolescent relationship outside the context of ICTs in homes, it is difficult to be conclusive about the impact of these technologies on the abovementioned relationship. However, it seems that adolescents' use of digital technologies is not a serious threat to a good parent-adolescent relationship.

The study addressed the paucity of information on the phenomenon of ICTs in the South African context. Future investigations in this field should focus on how parents report on their children's use of ICTs. The research should also focus only on a particular technology, such as cell phones or Internet use. Finally it is recommended that quantitative studies in this field should be complemented with a qualitative component, as a specific technology can be used in diverse ways. It is not the mere use of ICTs, but the context and purpose in which it is used, that determines the possible impact on the well being of the user.

October 2004

DECLARATION

I declare that *Exploring adolescents' perceptions of the impact of Information and Communication Technologies on parent-adolescent relationships* is my own work, that it has not been submitted before for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

Willem Adriaan Odendaal   October 2004

Signed:

ACKNOWLEDGEMENTS

I don't know if I'll have share in the next world,

But I want to have a share in the world of my children

Their nostalgia for the future

And mine for the past

Pass parallel to each other

Never meeting

As if in huge mistake

Caused by a tunnel engineer
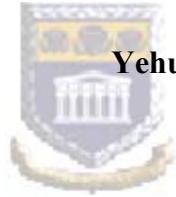
Yehu Amichai

1.   INTRODUCTION

It is axiomatic that people will experience changes in society during their lifetime; some of these might be trivial, others subtle and difficult to grasp, whilst some changes are very dramatic in nature. Very often these changes originate in technological developments that get introduced into society. At present society at large is amidst an explosion of information and communication technologies that are neither trivial nor subtle. These developments have introduced what seems to be an almost unlimited array of new ways in which to communicate, to gather and disseminate information, and to use these technologies for entertainment.

This "Digital Revolution" (Walsh, 2000, p. 69) began with the introduction of the computer, and eventually led to a situation where all satellite and telecommunications and digitisation processes are controlled by the computer. Initially the concept 'New Information and Communication Technologies' was used to encompass all these technologies. Since then a more simplistic concept, 'Information and Communication Technologies' (henceforth referred to as ICTs), was introduced. It can be speculated that this was necessitated by the convergence of television and video technology, no longer 'new', with digital communication technologies (Montgomery, 2000).

Two aspects of the changes in society that can be linked to the development of ICTs are of importance to this study: First, when Kingsley Davids (in Gullotta, Adams & Markstrom, 2000) reflected on changes in society, he stated the obvious fact that each generation grows up in a social milieu that differs from the previous or the next generation's milieu. The conclusion he draws from this is relevant to this study: Every generation's actions and basis for constructing meaning are guided by the specific cultural and historical context of its time. This, he claims,

makes it difficult for generations to understand each other, which is the so-called 'generation gap'.

Relating Kingsley's sociological theory to the ICTs of this era implies that the generation that did not grow up with the advanced information and communication technologies of today may attach different meanings to these than the generation that grew up with ICTs. For the former, face to face communications were the norm; the primary source of information for children were parents and teachers; visiting foreign places were reserved for the fortunate few, and the list continues.

The generation that was born in the late 1980's and thereafter will base their interaction with, and meaning of, ICTs on something completely different. For them, communicating without face to face contact might be a far more natural way of interacting with others than it is for their parents. Instant Messaging (IM) through the Internet, e-mailing and the Short Message Service (SMS) offered by cell phones are the technologies they grow up with, and therefore they might construct different meanings around it than what their parents do. For this generation it is almost impossible to imagine a life without the Internet (Kleinrock, 2004). It is not without justification that Norris (cited by Suoranta, 2003) claims that generational differences are the critical element for any discussion on the impact of ICTs in society.

The second aspect of the changes is that these technologies are by no means peripheral to the daily lives of people (Kleinrock, 2004). The common use of terminology such as SMS, e-mail, Internet cafés, surfing the Net, Cyberspace, and Global village are indicative of how entrenched ICTs have become in society. Statistics in the international arena give an indication of the extent to which people are using these technologies.

Globally there were approximately 60 million Internet users in 1997. This

number is estimated to have grown to 580 million in 2002 (Suoranta, 2003). Aidman (2000) stated that in 2005 there will be 13 million children in the USA that use online technology. In Britain it is estimated that nine in every ten secondary school students have a cell phone (Davie, Panting & Charlton, 2004), a trend that is also observed in Italy where the percentage of families with cell phones increased from 25% (1997) to 65% in 2000 (Prezza, Pacilli & Dinelli, 2004).

The obvious changes brought about by ICTs are the equipment, the changing ways to collect and communicate information, and the new forms of entertainment offered by these technologies. This is duly reported in the many quantitative studies in this field (Villani, 2001). As Suoranta observed "we are swamped by statistical information on ICTs" (2003, p. 46). An interesting comment in this regard comes from Montgomery (2000) who said that the market research in this field outpaces the academic research on the impact that ICTs may have on children. The manufactures of ICTs have to keep abreast with the trends and needs of the consumers, which may explain the abundance of market research in this field.
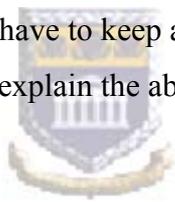
Those social scientists that report on the meanings and consequences of digital technologies are by no means unanimous in their assessments and findings. This is evident in the conflicting results of research that tried to unravel the influences of ICTs (Walton & Jansen, 2003). In two studies cited by Wright (2001) on the impact of frequent computer use, the findings were in direct opposition with one another. The first study found that a high frequency of computer use correlated positively with high degrees of self-satisfaction, confidence and a strong social support network. The second study contradicted this and found that a high frequency of computer use was associated with social isolation and withdrawal.

The classic example of these contradictory findings is the much-cited studies by Kraut and his colleagues. In their first longitudinal study on the psycho-social impact of Internet use, the researchers found that Internet use led to social

withdrawal and an increase in depressive symptoms (Kraut, Patterson, Lundmark, Kiesler, Mukopadhyay & Scherlis, 1998). In their follow-up study two years later, they had to repudiate their initial findings and report that Internet use had positive outcomes on the psychological well-being of users (Kraut, Kiesler, Boneva, Cummings, Helgeson & Crawford, 2002). The issue is not to explore the reasons they offered to explain the contradictory findings, but to illustrate how difficult it is to come to conclusive findings in the elusive field of ICTs.

Two characteristics of ICTs may explain the contradictory research findings in this field. First, the user is not only a passive receiver of information, but can actively engage in dialogue with some of these technologies. When surfing the Net or playing interactive games, actions are not only cued from the equipment but also from the interpretations and choices of the user. This defies a magic ray effect (Goldstein in Walton & Jansen, 2003) where the impact of a specific technology is automatically portrayed onto the user. Cultural artefacts such as ICTs, are not like chemical catalysts that will produce predictable results when used (Jenkins cited by Walton & Jansen, 2003). Turkle (1996) added to this, stating that as human beings construct technology, these technologies in turn construct them.

The second possibility lies in the pace with which these technologies develop. What was offered by a cellular phone in 2000, has been surpassed by the functions of cell phones today. An advertisement, randomly picked from a newspaper, showed no less than eight functions offered by a specific cell phone. Amongst the functions are that of a camera, a web browser and an e-mail capacity; incidentally it can also be used as a phone. Cell phones are obviously no longer merely a substitute for the conventional telephone. In a certain way the research on the influences of ICTs cannot keep up with the pace of development in this field, and is "surpassing the ability of scholars … to grasp fully its nature, its direction and its impact on young people" (Montgomery, 2000, p. 65). To prove his point Montgomery then referred to published research on the effects of

video games that applied to games that have become outdated and are no longer available in the market.

These rapid changes in the digital world is one of the reasons offered by Kraut et al. (2002) to explain their contradictory findings on Internet use. They claim that the change of Internet facilities to a more user-friendly format, contributed to the more positive effects found in their second study. This does not imply that research focusing on the psychological and social ramifications of ICT use does not contribute at all to understand the impact of these technologies, but it would be wise to treat research findings in this field with caution.

In conclusion it can be said that any researcher entering the maze of ICTs should keep in mind that:

- Human creativity in the use of information and communication technologies defies easily drawn conclusions that can be generalised over the spectrum of users and the different technologies (Tyler, 2002). Gaming might bear different meanings for different players, and electronic gaming is by no means the same as using the Internet to engage in online communication.
- Delineating the modality of use of the equipment might be more difficult but more critical than mere frequencies of usage to understand the impact of ICTs. The meanings that people construct around their use of ICTs may be more informative about the impact that these technologies have, than statistics about the use of these technologies are.
- Based on generational differences, parents and children may attach different meanings to ICTs. This study focuses on whether these differences are perceived by adolescents to be conducive or detrimental to the parent-adolescent relationship.

2.   RATIONALE

An article called 'The secret lives of teens', (Leland, Gordon, Underwood, Weingarten & Figuero, 1999) suggests that adolescents of every era have their

own codes of conduct and behavioural styles that are intended to exclude adults from their world. The youth of this era are no exception to this rule, however, Leland and colleagues (1999) argue that the digital technologies of today are isolating parents more deeply from their children than ever before. ICTs leave no traces behind for parents to know what their children are engaging with, and thereby lessen the opportunities for reality-checks from parents.

An example that illustrates this very clearly is a Norwegian study on adolescents' use of cell phones, which found that teenagers use this technology to establish and maintain relationships outside of their parents' control (Davie et al., 2004). Parents may limit their children's use of cell phones with the amount of airtime they are willing to buy, but the children can interact with whom they want and where they want, without parents overhearing their conversations. Establishing relationships outside parental control, however, is not a unique phenomenon that applies only to the youth of today; what is unique about the "Net-generation" (Wright, 2001, p. 37) is that ICTs increase the opportunities for adolescents to socialise without parental knowledge.
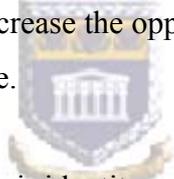
While adolescents, in establishing their identity, need to create distance and autonomy from their parents (Berk, 2000), some researchers are concerned that parents are reluctant to engage with their teens around ICTs. Casas (1998), a leading researcher in Europe regarding ICTs and children, found that an important percentage of parents feel unable to dialogue with their children about these technologies, or even speak with them about their ICT-activities, although children perceive these activities as important.

This situation, where parents do not interact with their children around ICTs, was also found in a survey in 2001 amongst 1 002 adolescents in the Cape Peninsula in South Africa. For instance it was found that the majority of participants who were aged between 12 and 17 years, never talk to their fathers about either their Internet-activities or their electronic gaming experiences (September & Savahl, 2002).

It is even argued that parents are losing their traditional form of authority over their children (Aphek, 2003; Casas, Alsinet, Perez Tornero, Figuer, Conzalez & Pascual, 2001). This conclusion is based on the observation that children's access to this highway of information, i.e. the Internet, can substitute parents as one of the primary sources of information for children. Additionally, there is the possibility that the ease and enthusiasm with which children engage with ICTs (Berson & Berson, 2003) may surpass their parents' enthusiasm and capability to adapt to this new environment (Montgomery, 2000; Wright, 2001). When children become the more techno-literate members in a household it may disrupt the guiding role of the parents (Stahl & Fritz, 2002). Although Roe (2000) was more cautious in his assessment of the impact of ICTs on the family structure, he agreed that the family dynamics in a home may change due to the introduction of new technologies. The possibility that children's use of ICTs impacts on their relationships with their parents commands research on this issue.

Researchers have also claimed that too little research has explored what these technologies mean for children (Hinn, Leander & Bruce, 2001; Roberts, 2000; Suoranta, 2003). This was affirmed by Kafai (1996) in his comment that the social significance of gaming (computer and video games) in children's lives is not matched by the amount of research done in this field, as well as in the claim that few studies explore the psycho-social consequences of cell phone use (Prezza et al., 2004). Researchers should face the challenge and investigate what the use of ICTs means to children (Aidman, 2000) and how it facilitates the social behaviours of the Net-generation (Biocca, 2000).

Discussions on ICTs and their impending consequences often have little to do with the reality as experienced by the youth (Suoranta, 2003) and therefore Montgomery (2000) advocates for including youth in the research; not as the subject of the research but as participants with the opportunity to voice their experiences.

2.1   Aim

This study aimed to explore adolescents' perceptions of how their use of ICTs may impact on the quality of the parent-adolescent relationship. Obtaining information from adolescents on how they experience their parents' interaction with them when they engage with these technologies, can provide insight into adolescents' perceptions of whether ICTs impact on this relationship. This research therefore aimed to explore the way that parents interact with their adolescents on their use of the Internet, gaming activities, or regulating their use of a cell phone, and how this is perceived by adolescents. The issues that were explored are stated in the following objectives.

2.2   Objectives

- How do adolescents perceive their parents' level of techno-literacy?
- Do adolescents think that their attitude towards ICTs differs from that of their parents?
- What are the comments, encouragement or limitations that parents place on their use of ICTs?
- What meanings do adolescents construct around ICTs and are they experiencing it as conducive to their relationship with their parents?
- Does this interaction differ from how their parents normally relate with them around their social lives: are their parents more involved with whom they date or what they do over weekends than with their use of ICTs?
- Do their parents engage in different ways with them according to the equipment in hand: are parents' comments and actions different when a teenager goes on the Internet than when the teen is playing electronic games or watching DVD's?
- How would adolescents like parents to relate with them regarding their use of information and communication technologies?

3. CONCLUSION

The fact that developments in the area of ICTs are affecting our daily lives cannot be disputed, and the questions around these effects are numerous. Answering these questions should be an imperative for social researchers, as this would hopefully lead to a better understanding of what underpins a person's actions and how people respond to the changes induced by information and communication technologies.

This study focused only on one of these issues, namely how these technologies may influence the parent-adolescent relationship as perceived by the adolescents. Although it can be expected that not all the questions related to this issue be answered in this study, this study may provide some understanding of the perceived impact of ICTs on parent-adolescent relationships.

CHAPTER 2:

LITERATURE REVIEW

1. DIFFERENT VIEWS ON THE IMPACT OF ICTs.

Much of the research in this field focuses on whether these technologies are beneficial or harmful to the well being of its users, resulting in a "binary determinism" (Casas et al., 2001, p. 34; Ho & Lee, 2001) amongst researchers. There are three discernable proponents in this debate: those who have a doom and gloom perspective; those who are accentuating the positives of these technologies, and a middle ground claiming that no easy judgment can be passed on the impact of ICTs. What follows is an overview of the arguments posed by the "utopias" and "dystopias" (Suoranta, 2003, p. 4) as well as by those who are more cautious in their conclusions on the influence of ICTs.

1.1 The 'Dystopias'

Since the introduction of cinemas and television in the 1950's in the USA there were concerns that such technologies will lead to moral decay and anti-social behaviours. Those concerns have grown exponentially with the introduction of new ways of communicating and disseminating information (Suoranta, 2003). Some of these arguments posed by researchers and social commentators are presented below.

1.1.1 *Endangering conventional ways of socialisation*

A contradictory effect of ICTs is that whilst offering instant and multiple ways to interact with others, the very same technology can also deny the basic need for face to face contact and human touch. People can set up their offices at home and conduct their business online without having to interact with others in-person. It is also possible to do shopping and banking via the Internet, thereby lessening the opportunities to socialise with others in a more conventional way.

In a somewhat dramatic analogy, Cole and Cole (1998) compared this scenario with the solitary confinement of a prisoner. They argue that it is a basic need for human beings to have regular face to face contact with others, and that ICTs are preventing people from satisfying this need. Their analogy may be an overstatement, but the fact remains that the facilities offered by ICTs have supplemented, and at times substituted, conventional ways of relating in-person with others. Those who have a negative view of ICTs argue that people are being isolated from one another despite the abundance of ways to interact through ICTs, and that this is detrimental to their psychological well being (Kraut et al., 1998).

There is also a concern that the "N-geners", Tapscott's description of the youth that are growing up in a digital world of computerised technology (Aphek, 2003, p. 4), will substitute in-person socialisation with their peers with online activities. In a survey of parents in the USA, 66% were concerned that the children's online activities may lead to social isolation, and 40% endorsed the belief that too much Internet-use can lead to anti-social behaviour (Gross, Juvonen & Gable, 2002).

This view was supported in a study by Wright (2001) in which 39% of fourth graders reported their willingness to give up a favourite activity (such as playing with friends) to use the Internet. There is enough research evidence suggesting that physical activities and interaction with peers are much-needed elements in the development of children (Berk, 2000), and when children sacrifice these activities for something else, there is reason to believe that this can become harmful to their well being.

Related to people increasingly interacting with others in the absence of physical proximity, are the findings of a study in Japan where cell-phone communication between parents and children was explored. For the participants the meaning of 'being available' was equated with 'being at home', leading the researchers to conclude that the parent-child relationship is rendered placeless through the use of cell phones (Minoura in Suoranta, 2003). In their social commentary on adolescents of today, Bean and Moni (2003) see the fluid space created by the

Internet as disrupting a fixed sense of place for children that can spill over to their inner world.

1.1.2   Dangers in communications through the Internet

Internet communication, especially chat rooms, are considered to be potentially harmful to teenagers (Berson & Berson, 2003; Shaw, 2002). In their research on teenagers' chat room behaviour, they point to the dangers outlined below.

Firstly, the perceived sense of anonymity, that results from the common use of pseudonyms in chat rooms, can lead to irresponsible behaviour from teenagers while communicating with others. They argue that identity deception in chat rooms may encourage adolescents to abandon self-regulatory behaviour: some who will not indulge in obscene language or abusive behaviours when interacting in-person with someone else, may do so in the anonymity of a chat room: "There is a disrespect for existing rules in the new context of cyberspace." (Berson & Berson, 2003, p. 67). The nickname given to these troublemakers is SNERT: Snot-nosed-eros-ridden-teenagers (Suler, 1998).

Secondly, Shaw is convinced that the lack of physical proximity in chat rooms also leads to a false sense of security and therefore teens are easily lured into revealing identifying information to strangers especially when a free gift is offered in exchange for this information (Aidman, 2000). According to Kline and Botterill (2001) teens also see it as unnecessary to know the true identity of the person they meet in chat rooms. The risks to these practices are obvious and may render the children vulnerable to exploitation.

According to a BBC news report (2003) abusive conduct in chat rooms has led to a decision by Microsoft to close down their Microsoft Network service that provides easy access to chat rooms. This is to be replaced with a service where the subscriber will have to supply his or her e-mail address to others before they can communicate in a chat room. This will allow the person using chat room services to have control over whom he or she wishes to communicate with.

1.1.3 *The content to which the youth are exposed*

An issue that also applies to older technologies such as television and electronic gaming is the content of the material that children are exposed to when engaging with ICTs. This is well documented in the article by Walton and Jansen (2003). According to Strasburger (2004) 10% of the 1 000 most popular web sites visited by teenagers are X-rated, which some regard as being detrimental to the well being of children.

The strongest argument posed by the dystopias is that exposure to indecent material, such as excessive violence, hate speech and explicit sex, correlates positively with anti-social behaviour. This also pertains to children's use of cell phones: in a national survey in Britain amongst teenagers 20% of them reported that they have received offensive or bullying calls (Davie et al., 2004).

The host of filtering services that are available to safeguard children on the Internet is further proof of this concern. Postman argues this to the extent where he concludes that the traditional lines between childhood and adulthood are being blurred by children's easy access to the "secrets of the adult world" (in Aphek, 2003, p. 2). These "secrets" relate to issues of violence and sex.

1.1.4 *A confounding variable: Parents' reluctance to engage with ICTs*

It has been indicated earlier that parents do not meet children's enthusiasm for ICTs as entertainment and socialising tools (Berson & Berson, 2003; Casas et al., 2001; September & Savahl, 2002). This may lead to a situation where the socialisation of children is increasingly facilitated by new technologies without parental guidance. In a study conducted by Stahl and Fritz (2002) only 10% of seven to twelfth graders reported that their parents supervise their visits to chat rooms or websites.

This view is confirmed by the previously mentioned South African study in which the researchers concluded that parents' influence over children's interaction with ICTs is "negligible" (Savahl & September, 2004, p. 18). Considering the possible

negative aspects of these technologies and parents' reluctance to act as agents that will guide children in this digital environment, it is no surprise that some researchers will have a 'doom and gloom' attitude towards ICTs.

1.2   The 'Utopias'

These researchers revel in the opportunities that ICTs offer to children. According to the utopias, computerised technologies satisfy children's natural curiosity and also stimulate their creativity (Buckingham in Suoranta, 2003). They accentuate that ICTs are opening up new horizons of information for children, and are a "library of libraries" (Biocca, 2000, p. 24). Other researchers have seen the Internet as a "mega publishing house" (Aphek, 2003, p. 5) because of the opportunities that children have to voice their opinions through the many websites on the Internet. One such example is a website where street children can speak about their hopes and hardships (See: http://www.casa-hlianza.org/EN/vioces/cartas/managua/francisco.shtml.).

Another positive aspect of this digital world is that teenagers are getting connected and exposed to diverse cultures (Casas et al., 2001) in a more real way than before: chat rooms and e-mailing gives them the opportunity to engage in interactive relationships with people all over the world, which is quite different from reading books and encyclopaedias about other people and places. Tapscott's view is that ICTs assist adolescents in their quest for independence, citing as an example a project where 10 to 15 - year olds are teaching computer skills to senior citizens (cited in Aphek, 2003).

The sense of empowerment and autonomy offered by ICTs to children can be explained by examining what the different technologies have to offer to the youth. Owning a cell phone permits children to acquire adult status (Prezza et al., 2004) because teenagers are less dependent on their parents to interact with their peers. With computers and the Internet, the sense of autonomy that adolescents experience, results from having access to information that is often not regulated by parents, and from acquiring computer-related skills (Kline & Botterill, 2001;

Izenberg & Lieberman, 1998). This is evident in a study on young Canadians in a wired world (Environics, 2001), which found that 47% of these teens claim that they have learned to use the Internet by experimenting on their own. Thus mastering information and communication technologies can be conducive to adolescents' sense of achievement and autonomy.

Contradicting the fears that computer use may lead to social withdrawal and less physical activities, a survey with 2 110 secondary school children reported that computer users had higher social support and engaged more in social-physical activities than non-users (Ho & Lee, 2001). Tyler (2002) contends that Internet use does not foster pathology, but is merely a new way of doing the same activities in which children used to engage. Countering the arguments about the dark side of the Internet, such as pornography and drug trafficking, Gross et al. (2002) found that children use the Internet as a communications technology in very much the same way that they use a telephone.

It is argued that online relationships can help people to overcome their initial anxieties to engage in a face to face meeting (Tyler, 2002), and may offer social support for teens with problematic relationships (Wolak, Mitchell & Finkelhor, 2003). Izenberg and Lieberman (1998) also pointed this out when they stated that teenagers suffering from real-life bullying at school can take refuge from this in online communications.

Addressing the concern that online communications can lead to sensory and social deprivation (Cole & Cole, 1998), some researchers found that it would be unusual for relationships which were established online, to remain electronic in nature (Tyler, 2002). This implies that people still engage in face to face interaction with one another, and online communication is used to strengthen offline relationships and ICTs are merely offering additional ways to maintain these relationships (Gross et al., 2002; Kraut et al., 2002).

The utopias who accentuate the benefits of ICTs counter the arguments about the harm that results from gaming by claiming that correlation does not prove causality (Strasburger, 2004), and that researching the effect of gaming in a laboratory setting, might not be related to the real-life experiences of children (Jenkins in Walton & Jansen, 2003). Adults may frown upon the horrible images that they see, but for children it is all about the suspense in the game. Villani (2001), after reviewing the literature on the impact of media on children, concluded that the literature showing that video games lead to aggressive behaviour is not based on research.

A somewhat unanticipated benefit of cell phone use was found by Charleston and Bates who conducted research amongst 11 to 15 - year olds in Britain. These researchers suggested that cell phone use is leading to a decrease in smoking amongst children. They found that children cannot afford to buy cigarettes and airtime and that they do show a preference to the use of their cell phones (Prezza et al., 2004).

Those who are optimistic about the benefits of ICTs argue that moral panics about the effects of these technologies are merely blocking the enhancement of the benefits offered by technology (Walton & Jansen, 2003).

1.3   The middle ground

Between these two opposing ends in the debate on the influence of ICTs, a middle ground points to a balanced approach towards these technologies that denies an 'either / or' judgment on the possible effects of ICTs on the user. This attitude was endorsed in this study.

Kleinrock (2004), claiming to be part of the engineering and development of the Internet over the past 30 years, discussed the pros and cons of this technology at great length. According to his analysis, the developments that brought many benefits for its users, have at the same time opened the backdoor for the darker

side to enter. Montgomery (2000) also claims that the digital culture of today holds both promises and perils for the youth.

Research in this field does not always account for pre-existing individual differences found amongst children (Walsh, 2000). An example of this is the view that violent electronic games cause aggressive behaviours in children. However, there is also research indicating that pre-existing levels of aggression in the user interact with the physiological reactivity that violent games may have on the player (Walsh, 2000), and that aggressive children may be more drawn to violent content (Strasburger, 2004). It is therefore not that simple to determine the effect of gaming on the player.

What follows is a more nuanced view of ICTs that will hopefully provide insight as to why any discussion on the possible effects of these technologies should be accompanied by a qualification of the context and modality of use, as well as a description of the user's characteristics.

1.3.1   The context, modality of use and characteristics of the user

The point of departure is the acknowledgement that technology in itself carries no meaning (De Beer, 1998) but that the user constructs the significance thereof. Research conducted by Wolak and colleagues (2003) into adolescents' online relationships illustrates this clearly. They found that teens (both sexes) who experienced serious conflict with their parents and had high levels of personal problems, such as peer victimisation and delinquency, were prone to form close online relationships [1]. In contradiction to the 19% of these vulnerable youth that had close online relationships, only 8% of the teens who did not experience serious personal problems engaged in such relationships via ICTs. It was also reported that the less vulnerable participants had a sound social support network offline, and discussed their online relationships with those people, rendering them less vulnerable for exploitation.

This view that off-line relationships can shape children's online behaviours is supported in a study that explored online harassment amongst teenagers. Of the 15% of participants in this survey that were identified as Internet harassers, 44% reported a poor emotional bond with the caregiver, and only 16% of the harassers indicated that they had a good relationship with their caregivers (Ybarra & Mitchell, 2004).

In assessing whether adolescents' engagement with ICTs is harmful or beneficial, it is necessary that the social context and developmental stage of the user be taken into account (Gross et al., 2002). These researchers found that adolescents' online communications were to a large degree only an extension of their off-line relationships; the Internet is "but another tool in their communications repertoire." (p.94). Teenagers that used ICTs regularly still spent their after school hours on conventional activities such as organised sport and spending time with their friends. In this social context of usage, it is doubtful whether these technologies are detrimental to adolescents' psychological well being. However, they also found that the intimacy in the content of Instant Messaging of teenagers correlates positively with experiences of social anxiety and loneliness at school. This finding emphasises the fact that how ICTs are used is related to the social context of the user.

The conclusion to be drawn from these two studies (Gross et al., 2002; Wolak et al., 2003) is that it cannot be assumed that everyone who engages in online relationships will automatically establish a close online relationship through digital communications. If close relationships do develop, it may be harmful for the more vulnerable segment of users, but for others it may have the opposite effect. The youth that engage in online relationships is extremely diverse and this makes it almost impossible to generalise research results (Wolak et al., 2003).

Tyler (2002) supported this evaluation of digital technologies. According to his research findings, people change technology to satisfy their psychosocial needs,

[1] They define a close relationship as one where intimate information is exchanged and is often

rather than technologies shaping these needs, and that the social impact of these technologies depends on the social context in which they are utilised.

This resonates with a study by Selwyn, Gorard and Furlong (2003) who found that adults' use of ICTs is patterned according to long term, pre-existing socio-economic factors. The conclusion from this is that those who are more affluent and exposed to ICTs in their work will be more adaptive to the digital landscape in their personal lives. The impact of ICTs is also associated with what people are willing to sacrifice in order to use these technologies. Kraut et al. (2002) found that giving up an activity such as visiting friends in favour of watching television is associated with social isolation.

The possible effect of digital technologies is also related to the novelty of the experience for the user. Once the novelty of a new technology is over, people go back to the things they usually do. If the Internet is brought into the home, initially there may be a decrease in conventional socialising, but after some time people return to their previous activities (Prezza et al., 2004). This was also found to be another reason for the contradictory results of Kraut and colleagues' (2002) studies on the effect of Internet use.

A final example that illustrates the double-edged nature of ICTs is with regard to adolescent health issues. Whilst there is concern that the Internet can lure teenagers into unhealthy behaviours such as substance use or early experimentation with sex (Aphek, 2003; Strasburger, 2004), this very same technology offers opportunities for health professionals to promote healthy behaviours amongst teenagers (Copeland & Martin, 2004; Michaud & Colom, 2003; Skinner, Biscope, Poland & Goldberg, 2003).

In an innovative experiment health professionals created an Internet based virtual world (CyberIsle) where a trained cessation facilitator provides adolescent smokers with support and advice on how to stop smoking. The initial findings

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associated with a romantic component.

report positive behavioural changes amongst the users of this web site (Woodruff, Edwards, Conway & Elliot, 2001). In the very same way that the anonymity of online communications can lead to aggressive and bullying behaviours (Ybarra & Mitchell, 2004), it can also encourage teens to ask questions from health practitioners that they would normally have refrained from doing in-person (Michaud & Colom, 2003).

1.4   Summary

The difficulty that researchers have in unravelling the impact of ICTs is summarised in the two longitudinal studies by Kraut and colleagues in 1998 and 2002. If using the Internet for online communications was found to be associated with symptoms of depression and social withdrawal, it becomes difficult to explain why the research yielded contradictory results. From these studies and others that were found to report contradictory results of the possible impact of ICTs it can be conceded that there is no simple main effect that ICTs have on the average person (McKenna & Bargh in Tyler, 2002). This should caution researchers from a hasty generalisation of their findings.

Turkle (1996) captured the ambiguous nature of the influence of ICTs when she describes the Internet as a Rorschach test where it is the user that determines the meaning of the technology. It has been indicated in the literature that with vulnerable youth, for example those who experience problematic relationships with their parents, the use of these technologies might be harmful. This means that it is not necessarily the technology in itself that can be problematic, but rather the social context that determines its impact.

In exploring the impact of ICTs on parent-adolescent relationships the existing context of their relationship will be an important contributor. The impact will also be affected by the 'how' and 'what' of teenagers' engagement with ICTs.

2. TRENDS IN ADOLESCENTS' USE OF ICTs

2.1 Introduction

In the discussion thus far, much of the focus has been on research that explores teenagers' use of the newer technologies such as cell phones and Internet facilities. However, television is still the technology used most by children (Rideout, Foehr, Roberts & Brodie, 1999; Roberts, 2000; Strasburger, 2004). A South African study found that television is still the most popular technology, followed by computer use at home, and a minority of participants utilise Internet regularly (September & Savahl, 2002).

It can be assumed that the use of computers, cell phones and the Internet is restrained by the capital investment needed to acquire this equipment. According to Prezza et al. (2004) the use of computers and the Internet correlates positively with higher socio-economic status, but for cell phones this correlation is on the decrease as cell phones are becoming more affordable to the lower socio-economic classes. These three technologies are the top of the range of ICTs for children (Nachmias, Mioduser & Shemla, 2003, September & Savahl, 2002; Strasburger, 2004; Wolak et al., 2003).

The information and communication industry is very much aware of children's interest in these technologies, and it comes as no surprise that this segment of the population is targeted in the marketing strategies. The penetration of ICTs is the highest in households with children (Suoranta, 2003). This leads to a situation where "technological production revolves around 'ways to keep children hooked'" (September & Savahl, 2002, p. 10). Montgomery (2000) is also concerned with the intimate relationships that get established between marketers and the youth as a result of the interactive media and the emerging of E-commerce.

2.2 Socialising and pleasure

Researchers are in agreement that a culture of entertainment and personal connections characterise children's use of ICTs, and that its use as an educational resource relating to their schoolwork is lagging far behind (Kline & Botterill, 2001; Nachmias et al., 2003; Izenberg & Lieberman, 1998; September & Savahl, 2002; Shaw, 2002; Skinner et al., 2003; Suoranta, 2003; Wolak et al., 2003). This may also explain children's preference to use the computer outside the school setting (Nachmias et al., 2003). The content and resources offered by these technologies are fun and challenging to children, which is the reason for their enthusiasm (Kline & Botterill, 2001).

The following statistics give an indication of children's preference for online activites (Environics, 2001):

❑ Playing and downloading music – 57%
❑ Sending e-mails – 56%
❑ Surfing the Internet for fun – 50%
❑ Electronic games – 48%
❑ Instant Messaging – 48%
❑ Chat rooms – 39%
❑ Homework – 38%

The socialising component of ICTs is illustrated in the South African study which found that when children are visiting their friends they also engage with the following technologies: 87% of them indicated that they watch television, 76% play computer games, and 50% use the Internet (September & Savahl, 2002).

Keeping in mind that experimenting with and establishing relationships is an imperative for adolescents (Prezza et al., 2004: Wolak et al., 2003) it can be expected that teenagers will embrace the many communication facilities offered by ICTs (Nachmias et al., 2003; Rideout et al., 1999). Therefore it comes as no surprise that the "social corners of the Internet", where interaction between people

takes place, are mostly used by the youth (Biocca, 2000, p. 26; Montgomery, 2000).

A study on Hong Kong adolescents found that the two highest ranking reasons for ownership of a cell phone were that of status/fashion and the sociability opportunities that cell phones offer to teenagers (Davie et al, 2004). Interestingly, children prefer sending SMSs rather than making calls (Prezza et al., 2004): 60% of the 17 year olds in their study made calls, never or twice a week, while 62% sent short messages more than three times a day. This may be because it is much cheaper to send a SMS than to make a call. It is also indicative of a new way of communication between teenagers.

2.3 The emergence of a 'bedroom culture'

An interesting phenomenon in international research is that ICTs are increasingly hosted in the rooms of children, leading researchers to term this phenomenon as the emergence of a bedroom culture (Kline & Botterill, 2001; Rideout et al., 1999; Strasburger, 2004).

In the study by Kline and Botterill (2001), 85% of the children had at least two or more media equipment in their rooms. This included telephones and radios and the technologies that are pertinent to this study, such as television, computers and access to the Internet. It seems as if children's use of technologies have moved to the privacy of their rooms. Rideout and colleagues (1999) found in their sample of children aged 8 to 18 that 65% had a television, 21% a computer, and 10% had access to the Internet in the comfort and privacy of their own bedrooms. This correlates with the estimates given by Strasburger (2004), indicating that more than 50% of USA teens have a television, and 29% of them can access the Internet in the privacy of their rooms.

The increase in children's use of technology in their bedrooms raises the issue of the popular 'couch potato' hypothesis that claims a link between television viewing and an increase in body mass index. Kaur and colleagues (2002) found

that since television is associated with bad eating habits and a displacement of physical activities, every additional hour watched, after a three hour per day watching routine, increases the odds for obesity with 2%. As can be expected, such findings are contradicted by other research evidence. Vandewater, Shim and Caplovitz (2004) caution against a hasty conclusion of causality between watching television and obesity, with a comment that obese children may be more drawn to sedentary activities because of feeling socially isolated.

No research was found in the South African context confirming this trend, but it can be expected that this might emerge in years to come; the increasing popularity of ICTs with children may result in demands on parents to provide children with their own equipment. Without speculating on the possible consequences of this trend, it seems an important enough aspect to merit a more comprehensive exploration by researchers.

2.4   Summary

It is important to keep in mind that the developmental needs of the N-generation, such as forming and maintaining relationships, establishing their own identity and autonomy from parents, or just to have fun, are still very similar to that of previous generations. As adolescents of previous eras were drawn to magazines or movies that contained explicit sex, teenagers of today will also be drawn to this when offered by ICTs. As previous generations of adolescents were concerned about wearing the right style of clothes, this may also be important for today's teens, but the latter may be also be concerned with keeping up with the trends in ICTs, such as having a cell phone.

The digital environment of today may facilitate and satisfy teenagers' needs in distinctly different ways from the past. Owning a cell phone offers much more to the teens than the conventional landline telephone. How this translates into the impact on adolescents may be confusing and unclear at present and deserves the attention of researchers. What cannot be disputed is that ICTs are important to today's youth and have become an integral part of their lives.

3. PARENTS, THEIR CHILDREN AND ICTs

The literature revealed clear differences between parents' and children's reporting on children's use of digital technologies, especially on their perceived communications with one another about ICTs. This is very relevant to this study as it provides a context against which the relationship between parents and children around ICTs can be explored.

3.1 Differences in opinion

Parents emphasise the educational benefits offered by ICTs. In the Canadian study (Environics, 2001), 65% of the parents said that their children use the Internet primarily for schoolwork. This is a world apart from the children that view and use ICTs as socialising and entertainment tools. They do use these technologies for schoolwork as well, but it is not the primary benefit that ICTs offer to them. Electronic media with educational content is very low on their popularity list (Kline & Botterill, 2001).
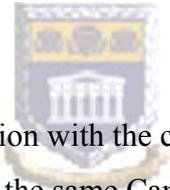
When asked about their communication with the children about ICTs, parents are more optimistic than the children. In the same Canadian study 78% of parents said that they discussed a great deal of ICT activities with their children, whilst 70% of the children said they had little or no discussion with their parents about this. Only 16% of the children said that their parents know a great deal about the sites they visited on the Internet. This is reiterated in the study by Savahl and September (2004) where parents reported higher levels of satisfaction in communicating with their children about ICTs, than children's perceptions of the communication.

Without disputing these findings, the issue of responding in a socially desirable way during research may contribute to these results. Parents may want to convey the impression that they do interact with their children and know what the children are up to, and adolescents will be reluctant to convey the message that their parents regulate them.

3.2   Parents interacting with their children

Children do spend a lot of their time with ICTs without the company of their parents (Roberts, 2000). Surveying 3 155 children, Rideout et al. (1999) found that 95% of them watched television on their own. Accordingly Kline and Botterill (2001) found that 68% of the children in their study claimed that there is no parental supervision over their Internet activities. Regarding their consumption of media in general, 40% of the children in the study said that they had no restrictions set by their parents.

When parents do engage with children around ICTs, it is mostly about limit setting (Suoranta, 2003), with the Internet as the most regulated technology (Kline & Botterill, 2001). These rules include sites that are off limits, not revealing personal information and not meeting in-person with strangers they met on the Internet (Environics, 2001). According to Walsh (2000), parents with a high level of media knowledge are more consistent in regulating their children's media activities, monitor these activities more closely and introduce alternative activities to the children.

Stahl and Fritz (2002) found in a study where teenagers reported on self-induced safety practices on the Internet that the participants do not want adult supervision regarding their Internet activities, an attitude that certainly applies to most other aspects of a normal teenager's life. However, nearly 50% of the participants reported self-restriction on the Internet by avoiding certain sites that they consider dangerous. Reflecting on earlier comments on children being more techno-literate than their parents, teenagers may not wish for adult regulation because they perceive their parents as not knowing enough about the Internet to guide their activities.

3.3   Summary

In principle, today's parents are confronted with the same situation as parents of previous generations in that they must guide their children to become healthy and responsible adults. The fact that the world is not the same as when they grew

up, is also not unique to present times. It may be tempting to conclude, as indicated in the literature, that it has become increasing difficult for parents to raise children. This will, however not do justice to parents of previous generations. How parents cope with guiding their children was, and will remain, a challenging enterprise.

If parents want to act as socialising agents for their children they will have to acquaint themselves with ICTs, not only as tools to be used in a work environment, but also as entertainment technologies. There is no reason to suspect that this is impossible. The question is whether parents are willing to engage in the issues and activities that are important to their children.

4.   CONCLUSION

In most of the research reviewed for this study it was found that the participants were asked about the patterns of their usage of ICTs such as how often they use cell phones, what are the Internet activities they engage in, or with whom they communicate when using these technologies. From the responses to these questionnaires some deductions are then made about people's uses of digital technologies and the possible impact it may have on the user. Some researchers supplemented their questionnaires with psychological scales that measure anxiety, depression, loneliness and the like. However, as Kraut et al. (2002) critiqued themselves in their first study, no prior psychological assessment was conducted on the participants to determine the pre-existing levels of depression or social isolation. It seems necessary that a pre-assessment of the participants' psychological well being should be conducted if more valid conclusions are to be drawn of the possible impact of ICTs on the user.

Other variables also need to be accounted for in the research in this field. It has been indicated that the social context in which the technology is used is as important as the frequency of use: using the Internet facilities to spend time with friends may be very different to using the same facility to alleviate loneliness. In addition, when a study reports that children do not talk to their parents about their

use of ICTs, it should be compared to the existing communication patterns between the parent and the child. It was also mentioned that the novelty of the technology might influence the amount of time spent with that specific equipment, and the possible impact thereof. This should also be explored when conducting research.

A final comment on the methodology of research on ICTs is that the paucity of longitudinal studies on the impact of digital technologies does not assist one in coming to terms with the effect of ICTs. Although it can be appreciated that this type of research is expensive, it may be worthwhile to track people's use and experiences of technology over a longer period of time.

Reflecting on the specific findings of the research, it seems as if the most realistic approach will be to neither exaggerate the benefits nor to minimise the dangers inherent in ICTs. Digital technology is neither the panacea for society nor the herald of a pending apocalypse. It is an artefact of modern times, to be used as a tool, and not to be viewed as a device that pre-determines how people live their lives. The choice still lies within the fingertips that press the consoles of the computer or cell phone, and, in that, determine the possible effects that technology will have on the user. A parent may use the cell phone to know whether the child is well and safe, and perceive that as enhancing their communication, but the adolescent may use the same technology to achieve more autonomy from the parent. The same instrument, but used to different ends.

In writing the instruction manual for the use of ICTs, social scientists have an important role to play to equip both parents and adolescents to optimise the benefits of these technologies. This should be done in the awareness that pre-existing factors may influence how the users construct the meaning of their activities.

CHAPTER 3:
METHODOLOGY

1.   STUDY DESIGN

Durrheim (1999) defines research design as the link between the research questions formulated by the researcher and the actual execution of the research. If the design of a research project provides the architectural guidelines for implementation of the research, it is logical that it should precede and therefore determine the method of the research. The importance of the design lies in ensuring congruency between the research questions, data collection and analysis (Durrheim, 1999). Before turning to the method of this study, it is necessary to comment on the research design of this research.

As indicated in the title, this was an exploratory study of a particular phenomenon, i.e. adolescents' perceptions of information and communication technologies and whether they experience it as something that impacts on their relationship with their parents. Exploratory studies are deemed appropriate when the research is conducted in a relatively unknown field (Durrheim, 1999). The literature review indicated that there is a paucity of information on this phenomenon in the South African context. An exploratory research design does not aim to provide detailed and replicable data, but is a preliminary investigation of the topic in hand (Babbie & Mouton, 2001). Exploratory studies result in the understanding of, and insight into, the research topic (Babbie & Mouton, 2001).

The second dimension of the research design is that it provides a framework or paradigm in which a research project is located. This study was rooted in a qualitative approach towards the issue of teenagers' use of ICTs. The focus was thus on the "Verstehen" (Babbie & Mouton, 2001, p. 270) of adolescents' perceptions and attitudes towards digital technology and how this may impact on parent-adolescent relationships. It aimed to look through the eyes of the

adolescents to gain an understanding of their experiences as users of these technologies, and their parents' interaction with them around the technologies. Qualitative research does not attempt to establish causal relationships, but aims to uncover the meanings of people's actions and behaviours (Gaskell, 2000; Silverman, 2000).

The disadvantage to an exploratory study within a qualitative paradigm is that this kind of research may result in raising more questions instead of providing definite and clear-cut answers (Babbie & Mouton, 1999). This was indeed found to be a reality in this study. The net results were tentative clues to possible answers around teenagers and ICTs, and some hints at methods that may provide more definite and satisfying answers. This is fully discussed in the Recommendations chapter.

In conclusion it can be said that these two elements of the design of this study dictated the methodology that was used to conduct the research. This is described in the section to follow.
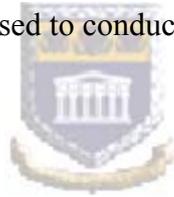
2.   METHOD

2.1   Participants

A total of 23 grade 10 learners took part in the study. The mean age was 15,3 years; 11 of them were female and 12 were male. They were recruited from three former Model C schools in the Cape Peninsula. The choice for Model C schools was made because the study wanted to include members of the previously marginalised groups in South Africa and schools serving middle-income communities. The latter was deemed a necessary criterion because the study was looking for teenagers that can be assumed to have access to digital technologies in their homes.

Thus this study utilised a purposive sampling method because the researcher wanted teenagers aged 13 to 16 years in middle-income homes who use ICTs at

home. This is in line with established research practice where the researcher is looking for participants with particular characteristics, in this case the age group, who share a common interest (Kelly, 1999; Stewart & Shamdasani, 1998) in this instance the use of ICTs.

2.2   Procedure

A written request for permission was submitted to the Western Cape Education Department in which the purpose and requirements of the study were explained. Once permission was granted, a total of eight schools that met the criteria of serving all ethnic groups and were situated in middle-income communities were randomly selected. Another criterion was that the selected schools should not be placed in neighbouring communities. The headmasters of the selected schools were contacted telephonically to request their participation. After this initial contact, formal letters were faxed to them. One school requested that the researcher visit the school to explain the study in person to the teacher that was to serve as liaisons officer. Three schools agreed to participate and the final arrangements were made between an appointed teacher and the researcher. Letters of informed consent from the participants' parents were given to the teacher to distribute amongst prospective participants.

It was emphasised that the recruitment should be done amongst learners that have cell phones, use computers at home, and have access to the Internet in their homes. The recruitment was left to the schoolteacher for practical reasons, but proved to be unsatisfactory. On the day of the data collection the researcher asked learners how the recruitment was conducted, and it was clear that two of the teachers did not explain the requirements to them. This resulted in a situation where some participants did not meet all the requirements in terms of ownership and access to technologies (See Table 1 for detail). This should be regarded as a limitation to the data.

The data collection was conducted on the school premises. The researcher was allowed to conduct the research during school hours in two schools. For the

third school data collection took place immediately after school hours.

2.3   Data collection

It is fundamental to all qualitative research that the researcher is regarded as the research instrument (Babbie & Mouton, 2001; Durrheim, 1999). Although the researcher may use specific methods to collect the data, he or she should take cognisance of his or her impact on the data collection and thus on the research.

Three focus group discussions were conducted. The appropriateness of focus groups as method of data collection in a qualitative study is well documented (Babbie & Mouton, 2001; Miller & Brewer, 2003; Stewart & Shamdasani, 1998), and was deemed as suitable based on the following theoretical considerations.

Focus group discussions are useful when little is known about the topic (Stewart & Shamdasani, 1998). It allows the researcher to explore the inter-subjective experiences and perceptions of the participants on the topic under discussion (Kelly, 1999). This implies that the protocol questions have to be non-directive and open-ended (Kelly, 1999), and that the role of the researcher becomes that of a facilitator that encourages the interaction between the group members (Babbie & Mouton, 2001; Stewart & Shamdasani, 1998). Miller and Brewer (2003) emphasise that the focus group should remain a focused discussion, and not be reduced to a group interview situation. It is in the presence of others that an individual is shaping and reshaping his or her perceptions and opinions, and this is the benefit offered by focus group discussions (Arksey & Knight, 1999; Babbie & Mouton, 2001). Despite the richness of data that can be generated by the interaction between the members, it may also limit the individual responses of the more silent group members (Stewart & Shamdasani, 1998).

When planning the focus group, the researcher should recruit members that share characteristics that relate to the research topic (Bauer, 2000; Stewart & Shamdasani, 1998). The ideal number of participants is between six to ten people,

and the number of focus groups to be conducted on a research topic ranges between three and five (Babbie & Mouton, 2001; Miller & Brewer, 2003). This study's method of data collection adhered to the abovementioned theoretical considerations. The required number of participants per groups (See Table 1), as well as the minimum number of groups was observed. The protocol questions (Appendix 1) were developed to explore four main issues:

- ✓ Teenagers' perceptions of their parents' level of techno-literacy.
- ✓ Teenagers' attitudes towards ICTs and how they use these technologies.
- ✓ Regulations imposed by parents on the adolescents' use of ICTs and comparing this with how their social life is regulated by the parent.
- ✓ How teenagers experience their parents' interaction with them regarding their use of ICTs.

These questions were supplemented with probing questions to stimulate the discussion. The supervisor and two external researchers that are knowledgeable in child research reviewed the protocol.
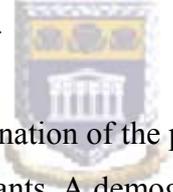
The discussions began with an explanation of the purpose of the study and what was expected from the participants. A demographic checklist (Appendix 2) was then completed by the participants. This checklist provided the researcher with baseline information on the participants' use and ownership of ICTs and is presented in Table 1.

Table 1: Demographic information of participants, their use and preferences of Information and Communication Technologies

	School M N (%)	School N N (%)	School O n (%)	Total
Female	5	4	2	11
Male	4	4	4	12
Total	**9**	**8**	**6**	**23**
Owning cell phone	9 (100%)	7 (88%)	5 (83%)	21(91%)
Internet at home	3 (33%)	1 (13%)	5 (83%)	9 (39%)
Ranking use of ICTs	1. TV 2. Cell 3. Video/DVD 4. Gaming 5. Internet	1. Cell 2. TV 3. Gaming 4. Video/DVD 5. Internet	1. Cell 2. Video/DVD 3. TV 4. Gaming 5. Internet	
Ranking of preference for ICTSs	1. Cell 2. TV 3. Gaming 4. Video/DVD 5. Internet	1. Cell 2. Video/DVD 3. Internet 4. Gaming 5. TV	1. Cell 2. TV 3. Gaming 4. Internet 5. Video/DVD	
Visiting chatrooms	1 (11%)	2 (25%)	5 (83%)	8 (35%)
Using the Internet for	Downloading of games; visit movie and celebrity websites; get cheats for games; how to make home-made bombs[2] ; e-mail; downloading of music videos; for school projects (only two participants).			

The discussions were audio-recorded and thereafter transcribed. The researcher transcribed the discussions from the audio recordings and used the brief

notes made during the focus groups. The accuracy of the transcriptions was

verified by a fellow student. The average time of the focus groups was 50

minutes, a limit that was imposed by the schools that were visited during school

hours.

2.4   Analysis

Before turning to a description of the analysis, the following

theoretical assumptions that underlie qualitative analysis are presented as these

guided the analysis process.

Some researchers contend that there are no hard and fast rules to be employed

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[2] The seriousness of this claim can be questioned.

when conducting qualitative analysis (Gaskell, 2002; Patton, 2002; Terre Blanche & Kelly, 1999). The fluidness of this component is evident in the comment from Arksey and Knight (1999) stating that qualitative analysis is an elusive process that requires creativity, imagination and a bit of luck. The researcher's approach towards the analysis should be "to make the strange familiar, and the familiar strange" (Terre Blanche & Kelly, 1999, p. 139).

The analysis is interlaced with the whole research process, and is already in progress when the data has been collected (Terre Blanche & Kelly, 1999). This is taken even further by Rossman and Rallis (2003), stating that the analysis process begins with the formulation of the research questions and the development of the research design, and as such the analysis is inevitably influenced by the researcher's reflections during the different stages in the research process. The theories on the topic and the research focus are the prejudices that the researcher brings to the reading of the texts (Bauer, 2000).

In this study the analysis leaned towards a grounded theory approach, implying that no hypotheses was tested in the data, and no pre-determined theories were imposed on the data (Patton, 2002). This is best described by Babbie and Mouton (2001) saying that this approach requires the researcher to admit that he does not know what it is that he does not know. For this study, the researcher approached the analysis with tentative ideas of themes that might emerge from the data. These ideas developed during the review of the literature, the collection and the transcriptions of the focus group discussions. Thus the analysis was simultaneously an inductive process, themes that emerged from the text itself, and a deductive process, where the researcher looked for data to support his preconceived themes. The following example illustrates this approach. The literature indicates that parents in general are not as techno-literate as their teens, a deductively formulated theme. The researcher read the texts for instances where this was reported. But the data also revealed that some adolescents were understanding and offered reasons for their parents' low level of techno-literacy, which became an inductively derived theme.

The analysis in this study can best be described as a qualitative content analysis, which involves looking for themes and not counting phrases or words that are grounded in the texts. Concurrently the analysis was conducted with the awareness of the researcher's pre-conceived themes. The execution of the analysis in this study is an adapted version of analysis as discussed by Terre Blanche and Kelly (1999). The deviations from their analysis process were the insertion of a pre-analysis stage and the omission of their Elaboration phase.

2.4.1   A pre-analysis stage

Preliminary themes, that is the preconceived ideas of the researcher, were written down, and are presented as "in-field insights" (Patton, 2002, p. 436) in Chapter 4. This was compiled based on the researcher's reflections during the data collection and transcription process. These notes were put aside in an attempt to bracket the researcher's ideas on the possible outcomes of the investigation.

2.4.2   Familiarisation with and immersion in the data

This comprised of repeatedly reading the transcriptions. Terre Blanche and Kelly suggest that this should be done up to the point where the researcher knows the data "well enough to know more or less what kinds of things can be found where, as well as what sort of interpretations are likely to be supported by the data and what not" (1999, p. 141).

The units of analysis were phrases and passages in the text, and not only the repeated occurrence of certain words. These passages were marked as possible themes. Since the data consisted of the texts of three focus groups, the texts were examined for similarities and contradictions within each group, as well as between the three groups. A total of 29 possible themes were marked.

2.4.3   Inducing themes

According to Terre Blanche and Kelly this process should move beyond a summary of the texts, and the identifying and labelling of themes must be related to the research focus (Rossman & Rallis, 2003). The marked passages were

revisited several times and refined into a total of four main themes with a set of sub-themes under each theme.

This stage is a good an example of qualitative research relying on the subjective judgment of the researcher about the meaning of the data (Arksey & Knight, 1999), and is closely linked to the final process of data interpretation. Once these themes, with proof in the coded passages, were finalised they were compared with the researcher's Pre-analysis ideas. This comparison resulted in the rereading of the texts and the refinement of the themes and sub-themes.

2.4.4   Interpretation and Checking

Although these themes were based on what was presented in the participants' discussions, at this stage the researcher turned into the interpreter of the participants' perceptions and experiences (Babbie & Mouton, 2001). In very simple terms it aimed to answer the "So what" question that the researcher is confronted with at the end of the analysis process. The product of this phase is presented in the next chapter where the results are discussed. It is a written account of what was found by the researcher's investigation into the attitudes of adolescents towards ICTs and their perceptions of the possible influence that these technologies have on the relationship with their parents.

The final element of the analysis was to check the credibility of the interpretation. This, according to Babbie and Mouton (2001) implies that the researcher must ensure that there is a congruency between the constructed reality of the participants and the realities that are attributed to them by the researcher. Durrheim (1999) rephrases this as the degree to which the research findings are believable observations for the researcher, participants and the readers of the study. Because it was not possible to regain access to the participants in the schools, the researcher did not refer the analysis back to the participants. This is a limitation to the credibility of the analysis.

2.5   Conclusion

To understand reality as forged by the interaction between people necessitates sensitivity for the context in which the interaction takes place (Patton, 2002). Adding to this is the emphasis in qualitative research on the context in which the investigation takes place (Babbie & Mouton, 2002; Durrheim, 1999) and how this may have impinged on the results of the research (Terre Blanche & Kelly, 1999). Applying this to the methodology followed in this study, demands a reflection on the context in which the data was collected.

The researcher, by nature of his age, could have been a parent to the participants and this may have influenced the interaction between researcher and participants, and therefore on their responses. It is not possible, or necessary, to have changed this contextual reality to ensure a more scientific methodology, as long as the researcher reports on this, and on how his own experiences influenced his analysis of the texts. This is duly reported in Chapter 4.

3.   ETHICAL CONSIDERATIONS

The following procedures were followed to ensure that this research project met the required standards of ethical research. Obtaining informed permission from the Western Cape Education Department as well as the respective schools was the first step in this process. The letters for informed consent from the participants' parents were distributed via the teacher, and collected by the researcher on the day of the data collection. In one school the data collection was postponed because not all of the recruited learners had brought these letters back.

Before the focus groups began, the participants were fully briefed on the nature of the study and guaranteed that the information resulting from this would be treated confidentially and no references would be made that can identify either themselves or the school. Their permission was obtained to report the information in any publications that may result from the study. Concurrently the researcher emphasised the importance of not revealing any information about their fellow

group members that may be harmful to such a member. The participants were also informed of their right to withdraw from the study at any point should they wish to do so. Their permission was also requested to audio-record the discussion.

CHAPTER 4:
RESULTS AND DISCUSSION

1. INTRODUCTION

The results of the study are the responses of the participants on the issues that were discussed in the focus groups (See Appendix 3 for transcriptions). This chapter presents the researcher's interpretation and understanding of how adolescents perceive the interaction with their parents around the former's use of ICTs as thematically extracted from the focus group material. Given the nature of the data, it was decided to present the results and discussion thereof, as a single text.

Before turning to the analysis of these texts, consideration is given to the researcher's preconceived ideas that were formulated prior to the analysis. This is deemed necessary because the ideas could have influenced the reading of the texts; being eager to find evidence in the data that prove the researcher's assumptions may have led to overlooking responses that are not in line with or related to these preconceived themes. As indicated earlier, these prejudices were influenced by the literature reviewed, as well as the researcher's own experiences (See Arksey & Knight, 1999; Bauer, 2000; Rossman & Rallis, 2003; Silverman, 2000). Evidence was found for some of these themes, some were found to be untrue and in other instances the researcher's prejudice was only in part true. The following codes indicate this.

⊕ Found to be true

◆ Partly true

✖ No evidence

? No clear answer

1.1   Themes based on literature

✥ SA youth do not use ICTs to the same extent as was reported to be the case for their peers in the international research literature.

✥ The most important difference between parents and adolescents regarding ICTs will be that parents view ICTs as educational tool and teenagers see it as fun and games.

✥ Parents do not interact with their teens around their use of technologies and do not regulate their use of ICTs.

✥ ICTs are a very important part of teenagers' lives.

◆ Children will be more competent users of technology than their parents.

1.2.   Themes based on the researcher's experiences

✥ Teenagers will experiment with facilities and content offered by ICTs that parents may not condone.

✥ Parents will not see the need of ICTs because they grew up without it. Parents that are skilled in the use of technology are so because of the work they do, and they will therefore mostly use technology for work purposes.

✥ Not all parents are less techno-literate than their children.

◆ Adolescents will be irritated with parents that are not as up to date as they are with technology.

✥ Evaluating the impact of teenagers' use of technology on the parent-adolescent relationship must be contextualised in the normal interaction between parent and child. The phenomenon of technology in the home does not determine the relationship but can be used by both parties to further their interests in the relationship; for parents it may be to control the activities of their children and for adolescents to increase their autonomy from their parents.

? Teenagers do not want their parents to be involved in how they use technologies or to be prescriptive around this.

? Children are dependent on parents for buying the technologies and this will impact on their relationship.

✖ Parents will not regulate their teenagers' social life differently to how they regulate their use of ICTs.

✖ Adolescents will use the Internet frequently.

2.   RESULTS

The data are presented according to four main themes that are issues impacting on the relationship between parents and teenagers. Under each of these, a set of relating sub-themes is discussed. According to Babbie and Mouton the presentation of the analysis should be "couched in the concrete terminology of the social actors" (2001, p. 297; see also Patton, 2002), therefore the themes are presented as quotations from the texts. At the end of the discussion of each theme some conclusions are presented. The main themes are as follows:

♦   Parents' level of techno-literacy
   "They are backwards. They do know nothing about this."

♦   Differences in attitudes towards ICTs and the generation gap
   "They [parents] won't use the computer like me all the time, it's more like for work if they have to type something."

♦   Regulating their teens' use of ICTs
   "No, there are no rules."

♦   Comparing the rules and interactions around teenagers' social life and technology use
   "I don't know why I can keep up late with the computer but not when visiting my friends. What's the difference?"

2.1   Parents' level of techno-literacy
   "They are backwards. They do know nothing about this."

The focus groups began with questions on the participants' perceptions of their parents' level of techno-literacy and use of technologies. The assumption was that if adolescents are more confident users than parents as indicated by Casas et al.,

(2001), this may give them a sense of superiority over their parents.

It was found that in Schools M and N, the majority of parents were perceived as knowing less than the participants about technologies, as clearly indicated in the quotation above. In contrast, the parents of the participants in School O were far more techno-literate. A criticism against the protocol of the questions is that the researcher did not explicitly clarify the meaning of this with the participants. However, tentative deductions can be made based on the way in which they expressed their parents' ignorance about ICTs. There were two distinctly different ways in which the adolescents reported on this.

2.1.1   Irritation

"My parents they know nothing about technology because they ask me: Can you do this, do that."   (Male participant)

"Yeah, what's the use if you try to explain and he doesn't like get anything?"
                                                           (Male participant)

Some of the female participants stated the following:

"I don't bother like explaining stuff and things about new technology. I know they wouldn't get it, they'll just nod."   (Female participant)

"It's no use showing because they forget quickly."   (Female participant)

It can be deduced from the above that some of the participants were, to say the least, at times frustrated by their parents' ignorance and illiteracy with modern technology, and this may have had a negative impact on their relationship. But this may be the same as when parents irritate their teens with the way they walk or talk. The technologies in the home may become an extension of an already problematic relationship.

The context in which other participants placed their comments on the parents' lesser knowledge, was very different from the frustration expressed by some.

2.1.2 *Contextualising parents' 'illiteracy'*

Some participants seemed to be more patient towards their parents as they offered explanations for why parents were less techno-literate. The most salient reason is given in the following quotations:

"They never grew up with that technology that's why they don't bother with that stuff." (Male participant)

"Can I just answer that? I will not say my parents are really backwards, but its like they don't see the point. Like my mom and dad is over 50 years…They don't really bother …" (Male participant)

Another participant linked this to the socio-economic status in which her parents were raised:

"I think it its more about the background where you come from …
Like my mother and father are not very aware of the latest technology because they come from a disadvantaged background. It's only now that they are getting into cell phones and DVDs and things. (Female participant)

The last reason offered for parents being less techno-literate than adolescents is that some parents do not need these skills in their work.

"But father he's not good because he doesn't need to be on the computer for his work." (Male participant)

These participants seemed to be more tolerant towards their parents when it came to the parents' use of ICTs. It is tempting to conclude that in these families the technologies are not evoking the same negative emotions, and possibly strained relationships, as for those participants who expressed their frustration around the parents' illiteracy. However, this study cannot report conclusively that this is the case, because the research failed to provide contextual information about the existing parent-adolescent relationship outside the use of ICTs.

Furthermore, the study does not offer data to compare the perceptions of the relationships between the participants in School O with those of Schools M and N. As indicated in the beginning of this theme, the parents of the participants at

School O were perceived to be at least as techno-literate as the children, and in some cases even more so.

"She [the mother] would be like 10/10, I'll be like a 6 or 7."

<div align="right">(Female participant)</div>

"My father he has his own computer business in XXX called YYY and I think he knows more than me, he definitely knows more than me."   (Male participant)

If the participants across the three groups had rated the relationship it might have provided more definite information on whether parents' competencies with ICTs influence the adolescent's attitude towards the parent.

2.1.3   Summative discussion

First, and this will be reiterated throughout the discussion, it should be noted that technology *per se* does not determine the nature of parent-adolescent relationships. Therefore if a child reported positively or negatively about the parents' level of techno-literacy, it should only be evaluated in the context of their relationship. This may have been the study's largest limitation: not providing contextual information of the participants' existing relationships with their parents.

Despite this limitation, the study served to question researchers' conclusions that ICTs are uprooting the parent's authority in the relationship with their teens (Aphek, 2003; Casas, 1998; Casas et al., 2001). The researcher's interpretation of the reasons offered for parents' ignorance around ICTs is that these participants did not belittle or disgrace their parents, as might have been the case if they did not respect their parents. It may be true that children are adapting more easily to the phenomenon of digital technologies than parents (Montgomery, 2000; Wright, 2001), but it is not that straightforward to conclude that children are prone to reject their parents'' authority over them because of the parents' perceived lack of techno-literacy.

The second conclusion is that because some parents may know less about digital technologies, this may offer an opportunity for constructive and positive communication between parents and their teenagers. The following quotations serve as examples of how teenagers report on this:

"My mother have a cell phone a 3250I Nokia, with a radio and a camera and I have to show her everything, to get to the gallery, where the photos are and show her all the pictures and all that, download her airtime for her."
(Female participant)

"... but I have to enter their airtime vouchers and everything else that has to do with cell phones, I have to do for them, like select the ring tones and stuff like that."
(Female participant)

"Its like, I know more stuff than my mother, and she will know certain stuff that I don't know. We like teach each other stuff on the computer ..."
(Male participant)

What has been reported in the literature about parents' reluctance to engage with their children around these technologies (Casas, 1998; Environics, 2001; Savahl, and September, 2004) may be less true in families where parents ask the children to help them with ICTs. But whether this is conducive or detrimental for their relationship may not lie in the computer or the cellular phone of the parent, but in their existing relationship outside ICTs. Children who have a good relationship with their parents may experience parents' need for their help as gratifying and empowering, or they may have a good relationship but experience frustration because of the parent's incompetence with digital technologies.

A final observation on this theme relates to the reported difference between School O and Schools M and N. Despite this difference, there was substantial similarity in the responses across all three groups for the rest of the discussion that followed. The conclusion drawn from this is that the influence of the parent's skills with ICTs on the relationship should be considered in conjunction with other variables that will be presented later in this chapter. As Durrheim (1999) rightfully claims, the qualitative researcher should acknowledge that the

phenomenon under investigation is a complex system, and the whole of the picture is more than the sum of the parts of that picture.

2.2 Differences in attitudes towards ICTs and the generation gap

"They [parents] won't use the computer like me all the time, it's more like for work if they have to type something."

This was the response to the question if parents ever have fun when using the computer or the Internet. The rationale for exploring how teenagers report on the parents' use of the Internet and computer at home was to find possible explanations why the literature reported a lack of parent-child interaction around ICTs.

In all probability parents only got introduced to computers and the Internet in their work, as was evident in the responses that equated the parents' level of competency with the work that parents hold.

"She's an accountant, she's more on the Internet than on the computer board."

(Female participant)

"They [parents] work in an office and its obvious that they will have to know how to use computers."

(Female participant)

Does it then come as a surprise that parents will view these technologies as work-related tools (Selwyn et al., 2003), and that they will therefore not spend as much time on using them as entertainment as their children do? Parents' use of ICTs at home, with the exception of cell phones and television, may be determined by how they normally use the equipment at their work.

This is in sharp contrast with the known fact that teenagers are drawn to ICTs because it is fun and games for them (Izenberg & Lieberman, 1998; Kline & Botterill, 2001; September & Savahl, 2002; Shaw, 2002; Skinner et al., 2003; Suoranta, 2003; Wolak et al., 2003). This is how the participants responded when asked about their use of ICTs.

"[What do you use the Internet for?]
Surf the Net, play games, listen to music and all that stuff." (Male participant)

"[Do you use Internet for school projects?]
"Sometimes but mostly for fun, because we don't really get that deep
research projects." (Female participant)

Apart from this difference, the enthusiasm with which children engage with ICTs may surpass their parents' enthusiasm about these technologies (Montgomery, 2000; Wright, 2001). This is how some participants described their enthusiasm:

"I'm on the computer 24/7." (Male participant)
[The abbreviation for 24 hours, seven days a week.]

"Further its just PC, PC all the time." (Male participant)

"Weekends you don't see me elsewhere but only on the computer."
(Male participant)
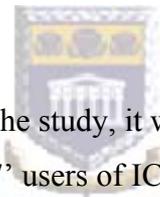
Although no parents participated in the study, it will be fair to assume that they will not describe themselves as '24/7' users of ICTs at home. The possible implications that these differences may have on the parent-adolescent relationship will be discussed at the end of this theme; it is sufficient to state that this provides the background for exploring the other generational differences that are discussed as sub-themes.

2.2.1 *"I think they [parents] probably see it as an educational tool."*

This response is indeed what the literature report on parents' attitude towards ICTs (Environics, 2001; September & Savahl, 2002). Adolescents are fully aware that parents will accentuate this benefit, and some may exploit this to their advantage:

"We say, OK mommy get me a computer, that's what I'm doing now, for
schoolwork, but it is primarily for entertainment." (Male participant)

"About the Internet, they get it because they think it will help us with schoolwork, OK not to study, but with research. They get it for that purpose. I don't think they know about the other purposes ..."   (Male participant)

It seems as if the argument in the literature is that parents will then expect their children to use the computer and Internet for that purpose, and if it does not happen, it creates the potential for conflict. If parents buy a computer or subscribe to the Internet with the view that it should be used for educational ends, they may be annoyed when this expectation is not met. Yet parents are aware that children are playing games on the computer, as a male participant reported:

"My parents tell me I must first do my homework and then only can I use the computer."   (Male participant)

These parents know that their son is using the computer to play games; the question is whether they perceive it as a waste of money to have bought a computer that is only used as an entertainment tool.

The issue around the benefits of ICTs should not result in an 'either education or nothing' attitude on behalf of the parents. It will do parents no good to deny their teens the excitement of games, surfing the Net or the *"fun to have a camera on your phone."* (Female participant).

Parents should realise that when they get their children a computer or access to the Internet, because of the developmental stage of their teens, these technologies will be utilised in ways that are appropriate for adolescents: as socialising tools, for the excitement it offers as well as for establishing their autonomy. The Internet and chat rooms are so attractive for the youth because *"... its fun, you can do whatever you want to."* (Female participant).

The next sub-theme highlights teenagers' exposure to sex-related content in a very different way from what parents may have been exposed to when they were young.

2.2.2   *"No, I don't think they [parents] know that you're watching [late*
            Saturday night movies on E TV]."

It is not without reason that some parents are suspicious of their children's ICTs
activities, as it was reported by some participants that teenagers do engage in
activities, especially on the Internet, that parents will not necessarily condone (See
Berson & Berson, 2003; Shaw, 2002).

"I do work on it [Internet], but I mean you can also do things on it that they
[parents] don't know. "   (Male participant)

The sex-related content that adolescents are lured to may be upsetting to parents:

[What do you do on the computer?]
"Play games, watch pornography. That's one of the famous things. My friend, say
he has Internet he downloads it for me then he writes it for me and I put it on my
computer... If you think about it, its nothing ...it's like a phase you grow
through."   (Male participant)

Participants in two of the groups that related incidents of *"catching on nonsense"*
(Male participant) in chat rooms. This is what one of them experienced in a chat
room:
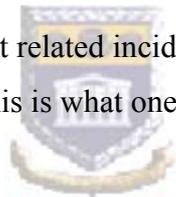
"Yeah, one time ... there was this man, but it's a man, he doesn't know that we
were boys. So had he his camera on, his web cam. So he took off his pants and
took out his spade. We were laughing and my friends just go with it asking: Is this
all you got? Then we tell him that we were boys and he was swearing."
                                       (Male participant)

Another example was told by a female participant where she and her friends
pretended to be a *"horny girl"*. She ended her story by saying *"... you get those*
jerks like me that just want to have fun because they know they can."

A side comment on adolescent' engagement with Internet pornography is that two
of the groups reported this to be a common practice in their schools, despite filters
and teacher supervision. But it should also be recognised that this is definitely not
limited to the newer generation of ICTs, as shown in the quotation that marked
this sub-theme; videos and the television are not more 'innocent' than the Internet.

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The fact remains that some teenagers across all generations will engage in activities that are offensive to parents (Leland et al., 1999), as the participant remarked about his sex-related activities on the Internet: *"it's like a phase you grow through."* What is argued here is that parents may perceive such activities in a more serious light than the adolescents. Parents may place the blame on ICTs for their children's behaviours, and in doing so, the use of ICTs by teenagers can become a battlefield in their relationship.

Examining the impact of ICTs in the context of the existing relationship needs to be repeated. How do parents handle their teenager's emerging sexual awareness in general, and does the guidance they are supposed to give about sex in an in-person relationship not also apply to ICTs? Digital technologies may be portrayed by some as the culprit of morale decay (Postman in Aphek, 2003), whilst others (Suler, 1998) argue that Cybersex might be a safer way for teenagers to engage in sex. How parents handle this issue will determine the impact of ICTs on the relationship, and how it is handled is dependent of the prevailing values of the parent.
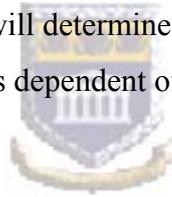
2.2.3 *"Its more the fact that there's so much peer pressure."*

A final example of how ICTs may expose and intensify the generation gap is evident in this typical adolescent comment. Acceptance by peers was and will be a developmental imperative during adolescents (Berk, 2000), and the importance of having and using ICTs in their socialising activities should not be ignored by parents. One female participant illustrated this point by saying that *"technology and social life goes together. If there's trouble with the one then it will affect the other side also."*

A greater responsibility rests on parents to come to terms with the fact that a cell phone is not perceived as just a communication tool, but *"For young people like us it's more like a status to have a good brand."* (Female participant). As in the times when parents were teenagers, there are certain things because of which

the youth of today, if they do not possess the required status symbols, *"would like slit their wrists, they can't handle it."* (Male participant). For this era these things do include digital equipment. The economic burden on parents to buy these, aggravates the situation where adolescents must have the 'cool' cell, or the latest computer game. This is how two females expressed their parents' reaction.

"They get frustrated when you tell them you must have that brand of cell phone, because they will tell you that they had to live without it when they were young ... But they don't worry about the brand they buy."

"They see it as something very expensive. They always look at the price first ..."

A concluding comment on ICTs as instruments that can widen the generational gap between parents and adolescents comes from a female participant that summarised the researcher's view of why ICTs may become a barrier in a healthy parent-adolescent relationship.

"... maybe its because our parents don't get exposed to this they don't feel confident [about ICTs]."   (Female participant)

2.2.4   Summative discussion

The adolescent issues of today, to have fun, to be accepted by their peers or to experiment with sex, are not issues that were brought about by the emergence of digital technologies. It cannot be denied that the ways in which these issues are translated in teenagers' use of ICTs are very different from the times when the parents were teenagers. As such, ICTs might impact negatively on parent-adolescent relationships.

Having said that, the prevailing values and norms upheld by parents may be more important than the activities itself. It seems as if the dystopias like Postman (cited in Aphek, 2003) disregard this too easily in their assessment of ICTs. Stahl and Fritz's study (2002) found self-regulated behaviours amongst teenagers' use of the Internet. Maybe these self-imposed restrictions are based on previous experiences, but it might also point to the influence of parents' values.

This study found that some participants exercise self-regulated behaviours. This will be discussed in the next theme, not as an issue of whether ICTs are harmful to adolescents or not, but as an indicator of how the pre-existing relationship comes into play in the impact of ICTs on parent-adolescent interaction. It will be argued that if the child adheres to the values of the parent, it will make their relationship less of a battlefield.

2.3   Regulating adolescents' use of ICTs

"No, there are no rules."

It was found that there are no other explicit limitations to the participants' use of ICTs than the limitations that are motivated by economic considerations on behalf of the parents, and those on the amount of time that teenagers are allowed on these technologies. This is in accordance with the existing view that the rules laid down by parents mostly concern the amount of time spent with these technologies (Berson & Berson, 2003; Kline & Botterill, 2001; Stahl & Fritz, 2002; Suoranta, 2003).

"For cell phones I'm only allowed to buy airtime once a month.
Then it's only R30 for the whole month. How can they possibly expect that to last
a month?"   (Female participant)

"An hour maximum [Internet], otherwise I have to pay what is past an hour."
                                                                (Male participant)

"No, they don't tell me, but sometimes like on week nights, like last night I stayed
up till 11 o'clock, and I still wanted to watch but they tell me I must go to sleep."
                                                                (Female participant)

The only other parental concern that was reported is on teenagers' visits to chat rooms. Some parents forbid the teenager to visit chat rooms *"ever after that Oprah show on television"* (Female participant). Other participants said that they are warned not to give personal information in chat rooms or when surfing on the Internet. This confirms research findings that the Internet is the most regulated technology (Kline & Botterill, 2001).

The following comments on the issue of parental regulations may be useful to consider. Firstly, teenagers may not want to admit in the presence of their peers that their parents restrict their use; admitting to this may cause them to lose face. Secondly, less speculatively, parental guidance were phrased in the response of a female participant:

"*I think if parents had some kind of proof that technology can harm you in a way, then they would be more strict.*" (Female participant)

Finally, it is possible that the freedom that adolescents have in using ICTs probably suits them well, and may lead to a more positive attitude towards their parents.

The remainder of this theme is devoted to the following sub-themes: adolescents' contextualising their use if ICTs in the pre-existing relationship with parents; ITCs as a means to discipline and encourage teenagers; and adolescents' acceptance of parents' responsibilities towards their children.

2.3.1   "You can watch whatever you want … as long as it's appropriate."
The participants' perceptions on why some parents allow their teens so much freedom were presented by them within the context of their pre-existing relationships. It affirms this study's notion that research on ICTs should take the user's context into consideration before valid conclusions can be made about the impact of ICTs on the user (Gross et al., 2003) and, in the case of this study, about the impact on the relationship between teenagers and parents.

The quotation used as marker for this sub-theme, indicates that parents' values and norms do come into play around teenagers' use of digital technologies. Although the participant did not explicitly say this, the researcher's interpretation is that the parents allow her freedom to use these technologies within the boundaries of what is appropriate in their home.

Another participant reported self-regulated behaviours around what she allows herself to watch on television:

"I got my limits. There are certain things I wouldn't watch, like the Saturday movies that all the guys want to watch." (Female participant)

The average age of the participants was 15.3 years; they are in their mid-adolescent years, and their moral development is well underway (Gullotta et al., 2000). It can be assumed that this female participant had already decided for herself what is acceptable and what not, but is also quite possible that her parents influenced her values.

More definite examples of how the participants contextualised their use of ICTs are presented in the following passages.

"I think it [the use of ICTs] depends on the trust between your family. If you come from a very close family then there's this bond between you, and she will knows what you do. That's the situation for my mother and I. We can trust one another because we went through a lot of experiences. I don't have really boundaries because I know what's right and wrong." (Female participant)

"Confidence allow: As long as I don't break their confidence then they allow me to use the computer as I want to." (Male participant)

The relevance of this to the focus of this study lays in that some teenagers' use of ICTs can be an affirmation of the relationship with their parents outside the digital environment. Those who are discouraged by all the possible negatives that ICTs can bring into parent-teenager relationships should pay heed that there might also be another side to this perspective.

The final proof that ICTs are intertwined in the interaction between parents and their children outside the realm of ICTs, is presented in the following sub-theme.

2.3.2 "My parents tell me I must first do my homework."

This is not the same as parents' disciplining the use of ICTs; what is at stake here is that parents see, as reported by their children, these technologies as a useful tool in dealing with their children's unwanted behaviours, or getting them to do things. The following comments illustrate this.

"I have a cell phone, there are no rules and regulations or conditions to the phone otherwise [than] if I pass this year then I'll get a new phone. That is the only rules and regulations you will ever get: just pass and you can upgrade your phone." (Female participant)

"There are no rules or regulations but if I do something wrong they take my cell phone." (Female participant)

If more airtime, a new cell phone or longer hours on the computer are offered as a reward to children, then technologies can be used by parents and adolescents as a means to manipulate one another. As such ICTs become a variable that can impact on their relationship.

2.3.3 "Yeah well, they're responsible parents."

The fact that some of the participants said that they do accept that parents are to take responsibility for them, may come as a surprise to these parents: adolescents are not known to acknowledge any form of authority too readily (Berk, 2000; Gullotta et al., 2000). And yet more than one participant admitted to accepting their parents' authority:

"If I think of it properly, I probably will raise my child like my mommy does, because even if you don't like what your parents say then you know they're right" (Female participant)

"OK, there's limits otherwise she will not be a parent, there must be limits. With my social life, but not with technology." (Male participant)

Although it cannot be denied that these admissions might have been easier to make in the presence of a stranger who is not endangering their striving for independence, it shows that some adolescents do realise that parents have their well being at heart. It was indicated earlier in the discussion that there seems to be

very few restrictions placed on the use of ICTs that may also make it easier for the adolescent to abide to the few regulations that parents might impose.

2.3.4   Summative discussion

Firstly, this study does not dispute the fact that children are using these technologies without the presence of their parents (Kline & Botterill, 2001; Roberts, 2000; Rideout et al., 1999). However, it cannot endorse that this implies that adolescents are therefore without recourse to parenting (Savahl & Savahl, 2003). The findings indicate that parents need not be physically present to exert parental values that may guide adolescents' use of ICTs.

Secondly, ICTs *per se* may be perceived by adolescents as not being a stumbling block in the interactions with parents, because parents do not regulate the way in which they use it. At the same time it should be taken into account that teenagers are not independent users of ICTs because parents provide them with access to these facilities. It is therefore not a surprise that ICTs will be used to discipline adolescents in other areas of their lives, thus these technologies may impact on the relationship.
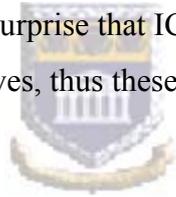
Thirdly, ICTs might be less of an issue in parent-adolescent relationships than assumed by the researcher. This conclusion is based on the participants' report that no conflict is experienced with their parents on the use of ICTs. However, parents may report considerable conflict and there may well be *de facto* conflict that the adolescents do not report. A second qualifying comment is that in the South African context, parents and teenagers do not engage with these technologies to the same extent as their counterparts in the international literature, therefore it may be less of an issue of conflict in their relationship. There may come a time that it will raise the same debates and concerns as in the international arena; the question is whether social scientists will then be able to respond to these issues based on sound scientific evidence that is applicable for the South African context.

The last theme is related to the participants' accounts of how parents interact with them on their use of ICTs. This will be compared with parents' involvement in the in-person socialising of teenagers. No sub-themes are presented.

2.4 Comparing the rules and interactions around teenagers' social life and technology use

"I don't know why I can keep up late with the computer but not when visiting my friends. What's the difference?"

The significance of this issue is that it revealed something of the parents' view of technologies. This might provide an explanation of why parents were reported to be comfortable in leaving the teens alone to use ICTs. The researcher's assumption was that there would be a congruency between these two aspects, regulating adolescents' use of ICTs and their socialising, but this was found to be incorrect.

Across the groups the participants were unanimous that there is a big difference regarding parents' regulating their in-person activities and their use of ICTs. All agreed that parents are far more concerned about the former than the latter:

"With technology I'm more free, but with my social life my mother will interfere and tell me she doesn't like this guy and she has curfews. I have to be back at eleven o'clock at night." (Female participant)

"My parent's attitude towards my social life compared to my technology-life (as we call it now) is way different because with my social life she's much more strict and I can't go everywhere, and there's time limits." (Female participant)

Asked about the reasons for this, the following were offered:

"The time she experienced childhood there was not technology and now we're experiencing it together. She's learning and I'm learning with her. But then with my social life she thinks that she knows everything." (Female participant)

This response confirms the notion held by researchers that parents are not knowledgeable around ICTs, and therefore they may refrain from offering advice.

They may feel more comfortable to offer advice when it comes to conventional ways of socialising.

The second reason was that the off-line world was perceived as containing more real threats to children.

"Risks. If I sit at right at the computer, then there's not really much that can happen … It's all about safety." (Male participant)

"With technology it doesn't break down your system. It's more easy to detach from that, but with social life it is more real. Like for a drug addict it's much harder to get from it that than it is to get from the television." (Female participant)

There was also this interesting view:

"I think the reason why they are more suspicious about our social life than our technology life is because with our social life parents can still control it in a way, but with technology you can't really control because it's everywhere, and one parent cannot stop such a thing. Maybe that's why there's boundaries to our social life because they can still control it and say no." (Female participant)

These reported concerns of parents about the physical dangers present in society may be very specific to the South African context, which is plagued by a high incidence of violence and crime. Parents are aware of all the dangers their children are exposed to when socialising with friends outside the home, and therefore consider it safer when the children are at home using ICTs.

The Dystopias will raise serious objections to the validity of these perceptions of the dangers of ICTs (See the discussion in Chapter 1). To support their case, it must be mentioned that amongst the 23 participants, one male admitted that he once was addicted to gaming. He was questioned on his self- diagnosis and this is how he responded:

"I couldn't stop, I like played till the next day … then I found out that like I had headaches and stuff and I got tired and couldn't concentrate." (Male participant)

Finally, cell phones as part of the digital technologies are used by parents as a means to safeguard their children's in-person socialising:

"There are rules to going out over weekends and you have to bring your cell phone along so they can monitor your every move. They can call you where you are and know what you are doing and everything." (Female participant)

There was a hint of annoyance in this remark, implying that there may be situations where the child would not like to be 'tracked down' by the parent. But in other situations it can definitely be a useful tool:

"If I want to go out … it is a lot easier now [with modern technology] because I got my cell with me all the time. So they're not worried at all."
(Female participant)

Without a doubt the use of cellular phones is increasing the communication between parents and their teens. At times the teenagers will welcome the capability to call on their parents when in need, and in these instances it will be conducive to their relationship. However, as mentioned in all other themes, this positive or negative influence is dependent upon the context in which the cell phone is used.

2.4.1   Summative discussion

There is a perception amongst parents, as reported by their children, that the digital environment is less of a real risk to children. Without repeating the debate amongst researchers on this, it seems as if the participants and their parents are in agreement that ICTs pose no real harm to its user. Relating this to their relationship, it can foster a mutually positive attitude to one another. It can be speculated that when parents become convinced that real dangers lurk in ICTs, this will become a strain on the relationship, especially when the teenager is not convinced about these dangers.

Reflecting on the assumed increase in communications between parents and adolescents because of the cell phone, this in itself will not determine the nature of

its impact on the relationship. While parents may be unconditionally pleased to keep in touch with their teenagers, this might not be the case for the adolescent.

3.   CONCLUSION

Tyler's (2002) conclusion after researching the impact of the Internet on social life, is that the more things change, the more they stay the same. Reflecting on the results of the study it seems as this may be a valid comment on the impact of ICTs on parent-adolescent relationships. Parents and adolescents in the 21st century are battling with very much the same issues as previous generations that had to do without digital technologies. However, the researcher is convinced that Tyler's conclusion is too simplistic and ignorant of the new dimensions and dynamics that children's use of ICTs bring to the relationship between parents and adolescents. Hopefully the discussion in this chapter pointed to some of these issues.

What remains to be addressed are the conclusions to the study, its limitations, and recommendations for future research. Together with this consideration will be given to the possible contribution that this research may have made. These are presented in the final chapter.
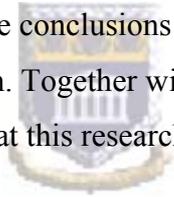
The final chapter begins with a concluding discussion of the results, followed by some thoughts on the limitations to the study. The recommendations to future research in this field are presented simultaneously with the limitations, as the limitations open up new lines of inquiry in understanding the meanings and possible impact that ICTs may have for, and on, teenagers. The chapter ends with a final comment on the study, and a reflection on the contribution that this research may have made to the existing knowledge of information and communication technologies.

1.   CONCLUSIONS

The researcher's concluding thoughts are well summarised in the following comments made during the focus groups:
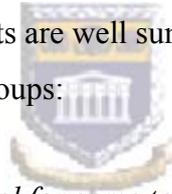
"Like I said, it can be a status symbol for some teenagers and you cannot generalize because people are different."   (Female participant)
[This was in response to the question of teenager's use of cell phones.]

"I think every advantage has its disadvantages and it's a little bit of both. It can be negative or positive."   (Female participant)
[Responding to the question about their perceptions of ICTs.]

"I think it has more to do with the individual and how your parents are."
                    (Female participant)
[What are the differences between you and your parents around ICTs?]

What appeals in these comments is that generalising about the perceived impact of ICTs is not condoned. An example to explain this is the apparent lack of conflict between parents and teenagers around ICTs. One interpretation is that ICTs do not affect the relationship negatively; another possibility is that the teenager may experience this as apathy from the parent, which can hardly be conducive for their

relationship. Having said this, it does not rule out some tentative indications of the impact of ICTs on parent-adolescent relationships, but this should be made in the acceptance of the abovementioned comments from the participants.

Norris's claim that generational differences are the critical element for any discussion on the impact of ICTs (cited in Suoranta, 2003) holds particularly true for this study, and is evident in the following summary of the findings.

Although the majority of parents were perceived as less techno-literate than the participants, it was interpreted as not detrimental to their relationship. The reasons they offered, as well as the acceptance of parents' responsibility towards them, can be seen as showing respect to parents.

Parents' lack of enthusiasm and use of the fun and games offered by digital technologies was not reported to be experienced as negative by the adolescents. There may be concerns about the fact that teenagers are left on their own with ICTs, but this lies outside the focus of the study. What is relevant is that adolescence is a stage where children prefer to be left alone, and the almost limitless use of ICTs may suit them well.

ICTs in the home also give an opportunity for positive interaction when the teenager assists the parent to use these technologies. Whether these opportunities are utilised by both parents and adolescents, do not lie in the presence of digital technologies in the home, but on the willingness of the parent to enter the digital landscape that are so exiting to children. Parents should be encouraged to do this, not in a way that they should become expert users of ICTs, but as students of the new horizons that their children are discovering through the different technologies.

Finally, both parents and teenagers are of one accord that the real dangers that can affect teenagers are not present in the use of ICTs. Whilst they should be made aware that there is indeed a darker side to these technologies, it should not be done in a moralising tone that denies the potential benefits of ICTs.

2. LIMITATIONS AND RECOMMENDATIONS

A methodological limitation to the findings concerns the focus group that was conducted at school O. Since the researcher was not experienced in interactive gaming and chat rooms, he enquired in too much detail about these activities, and this resulted in the focus group to transform into a group interview at times. This may have limited the richness of information that had been generated in the discussion amongst the participants in a focus group. (See the transcription in Appendix 3). The other limitations that will be discussed relate to the scope of the study and issues that transpired from the analysis of the data.

The most serious limitation in this regard is that the scope of the research was too general. This does not imply that the focus of the study, exploring the perceived impact of ICTs on the parent-adolescent relationship, was not addressed, but that the study should have been limited to a specific kind of digital equipment. From the results it seems as if cellular phones are the most commonly used technology amongst teenagers, at least for the sample in this study (See Table 1). Across the three groups there was the sentiment that *"I cannot live without my cell phone."* (Female participant).

It will not only be interesting, but also important, to explore how this technology, with its abbreviated format of communication, is influencing the communication patterns between adolescents and their parents, and amongst the youth themselves. Are new values and means of maintaining relationships constructed because the contact between people is instantaneous and possible at all times, and that incoming calls can be regulated by the receiver as the caller's identity is registered on the phone? These communication issues also apply to the Internet facilities, but since this was reported as being used less by the participants, this should not be the first line of inquiry. The final effect of these changes in communications may only be established once the "Net generation" reaches adulthood, but researching the changes as they grow into being parents and spouses can contribute to capacitating this generation to establish healthy relationships in the future.

The researcher has hinted earlier that teenagers will seek the excitement of sex in whatever form it as available to them, and therefore visiting a pornographic site on the Internet is in principle the same as paging through a sex magazine. However, this does not mean that the impact of these two activities will necessarily be the same on the user. If an argument for the negative effects of porn sites is to be scientifically proven, a comparative study should be conducted between teens that indulge in the more traditional mediums in which sex is offered, such as movies and magazines, and those who are using the Internet. Defining the extent of use, as well the context in which it is used, will be an important issue to consider.

The second limitation concerns the lack of contextual information about the existing parent-adolescent relationship. It is not enough to know that teenagers' social life is more regulated than their use of ICTs. The way that parents interact with their teens on other issues such as school performance or getting their teenagers to conform on their social values may be important information to contextualise parents' regulations around the use of ICTs.

There are studies that measure the quality of the relationship as perceived by the adolescent (see Davie et al., 2004; Wolak et al., 2003), where the researchers established correlations between this and the teen's online behaviours. It is recommended that the relationship should not only be assessed by the adolescent, but also be compared with the parents' assessment. The fact that research indicates contradictory reports from parents and children around the teens' use of ICTs (Environics, 2001; Savahl & September, 2004), is enough reason to expect that differences may be found in such a comparison.

As indicated elsewhere in the study, parents and adolescents may respond in a socially desirable way, especially when participating independently in research. However, the participants reported that their parents are very accommodating about the use of ICTs, and that the parents are not really concerned about the dangers posed by ICTs. This may not be a true reflection of the parents'

perceptions, and may be worthwhile to investigate. It is proposed that future research includes both parties at the same time in interviews or focus group discussions. This may result in a better understanding of similarities and disagreements about the meanings that parents and children construct around the digital technologies in the home, and how it is perceived to impact on their relationship.

It will also be worthwhile to explore the family dynamics in households where ICTs have become entrenched in everyday activities, and compare this with more traditional households that are less connected to digital technologies. It may be, as claimed by the one participant who has access to the Internet in her room, to be no *"big issue for us"*, but family structures and functioning may be changing as ICTs are introduced into homes, and if so, in which direction are those changes?

Finally, the strength of this study is that it was a qualitative study. The researcher is convinced, based on the literature that was reviewed, that using quantifying measurements alone, will not contribute to a better understanding of the impact and meanings that users constructs around ICTs. Any quantitative research in this field should be accompanied by a qualitative approach to the topic. The rationale for this conviction lies in that information and communication technologies can be used in such diverse ways that being able to say that a percentage of teenagers use SMSs, does not reveal the social significance of using cell phones.

3.   EPILOGUE AND 'EPI-LOG'

The researcher is convinced that any debate and research on children and ICTs should start off with an acknowledgement that these technologies are intertwined with how they live their daily lives. ICTs do not co-exist with any of their activities or relationships, but are entrenched in these relationships and activities. Therefore they may be taken aback when asked how they perceive ICTs to impact on the relationship with their parents, as they experience it as lesser of an issue that may widen the generation gap between them and their parents.

At the same time parents may have a different perspective on this because they may still have to come to terms with ICTs. Therefore it cannot by ruled out that These technologies may indeed impact on the parent-adolescent relationship, albeit from the parents' perspective.

The most conclusive finding in this study is that the impact of ICTs on the parent-adolescent relationship needs to be contextualised within the multi-layered dimensions of pre-existing relationships, the circumstances and purpose of use. There seems to be ample opportunity for both the parent and the teenager to make use of the information and communication technologies in the home to enhance the quality of their relationship, provided that the relationship outside the use of ICTs is sound and satisfying.

The significance of this study is to be judged by the reader and the research community. In South Africa there may be more pressing social issues to consider, such as HIV-Aids, crime, poverty and illiteracy. Despite these realities, it is also true that society at large is becoming more entrenched in the use of ICTs. For this part of the population it may be equally important that social scientists should focus on the issues and phenomena that impact on their social-psychological well being. There are also indications that digital technologies such as cellular phones can be used in reminding HIV patients to take their medication on the prescribed times during the day.

Although there can be disagreement about the extent and direction that the changing ways of communicating and disseminating information are impacting on peoples' lives, the changes in themselves cannot be disputed. Is this not reason enough to place information and communication technologies on the agenda of social scientists?

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