Preadolescents' Internet Usage: Psychosocial Implications

Dawn E. Pollon (B.A. Hons, B.A.)

Department of Graduate and Undergraduate Studies in Education

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Faculty of Education, Brock University

St. Catharines, Ontario

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Abstract

Preadolescent Internet usage is prevalent today. This thesis examined how Canadian preadolescents use the Internet, what they do when they are on the Internet, and why preadolescents are fascinated with the Internet. Eight qualitative categories were derived from the data. The categories are Downloading, Information Hunting, Consumerism, Virtual Nurturing, Gaming, Expressions of Violence, Chatting, and Music. By critically distilling and analyzing preadolescent Internet behaviour through the lens of behavioural and cognitive psychology, and explicating the amount of psychological, cognitive, and social learning that preadolescents may be exposed to on the Internet, and the attraction that is cumulatively a profound draw for a preadolescent audience, an argument will be made that Internet usage in preadolescents may impair their cognitive, social, and psychological development because of the impulse seeking and gratification priming that has been reinforced during the formative period of preadolescence.
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CHAPTER ONE: THE PROBLEM

This longitudinal study examined the psychoeducational outcomes of 64 Grade 6 preadolescents' Internet media habits over a period of 2 years.

Overview

Preadolescent Internet usage is prevalent today. This study specifically examined how preadolescents use the Internet, what they do when they are on the Internet, and why preadolescents are fascinated with the Internet.

It is acknowledged that the term *preadolescence* is a modern construct which adapts to historical, technological and societal advances (Bosma, Graafsma, Grotevant, & de Levita, 1994). For the purposes of this study, the term *preadolescence* describes children from the ages of 10-12, and the term *adolescence* describes youth from the ages of 13-18. However, it must be acknowledged that much of the literature discussed in this thesis uses the term *children* in a generic sense, and at times may use the term children to refer to an age group spanning from 3-12 years of age (Byrnes, 2001; Donnerstein & Smith, 2001; Horgen, Choate, & Brownell, 2001; Singer & Singer, 2001; Tarpley, 2001; Winn, 1985, 2002).

In a March 2001 survey conducted by the Media Awareness Network, results revealed that 99% of Canadian children have used the Internet (A. Taylor, 2001) and that 79% of children have online access at home (Biehn, 2002). While these statistics may seem inflated, the sentiment around them is relevant. Digital technology is here to stay. What is yet to be discerned is how this technology will change, in pedagogical and developmental terms, the experience and meaning of preadolescence.
This study examined the Internet-based behaviours of 64 Grade 6 students over a 2-year period. By means of a survey entitled the *Reading and Viewing Questionnaire* (Elliott, Woloshyn, & Bosacki, 2000; Elliott, Woloshyn, Bosacki, Richards, & Murray, 2001), this study explored preadolescents' Internet media habits, preadolescents' understanding of their own Internet usage, and, guided by Social Learning Theory and developmental psychology, explored the psychoeducational and psychosocial questions that arise when a critical lens is applied to preadolescents' Internet media habits.

**Purpose of the Study**

The purpose of the study is threefold. First, as outlined in the Review of Literature, the primary focus of research on children and the Internet has been on the dangers that threaten children on the Internet (Freeman-Longo, 2000; Hansen, 1998; Kerner et al., 2001; Krausz, 2001; Skurzynski, 1999; Tarozzi & Bertolini, 2000; A. Taylor, 2001). Second, much of this research has been conducted in the United States and Britain. Thus, due to the narrow scope of the current research, there is a need to examine how, what, and why Canadian preadolescents use the Internet, as they are a unique and distinct population (Adams, 2003).

Statistical data revealing types of Internet behaviour will disclose how preadolescents use the Internet, while a content analysis (Funk, Geysa, Buchman, & Germann, 1999; Horgen et al., 2001; Wartella, O'Keefe, & Scantlin, 2000) of specific, frequently mentioned sites will be conducted in order to discern why preadolescents are attracted to these specific sites. This analysis will lead to the third purpose of the study, which is to inform educators, parents, and policymakers as to what the relevant issues are, and the
questions that may be raised when preadolescents are exposed to and make use of the new digital technology.

**Questions to be Answered**

While conducting the Review of Literature, it became evident that research on the topic of preadolescents and the Internet has occurred within limited domains. While a few surveys have examined preadolescents' general preferences as to what they do on the Internet (downloading music, chat-rooms, emailing, and playing games; Ferguson, 2000; A. Taylor, 2001), there has not been enough critically conducted research to draw conclusive understandings about the meaning and developmental implications of this behaviour. Further, most academic studies of preadolescent Internet usage have occurred outside of Canada. Thus, we cannot conclude that these findings are generalizable to a Canadian preadolescent population, as Canadians have a distinct culture, values, and mores (Adams, 2003). Issues and questions that have yet to be addressed include:

- Are there gender differences in what preadolescents choose to do on the Web?
- What are the most frequent sites visited? What is the content of these sites?
- Do children report being supervised while online?
- What attitudes contribute to a presence or lack of parental control?

Due to the nature of participant self-reporting, and the limited scope of the study, the outcomes of this study are descriptive in nature. However, the study contains a critical content analysis of the descriptive findings, and asks further theoretical and conceptual questions in chapter 5 regarding the value of the Internet in light of the findings.
Definitions of Terms

The following terms are explained as used in a socially constructed, popular context.

_Adolescents:_ Descriptive term for youth from 13-18 years of age.

_A/S/L_ (Age/Sex/Live): An introductory question or salutation used to assess who a participant in a chat room is – how old they are, their gender, and where they live.

_Children:_ Descriptive term for children from the ages 3-9; also, when used in reference to other research studies, is a generic descriptive term for children from the ages of 3-13.

_Chat/IM:_ Instant Messaging; when 2 or more people have a real-time written conversation that is typed out on the keyboard and broadcast on the computer screen.

_Emoticons:_ Icons employed within an email or chat message that serve as shorthand symbols to express emotions.

_MUD:_ Multi-user domain role-playing game. Role-playing games wherein the player creates his/her own character and reality, and plays at living life with others who abide by said created reality.

_PC:_ Personal Computer.

_Preadolescents:_ Descriptive term for the participants in this study, from the ages of 10-12.

_RL:_ Real life. Interactions and activities conducted in the presence of other people, not interfaced by a computer (Turkle, 1997), veridical reality.

_SL/Sim:_ Simulated life. Activities conducted on the Web that may resemble or mirror activities conducted in everyday "Real Life"; activities conducted not in the presence of other people, but interfaced by a computer (Turkle, 1997).
An electronic communications network that connects computer networks and organizational computer facilities around the world (Merriam-Webster, 2002).

Theoretical Framework

There are many theories that inform a study of preadolescent Internet usage. The first theory to be considered is Social Learning Theory by Albert Bandura (Allen, 1997; Bandura, 1977, 1989, 1994a, 2000, 2002). Through much research Bandura has proven that the learning of new behaviours and the resulting attitudes towards said behaviours are acquired through either direct experience or indirectly by means of observing the behaviour modelled (Allen, 1997; Bandura, 1977, 1989, 1994a; Berkowitz & Rogers, 1986; Donnerstein & Smith, 2001). Research informed by this theory indicates that children acquire novel behaviours by observing models (Allen, 1997; Donnerstein & Smith, 2001). While children's Internet usage is a new area of research, it will be argued that the Internet is a pure medium of behaviour modelling, and thus may have a profound influence on children acquiring novel behaviour and attitudes (Bandura, 1977, 1994a, 2002; Berkowitz & Rogers, 1986; Donnerstein & Smith, 2001).

A second theory that informs an analysis of preadolescent Internet usage is that of cognitive psychology. Proponents of cognitive psychology argue that Social Learning Theory cannot account for the lasting effects of acquiring a new behaviour or attitude. Cognitive psychologists argue that upon observing a certain behaviour, neural networks begin to create related areas of knowledge called schemas (Berkowitz & Rogers, 1986). Upon activation (by observation) these schemas, or as they are often called, neural networks, set up a "priming effect" that intrinsically predisposes the observer to
continually activate already established schemas, while simultaneously enlarging associated schemas and neural networks (Berkowitz & Rogers, 1986). Thus, as the child views for instance, violence in a Internet game, the schema "violence" and all the associations in the neural net "violence" become associated to the schema "games" and all the neural net associations in the schema "game" (Byrnes, 2001; Donnerstein & Smith, 2001; Mayer, 1999, 2003). Thus, the theory of cognitive psychology provides ample justification to undertake serious content analysis of the Internet and the effect it may have on preadolescent psychosocial and psychoeducational development.

Another theory that will inform the data analysis is a specific theory of adolescent development by Erik Erikson (Abbott, 2001; Erikson, 1963, 1985; Turkle, 1997). Erikson called one element of his theory of adolescent identity development, The Psychosocial Moratorium. While Erik Erikson works from a psychoanalytic tradition, much of his theory of the moratorium of self has relevant, contemporary applications.

Erikson thought that adolescence and, arguably in today's contemporary society, preadolescence, was a time of powerful experimentation and interaction with people and ideas (Abbott, 2001; Erikson, 1950; Turkle, 1997). Experimentation may be a possibility for many of today's preadolescents as they appear to be as mature as their adolescent peers. This change in the perceived level of maturity of preadolescents may have arisen due to the perceived phenomenon of early onset-adolescence. Early onset-adolescence is the culturally observable occurrence wherein preadolescents are allowed to pursue the same interests and make the same sophisticated decisions that their more mature adolescent peers make.
Hence, before Internet access was prevalent, experimentation with people and ideas, otherwise known as teenage socializing, often required the adolescent to leave the confines of his or her home, thrusting the adolescent out into the world, the "real," objective, veridical world. Thus, traditionally, adolescence and the experience of adolescence was often restricted to those of a certain age who had shed the identity of childhood and adopted multiple and often vastly different identities during this intense phase of experimentation (Abbott, 2001; Bosma et al., 1994; Erikson, 1963).

However, this has changed with the advent of Internet access in the home, and by the fact that preadolescents, by virtue of their new status as being sophisticated consumers, are some of the most frequent users of this technology. Since the Internet allows preadolescents to interact with others without leaving the home environment, this has provided parents and guardians a potentially false sense of comfort due to the fact that the child is physically in the home (Biehn, 2002). As a result of this false sense of security, many parents do not always monitor their children's Internet activity (Biehn, 2002; Caywood, 2001; Goodale, 2001; A. Taylor, 2001), and thus as a result of this lapse in attention, preadolescents may now be enjoying and experimenting with people and ideas to a degree once reserved for adolescents.

Importance of the Study

While there has been a recent survey conducted on Canadian youth's Internet usage by the Media Awareness Network entitled, *Young Canadians In A Wired World: A New Survey on How Canadian Kids Are Using the Internet* (A. Taylor, 2001), the method and the theories informing this survey have been difficult to ascertain due to a lack of availability and detail in the released reports. Also, the Media Awareness Network is a
not-for-profit group sponsored by major Canadian corporations such as BCE, CTV, Chum Television, Bell Canada, CanWest Global, Rogers@Home, and AOL Canada. Since these corporate alliances fund the Media Awareness Network’s research, and as, a result of this relationship, may put implicit pressure on the researchers to find certain outcomes, it is crucial that in order to obtain an independent and rigorous explication of Canadian preadolescent's media habits, further objective, academic study is undertaken.

**Scope and Limitations of the Study**

This study has collected and disseminates research findings regarding Canadian preadolescents' Internet habits. Limitations of this study include the limited sample from which data were collected. While this study purports to be a Canadian study, the data were collected from four diverse elementary schools across Ontario. Thus, this study cannot speak to preadolescents' Internet usage in unique locations such as newly formed Nunavut, or distinctive economically disadvantaged locales such as Newfoundland, or isolated locales such as Northern Saskatchewan or the Queen Charlotte Islands in British Columbia. However, it is my contention that the various data collection sites were chosen with much consideration in terms of sampling from diverse locales and populations. Thus, the diversity represented in this study accurately reflects the average representational diversity found within the more populated urban and rural areas of Canada.

Another limitation of the study involves the nature of self-reporting with young participants. Specifically, childrens' self-reporting of time increments can seem dubious at best. However, I believe that these self-reports are in essence accurate; when a young participant reports spending "2 or more hours per day" on the Internet, what they are
reporting is that it is their perception that they are spending a great amount of time on the Internet. Thus, if it is the researcher's goal to ascertain the importance of a certain activity in a young person's life, and the participant reports having the perception that the activity takes up a large portion of time, then the self-report is relatively accurate.

A further limitation is in reference to the Media Awareness Network's *Young Canadians In A Wired World: A New Survey on How Canadian Kids Are Using the Internet* (A. Taylor, 2001) survey. At first glance, the research that arises out of my thesis appears very similar to the style of study conducted by the Media Awareness Network. However, upon detailed analysis the findings are radically different. This difference in findings will provide ample points of comparison and contrast and allow for much speculation and critical analysis as to the origins of the differing outcomes.

One last limitation of this research is that the interpretation and analysis of the data is limited to the depth and scope of my personal lens, as researcher. While every attempt is made at achieving objectivity, none of the data are without the researcher's ontological and epistemological understanding and imprint.

**SSHRC Explanation**

The purpose of this thesis is to examine and explore the various psychosocial and psychoeducational issues that arise out of preadolescents' Internet usage. Specifically, this thesis will utilize Social Learning Theory and developmental psychology as a theoretical lens for viewing preadolescents' Internet habits and patterns of behaviour. The data for this thesis were collected under an umbrella Social Sciences and Humanities Research Council (SSHRC) project headed by Dr. Anne Elliott of Brock University, Faculty of Education. The project, entitled *Children's Stories as Cultural Mirrors: Self-*
Concepts and Worldviews, is a 3-year longitudinal study which aims to understand elementary school children’s media and literary preferences, and how these preferences may differ as a function of age, and ethnic or cultural background (Elliott et al., 2001). Children from Grades 1, 4, and 6 are in the process of being followed as they progress over the 3 years of the study, so that the study covers the entire primary, junior and intermediate school years (Elliott et al., 2001). Thirteen different schools are involved, including the Catholic School Board, private schools, public schools, and 2 First Nations’ schools. This present study of preadolescents’ Internet habits consists of a selected sample of Grade 6 students, aged 10-12, from four diverse schools, who were followed for 2 years.

One of the primary instruments through which the SSHRC study collects its data is entitled the Reading and Viewing Questionnaire. Within the 24-page Reading and Viewing Questionnaire is a section on Internet usage, which will serve as the primary data collection instrument for this thesis. Please see Appendix A for a copy of the complete SSHRC questionnaire, and Appendix B for the Internet Usage section of the questionnaire.
CHAPTER TWO: REVIEW OF RELATED LITERATURE

Within the last decade, the emerging presence of computer-mediated communication within homes and schools is a remarkable and unique technological advancement, one that is historically unprecedented (Bellamy & Hanewicz, 2001; Ward, 2002). The subsequent normalization process of personal computers (PCs) and the Internet as a communication and information medium creates a need for researchers to study and analyze the psychoeducational outcomes and the inherent issues that lie within childrens' choice and use of the Internet.

Due to the dearth of literature which deals directly with the psychoeducational outcomes of preadolescents' Internet usage, the review of related literature included book, journal, magazine, newspaper and electronic sources around the issues of frequency of Internet usage, socioeconomic factors of Internet access, the Internet as communication medium, Internet safety issues, the Internet as information source, and the phenomenon of parental control. The scope of the literature review is vast in that it utilizes popular sources as a means of drawing out the most timely and relevant information on a current and rapidly expanding issue such as the Internet. Various issues surrounding childrens' use of the Internet are discussed, but at the time of review, no studies that specifically examined the psychoeducational outcomes of childrens' Internet usage were underway.

Thus, this gap in the literature led to the resulting analysis of preadolescents' Internet media habits, which will contribute to the fields of education and educational psychology by fostering teacher and parental awareness, and raising formal critical questions that should be foremost in any guardian's mind when Internet media, information and communication are combined with children.
The Demographics

In a recent survey conducted by the Media Awareness Network, findings revealed that 99% of Canadian children have used the Internet (A. Taylor, 2001). In a 2000 Statistics Canada survey about household Internet usage 71% of eligible respondents claimed to use the Internet a minimum of 7 times a week (Statistics Canada, 2002). Of the respondents, single-family households with school-aged children had the highest reported Internet usage. Of these respondents, 40% of the children reported Internet access from school (Statistics Canada, 2002). While usage rates increase, Statistics Canada reports that individuals' concern for privacy on the Internet is decreasing from previous years. In 2000, 40% of respondents stated that they had no concerns about their privacy being compromised while using the Internet (Statistics Canada, 2002). While higher-income households were more likely to have Internet access, households with an income of $36,000 or less exhibited more growth of Internet access than any other income bracket (Statistics Canada, 2002).

Why Children use the Internet

The lure of the Internet for preadolescents is no mystery. The combination of the flash of colour and lights, the music of MTV, and the seduction of endless consumerism heralds a world unlike any other (J. Arnett & Larson, 1995; Tarpley, 2001). However, research is beginning to show that in spite of the endless opportunity available to them, preadolescents primarily use the Internet for information and entertainment (Ferguson, 2000; Roberts, 2000; Seel, 1997; Se-Wen & Lull, 1986; Valentine & Holloway, 2001; Valkenburg & Soeters, 2001).
One dynamic that has not been researched sufficiently is that there may be an age/use effect, in that young children use the Internet for playing games (Funk, 1993; Kubey & Larson, 1990) and as they mature, their Internet usage expands into specialized interest and information seeking (Valkenburg & Soeters, 2001). Also, it has yet to be established if there are any concrete gender differences in usage preference (Valkenburg & Soeters, 2001).

In a 2001 study, 2 Dutch researchers, Patti Valkenburg and Karen Soeters conducted a survey entitled *Children's positive and negative experiences with the Internet*. Valkenburg and Soeters' study of 194 Dutch children, aged 8-13, studied the positive and negative experiences of children on the Internet, as well as the motive for children’s Internet usage (Valkenburg & Soeters, 2001). Valkenburg and Soeters state that theirs is the first academic study to look at the motives of why children use the Internet. They reveal that many private market researchers have conducted extensive studies on children’s Internet usage, but that these companies charge the price of $3,995 per report, making obtaining the method and findings cost prohibitive to most researchers.

Valkenburg and Soeters speculated on many motives that would fuel children’s Internet usage. They speculated that traditional gender differences would be detected in this new medium, i.e., that boys would play more games than girls, and girls would use the Internet as a form of communication more than boys (Valkenburg & Soeters, 2001). They also speculated that as children grew older and their interests developed, researchers would see a shift from children being interested in general entertainment sites to sites aimed at specific hobbies and interests (Valkenburg & Soeters, 2001).
In their survey, Valkenburg and Soeters found that children listed having an affinity for computers, entertainment, online communication as well as offline communication as the motives for their Internet usage (Valkenburg & Soeters, 2001). Valkenburg and Soeters state that older children reported that they enjoyed using the Internet to find information about sports and their favourite idols. They found that boys and girls did not differ in their interest to play or download computer games as found earlier by Kubey and Larson, 1990. They did find that boys were interested in finding cheats codes when girls did not list this as an interest, and that girls named finding information as an interest, when boys did not specify this interest.

In an article entitled The effects of age, gender and computer experience upon computer attitudes, British researchers examined the computer attitudes of 278 students. The participants were aged 11-12 and 15-16. The researchers looked at age and gender and the relation of positive and negative attitudes towards computer use to see if these factors influenced experience with computers (Comber, Colley, Hargreaves, & Dorn, 1997). Computer use specific to this study included game playing, mathematics applications, word processing and computer programming.

Comber et al. found that a higher rate of male participants had a computer in the home and used it at least once a week, when compared to female participant use. They also found that a higher number of boys play video games than girls, but that computer use at school is equally reported between the genders (Comber et al., 1997).

When further analysed, the results showed that computer use for boys was stable across the 2 age groups, but for girls there was less computer use in the older age group than in the younger age group (Comber et al., 1997). However, there were no significant
findings on gender differences in liking the computer, when computer ownership and use were statistically controlled.

Thus, Comber at al., conclude that boys had more experience with computers than girls, that more boys owned computers at home than girls, and boys reported more varied uses for the computer than girls, i.e., playing games, programming and various applications (Comber et al., 1997). While this study does not specifically examine Internet usage, it does reveal that if access to both genders existed equally, there would be little inherent bias on the female participants' behalf that would predispose them to disliking the Internet.

In a 2000 Canadian survey conducted by Northstar Research Partners for Youth Culture, pollsters revealed that children ages 12-17 regularly go online. A full 85% of respondents reported that they have Internet access, with 3/4 of these stating that they have Internet at home (Ferguson, 2000). Girls report going online for an average eight hours a week, while boys report going online for an average of ten hours a week.

Northstar Research Partners for Youth found that teens use the Internet for chat, IM, and for homework purposes. Teens report talking to both friends and strangers while in chat rooms, and 56% report visiting a Web site that has content their parents would disapprove of (Ferguson, 2000).

Teens surveyed admit that they believe there should be more supervision on the Internet; 51% say that if it is not their parents who monitor them, there should be some regulatory power that oversees certain behaviours on the Internet. A large majority of parents polled, 73%, agreed that childrens' Internet activities should be monitored (Ferguson, 2000).
Northstar Research Partners for Youth report that outside of communication, homework is the single most popular reason that youth cite for using the Internet. The study revealed that parents of these youth also cite research as their primary focus when using the Internet. Contrary to these findings, both groups agreed that the sources on the Internet often cannot be trusted, as it is difficult to verify the content or the author of the content (Ferguson, 2000).

While much of the research around boys' preferences is in agreement, one area that needs explication is whether or not girls' preference for talking on the phone as a form of communication (Livingstone & Bovill, 1999) will cross over into the realm of Instant Messaging (IM) on the Internet. As for substantiated use, researchers have found that adolescents tend to use the Internet to visit Web sites, send and receive email, participate in online chat room discussions, and play online computer games (Turow, 1999; Turow & Nir, 2000; Valkenburg & Soeters, 2001; Walter, 2001). However, when the data are deconstructed by category of age, children do not send as many emails and participate in chat rooms as frequently as adolescents do (Turow & Nir, 2000; Valkenburg & Soeters, 2001). Thus, it must be noted that with the exception of the research conducted by Valkenburg and Soeters (2001) and Turow and Nir (2000) there is extremely limited academic research on preadolescent Internet usage (Valkenburg & Soeters, 2001).

Internet Safety and Privacy Issues

While the popularity of the Internet with children is much discussed (Mullner, 2001; Negroponte, 2000; Tarozzi & Bertolini, 2000), much of the youth and Internet-related research focuses on the various dangers that lie concealed on the Web (Freeman-Longo, 2000; Hansen, 1998; Kerner et al., 2001; Krausz, 2001; Skurzynski, 1999; Tarozzi &
Bertolini, 2000; A. Taylor, 2001). Three primary dangers to children have been identified (Freeman-Longo, 2000; Valkenburg & Soeters, 2001).

First, there is the issue of exposure to violence and sex and the developmental implications that this exposure has for children. A majority of the Internet-related research focuses on the effects of exposure to adult-oriented material on children (Freeman-Longo, 2000; A. Taylor, 2001).

Second, given that online chat rooms, IM, and email allow for complete anonymity and privacy, it has been reported that these interactive mediums are the choice environment of pedophiles to groom and manipulate unsuspecting children (Freeman-Longo, 2000). Thus, given the nature of chat rooms, email and IM, children are vulnerable to online harassment from known and unknown predators (Bushong, 2002; Valkenburg & Soeters, 2001).

Last, due to children's naiveté regarding the importance of maintaining the confidentiality of personal information (Canadian Press Newswire, 2001), and the unique environment of the Internet which allows strangers to appear trustworthy (M. Taylor, 2001), children may be at risk for physical harassment (Magid, 1998; Valkenburg & Soeters, 2001). The occurrence of the correlation of developmental curiosity of sexuality and relationships in young adolescents, and the frequency of Internet usage in this age group coincides to produce this unique vulnerability in and for preadolescent Internet usage (Magid, 1998).

One question that researchers are now beginning to speculate on is the level of awareness parents have towards the technology that their children use so frequently (Caywood, 2001).
In a survey conducted by America Online (AOL) Canada, 1600 Canadians were asked about their perceptions of children and safety on the Internet. Specifically the participants were all individuals who had both Internet access in the home and youth under the age of 18 living in the home. Results reveal that 85% of participants believed that they should be the primary supervisor of their children’s Internet use (Parents worry... 2001). However, 93% of the participants felt that the general public needed to be educated about children’s online safety, and that schools should be educating children about Internet safety. While parents expressed concern, only 18% admitted to using filtering devices on the home PC (Parents worry... 2001).

The Media Awareness Network (MNet) states that their 2001, survey Canada's Children in a Wired World illustrated the "disconnect" between parents' perceptions of supervising their children’s Internet activity and the children’s actual unsupervised Internet usage (Biehn, 2002).

In the study Young Canadians in a wired world: a new survey on how Canadian kids are using the Net, conducted by the Media Awareness Network, Anne Taylor, principal investigator, conducted two surveys of children and the Internet usage.

In the first study, Media Awareness Network surveyed 1000 parents by means of 30-minute telephone interviews. Findings reveal that the parents perceive themselves as being "in touch" with the Internet generation, and that their understanding is that the Internet is primarily a tool for education. 53% of parents reported that they monitor their children’s Internet use closely (A. Taylor, 2001).

When the Media Awareness Network probed this finding in focus groups, parents expressed that “monitoring” meant making sure that siblings got equal access to the
computer, that homework was done before using the Internet for entertainment, and keeping the phone line free for family use. When questioned directly, the majority of parents could not recount the names of sites visited by their children.

In the study that examined children's attitudes about Internet usage, the Media Awareness Network surveyed 5,600 students aged 9-17 years. The participants report that the Internet is their private world and that their parents are not privy to this realm. 57% percent of participants report that they communicate with strangers in IM, 44% of participants report that they have email accounts that their parents do not know of, and that 60% of the participants have gone into a private chat room to talk to with a single individual (A. Taylor, 2001). The Media Awareness Network reports that IM can have a positive influence on those children who have low self-esteem or disabilities, in that social exclusion based on stereotyping is less prevalent on the Internet.

In the Media Awareness Network's study the participants surveyed did not name any violent web sites, however, 40% of the participants report having visited a violent site in the past. 45% of the participants report that their parents know what sites they are visiting (A. Taylor, 2001).

One common report is that parents do not even know how to monitor Internet usage by accessing the history of where their children have been on the Internet (Goodale, 2001; A. Taylor, 2001). If parents are less technologically skilled than their children, surely then, this justifies a critical examination of the issues that surround preadolescents' Internet usage (Freeman-Longo, 2000). When we consider that preadolescents' Internet usage often occurs unsupervised (Donnerstein & Smith, 2001; Kavur, 2001; Magid, 1998), the culmination of the various developmental, educational, environmental, and
contextual factors that are involved in this common preadolescent pursuit demands a
more incisive, rigorous explication of this dynamic.

In an article entitled *Parenting the Internet*, researcher Bushong presents the findings
of her study regarding American childrens’ Internet usage. Bushong reports that in the
United States 25 million children used the Internet in the year 2000 (Bushong, 2002). She
reports that this number has tripled since the eight million who reported use in 1997.

Parents report that meeting their children’s educational needs was the primary
motivating factor in purchasing a computer for the home. However, when surveyed, a
group of parents reported that their family used the Internet to visit Web sites, send email,
perform basic searches, and infrequently visit chat sites. When asked, these parents did
not know that electronic databases and public library catalogues were available to them
online (Bushong, 2002).

While there seems to be a disconnect between intention and use, Bushong proposed 5
rules of Internet use that parents may consider adopting. First, Bushong states that the
computer should be placed in a highly visible area of the house; putting the computer in
the kitchen or the family room, Bushong argues, means that adults can intermittently
survey the Web activities of the child.

Second, Bushong argues that rules and expectations about Internet use should be
discussed and understood by the family members before an unexpected incident occurs.
Bushong reports that some web sites offer downloadable contracts about Internet use
(Appendix D), that both parents and children sign, so that the guidelines of behaviour are
clear to parent and child (Bushong, 2002).
Third, Bushong suggests that parents talk to their children about the manner in which online harassment can present itself. She states that children should be encouraged to notify an adult, when they receive a communication (email or IM) that makes them feel uncomfortable. Bushong states that children should be made aware that they do not meet people in person that they have met online unless their parents are present (Bushong, 2002).

Fourth, Bushong encourages parent-child dialogue on critical Web site evaluation skills, the affects of the media and advertising practices, and search skills. Bushong argues that there should be family rules in place about giving out personal information, even if the child believes the person seems familiar, or is known by the family (Bushong, 2002).

Lastly, Bushong recommends that the family as a unit should make decisions regarding Internet filters and parental controls, accessed either through the Internet service provider or self-installed software. Bushong argues that this is the best way to limit childrens' exposure to adult content, however she acknowledges that filters can also block information that one may desire access to, especially she notes, health oriented sites (Bushong, 2002).

While this thesis does not deal specifically with Internet safety issues, a list of safety related sources has been compiled in Appendix D, in the spirit of disseminating relevant knowledge to interested parties.

**Developmental Issues**

Most studies that have looked at the Internet in isolation have found that it is a benign tool (Seel, 1997). However, many issues arise when a critical stance is adopted in terms
of the educational and developmental value of the Internet. Many parents state that they struggle to keep up with the latest hardware and software so that their children will not be educationally hampered (Seel, 1997). Parents on the other side of the issue state that they worry that their children spend too much time in front of the computer screen (Kandell, 1998). Teachers caught in the middle struggle with increasing class sizes, decreasing attention span, and the perplexing knowledge that if one aims to reach children, it is necessary to use a medium and speak in a lexicon which appeals to them (Seel, 1997).

Message aside, the medium of the Internet raises questions and issues the likes of which are unique. Never in history has there been an item in the household which allows a minor the autonomy to go anywhere, see anything, and in some virtual respects, experience things without their guardian's permission or even knowledge (Bellamy & Hanewicz, 2001; Katz, 1996; Seel, 1997).

It is an understood tenet that an individual's and in general, society's value systems are informed and shaped by the media that they use (Anderson, Huston, Schmitt, Linebarger, & Wright, 2001; Villani, 2001; Weiser, 2001). This happens by means of the dialectical cycle of media projecting images, individuals adopting and internalizing these images, which in turn become images that are again projected back out into society (N. Murray, Bosacki, Pollon, & Golden, 2002).

Many developmental psychologists have argued that this media influence via television would be the downfall of the TV generation. Indeed, research reveals that television may have negative effects on its viewers. Repeated viewing of violence on TV causes an increase in childhood and adolescent aggression (Anderson et al., 2001; Groves, 2002; Johnson, Cohen, Smailes, Kasen, & Brook, 2002; St. Peters, Fitch, Huston,
Wright, & Eakins, 1991), timely viewing of fast food commercials is linked to compulsive eating and the rise of obesity (Horgen et al., 2001) and unrealistic body types on television aggravate body image and self-concept for developing girls and boys (Horgen et al., 2001).

Accordingly, the Internet is subject to all of the criticisms that apply to television, in addition to the fact that the Internet is interactive, allowing the user the freedom to pursue any type of uncensored media image (Seel, 1997). This means that the dialectical image projection cycle happens as fast as the consumer can demand and the creator can supply it. Accordingly, media trends that occurred through the medium of television and were once considered vast, fast, and influential, now pall in relation to the potential of the Internet.

In his article Plugged, in spaced out, and turned on: Electronic entertainment and moral mindfields, John Seel argues that the Internet will change our society. He claims that with the advent of the Internet, children can for the first time reach beyond the scope of what parents deem good for them, and be exposed to material that they have neither the judgment nor maturity to absorb (Seel, 1997).

Seel discusses the fact the University of Maryland has started group therapy sessions for those students who have cyberaddiction. He states that this new reality has yet to be felt in its entirety, as we have not yet grasped the implications of a medium that lets people pretend to be other than who they are in reality. Seel argues that RL is “colourless” in comparison with SL, and that it can not but be addicting in that one can meet anyone, be anyone, do anything and have little or no consequences to one’s behaviour or self (1997). Seel argues that this profound shift in the perception of reality
will have an effect on moral education and character formation, in that achievement and success in real life requires careful forethought, planning, and repeated training of the good choices that good behaviour requires (Seel, 1997).

Thus, Seel argues that there is a need for critical assessment of technology in our lives. He argues that we need to ask if the technology in our lives is shaping our perception of reality or serving our reality. Seel submits that if we do not ask this question of technology, as a society we will begin to lose control and direction of it, and not be able to foresee the impact it may have on us (Seel, 1997).

In line with the concerns about the Internet and its ability to influence and shape values, critics once called TV the "plug-in drug" (Winn, 1985, 2002). "TV addiction" was a popular term, also used to describe people and or children who seemingly had the inability to limit and control their television viewing.

In a similar vein, Robert Freeman-Longo in his article *Children, teens and sex on the Internet* (2000), argues three points in regard to children and the Internet. First, he argues that there is an increasing concern about under aged persons being exposed to adult content on the Internet. Second, he states that parents are not aware of the many ways in which their children can be exposed to adult content. Third, Freeman-Longo argues that because the Internet is a fairly new medium we cannot fully understand the long-term affects of this exposure (Freeman-Longo, 2000).

Freeman-Longo states that sexual abuse has reached epidemic proportions in the United States and that as a society we must become aware of the impacts of children having online exposure to sexual content. In light of sexual addiction, Freeman-Longo wonders what the potential these exposures will have on youth developing sexual
addictions. He states that there are no studies that analyze children and teens on the Internet, and the compulsive behaviours such as frequent pornography viewing or masturbation that may be connected to repeated exposure (Freeman-Longo, 2000).

Freeman-Longo reports that children have access to adult chat rooms, adult video sites and pornography sites simply by possessing an email account and lying about their age, as there is no way to verify this kind of information on the Internet. Chat rooms are also a venue where people lie about their age and even gender. Freeman-Longo puts forth that while many chat room name titles appear harmless, once an individual is inside, it is filled with sexual content (Freeman-Longo, 2000). Freeman-Longo notes that one does not need to participate in the sexual content themselves, as the chat room design allows a person to sit back and observe what the participants are saying without participating in the chat (Freeman-Longo, 2000). Thus, exposure to explicit language can occur without participation.

Freeman-Longo notes that Internet and chat line usage can bring about positive development in teenagers. He puts forth that the Internet may help teens develop relationships based on common interests and attachment, not merely physical appearance. He states that while youth are on the Internet using the keyboard to communicate, they are developing an ability to express themselves in words, which has transference value to school or future career. However, Freeman-Longo states that because many youth are alone while using the Internet, they are equally likely to be exposed to explicit language by means of sexual propositions from strangers or "friends" that have not been met in real life (Freeman-Longo, 2000).
Freeman-Longo conducts a very disturbing commentary when he analyzes the possible ramifications of youth being exposed to explicit material when they are developmentally impressionable. He argues that children or youth who seek stimulus and pleasure online may be stimulated to the point that the yearning for actual sexual experience may push the adolescent to early sexual experience, which may entail a myriad of difficulties, from unwanted pregnancy to acquiring sexually transmitted disease. Further, Freeman-Longo argues that this may be a generation who develops a deep distrust of people, as on the Internet people may not be as they represent themselves, and the lines of reality and relationships become blurred (Freeman-Longo, 2000).

Last, Freeman-Longo states that with continued exposure to Internet chat line relationships, users become familiar and experienced with seeking intense levels of excitement through Internet relationships. This may result in some individuals who do not find adult healthy sexuality as fulfilling or exciting when compared to Internet relationships, which may culminate in a pursuit of compulsive sexual stimulation (Freeman-Longo, 2000).

Freeman-Longo documents some specific examples of how preadolescents and adolescents can be exposed to explicit material on the Internet. As part of his analysis, Freeman-Longo interviewed therapists and counsellors who work with adolescents addicted to the Internet. The professionals he interviewed recounted stories of how adolescents would obtain access to pornography sites. Counsellors report that many adolescents simply take their mother or father's wallet off the dresser, obtain a credit card number, and replace the wallet. In possessing a credit card number, and by providing a
false birth date, the adolescents were allowed to purchase an exclusive membership to a sex site (Freeman-Longo, 2000).

Freeman-Longo argues the Internet filters are not always the answer. One professional therapist reported that her own 14-year-old son had disabled the Net blocking software that was installed on his computer; this woman has since bought new software and reports that her son has not disabled it – yet (2000).

Freeman-Longo documents another instance wherein a child was doing a research project on golden retrievers, in the presence of an adult. When the child typed in "golden retriever", the screen instantly returned a "golden shower" Web site, and the child was exposed to a picture of two adults in the midst of sexual relations, urinating on each other (Freeman-Longo, 2000).

Anne Taylor in the Media Awareness Network study also documents a similar anecdote. She relays the incident wherein a few female adolescents were trying to find their favourite rapper Pink's Web site, and by typing in www.pink.com were exposed to a hard core pornography site and the requisite sex-related java-loop which kept the adolescents exposed to the pornography for many minutes (A. Taylor, 2001).

Corresponding with this understanding The American Psychological Association has gone so far as to classify Internet addiction, or "cyberaddiction" as a new clinical disorder in that it is an addiction which involves failed impulse control without involving an intoxicant (Brenner, 1996; Drabman & Thomas, 1974; Freeman-Longo, 2000; Huesmann, 1986; Joy, Kimball, & Zabrack, 1986; Kraut et al., 1998; B. Murray, 1996; Rattiner, 1996; Roan, 1996; Seel, 1997; K. B. Young, 1996; K. S. Young & Rogers,
In 1998. In addition to concerns about addiction, there are moral and character development issues that are raised.

In 2000 a funded report to the Markle Foundation was released, entitled *Children and Interactive Media* (Wartella et al., 2000). This report cumulatively reviews the past research of various forms of interactive media and the social, cognitive and health related findings.

Wartella argues that today children spend as much time using the media as they spend in school or being with friends and family (Wartella et al., 2000). She submits that while many researchers have studied the different mediums (video games, Internet, chat, email), few have looked at the content as it is a "moving target". Wartella states that the options that children have to choose from on the Internet are immense and not limited and able to be monitored, like television in the past (Wartella et al., 2000).

Wartella acknowledges that there are gender differences in how interactive media is used. She argues that the research shows that boys are heavily invested in game playing, while girls do not show equal interest (Wartella et al., 2000).

Wartella puts forth that few studies have been conducted on gender and computer technology, and results revealed that girls and boys use the computer equally. Girls are not computer phobic, but rather, they are critical of the computer culture, as they dislike and the action and violence that tends to predominate games (Wartella et al., 2000).

On a positive note, Wartella reveals that boys who frequently play video games have more social contacts with friends outside of school, as game playing serves as a bond for young males (Wartella et al., 2000). Research also reveals however, that the playing of
violent video games does encourage displays of aggressive behaviour, attitudes and thoughts, although the long-term affects are not yet understood (Wartella et al., 2000).

Developmentally, Wartella’s review of research concludes that it is not the medium that affects children's social, cognitive, intellectual, or physical development, but the content of the medium that is influential. Wartella acknowledges that presently there are more questions than answers as this type of (necessarily) longitudinal research is in its infancy (Wartella et al., 2000). Wartella concludes that research on children's interactive media use is in an early stage, but in order to understand this vast, and rapidly evolving medium we need to collaborate between the disciplines of education, psychology, communications, and sociology and to disseminate our individual research findings as a means to capture and understand the extensive impact the interactive media has on our youth (Wartella et al., 2000).

Society has yet to see a generation who have been raised with the option of pursuing and existing in an alternate reality (chat lines, cybersex, and multi-user domain role playing games - MUDs), where a virtual, consequence-free existence (SL) can be experimented in and often chosen over the demands of actual existence (RL; Dery, 1996; Negroponte, 1995, 2000; Sirius, 1994, Turkle, 1997). Thus, when compared to television, research is in its infancy in terms of revealing and understanding issues around preadolescents' Internet usage (Valkenburg & Soeters, 2001).

**Summary of the Review of Literature**

As stated and supported by the review of literature, there is very little current research activity in the area of preadolescents' Internet media habits. What research has been conducted is primarily concerned with the issues of child Internet harassment and
cyberaddiction. This leaves many questions regarding preadolescents' Internet usage to be addressed and answered in a timely manner.

First, given Canada's disparate geography, how are Canadian preadolescents spending their time on the Internet? Specifically, what are Ontario preadolescents doing on the Internet? What kind of activities are Canadian children pursuing on the Internet? Do their interests differ from children around the world? Are there gender or age differences in the activities that they pursue on the Internet? Do girls utilize the Internet as a more technologically savvy form of social interaction? As research predicts, are boys more invested in Internet games? Due to the concerns of psychological and physical harassment, is there foundation for concern regarding cyber-bullying? In terms of parental control, how many preadolescents report being alone while surfing the Net, or being with a parent who monitors them during their Internet access time? Are the findings that parents do not monitor their childrens' Internet access accurate for Ontario children?

This study will answer these questions, and at a theoretical level, raise questions and explicate the paradox of the Internet – that being, how a new technology, which is lauded as progressive and "good," can, in certain contexts, threaten preadolescent well-being and development.
CHAPTER THREE: METHODOLOGY AND PROCEDURES

The process of this research has an emerging inductive methodology (J. W. Creswell, 1998), guided by the theoretical framework of Social Learning theorist Albert Bandura (1977, 1989, 1994), cognitive psychology, and the psychology of Erik Erikson (1963, 1985). There are 5 philosophical paradigms and 2 social science theories that, once articulated, establish that the method and overall spirit of this thesis is strongly justified and grounded in tradition (Caelli, Ray, & Mill, 2003). As this study explores new phenomenon and yet is grounded in tradition, it maintains the standards of responsible academic research (J. W. Creswell, 1998; LeComte & Preissle, 1992).

Description of Operational Procedures/Method

Research Design

In this study I have analyzed 2 years of data taken from an in-progress 3 year longitudinal, ethnographic, interpretative study entitled Children's Stories as Cultural Mirrors: Self-concepts and Worldviews that follows children in Grades 1, 4, and 6. One of the major goals for the longitudinal design is to track developmental changes in preadolescents' media preferences as a means of understanding the process of identity formation. Children's Stories as Cultural Mirrors: Self-concepts and Worldviews utilized a three-stage approach to data collection.

In the first stage of the study, the participants completed a 24-page Reading and Viewing Questionnaire, which required 60 to 75 minutes to complete. The Reading and Viewing Questionnaire was at times inventory style, interchanged with free-association generation of responses. See Appendix A for a complete copy of the Reading and
Viewing Questionnaire. Importantly, the students were often asked to elaborate and provide an explanation for their answers as a means to more fully understand the response provided.

The Reading and Viewing Questionnaire (Appendix A) is an inventory-style questionnaire that asks questions in regard to the participant’s media preferences. Specifically, it asks preadolescents to rate and comment on their reading, movie/video, TV, music, electronic game, and Internet preferences. The Reading and Viewing Questionnaire also asks about the participant’s recreational activities, their opinion on academics, and also has a set of self-concept questions that are designed to assess how the participants view themselves and what kind of people they would like to be when they grow up.

Personally, I have played 2 roles in the data collection process. In the 1st year of the study I served as a Research Assistant. I went to the schools and facilitated administering the questionnaires in individual classrooms. In the 2nd year of the study, I became the Project Manager and it was my responsibility to manage the Research Assistants, oversee the administrative aspects of the project, and personally visit schools on a weekly basis to collect data.

For the purpose of this study, the questions on Internet usage were used to generate both quantitative and qualitative data, which were then used to compile an understanding of preadolescents’ usage of the Internet. Specifically the findings of this study addressed questions regarding how preadolescents use the Internet and the behaviours associated with this usage, why preadolescents use the Internet in terms of the content that they are
exposed to, and what the relevant issues are that arise out of preadolescents' Internet usage.

Quantitatively, statistics were compiled using Statistical Package for the Social Sciences version 11.0 (SPSS) on how many preadolescents belong to a chat group or IM, use email, download music, or use the Internet to play video games. See Appendix B for the Internet Usage Section of the Reading and Viewing Questionnaire.

Privacy and Confidentiality

For the purpose of maintaining confidentiality, each participant who completed the Reading and Viewing Questionnaire was assigned an eight-digit unique code that was non-identifying. School names have been changed to protect the participants. The alphanumeric code is used in all forms of data analysis, including the data-analysis software EthnographV5. Any findings that are used in conference presentations, journal articles, or Web site reports will contain only average scores and non-identifying group information (Elliott et al., 2001; Howe & Moses, 1999).

For administrative purposes in accordance with Brock University Ethics Guidelines, all data will be kept in a locked filing cabinet for up to 5 years after the completion of the study. Upon completion of this time all data (including paper, electronic disks, and audiotapes) will be destroyed according to the "confidential papers" destruction policy, Faculty of Education, Brock University.

Participants

Participants were selected in order to obtain a study sample that represented geographical, cultural, and ethnic diversity across Southern Ontario (Elliott et al., 2001).
The sample includes the schools Apple View, Willouby, Eastown, and Trentway, which reflect socio-economic and cultural diversity from urban, rural and First Nations schools.

**School descriptions**

Apple Valley is a large public school, situated in a rural area outside a metropolitan city. The school is new and is located in an agricultural area away from malls and services, however suburbs are occupying more of the land. The population of the school is primarily Euro-Celtic, with few visible minorities.

Willouby School is a mid-sized public school, located in small town, which is quickly being engrossed by urban sprawl. The school is within walking distance of most homes, and is situated in a quiet corner of the town. The population is Euro-Celtic with few visible minorities.

Eastown is a small school located on a First Nation reserve. The school is situated outside the town, near woods and bush. The school student population is primarily First Nations with a few students of Euro-Celtic heritage.

Trentway is a rural school located in the midst of agricultural land. Logistically it is not near any urban centres or services. It is a mid-sized school comprised of students from diverse ethnic backgrounds. While housing developments are currently under construction, this school is isolated and most students are transported to school by bus.

**Data collected under an umbrella project**

In September of 2001, members of the SSHRC umbrella project sent out the research proposal (approved by Brock University Sub-Committee on Research with Human Participants) to various school boards within Southern Ontario. The proposal included letters of information and consent forms (See Appendix C), which explained in detail the
voluntary nature of participating in the study, the student/school confidentiality agreement, and the time requirements needed to complete the Reading and Viewing Questionnaire (Elliott et al., 2001). Upon receiving board consent, the primary researchers, along with accompanying research assistants, contacted the principal and negotiated the date and time in which to conduct the study. Letters of information and consent forms were then sent home with students from the participating Grades 1, 4, and 6 classrooms, inviting them to join in the study. Participation in the study was strictly contingent upon the child presenting a signed consent form (Appendix E). On the day of the study those children who did not have consent to participate were assigned other work by the homeroom teacher to be completed during the duration of the questionnaire (Elliott et al., 2001).

**Instrumentation**

The overall method was a cross-sectional approach to data collection (Smith & Davis, 1997). The Reading and Viewing Questionnaire (Appendix A), was developed by Dr. Anne Elliott et al. for the study *Children's Stories as Cultural Mirrors: Self-Concepts and Worldviews*, (Elliott et al., 2001), and is aimed precisely at participants in the primary and middle school years. The questionnaire is a combination of multiple choice questions which gather demographic data, and open-ended questions which collect a range of opinions from the participants (Smith & Davis, 1997).

**Data Collection and Recording**

The Reading and Viewing Questionnaire was conducted in the participants' school homeroom, library or resource centre. The data set consisted of Grade 6 students from
four different schools over a 2-year period. In total, 64 participants completed the Reading and Viewing Questionnaire.

Researcher field notes were kept during the data collection process. Field notes included themes and statements made by participants during informal conversations and observations of participants who used library computers after completing their questionnaire.

**Data Processing and Analysis**

The data have been analyzed using both quantitative and qualitative analyses to draw conclusions about the data. The general protocol is a collect, code, interpret cycle (Coffey & Atkinson., 1996; Creswell, 2002), which may be best described as Phenomenological Ethnomethodology (Merriam, 1998). I argue that this study is a Phenomenological Ethnomethodology as I chose to construct a dialectical data analysis approach by viewing the data through the lens of educational, cognitive, and psychological theories (J. W. Creswell, 1998). Out of this phenomenological process I hoped to arrive at a shared essential understanding of preadolescent Internet usage (J. W. Creswell, 1998; Merriam, 1998; Van Manen, 1997). In many ways the methodology parallels the data in that it was a search for being and becoming (Van Manen, 1997) and that it seeks to be heuristic (Merriam, 1988). Also this work was, to a certain extent, influenced by Ethnology, as the Internet, as used by preadolescents, is a medium used by a culture-sharing group (J. W. Creswell, 1998). Preadolescents are a culture unto themselves as they share distinct cultural interests such as movies, books and hobbies, as well as a distinct lexicon in their everyday use of slang. Thus, as an outsider, I sought to uncover a deeper understanding
of the preadolescent experience, as well as generalize the conclusions to a larger population (LeCompte & Preissle, 1992).

This study is not strictly an Ethnomethodology due to the fact that there is no interactionist agenda (LeCompte & Preissle, 1992). Typically, Ethnomethodology has two specific elements to it. First, the researcher is concerned with how individuals make sense of their world and experiences (Poore, 2002). For the purposes of this study, I am concerned with how preadolescents adapt and make sense of the Internet. The second element of Ethnomethodology, does not, however apply to this study. Ethnomethodology characteristically focuses on the interaction between the researcher and the participant and typically ignores any data that are collected. Thus, this study is not wholly Ethnomethodological as the data that are collected are used to understand how preadolescents make sense of the Internet.

Coding of the data has been done in the basic or generic style (Merriam, 1998), augmented by the qualitative software Ethnograph (Seidel, (c) 1998). The software augments the a posteriori, line-by-line grounded analysis process of identifying concepts, identifying themes or patterns, identifying categories, and noting outliers (Charmaz, 2000; Freeman, 1998; Merriam, 1998). Qualitative observations and analysis were augmented by quantitative descriptions to bring a statistical dimension to the coding and categorizing technique. Descriptive statistics have been compiled using the software program SPSS (Statistical Package for the Social Sciences Version 11.0) on how many preadolescents use MSN, chat, email, play Internet games and if they report being supervised or alone while on the Internet.
Thus, the data analysis reveals common concepts, themes and patterns found in the data (Creswell, 2002; Freeman, 1998). The data analysis explores and builds an understanding of the participants' perceptions of their Internet usage.

**Educational Importance**

Findings have been shared with the participants with the express purpose of ensuring a reciprocal analysis process. It was expected that students found the process of completing the Reading and Viewing Questionnaire beneficial in the sense that the children have been given a "voice" to talk about this aspect of their experimentation with Internet as a media, communication, and information source (Howe & Moses, 1999). In the classroom, participation in this study may serve as the impetus for discussion regarding preadolescent Internet usage, in line with the standards of the current media studies curriculum (Ministry of Education and Training, 1997).

Study findings have been disseminated in various ways. First, participants have been invited to view and interact with the Web site at URL http://childmedia.ed.brocku.ca/ created for the umbrella SSHRC project *Children's Stories as Cultural Mirrors: Self-Concepts and Worldviews* (Elliott et al., 2001). This Web site includes general themes and patterns extracted from the data, descriptive statistics, conference presentations, a reading list of books for preadolescents, and specifically related to this thesis, Web links that discuss online safety for preadolescents, provide information on Internet filters, and regulated sites that discuss chatroom threats to preadolescents (for a list of relevant Internet sites, see Appendix D). This resource, provided to teachers and parents, will prove especially useful to those individuals wanting to make informed decisions regarding curriculum and leisure pursuits on the Internet (Elliott et al., 2001). Participants
have also been invited to join in a classroom-based debriefing session, held at the school, where findings are discussed under the auspices of the umbrella SSHRC project. Finally, it is my hope for the participants of this study that they develop new insights into the nature of preadolescent use of the Internet and how this behaviour may affect their psychoeducational and psychosocial development.

*Free and Informed Consent*

Letters of information and consent were distributed to all potential participants. Only those students who returned a signed consent form were permitted to participate in the questionnaire phase of this study. It is important to note that the primary researcher of the umbrella SSHRC research team believed it important to the spirit of the study that the preadolescents participated willingly; thus, student participants were required to sign the consent form along with their parent or guardian, indicating that they understood the conditions of participation and were doing so of their own volition (Elliott et al., 2001).

This study posed no risks to the participants, other than those outlined in Appendix E.

**Philosophical Traditions of Methodology**

*Rhetorical Assumptions*

The first philosophical tradition to be discussed comprises the rhetorical assumptions inherent in the thesis. The language and their inherent meanings which permeate this work have evolved, and are thus, fluid, operational (Jaeger, 1988), and most importantly, subjectively meaningful for the participants (J. Creswell, 1998; J. W. Creswell, 1998). Thus, while terms may be operational, they will be contextually situated and explained
from the perspective of the participant so that the meaning is clear (J. W. Creswell, 1998).

**Epistemological Assumptions**

Epistemologically, the assumption of the relationship between the researcher and the researched needs to be explicated (J. W. Creswell, 1998). Questions of age-centred understanding may arise when researchers study preadolescents. I have often asked myself if I can truly understand the nature of the preadolescents' world and their representation of their experience if I have a vastly different age, experience, and world view. I have come to the understanding that the two worlds are not necessarily incommensurate – that is we do not speak two different "languages." While an older, mature researcher can never become an insider in a preadolescent universe, past experience, theory, and an understanding that preadolescents can create and report on their reality, informs the communication to the extent that a shared understanding of the preadolescents' experience exists (Knupfer, 1996).

It may also be noted that when researching and discussing an inclusive medium such as the Internet, the researcher is able to participate in the experience, and that the only element left out is the act of interpretation, which can be, from a phenomenological viewpoint, problematic but not insurmountable, as those of us who participate in the day-to-day act of communication will attest to (Heidegger, 1966; Van Manen, 1991).

**Establishing Credibility**

As previously mentioned, issues of phenomenological interpretation often evolve around the central issue of researcher credibility. One of the central tenets of collecting
valid data is establishing trustworthiness and credibility (Lincoln & Guba, 1985). In interviewing preadolescents, I have found that being authentic and allowing spontaneity are the keys to establishing credibility (Knupfer, 1996; Lincoln & Guba, 1985). I do not seek to become like a child, but rather a genuine, interested participant with an inclusive perspective who may even share their sense of humour. Being able to converse about Nintendo's *Mario Kart* and the role of Princess Peach, the *Harry Potter* Web site (Warner Brothers, 2003) and participating in the Sorting Hat Game, the availability of downloadable games on the Pop Cap site, or the novel *Holes* by Louis Sachar (1998) all help to retain the spontaneous orality that communicates to children that I am a credible, interested adult (Knupfer, 1996).

**Ontological Assumptions**

The ontological assumptions of this research project include the realities of the researcher, the participants who are being studied, and those of the reader (J. W. Creswell, 1998). The effect of Internet usage on a preadolescent’s social existence is palpable, as one participant expresses: "you get to talk to people all around the world" because it is "fun to talk with people you don't know" (2WMF0712, www.MSN.com, www.whyville.com). The Internet is the preferred form of communication among many of those preadolescents who have access to it. While reality is subjective, it can be argued from the data that contemporary preadolescents are fond of the Internet because it is a form of communication that offers unlimited freedom, and is simultaneously condoned or ignored by parents or guardians because the preadolescent remains in the home under the watchful eye of the parent.
From the parents' perspective, while some acknowledge a media-generated awareness of the possibility of danger on the Internet, many acknowledge that they themselves are not "tech savvy" and that their preadolescents, in fact, understand how to operate the computer better than they do (Biehn, 2002; Freeman-Longo, 2000; Goodale, 2001; A. Taylor, 2001). Thus, from the perspective of educators, parents, and guardians of preadolescent children, this study may be in many ways a glimpse into the secret world of preadolescent Internet activity.

From the perspective of the researcher, I stand as an informed Neo-Luddite. I am well-versed in how the Internet works and have used chat and instant messaging to a great extent. However, while I am in agreement with Sherry Turkle (1997) that the Internet is often an impoverished substitution for meaningful communication due to its unilateral nature, simultaneously, I am still able to appreciate how this phenomenon could revolutionize the experience of being a preadolescent in that it offers curious young minds the autonomy to make decisions and have increasingly sophisticated experiences.

**Axiological Assumptions**

The axiological assumptions are, quite naturally, the most tenuous of the five philosophical traditions to discuss. While this thesis explores preadolescents' use of the Internet and how this impacts upon their educational and psychological development, it also theoretically speculates on the nature of living and experimenting in what will be called *Simulated Life* (SL) or non-veridical reality. The nature of SL is such that the participant participates in experiences in which her/his body may be passive, and yet her/his mind is fully engaged, understanding and experiencing as much as his/her imagination and past life experience will permit (the Internet experience is differentiated
from reading a novel in that there is often the participation of another individual, thus in some limited respects it is interactive as opposed to imagined). Thus, SL raises issues somewhat tantamount to Hilary Putnam's "brain in the vat" thought experiment (Martin, 1991); when distilled down, the philosophical question remains — if you have had an experience in SL, have you also had it in Real Life (RL)? If so, do the experiences preadolescents initiate and participate in on the Internet constitute formative experiences that may affect their psychosocial and psychoeducational development? These questions are primarily all value laden, and thus, axiological in nature, and as such do not lend themselves to immediate categorical answers. However, within the discussion section of this thesis I will fully articulate the questions that educators, parents, and society at large should be asking for and of preadolescents in the digital generation.

**Summary of Chapter**

The overall goal of this study was to provide an explanation of the contemporary phenomenon of Canadian preadolescents' Internet usage and the various psychoeducational and psychosocial implications that this behaviour may have on preadolescent development. Until now, we have only had thin statistical descriptions of this behaviour with no relevant elucidation (LeCompte & Preissle, 1992). By taking a dialectical approach, which includes utilizing various psychological and educational theories, grounding the study deeply in philosophical paradigms and social science traditions and supporting a qualitative investigation with quantitative relationships, this study's methodology has been strongly rooted in tradition and as such has maintained the high standards of responsible academic research (Caelli et al., 2003; Howe & Moses, 1999).
CHAPTER FOUR: ANALYSIS OF CONCEPTS, THEMES AND OUTLIERS

The next two chapters of this thesis will elucidate the How, What, and Why of preadolescent Internet usage. Chapter 4 will answer the how and what by explicating both a macro and microanalysis of the data. The macroanalysis will consist of examining participants' shifts in their Internet usage from the 1st year of the study to the 2nd year of the study. The microanalysis will consist of a qualitative metacoding of the data. Year 1 and year 2 of the data were collated and coded cumulatively to apprehend the central concepts, categories, themes, and outliers that articulate the participants' experience using the Internet. Researcher field notes supplement data collected from the participants. Field notes include ad hoc conversations between the researcher and the participants, as well as observation of participant computer usage. Chapter 5 will put forth questions that educators, parents, and guardians may ask in determining why preadolescents use the Internet and postulate some possible psychosocial and psychoeducational outcomes.

Ethics approval was granted by Brock University and all participants agreed to take part in this study. Participants are identified by code names to protect confidentiality and anonymity. As well, school names have been given pseudonyms to protect participants. Quotations collected from the raw data are unedited for the purpose of maintaining the integrity of the data, to illustrate the developmental level or understanding of the participants, and to honour their participation in this study. All raw data will be sourced in a consistent format for reading ease. Participants' words will be cited in double quotation marks followed by their code number and the Internet Web site that the participant is referring to as the participants have named it. It is acknowledged that Web sites are often either incorrectly named or given a generic name by the participant (i.e.,
"game site"). This fact is preserved throughout the analysis to illustrate the point that preadolescent Internet users do not necessarily possess a high level of digital literacy to make fluent use of the Internet.

**Coding: Identification of Concepts and Themes**

While it is acknowledged that the limitation of qualitative data is that neither correlational nor causal generalizations can be drawn (Coffey & Atkinson., 1996; J. Creswell, 1998; Creswell, 2002), it can be claimed that the findings articulated represent this unique sample of preadolescents from the four participating schools. What the data do give us is a deeper understanding as to how and for what this sample of preadolescent participants use the Internet, which may give us an understanding of preadolescent Internet usage that is generalizable to the larger population.

As stated in chapter 3, coding of the data was done in the basic or generic style (Merriam, 1998) *a posteriori* in a line-by-line grounded analysis of identifying concepts, categories, themes, or patterns and noting outliers (Charmaz, 2000; Coffey & Atkinson., 1996; Freeman, 1998; Merriam, 1998). The analysis has been augmented by the qualitative software Ethnograph (Seidel, (c) 1998) version 5.0. Codes and category names are *in vivo* codes, meaning that the terminology or name of the category is derived directly from the participants as they have articulated their experience (c.f. Glaser, 2002).

The first step undertaken in the data analysis was to eliminate any data collected from participants who did not complete year 2 of the survey. This was done for continuity of the longitudinal study so that the sample analyzed consisted solely of participants who completed both year 1 and 2 of the Reading and Viewing Questionnaire. Participant attrition was relatively stable at a rounded average of 16%. In Apple View, 4 participants
were lost out of an original 23 participants (rate of attrition, 17%). In Eastown, one participant was lost from an original pool of 11 participants (rate of attrition, 9%). In the third school, Willouby, 4 participants were lost from the 21 participants in the 1st year of the study (rate of attrition, 19%), and in Trentway, 4 participants were lost reducing the total to 17 participants who completed both years of the study (rate of attrition, 19%). Thus, for both years of the study, Apple View had 19 participants (10 male P, 9 female P), Eastown had 10 participants (2 male P, 8 female P), Willouby was represented by 18 participants (4 male P, 14 female P), and Trentway had 17 participants (6 male P, 11 female P), for a total of 22 male participants and 42 female participants. In total the study has 64 participants.

The next step in data analysis was to organize the data in such a way that each participants' data were grouped together so that year 1 and year 2 data could be viewed chronologically in order to identify any developmental shifts that may have taken place in the individual participant over the course of the 2-year study. Additionally, the data were analyzed by school and gender for the function of understanding gender differences.

Subsequently, the raw data from the Reading and Viewing Questionnaire were then analyzed for concepts identified by the preadolescent participants. Initially 315 concepts were identified in the data. These 315 concepts were then collapsed into 8 main categories (Coffey & Atkinson., 1996; Creswell, 2002; Freeman, 1998). One assumption of the Reading and Viewing Questionnaire is that if a participant can name a Web site and document the type and level of activity that takes place within said Web site, the participant has then identified him or herself as an individual who engages in Internet usage.
Qualitative concepts and categories were augmented by quantitative descriptions to bring a statistical dimension to the coding and categorizing technique. Using SPSS (Statistical Package for the Social Sciences, version 11.0), descriptive statistics were compiled to describe if they belong to chat group or IM, use email, download music, or use the Internet to play video games.

Through the data analysis process common concepts, categories, themes, and patterns were found in the data (Coffey & Atkinson., 1996; Creswell, 2002; Freeman, 1998). The goal of the data analysis was to explore and build an understanding of the participants' perceptions of their Internet usage.

Longitudinal Analysis of Participants' Choices: Developmental Shifts or Merely Preference?

The data were organized so that a macroanalysis of each participant's Web site choices could be analyzed from the 1st year of data collection to the 2nd year of data collection in chronological order. Web site choices were coded to identify shifts in participants' Internet usage. The data were coded as No Web site, meaning that no Web site was identified by the participant, General Web site, meaning that the Web site identified was a general interest site, and Specific Interest, indicating that the Web site named is related to a specific interest, person or hobby.

The code General Interest Web site (G.I.) denotes Web sites that are general interest sites. This code includes general gaming portals – sites that offer the player many different games, such as addictinggames.com, coffebreakarcade.com, and newgrounds.com, search engines such as google.com, or Web sites that discuss general
forms of hobbies such as a generalized sports site (i.e., saltlake2002.com) that discuss all types of sport.

The code Specific Interest (S.I.) includes Web sites that name particular celebrity names (mary-kateandashley.com, harrypotter.com, blink182.com), specific hobbies such as skateboarding, or playing a game with a site devoted solely to that subject (neopets.com, exco.com, transworld.com), and specific activities such as chatting on MSN messenger. The specific code also includes downloading sites wherein the participant would engage in the specific activity of downloading music, games, or movies (napster.com, kazaalite.com) or email (hotmail.com). Data from all but 2 of the 64 participants fit into this coding regimen. These 2 outliers named both generalized interest sites and specialized interest sites in their 1st and 2nd years. For example 1 female from Eastown named www.bored.com (generalized portal site) and harrypotter.com, a specialized interest site in her 1st year of the study, while naming harrypotter.com (specialized site) and google.com (a generalized search engine site) in the 2nd year of the study (2EGF0725).

Macroanalysis of the developmental shifts of the participants revealed five types of patterns of preadolescent Internet usage. Participants identified themselves as not being able to name a favourite Web site over the 2 years of the study; as moving from having no favourite Web site in the 1st year of the study, to naming either a general or specialized interest Web site in the 2nd year of the study; as having a general type favourite Internet site in both years of the study; as moving from having a general type favourite Internet site in the 1st year of the study to having a specialized Interest site in
the 2nd year, as well as participants who identified as having specialized interest type sites as their favourite Internet site in both years 1 and 2.

Upon completing the macroanalysis it was revealed that in the 1st year of the study, 28% of the participants did not name a favourite Web site, thus indicating that in the 1st year of the study almost 30% of the total population of the study did not engage in frequent Internet usage. This shifted dramatically in the 2nd year. In the course of one year, 15.5% of the participants shifted from self-identified infrequent Internet usage to frequent Internet usage in that they provided Web site names and documented the type and kind of activity that they would participate in on said Web site. Of note was that of the 12.5% of participants who did not name a favourite Web site in year 1 or year 2 of the study, 8% of the participants in this category were female.

Nineteen percent of participants identified themselves as having a preference for generalized interest sites in years 1 and 2, as well 19.0% of participants identified themselves as having a generalized interest site preference in year 1 and then shifting to a specialized interest site in year 2. Especially interesting is that the gender breakdown is exactly equal in both category: 6.25% of male participants did not have an interest shift in that they identified themselves as liking the same type of generalized Web sites in both year 1 and year 2, as did 6.25% of males who acknowledged a shift from liking generalized Web sites in year 1 to preferring specialized interest sites in year 2 of the study. Equally 11.0% of female participants reported that they preferred generalized type sites over both years of the study, while 11.0% of female participants stated that they changed their preference from a generalized-type Web site in the 1st year to a specialized-type Web site in the 2nd year of the study.
Most interesting in the macroanalysis however, was that 22.0% of female participants reported that in the 1st year of the study they preferred special interest-type Web sites and that this preference remained stable into the 2nd year of the study. This contrasts with 3.0% of male participants, who named an inclination for specialized interest Web sites in both years of the study. Further study may explicate this gender difference in preference of type of site.

A small percentage of participants reported a digression of preferences: 6.25% of the participants reported shifting from specialized interest type Web sites to generalized interest Web sites, while 1.0% of the participants reported shifting from a generalized interest in the first year to no favourite Web sites in the 2nd year, and while another 1.0% of the study population reported shifting from a specialized type interest in the first year to no favourite Web sites in the 2nd year. It is of note that both of the participants who shifted from Internet usage in the 1st year to not naming a favourite Web site in the 2nd year were both female participants who had identified themselves as heavily involved in Internet use in the 1st year.

The "What": Content Analysis of the Five Most Frequently Named Sites

There have been few attempts to analyze Internet Web site content as it is a "moving target" (Wartella et al., 2000) that changes with trends and pop culture developments. Past research shows that boys use the Internet to play games, while girls use the Internet for homework, email, and chat (Comber et al., 1997; Kavur, 2001; Wartella et al., 2000). However, a 2000 report for the Markle Foundation on Children and Interactive Media argues that because of the influential nature of media on children's social, emotional, physical and educational development (Abbott, 2001), the moving target of Web site
content must be scrutinized in an objective manner to more fully understand the breadth and depth in which preadolescents are being influenced (Wartella et al., 2000). This may be especially prescient considering in this study participants report being alone while on the Internet (Appendix F). Past research indicates that parental supervision or preadolescents is low as parents feel that the Internet is a protected medium that keeps their children occupied within the safety of their home (Biehn, 2002; Bushong, 2002; Ferguson, 2000; Freeman-Longo, 2000; Goodale, 2001).

Thus, the aim of this study was to provide a content analysis of the five Web sites most frequently named by the participants who took part in the Reading and Viewing Questionnaire over both years of the study. In year one of the study, 28% of the participants did not name a Web site, while 12.5% of the participants were not able to name a favourite Web site in the second year. Of those participants who named 2 favourite Web sites each year, 129 unique Web sites were named, thus revealing that the Internet is a vast medium which may, unlike television or the music industry, prove difficult to capture and explicate in a comprehensive manner the content to which preadolescents are being exposed.

Content analysis of Web sites consisted of visiting the Web site and evaluating the content based on a set of objective criteria derived from those used by the Internet Content Rating Association (Funk, 1993; Internet Content Rating Association, 1999), suggestions put forth by the Markle Report on Children and Interactive media (Wartella et al., 2000), and the content rating system used by newgrounds.com, the most subversive site named by the participants. Specifically, Web sites were evaluated by the genre of content (chat, information, gaming), the kind of interaction required by the participant
(audio, text or audiovisual), and whether or not product or character branding exists in the content. It is to be noted that branding content may change as a function of time, but that the Web site employs branding as a device is most likely a stable trend. The content will also be analyzed for the presence of nudity, violence (mild, moderate, or excessive), type of violence (realistic presentation or fantasy/cartoon violence), audible explicit language, textual explicit language, and adult themes. If the Web site contains educational material, this will be noted in the analysis. It is acknowledged that while some Web sites may only have a main "home page," other Web sites have different sections or links to other sites within the Web site. Analysis is conducted on whether content is present within the overall site (Funk et al., 1999; Internet Content Rating Association, 1999; Wartella et al., 2000).

The top 5 sites and percentage of participants naming them are as follows:

1. MSN.com; 17.0%
2. neopets.com; 14.0%
3. funbrain.com; 11.0%
4. yahoo.com; 9.0%
5. harrypotter.com; 6.25%
   freearcade.com; 6.25%
   bonus.com; 6.25%
   hotmail.com; 6.25%
   newgrounds.com 6.25%
Table 1

*Content Analysis of 5 Most Named Web sites*

<table>
<thead>
<tr>
<th>Web site name</th>
<th>Genre of content</th>
<th>Kind of interaction</th>
<th>Product or character Branding</th>
<th>Educational link or content</th>
<th>Nudity</th>
<th>Violence</th>
<th>Language</th>
<th>Adult themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSN</td>
<td>G.1</td>
<td>Text, visual</td>
<td>Both</td>
<td>Link noted</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Neopets</td>
<td>S.1</td>
<td>Audio, text, audiovisual</td>
<td>Both</td>
<td>Content</td>
<td>None</td>
<td>Moderate fantasy violence</td>
<td>*None</td>
<td>None</td>
</tr>
<tr>
<td>Funbrain</td>
<td>G.1</td>
<td>Text, audiovisual</td>
<td>Excessive</td>
<td>Content</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Yahoo</td>
<td>G.1</td>
<td>Text</td>
<td>Both</td>
<td>Link only</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Harry Potter</td>
<td>S.1</td>
<td>Text, audiovisual</td>
<td>Both</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>FreeArcade</td>
<td>G.1</td>
<td>Audio, audiovisual</td>
<td>Both</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>*None</td>
<td>None</td>
</tr>
<tr>
<td>Bonus</td>
<td>G.1</td>
<td>Text, audiovisual</td>
<td>Excessive</td>
<td>Content</td>
<td>None</td>
<td>Fantasy violence</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Hotmail</td>
<td>G.1</td>
<td>Text</td>
<td>Both</td>
<td>Link</td>
<td>None</td>
<td>None</td>
<td>*None</td>
<td>None</td>
</tr>
<tr>
<td>Newgrounds</td>
<td>G.1</td>
<td>Audio, text, audiovisual</td>
<td>Product</td>
<td>Yes</td>
<td>Realistic and fantasy violence</td>
<td>Audible explicit, textual explicit</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

* Denotes that explicit language may take place within individual chat channels or emails
**MSN.com**

Genre of content: A general site that offers a search engine, link to hotmail.com, msn messenger, news headlines, online shopping, and games

Kind of interaction required by participant: text

Product or character branding: Images of current movie and book characters shown. Image of Hollywood celebrity. Image of laptop computer with brand name prominently displayed

Link to educational Web site noted.

No nudity

No violence

No audible explicit language

No textual explicit language

Does not contain adult themes

**Neopets.com**

Genre of content: A specialized interest Web site wherein participants join Neopia the land of Neopets, design and adopt a virtual pet, and then participate in various activities to earn points to buy food for their virtual pet. Earning points includes training the pet at school, playing games, and fighting the virtual pet. The site offers members chat rooms/channels, email, shopping, newspapers, games, screensavers, and a live Web cam of the Neopets staff office.

Kind of interaction required by participant: audio, text, and audiovisual
Product or character branding: Textual product branding within content. Pop-up ads, and page advertisements advertise games.

Educational content noted: Participants are encouraged to develop literacy and art skills by writing short stories about their Neopet, participate in caption contests, and utilize drawing guides provided for aspiring artists. Games include spelling and mathematics quizzes to earn points for food. Neopia has its own dialect and pronunciation guide.

No Nudity

Moderate Fantasy/cartoon violence (player can direct their Neopet to "attack weaker" Neopets upon first meeting them. In the "Battledome" you fight your Neopet until you ask for and are granted release. "QuickFight" lets you enter into an instantaneous fight if you do not mind who you fight and do not want the bother of challenging people and waiting for them to come online.

No audible explicit language

No explicit language within Web site content, however, textual explicit language may be possible within chat channels.

Content does not contain adult themes

Funbrain.com

Genre of content: A general site that is devised and run by the Family Education Network. The Web site content offers games such as Math Baseball, Grammar Gorillas, and Planet Zug, a vocabulary builder. There are areas for children, teachers and parents. Offers cartoon movies and portal links to other sites. Kid-specific content includes pages dedicated to "numbers," "words," "universe," and "culture" (history).
Kind of interaction required by participant: text and audiovisual

Product or character branding: Excessive product and character branding within content. Pop-up ads and page advertisements interrupt the playing of educational games.

Educational content noted

No nudity

No violence

No audible explicit language

No textual explicit language

Does not contain adult themes

*Yahoo.com*

Genre of content: A general portal site that offers a search engine, links to email, Yahoo! Messenger, news headlines, online shopping, and games.

Kind of interaction required by participant: text

Product or character branding: Images of current movie and book characters shown, image of music artist. Image of laptop computer with brand name prominently displayed.

Links to educational Web sites noted. No educational content within Web site.

No nudity

No violence

No audible explicit language

No textual explicit language

Does not contain adult themes


*HarryPotter.com*

Genre of content: A specialized interest site that offers Harry Potter themed games, chat forums, IM, shopping, news, and movie clips.

Kind of interaction required by participant: text, audiovisual

Product or character branding: Current book and movie images

No educational content within Web site.

No nudity

No violence

No audible explicit language

No textual explicit language, although textual explicit language may exist within chat channels.

Does not contain adult themes

*FreeArcade.com*

Genre of content: A general site that offers various video games such as "shooting games," sports games, and puzzle games.

Kind of interaction required by participant: audio, audiovisual

Product or character branding: Images of current music artists shown. Limited advertisements.

No educational content

No nudity

Fantasy violence

No audible explicit language

No textual explicit language
Does not contain adult themes

**Bonus.com**

Genre of content: A general site that describes itself as "family entertainment." Site offers games, sport, brainteasers, family sections. Bonus.com uses a unique interface called "NetScooter®" which forces children to surf within the Bonus.com Web pages by removing the Internet tool bar at the top of the Web page.

Kind of interaction required by participant: text, audiovisual


Educational content noted. Word games, history quizzes, spelling bee, geography test or lateral thinking puzzles. The Family section offers tutorials for safe Internet practices, and safety in the community. There is a section on environmental living and profiles on historical and living role models. Educational section on nutrition and healthful eating. "Grown-up" games included slot machine type games and video poker and card games.

No nudity

Fantasy violence

No audible explicit language

No textual explicit language. Bonus.com has a policy on playing interactive games, that if a participant breaks the rules (i.e., gives out personal identifying information), the
participant's screen name will be deleted from the system and he/she will not be allowed to create another screen name.

Does not contain adult themes

**Hotmail.com**

Genre of content: A general site that offers a search engine, link to hotmail.com, MSN messenger, news headlines, online shopping, and games.

Kind of interaction required by participant: text


Link to educational Web site noted

No nudity

No violence

No audible explicit language

No textual explicit language

Does not contain adult themes

**Newgrounds.com**

Genre of content: A general site that offers games, cartoon movies, and portal links to other sites.

Kind of interaction required by participant: audio, text, and audiovisual

Product or character branding: No branding within content. Pop-up ads, and page advertisements have sexual and drug-related content and adult themes.
No educational content noted.

Nudity

Violence (realistic portrayal and fantasy/cartoon)

Audible explicit language

Textual explicit language

Contains adult themes
Microanalysis of Eight Main Categories

Microanalysis of the raw data collected from the Reading and Viewing Questionnaire consisted of cumulatively coding year 1 and year 2 of the data to apprehend the central concepts, categories, themes, and outliers that articulate the participants' Internet use and experience. The coding was done in generic style (Merriam, 1998) *a posteriori* in a line-by-line grounded analysis of identifying concepts, categories, themes, or patterns and noting outliers (Charmaz, 2000; Coffey & Atkinson, 1996; Freeman, 1998; Merriam, 1998). As stated earlier, 315 concepts were identified in the data. These 315 concepts were then collapsed into 8 categories (Coffey & Atkinson, 1996; Creswell, 2002; Freeman, 1998), which include Downloading, Info-Hunting, Virtual Nurturing, Consumerism, Expressions of Violence, Chatting, Music, and Gaming.

The data were collected from four different schools and are often presented by participant gender and name of school. Also of note is that data is presented by the number of times they appear in the surveys. The data are characterized as being identified a number of "discrete" or "unique times" as a means of communicating that a concept within the category was acknowledged a certain number of times, broken down by gender and school affiliation. The number of times a concept cited may not be equivalent to the number of participants who cited it. For example, the concept *Downloading* was named 25 discrete times within the data, but this does not imply that 25 individual participants named downloading in their Internet behaviours. A single participant may have cited a concept more than once.
null
**Downloading: Evidence of Preadolescent Digital Sophistication**

*Downloading* was a theme that produced a few surprising results. Downloading is the act of transferring an application, document, video, or audio clip including movies, from the Internet to one's own PC (State of Victoria, 2002). Unexpectedly, all four schools had female participants who identified as using the Internet to download music, games, and various applications, whereas only one set of male participants from Apple View identified as being familiar with downloading or downloading on a regular basis. Two points of analysis stand out regarding the male participants' lack of downloading. First, the male participants who identify themselves as Downloaders are from Apple View. This school exhibits the highest overall socioeconomic status in this study. Thus, it may be an expected finding that these male participants identify themselves as preadolescents who use the Internet to download (Statistics Canada, 2003). However, what is apparent is that the socioeconomic factor that may explain the male participants' access to the Internet is not a factor that equally applies to female participants' Internet access, as all four groups of female participants, from every socio-economic strata, identified themselves as preadolescents who download. However, the female preadolescents' male cohorts *do not* equally identify themselves as participating in downloading as an Internet activity. This suggests that the male participants identify themselves as either not being as experienced or as interested in various uses of the Internet activity as their female peers. The argument that the male participants who do not download may not have the same access to Internet service as those participants from a more socioeconomically
advantaged background, seems to be refuted in that female participants, despite their socioeconomic status, identified themselves as partaking in this Internet activity.

A point that further reinforces the argument that the male participants in this study may not be (contrary to the popular stereotype; Comber et al., 1997; Livingstone & Bovill, 1999; Wartella et al., 2000) as interested in downloading materials off the Internet as the female participants are, is that the breadth of usage cited is more diverse for the females than it is for the one group of males that identified themselves as preadolescents who download. For example, the male participants from Apple View specifically reported that they download games and movies, whereas the female participants reported downloading video games, music onto CDs, and furniture and new characters from SIMS.com. In fact, no male participants identified themselves as downloading music, whereas downloading music was reported eight separate times within the female sample. This is a surprising result as it is in stark contrast to the recent statistics released by Statistics Canada, who report that adolescent males use the Internet in more diverse ways than female adolescents (Statistics Canada, 2003). Future research may inquire into the developmental changes experienced in preadolescence that account for this decline in female Internet usage.

**Info Hunting: A Portal to "Cool Hunting," Expressions of Autonomy and the New Value of Information**

The category of *Information Hunting* was developed as a qualitative category in preadolescent Internet usage from 35 unique concepts mentioned in the data. Upon analysis, the 35 concepts fell into 4 natural clusters of themes within Info Hunting – these themes in their rank order of how often they were identified are: surfing the Internet,
searching for information pertaining to a particular interest, an autonomous or self-directed expression in the need for information, and cool hunting.

The search for information. Female participants from each of the four schools in the study identified themselves as concerned with information hunting, whereas only one group of male participants from Apple View, and one individual male participant from the school Eastown identified themselves as interested in info hunting. No male participants from Willouby or Trentway (both mid-low SES schools) were found identifying themselves in this category.

It appears evident in both popular culture and in this particular study that information is the new "sexy" concept; preadolescents appear to be quick to understand that knowledge is power and information can often pass for knowledge. Eighteen unique data pieces were collected on searching for information by means of surfing the Net. Preadolescents understand that certain search engines (google, yahoo, MSN) are portals that lead to literally anything the mind can conjure. Both male and female participants reported appreciating that the Web is a vast resource as captured in their statements, "you can search for info" and "it has info on anything" (2EGF0725, www.google.com), "because it has all the updated news..." (2TOF0704, www.petz.com) and gives one, "... a variety of information" (2WMF0704, www.yahoo.com).

Specialized Interests – hobbies and dreams. Within the understanding that the Internet is a tool for obtaining information, preadolescents use the Internet to seek out specific interests. Eleven unique data pieces were identified around the theme of searching for information on a "specific interest." All participants, except for one, were females representing all four schools. A lone male participant identified that he liked to
go to dragonballz.com and "find out about the characters" (2EGM0731). The female participants acknowledged that the Internet could help them discover information on a vast array of specific interests. In this sample of the data, the female participants reported that the Internet facilitated their unique and individualized interests and hobbies to such an extent that they articulated deep, abiding focused passions such as planning on adopting a foal, tracking the career of a role-model, learning new stretches to warm up for ballet practice, learning every detailed nuance about the members of a favourite band, reading a daily horoscope, or using the Internet to find information to use at school. As 1 female participant expressed, "I like this site because I like to see what happens with my favourite figure skater," because it "shows her achievements and goals" (2TOF0707, www.jenniferrobinson.com). Thus, these female participants' have communicated that for them the Internet is a tool to help an individual explore and define their autonomy. This leads to the next theme in Info Hunting – info searching as an expression of autonomy.

Expressions of autonomy. The understanding that a self-directed freedom or autonomy is available to preadolescents through info hunting on the Web is evident in the language that they use to phrase their responses. For example, in the data segments "it gets me my info quickly" (2AAM0720, www.yahoo.com), "it has info I need", (2AAM0702, www.dragonballz.com), and "I find my information that I need" (2AAF0715, www.olympic.com), the participants are linking the concept of self, my, to ownership and possession of data, my info, my information.

Cool hunting. The last theme in the category of info hunting was that of "Cool." Popular culture and personal experience reminds us that the paramount preoccupation with adolescents and preadolescents is whatever is deemed to be "cool" at the present
moment. The Internet provides marketers with a new medium that subverts the traditional marketing dynamic. Wherein a few years ago marketers predominantly had to reach children through commercials and print ads, preadolescents can now go out and find marketers and their products, all in an effort to stay current and "be cool." Being cool is a preoccupation with preadolescents as is represented by the 27 discrete times the word "cool" was found in the data. However, what is cool is as elusive and varied to researchers as it is to the children who are searching for it. The Internet makes cool hunting (Dretzin, 2001) accessible to any preadolescent with a PC and an Internet connection. However, the search for cool may be nothing more than the fantasy of possibility. Generally, the preadolescents in the data did not convey that they find what is cool on the Internet and then seek out to possess the actual item (there were 2 male participants who stated that they do purchase articles on the Internet). Rather, there were more expressions to the importance of knowing what is cool, as opposed to owning what is cool. As the participants report, "I can look for cool things and chat," and "talk to different people and finding cool things" (2WMF0707, www.yahoo.com), and "the whats [sic] cool part (as in clothes)" (2TOF0714, www.whatsherface.ca).

**Internet Consumerism: Preadolescent Desires**

Buying items on the Internet or at least looking at items that one desires to buy is a very common interest for preadolescents in this study. Every gender and school was represented in the category of Consumerism, except for Willouby males who did not identify buying as an Internet behaviour. Participants identified that they search for three different themes of items: clothes, toys, and sports equipment.
Shopping for clothes on the computer. Looking at clothes was a theme that was identified solely by female participants. Participants stated that they go to Web sites that let them dress female girl characters in actual designer clothes that are currently available at upscale stores in malls. These Web sites are seductive in their fantasy appeal; they allow the participant to tailor the model to resemble herself in that one can pick the ethnicity of the model, eye colour, length and colour of hair, and appropriate background that the participant would see herself in (a beach background versus a school setting). For example, one participant states that her favourite site allows her to "play" at dressing up in clothes she owns: "dollsmania lets you create people who have clothes like: Exco, Bilibong [sic], Roxie, etc. (what I wear). I like how I'm able to download my dolls onto my profile" (2AAF0722,Dollzmania.com). A 2nd participant also states that she too likes "playing all the games and watch parts of the video and dressing up the charters [sic] in different clothes" (2TOF0702,www.pbskids.com). This is a fascinating marketing tool, which must surely create desire in the preadolescents who become involved at looking at clothes on the Internet. In recent history, girls would play with Barbie and dress her in clothes that proximated styles of clothes that could be found in the mall; today girls virtually dress themselves in designer clothes on the computer screen.

Toys and sports equipment: an enduring interest. Both male and female participants identified with the themes of looking at or buying both toys and sports equipment on the Internet. Once again though, preadolescents convey that looking at items on the Internet, does not entail purchasing the items. For example 1 male participant reports that he goes to Badlandspaintball.com as the Web site "shows me pricings [sic] of paintball things I could buy" (2AAM0709).
Again the vastness of the Internet was communicated in the varied responses from the participants. Preadolescents identified that they are interested in looking at various items from celebrity-autographed clocks "they have kewl [sic] things that you can buy like an autographed clock", (2AAF0724,www.aaroncarter.com), to a participant who follows the latest trends that are both television shows and toys, "when you get to buy the toys" (2EGM0731,www.simpsons.com), and "because it shows me yo-gi-oh [sic] cards to buy and stuff" (2EGM0731,www.poke-order.com). One participant even identified himself as a bargain-hunting consumer in that he likes www.ebay.ca because "you see all of the things you can buy" and "I can buy things for cheap prices" (2AAM0709).

If we are to critically analyze how preadolescents use the Internet it should be noted that the category consumerism appears predominantly in the data. Equally notable is that the concept of schoolwork did not appear enough times in the data to be considered a category. Preadolescents are exposed to not only consumer fantasies that may not match their economic realities, but they are also being exposed and acculturated to a new form of nurturing. The Internet in many respects is a medium that fuses reality and non-reality together, but acculturates preadolescents as if this demarcation does not exist.

**Virtual Nurturing, Neopets and the Language of Reality for Preadolescent Females**

Virtual pets, also known as Neopets are the newest form of play seen in this survey of preadolescent Internet usage. The concept is fairly simple; the preadolescent logs onto a virtual pet site and creates his/her own unique, perfect pet. It is then the responsibility of the preadolescent to care for their pet, sustaining the pet’s life by earning money for food, playing with it, and having it interact with other virtual pets.
The sample of participants that named playing with virtual pets as a pastime was an oddly skewed sample at best. Overwhelmingly, it was female participants who identified with this activity. Females from Apple View, Trentway and Willouby all identified themselves as involved with virtual pets. Willouby female participants acknowledged virtual pets 13 discrete times. Apple View female participants mentioned the concept 8 times, whereas Trentway female participants mention the concept virtual pets 5 times. However, no female participants from the school Eastown identified virtual pets as a pastime pursued on the Internet. Similarly, only 1 male participant from Apple View stated that he is involved with virtual pets; no other male participants acknowledged this interest.

Within the category Virtual Pet, 3 natural clusters of themes formed. These included the theme of creating your virtual pet, caring for your virtual pet, and the consumerist aspect of virtual pets.

*Creating and caring for a new pet.* Like real pets, virtual pets seem to inspire the anticipation and regret indicative of the commitment. The theme of conditional love, though subtle, exists. For example, 1 female participant stated "it's fun to take care of and create pets" and later, and most candidly, "you can create your own pet so you'll like it" (2WMF0710, www.pets.com). Also very much like a real pet, it appears that a virtual pet can also be exacting on our expectations and desires. Yet unlike a real pet, when you get tired of your virtual pet you can try out a new one as articulated by 1 female participant, when she stated that the best part is "when you get to pick a new pet" (2AAF0706, geopets.com).
Another interesting point that emerges in the data is that the preadolescents believe themselves to be playing with their virtual pets in an equivalent manner that we would expect from children who were talking about playing with real pets. However virtual pets are not like real pets in that they are often viewed as toys that can be disregarded in the way that an old doll or well-used game is forgotten about. This is expressed in the language that the participants use, which not only indicates that they perceive themselves to be "playing" and "keeping busy" with their pet, but also responding to their pet's virtual emotions. For example, 1 female participant clearly reports having affection for her virtual pet when she reported, "when I feed my pets they are so cute. Also when they are scared!" (2AAF0708, neopets.com). Also there is the element of "playing house" with these virtual objects of affection. For example, 1 female participant sounds like a busy homemaker when she stated that "it is interesting and I have a little creature who always keeps me busy" (2WMF0704, www.neopets.com) or when another participant stated "you get to take care of pets and make homes for them" and "I like making homes for them" (2WMF0706, neopets.com). The theme of consumerism fits nicely into the notion of virtual homemaking for virtual pets.

*It takes money to keep a pet.* Particularly at neopets.com, it is the responsibility of the pet owner to play games to earn money to buy food for their virtual pet. As 1 female participant reported, "I like looking after my pet's [sic] and I have a lot of money around $5000.00" (2AAF0708, neopets.com) and another, when she declared "I like it because you can play games to get mony to by [sic] stuff for your neopets and stuff" (2WMF0702, neopets.com).
Virtual pets can have a pragmatic side to them; as a female participant articulated "I like this Web site because I can pretend to have and care for an animal, but really [sic] I can't because I'm allergic to dogs and cats" (2AAF0706,Geopets.com). This seems to be a happy resolution for the preadolescent child who wants a pet and for health reasons is not able to have one. However, the question remains as to the developmental value of virtual bonding and its effects on impressionable preadolescents.

On can argue that bonding with a virtual pet is no different than bonding to a plastic, nylon haired "dolly," which generations of little girls have done before virtual pets. Still, impressionable young females have never before designed and created an entity that would embody the creator's notion of perfection, as one would do for example, on neopets.com. Philosophically and pedagogically this notion is truly disturbing; not only are our impressionable preadolescents constructing, nurturing, and caring for the virtual pet that embodies what they deem to be uniquely pleasing to them, that is, "you can create your own pet so you'll like it" (2WMF0710,www.pets.com). The "playing" with virtual pets may be an exercise of reinforcing conditional nurturing schemas; that is, virtual pets may teach and reinforce preadolescents to love conditionally that which is perfect, and then disregard the object when the fancy passes. Once again the data reveal that the Internet acculturates our preadolescents to a world where the demarcation between veridical and non-veridical reality is blurred. It is a world where preadolescents have affection for objects, but the affection is as transient as the world it is projected to. Social Learning Theory argues that any time social learning takes place, the understandings are extrapolated and applied to social understandings (Bandura, 1977, 2000). Developmentally, I believe we should have concern for impressionable
preadolescents who are straddling society and the Internet, who are learning values and behaviours in the former and will, research tells us, extrapolate those understandings to the latter.

*Playing Games in the Internet: The Universal Preadolescent Pastime*

*Playing games* is the one category that was identified by every gender and school group in this study. Previous research reports that preadolescents and adolescents use the Internet for game playing (Donnerstein & Smith, 2001; Ferguson, 2000; Funk, 1993; Kubey & Larson, 1990; A. Taylor, 2001; Turow, 1999; Turow & Nir, 2000; Valkenburg & Soeters, 2001). What is new within the domain of our understanding of preadolescents' attraction to the Internet game playing, are the 4 themes that emerged from within the 52 unique concepts that were identified in the preadolescents' data. The themes identified are type of games, winning at games, passwords, and cheats.

Little diversity in type of game. The theme type of game also broke down into a further 3 patterns. Preadolescents listed action games, violent games, and memory games as being their favourites. Participants named 14 unique games in the data: City Jumper, 3D Pong, Insaineaquarium, Stick RPG, Poke the Bunny, Squirrel Golf, Match Up, Fat boy, Fact Monster Arcade, Lenny in Space, Lenny Loosjocks in Space, Poit, and Buster's Ice Cream Game. Visits to Web sites confirmed that the games named included violent, action/goal oriented, and memory games. As each of the games was studied it became evident how the patterns of winning at games and the role of passwords were inherently included into the design of the games.

*Easy challenge.* For example, many of the games are designed to appear difficult at first, and with some persistence the game's difficulty level diminishes. "Fact monster
arcade" (http://fekids.com/article/0,1120,46-27145,00.html) is a game that appears difficult at first, but by the second or third attempt the level becomes easier, allowing the young player to move on to the next level by winning and learning a secret password that allows him/her to continue playing. This is clearly not a practice effect as the difficulty level of the game changes and becomes markedly easier to win on the second or third attempt. This discovery of the moving target of game difficulty may explain why preadolescents have an abiding fascination with games on the Internet, as it is in human nature to pursue those things at which we experience early success (Leonard, 1991). However, this may also be another example wherein the lessons from the Internet do not necessarily translate outside of the medium.

Passwords and secret codes. Another interesting facet of Internet games is that of passwords. One game in particular, "Fact monster arcade" involves winning, and passwords, and it is not a violent game; on the contrary it is a memory game that requires the player to learn and memorize passwords in order to play at the next level of games. This site is run by the Family Education Network, which offers homework help to children, Internet activities, and discussion forums for parents regarding child development, education, and parenting issues (http://www.familyeducation.com/home/). The concept of passwords is one that particularly appeals to preadolescent participants. As 1 female participant stated, www.funbrain.com "is fun to play. You also have to get 6 passwords" and that for her "the best part is when you get a password to another game" (2WMF0703). The concept of passwords fulfills preadolescents' desire for autonomy and exclusivity, and is a manner of expressing the fact that, to preadolescents, the Internet is a private community accessible to only those who, literally, have the password.
While some of the games named by the participants may be considered benign (e.g. *Poke the Bunny* requires you to poke the bunny with a big finger until the bunny turns on the player and bites his/her finger (http://www.platinumgrit.com/poke.html), some of the games are clearly violent and aggressive. One participant in particular named a game wherein she states "I like the Osama Binladen [sic] one where he gets into a boxing match with me and I kill him" (2TOF0703, www.JoeCartoon.com).

The disclaimer to JoeCartoon.com states that the site "Specializes in the sick and the wrong" and that "This site is most certainly lacking in maturity and has absolutely no redeeming qualities whatsoever. If you are easily offended please enter, for your offendedness will bring me great pleasure" (http://www.joecartoon.com/pages/comics/). This site contains many subversively violent cartoons, undeniably aimed at children. For example, a cute roly-poly brown cartoon gerbil is the central protagonist of this Web site. However, upon further investigation, it becomes apparent that the "cute gerbil" is a gerbil that swears and has a penchant for violence. On the home page he is shown exhaling smoke - nuance that the gerbil is associated with smoking cannabis – or even at its most literal translation, which is what may be expected developmentally from preadolescents (Bosacki, Murray, & Pollon, 2003; Dorr, 1986; Funk et al., 1999), that the gerbil enjoys cigarette smoking. It is an acknowledged norm in our society that cartoons whether or not they are consciously aimed at marketing to children, are in fact understood to affect impressionable children by the very means of the cartoon medium (USA Today, 1997, 1999). All of the games at joecartoon.com have common themes and end goals. For example, in the game "gerbil fishing", the goal is to press buttons to get the gerbil to use explicit language, kill the fish by kicking his foot through them, and having them bleed to
death, or have the fish rip the gerbil's arms off and watch him swear as he bleeds. The content is violent and contains audible explicit language. While critics will suggest that this type of material was always available to preadolescents, I would argue that this material in now available to all preadolescents with Internet access.

Cheating is part of the game. The fourth identifiable theme was that of obtaining game cheat codes or as the participants refer to them "cheats." Male participants were alone in naming, finding, or getting cheats as a primary aspect of their Internet gaming experience. As the participants energetically state they like gaming Web sites "because it's packed full of cheats for games" (2TOM0706, www.supercheats.com), "it has cheats for every videogame" (2AAM0723, www.happypappy.com), and "it has tips and cheats," (2AAM0705, a kids gaming site). As 1 male participant claims exuberantly, he likes the Web site because there are "so many cheats and guides for free!" and when asked what the best part of the site was, "the cheats!" (2AAM0710, www.gamefaqs.com). The very notion of cheats however, brings about interesting philosophical and pedagogical questions. Do cheats teach our preadolescents that "cheating" is a normal part of the process of success, that is, that you must cheat in order to beat a game? Would the concept of cheats be more acceptable if they were simply called game aids or game clues? Some participants, when asked informally, stated that in fact cheats and finding cheats are part of the inherent design of the game and that the game is not meant to be played without finding the cheats; that is, finding the cheats is part of the challenge and thrill of "figuring out the game."

Whether the participant is exposed to games that are easily won, violent, contain adult content, or have cheats, the overriding pedagogical question remains: If a preadolescent is
exposed to certain types of content during formative stages of his/her development, will this influence a susceptibility or seeking out of similar content that will eventually manifest itself as identity traits and personality preferences? A longitudinal analysis of individual Internet habits may elucidate this issue.

Expressions of violence

The category expressions of violence was derived from a small, but marked set of concepts. These concepts came from a skewed sample of participants; expressions of violence were noted in the female population from Apple View (2 discrete data pieces) and Trentway (2 discrete data pieces), while expressions of violence were noted in the male population from the schools Eastown (2 discrete data pieces) and most notably from Willouby, where 7 discrete expressions of violence were detected in the data.

Violence in the First Person. Most of the expressions of violence were situated within 2 patterns that both contain an overarching theme. Identified was the pattern of "being killed" and "killing" in the context of playing games. Within each of the patterns was the theme of personalized realism – that is, each of the participants who talked about violence used language that personalized the act of violence.

For example, 1 male participant stated that he likes newgrounds.com because in his words, "you get to kill famous people" (2AAM0705). Another male participant identified in the first year of data collection that he liked "shooting stuff" and "killing stuff" (2WMM0711), while in the second year he too identified www.newgrounds.com as his favourite Web site for games "because you must be 18 years or older to play" (2WMM0711) which, of course, this participant is not. Even female participants used personalization in their expressions of violence. A female participant stated that her
favourite part of a game "is when the boss comes out and tries to kill you" (2TOF0720, www.crash.com). It can be argued that these expressions of personalized violence are to be attributed to linguistic form; that is, when a person is talking about playing a game or describing to another person how to play the game in an informal, colloquial manner she/he would often say, "you have to jump up and catch all the gold coins."

As revealed in the macroanalysis, newgrounds.com tied for the number 5 most named site. The Web site is truly shocking in its level of depravity and violence. This site contains the singularly most subversive, shocking content yet seen on sites named by participants. Some would state that to newgrounds.com's credit, each video cartoon or game has a rating system that is shown before the file is downloaded. However, I would put forth that this is simply a heuristic used by preadolescents to quickly find and choose pornographic and violent content in games or videos. Each game or video clip is rated on nudity, violence, audible explicit language, textual explicit language, and adult themes (www.newgrounds.com). Each time the viewer clicks on a link there is a "pop-up" advertisement for pornography. The homepage of the video section offers cartoons about anal sex and anal sex toys, and one "Public Service Announcement (PSA)" that describes abortion as "fun" (www.newgrounds.com). The video game homepage offers pornographic games wherein the player undresses the cartoon girl, or gets "Sonic the Pervert" (a takeoff on the popular children's Sega video game character Sonic the Hedgehog) to rip the female character's clothes off (www.newgrounds.com).

*Cartoons?* Most disturbingly though, is that it is in cartoon format, which inherently appeals to preadolescents. Another factor that may influence the internalization of violence is that in many of the games the main character is a young person. In one of the
tamer games on newgrounds.com, the main character SkullKid, wears fashionable khaki pants, a white t-shirt, and all-white running shoes (while murdering people with a chainsaw), a common uniform for today's male preadolescents.

**Internet Chatting: Strangers are Friends**

Chat or instant messaging (IM) is digital technology's betterment of the telephone. Instant Messaging enables two or more individuals to engage in real time communication by means of typing and using Emoticons (small pictures – icons – that represent emotions, i.e., a happy face that is winking to express that you have just made a tongue-in-cheek expression, and that the reader should read your previous statement as if you were "just joking"). This form of communication appeals to preadolescents for a number of reasons – they report that it is private, and that their parents are more lenient with them being on the computer than when they are on the telephone.

Upon analyzing the 21 categories identified within the concept of chat, 3 natural clusters of themes emerged from the categories. The themes were: chatting with friends and family, chatting with strangers, and IM as a form of “talking.”

**Privacy.** Personal experience reminds us that during preadolescence, talking and connecting with peers outside of school becomes of paramount importance, especially for preadolescent females. In this study all four schools had female students who identified as participating in chat or IM. The participants from Apple View named chat, or IM, 14 discrete times in the survey, Willouby female participants identified chat/IM 13 discrete times, and Eastown and Trentway participants identified chat/IM 4 times each. This contrasts greatly with the number of male preadolescent participants who named chat or IM as an activity that they engage in while on the Internet. No male participants from
either Apple View or Eastown identified chat/IM, while it was named 4 times by Trentway male participants, and only 2 times by Willouby male participants. Once again the female preadolescent participants asserted that digital technology plays a major role in their own lives and development.

While collecting data in the field, I had the privilege to talk informally with our participants about many of the trends in their preadolescent world. Many preadolescents revealed that they like IM for chatting because of the level of privacy it affords them. As 1 male participant stated "you can do anything on it" (2WMM0721, www.MSN.com). When talking on the phone, any conversation that is taking place can be heard by anyone who is with earshot. Preadolescents report that typing their conversations on a keyboard allows them to conduct discussions that they would not be able to have verbally for fear that they would be overheard by parents and siblings. With this understanding it is simple to understand why chat/IM is becoming the newly preferred mode of communication.

"Talking" while doing homework. Another reason that preadolescents gave for preferring IM to the telephone, and this is especially relevant to the preadolescent female, is that telephone use can often be the cause of consternation and disputes between preadolescents and their parents and family members. Using the PC to IM allows the telephone line to remain free for the family (unless the PC is on a dial-up modem). Simultaneously, this allows the preadolescent to be sitting in front of the computer, which they report, parents perceive as a positive use of time, due to the fact that, according to the participants, parents associate computer time and typing with doing homework or information searches.
While in the field collecting data it was reported many times that preadolescents would keep many screens active on their desktop so that they were able to carry on an IM conversation and the moment they heard an adult come into the room they would minimize their IM screen and maximize their homework screen to give the illusion that they had been typing on their homework. The students reported that their parents were not wise to the ruse and that they often stayed up late in front of the computer “doing homework” with their parents’ approval.

*Family and friends/strangers.* A third reason that preadolescents attribute their attraction to IM chatting is that IM allows them to have interaction with not only family and friends, but also “strangers” and “people you don’t know.” As one male participant stated "you can talk to your friends" (2WMM0721, www.MSNmessenger.com [sic]), or equally true, as one female reported you can spend your time "chatting with people you don't even know" (2TOF0703, www.MSN.com). Within this sample of preadolescents there were 4 discrete data pieces that were under the theme of “talking with strangers.” Cyberstalking, exploitation of children, and identity protection are all issues that are covered currently in the popular media and psychoeducational literature (Canadian Press Newswire, 2001; Caywood, 2001; Freeman-Longo, 2000; Goodale, 2001; Magid, 1998; M. Taylor, 2001; Valkenburg & Soeters, 2001).

*Preadolescents and Music on the Internet: Expressions of Loving, Learning and Listening*

The category of *music* was created from 24 distinct concepts identified in the data. Within the category of music, 3 themes pertaining to why preadolescents like the Internet as a medium for music emerged. These themes were listening to music, learning about
music, and expressions of loving music. Outliers of watching videos, music "top 10" lists, music on video games, and "liking sites" were noted.

Once again preadolescent females from all schools identified themselves as using digital technology more frequently than male participants. Specifically, they identify the Internet as a means to pursue their interest in music. Apple View females cited music as an interest the most (12 separate times) whereas Willouby females identified music as an Internet interest only 3 unique times. Male participants did not identify music as an Internet interest very often: Apple View males named music 5 times, Trentway males named music 2 times, and Eastown and Willouby males did not identify music as a concept in their surveys at all.

*Look, listen, learn.* Emerging from the data is the point that preadolescent females are more engaged in monitoring the music industry than preadolescent males. This is both an interesting and explainable phenomenon. Music group/artist Web sites offer the viewer a multimedia study of the group or artist's recent and past concerts, their videos in real-time streaming, personal interviews, photos and some even offer email interaction between fans and artists.

*First love: music.* Many of the participants express an exuberance for music, from the manner in which they use capital letters to fill out the survey, to the free expressions of music as a passion, as in "I love music" (2AAM0705, Kazaa.com), "because I love Blink 182 and love learning stuff about them" and "because I love Sum41 and like there [sic] site", (2AAF0704, www.Blink182.com, www.Sum41.com). One female participant is very succinct in her explanation that music group Web sites fulfill various needs for the preadolescent when she explains "this is my favourite band's Web site it has Shane West
in it" and "there pictures from there concerts and there music [sic] to download I LOVE THEIR MUSIC" (2AAF0706, Johnnywas.com). As is evident from the data cited the themes of listening to music, learning about music and expressions of loving music are interconnected. However, even the outliers in the data are noted to be distantly related to the main themes in that the participants identify their interest of pursuing music on the Internet as a means of expressing identity.

For example, 1 participant stated that he uses the Internet to vote to have his favourite group's video shown on Much Music television channel "because I can vote for my favourite songs," and, to the survey question, "What is the best part?" his reply, "when I get to vote" (2TOM0712, www.muchmusic.com). The Internet, for this particular participant, provides him with membership in a community where he has the democratic right to express his tastes and influence television programming, thus through pursuing music as an Internet interest, these preadolescents identify that their needs for autonomy, attachment, and group membership are met.

**Self-study Thursday June 26: 15 minute break**

As stated in Chapter 3, this study recognizes that preadolescents are a culture-sharing peer group (J. W. Creswell, 1998), who are participating in the behaviour of Internet usage, which by its very nature and design is accessible by outsider researchers. Thus, I believe that as a qualitative researcher, I am able to arrive at a shared essential meaning of preadolescent Internet usage (J. W. Creswell, 1998; Merriam, 1998; Van Manen, 1997) and come to understand their preadolescent Internet experience through their words, while simultaneously walking in their virtual footsteps while viewing the virtual landscape through the lens of a critical researcher.
While I am not a preadolescent and my observations on my own internet behaviour are not necessarily generalizable to preadolescent Internet behaviour, I submit that my self-study does articulate and elucidate certain points about how impulsive behaviour is easy to fall into while surfing the Net, and that this potential behavioural style is not exclusive to an age range.

In an attempt to capture unstructured Internet behaviour, I decided that the next day at work I would recall the Internet history and document where I had gone on the previous day’s fifteen-minute break. Notably I recognized that I am the only one who uses the Internet at work, and that I am one of the youngest employees. This is my Internet history over a fifteen-minute period:

- [www.yahoo.com](http://www.yahoo.com) – to look for the Lemonade Stand game I like - found a music trivia game instead
- [www.triviaplaza.com](http://www.triviaplaza.com) – played 2 music trivia games
- [www.james-taylor.com](http://www.james-taylor.com) – to see why he was in Belmont psychiatric unit
- [www.literalmind.com](http://www.literalmind.com) – to read about Susanna Kaysen author of *Girl Interrupted*
- [www.login.passport.com](http://www.login.passport.com) – to check hotmail account
- [www.desiretalkers.com](http://www.desiretalkers.com) – to see what would come up (?!)
- [www.merging.org](http://www.merging.org) – trying to see a MUD in action

My Computer – to check the Intranet at work to see if anyone emailed me.
www.yahoo.com – searched for Matthew McConaughey – looked at an Amistad Web site

www.psychoterapyyontario.com – wondering what kind of credentials psychotherapists in Ontario have

www.ram.org – read a Dazed and Confused movie review

www.rispersal.com – looked up antipsychotic drug Risperdal

www.romanticmovies.com – more Matthew McConaughey! (I have never before looked at pictures of Matthew McConaughey in my life – I swear)

www.rottentomatoes.com – looked at 2 more Dazed and Confused Web sites

www.rxlist.com – looked at side effects and drug interactions of psychotropics

www.sears.ca – looked at exercise equipment

www.IOJM.com – looked at my first publication to make sure it is still there (!)

www.Ikea.com – too slow in loading, moved on

www.yahoo.com – to play Lemonade Stand (finally)

Analyzing my own Internet behaviour was most edifying; I have never visited many of these sites before or since the night of my 15 minute break at work. Vaguely, I can see the thread of logic that propelled my inquisitiveness. Upon reflection however, I understand that I have the capacity to process information at a fast rate, and create a concisilence of varied threads of knowledge and concepts. I wondered however, how do
young preadolescent minds, in a formative period, without the heuristic of experience to
guide, make sense of and process not only the content, but also the actual style in which
the content is presented? It appears that the Internet may facilitate an impulsive style of
cognition; the moment an idea "pops" into our mind, we can pursue it on the Internet.

While the design of the Internet may lend itself to be used in a rapid manner, the data
reveals that the preadolescents in this particular study are engaged in some very specific
Internet behaviour. In chapter 4 microanalysis of concepts, categories, and themes in the
data revealed what preadolescents are doing while on the Internet, while chapter 5 will
why explore why this behaviour may have developmental psychosocial and
psychoeducational implications for preadolescents.

Thus, chapter 4 has explored the data given to us by the participants, which explicate
how preadolescents utilize the Internet and what kind of content they are attracted to.
Chapter 5 will postulate on why preadolescents are using the Internet, and bring attention
to some of the psychosocial and psychoeducational questions that may require answers in
light of our heightened understanding of preadolescent Internet usage.
CHAPTER FIVE: SUMMARY, RECOMMENDATIONS AND IMPLICATIONS

Thus, Chapter 4 documents the \textit{in vivo} codes articulating the preadolescent participants' Internet usage in their own words (Glaser, 2002). The next task is to articulate why preadolescents use the Internet. Using the qualitative data to illustrate the argument, Chapter 5 will introduce the idea that frequent Internet usage may prime and reinforce psychological, social, and cognitive impulse-seeking and gratification in preadolescents. Further, it will be submitted that educators, parents, and guardians who have previously tacitly condoned Internet usage as a form of education or entertainment for preadolescents may want to acknowledge this possible priming effect and that a possible outcome of this type of priming during preadolescence may lead to maladaptive psychosocial and psychoeducational cognitive styles in adolescence and adulthood.

While conducting the chapter 2 review of literature, it became evident that research on the topic of preadolescents and the Internet has occurred within limited domains. While a few surveys have examined preadolescents' general preferences as to what they do on the Internet (downloading music, talking in chat rooms, emailing, and playing games; Ferguson, 2000; A. Taylor, 2001) and some studies focus on the inherent dangers awaiting preadolescents on the Internet (exposure to adult-oriented material, vulnerability to online harassment from known and unknown predators, and maintaining the confidentiality of personal information; Caywood, 2001; Freeman-Longo, 2000; Hansen, 1998; Magid, 1998), there has not been enough critically conducted research to draw conclusive understandings about why preadolescents are drawn to the Internet and what the developmental ramifications from this exposure may be for preadolescents (Mundorff
& Laird, 2002). This concluding chapter will explicate why preadolescents use the Internet and will argue that the Internet is revolutionizing the meaning and experience of preadolescence in deep pedagogical, philosophical, and developmental terms.

This argument will be advanced in two phases. First, a discussion of recent theory and research related to behavioural and cognitive priming will be applied to the data collected during this longitudinal study of preadolescent Internet usage. Second, these findings will be applied to a sample of the codes and the participants' words to elucidate the notion that they too think of the Internet as an impulse gratification tool.

Thus, by critically distilling and analyzing preadolescent Internet behaviour through the lens of behavioural and cognitive psychology, and explicating the amount of psychological, cognitive, and social learning that preadolescents may be exposed to on the Internet, and the attraction that is cumulatively a profound draw for a preadolescent audience, an argument will be made that Internet usage in preadolescents may impair their cognitive, social, and psychological development because of the impulse seeking and gratification priming that has been reinforced during the formative period of preadolescence.

Skinner, Behaviourism, Bandura, Social Learning, and the Internet, the Opiate of all Media

This section of chapter 5 will conduct a synthesis of current and past psychological, behavioural, and cognitive theory and research to elucidate both the overt and underlying mechanisms that are at work when preadolescents use the Internet.

I submit that there are three primary influences at work that reinforce preadolescents' Internet usage. They are: the design of the computer and the Internet Web pages, the
social acculturation process, and the priming of behaviours and cognitions through which these reinforcements take place. I submit that these three powerful forms of reinforcement may have psychosocial and psychoeducational ramifications for preadolescents, in that certain students may be at risk for developing an impulsive functioning style and an impulsive cognitive style, entailing that they may experience difficulty with concentration, task monitoring, abstract thought and meta-cognition.

The first influence is the external reinforcement of Internet usage by both the actual physical design of the computer and computer mouse and the audiovisual presentation of the Web pages themselves.

**Observations of Participant Computer Usage**

Throughout the data collection process I had the privilege of observing participants using computers. This happened many times as we would often conduct the questionnaire in the library or resource room in order to accommodate large class size, or as the result of amalgamating groups of students from different classrooms.

Occasionally, during the administration of the Reading and Viewing Questionnaire, a student would finish the survey before his/her peers, and as a result would go and use the computer while waiting for his/her class to finish. Many times I would observe the behaviour of the students, including what kind of Internet sites he/she would frequent, the type of games he/she would play and his/her demeanour while on the Internet.

Frequently I observed that the participants, while using applications or surfing the Internet, clicked the mouse in an intermittent, scattershot approach. More than once I observed a student who did not appear to be processing the content on the computer
screen; rather, the participant was moving the mouse in an erratic manner looking for any hyperlink that would open a new window.

In one particular instance the participant was playing a math game; the participant very clearly did not understand the goal of the game (to match the correct answer to the question posed) as the participant erratically clicked on every answer in a sporadic pattern, until the game announced to the participant that he/she had lost and invited him/her to play again.

These observations made me question what the participants were learning by their Internet experience. On more than one occasion, in various schools I had observed students clicking the mouse intermittently, in a pattern not connected to the game or Web page content. I began to look at the participants' Internet usage through the lens of Skinnerian Behaviourism.

**Behavioural Priming Through Internet Usage: A Skinner Box in Every Household?**

The click of a computer mouse is oddly enchanting. If you have ever observed a child or a preadolescent learning to use the computer (or, for that matter, been an adult trying to start an uncooperative application) you will see that that s/he clicks the mouse with an intermittent franticness in the hope that one magical click will achieve the desired outcome and magically start the application. In his theory (or non-theory as he called it) of Operant Conditioning, B. F. Skinner discovered that an animal will act on its environment in such a way that the consequences of the action will further influence the behaviour to be repeated (Allen, 1997; Skinner, 1983a). In other words, when an animal is rewarded for a behaviour, the animal will reproduce the behaviour that led to the
reward. Likewise, an animal will avoid a behaviour if it results in a negative effect.

Specifically, Skinner found that when a pigeon was placed in a chamber with a button that, when pecked, would release a pellet of food, the pigeon would peck at the button until reaching exhaustion, in spite of how frequently or infrequently the food pellet was released (Allen, 1997). This invention was known as the Skinner Box. While many critics of Skinner rightly argue that people are not pigeons, the one unyielding principle that Skinner discovered applicable to both pigeons and humans is that the strongest way to reinforce behaviour is to use an intermittent or variable schedule of reinforcement (Allen, 1997; Choy, 2003).

When we think about the "click" of a computer mouse, and the subsequent windows or Internet sites that open (unless you are in a dreaded java-loop, which surely must be punishment!) the PC, with mouse to the side, simply put, is a cleverly disguised Skinner Box, and as this study suggests, it is preadolescents during a formative period in their development who are using it. Each and every time the mouse is clicked or the keyboard is tapped, this serves as reinforcement for our behaviour. When we pair the PC with Internet access, the opening (rewarding) of brightly-coloured pages, which often sound as good as they look, we have a contraption that makes the Skinner Box seem very simple by comparison in that the computer with Internet access primes our behaviour on a psychological as well as a cognitive level.

If I personally reflect on my computer experience, there is nothing more pleasing than hearing the hum of the keyboard, looking up from the keyboard (I'm not a good typist!) to see all the text that has been generated. If this is not conditioning, why then is the mouse or keyboard not silent? I have consciously studied my use of a laptop and noticed that the
finger-pad mouse is not as satisfying as a clicking mouse. As a writer I become lulled by the click of the keyboard because it signifies to me *production*.

As seen in the participants I have observed using the computer, who click randomly at any hyperlink or image on the screen, the design of the computer, the visual presentation of the Web pages, and the layout of windows interface encourage users to click the mouse intermittently. Microsoft knows what it is doing.

A further point on the Internet's reinforcing properties is that when an Internet connection is too slow, or the Web pages I am browsing are not loading and opening up properly, I have found that my Internet use ceases completely. On Skinner's conception, my behaviour has gone unrewarded long enough so that the behaviour extinguished itself (Allen, 1997). Each and every time that this has happened, I find myself logging off, as my level of interest has not been sustained, that is, reinforced. While this may seem like only a smug observation, upon reflection, when we apply this conditioning to preadolescents whose formative years will be shaped by this experience of stimulation and reinforcement, we may conclude that the ramifications of preadolescent Internet use may have startling consequences.

*Children report being alone while using the Internet.* In this study, participants were asked if they were either alone, with a friend or monitored by a parent/guardian while using the Internet. Statistics compiled reveal that in the 1st year of this study 90.1% of the participants reported either being alone or with a friend while using the Internet, while in year 2 of the study 87.7% of participants reported being alone or with a same aged friend (see Appendix F).
As discussed in The Review of Literature in Chapter 2, the fact that many parents are not aware of what their preadolescents do while on the Internet has been examined (Biehn, 2002; Bushong, 2002; Canadian Press Newswire, 2001; Ferguson, 2000). This phenomenon is attributed to the fact that since the Internet allows preadolescents to be entertained without leaving the home environment, parents and guardians have been lulled into a false sense of comfort about the Internet, due to the fact that the child is physically in the home, and thus, is safe and secure (Biehn, 2002). As a result of this false sense of security, parents do not always monitor their children's Internet activity (Biehn, 2002; Caywood, 2001; Goodale, 2001; A. Taylor, 2001). Preadolescents may often enjoy this leniency and lack of parental control as they seek out and engage in behaviour that they may not engage in RL, all while sitting in the family room. For example some of the participants spoke of chatting with strangers, visiting subversive sites, and gambling.

One future concern, given that most preadolescent Internet use is unsupervised and unregulated by parents/guardians, may be that of cyberaddiction. The issue of cyberaddiction has recently been acknowledged by the American Psychological Association who have gone so far as to classify Internet addiction, or "cyberaddiction" as a new clinical disorder in that it is an addiction which involves failed impulse control without involving an intoxicant (Bellamy & Hanewicz, 2001; Brenner, 1996; Drabman & Thomas, 1974; Freeman-Longo, 2000; Huesmann, 1986; Joy et al., 1986; Kraut et al., 1998; B. Murray, 1996; Rattiner, 1996; Roan, 1996; Seel, 1997; K. B. Young, 1996; K. S. Young & Rogers, 1998). While it is acknowledged that only individuals with complex predispositions may be at risk of cyberaddiction (Bellamy & Hanewicz, 2001; B. Murray, 1996; Turkle, 1997), I believe that the data indicates preadolescents who frequently use
the Internet may be at risk of developing a more subtle psychosocial and psychoeducational outcome, that being an impulsive cognitive and functioning style, as indicated by the lack of developmental shift from generalized interest sites to specialized interest sites, contrary to the speculations made by Valkenburg and Soeters (2001).

When we conduct a critical analysis of some types of Internet usage, especially the common "surfing the Web," it appears in its most basic, pared-down essence as impulse chasing. Certainly there are instances when we set out with a specific purpose in mind; for example, we use the Internet to access library databases and conduct a literature search. However, this use of the Internet would not be classified as entertainment usage, as it is teleological, purposeful behaviour. Using the Internet for entertainment, however, happens in a very different manner. The Internet is one of the fastest responding, "interactive" forms of media that we have ever been exposed to as a society. While this is an exaggeration, in some respects, the Internet seems to respond as fast as the brain can transmit axon potentials to deliver new ideas to pursue. When we are surfing the Net our actions may begin as purposeful, but often take us to places we had not imagined.

As stated in the methodology, the Internet is an interesting medium to study in that it is used by a unique culture-sharing group (preadolescents), but that I as a outsider (a mature researcher), I can also participate in the media to observe and reflect on the experience. As a form of self-study I recalled the Internet history on my workplace computer. On one evening shift I had enjoyed a 15-minute break by surfing the Web. I was curious as to how impulsive my behaviour had been and where had I gone in 15 minutes. In that time I had surfed the Net, every site that I had visited was one that was unplanned, and very unusual from my normal behaviour.
How is it that we can deny the impulsive nature of the Internet? I am a grown woman with serious interests, and a well-formed ability to concentrate, and yet, given the inclination and the opportunity we (as I have done) use the Internet as a mirror of our neuronal processes; the moment an idea “pops” into our head, we can pursue it on the Internet. The Internet, when used for the purpose of surfing and entertainment, is a Skinner Box that externally reinforces our behaviour, with the brightly coloured Web pages and wonderful sounds, and through repeated use, internally reinforces a cognitive style of impulse seeking and gratification.

Considering the Skinnerian nature of our interaction with the Internet, and the immature and often impulsive nature of preadolescents, together with the false sense of security and the concomitant unsupervised access that preadolescents have of the Internet, I submit that the Internet may be a benign tool that has the potential to be a negative influence on impressionable preadolescents during a formative period in their psychosocial and psychoeducational development.

The second type of reinforcement that encourages repeated Internet usage is the active acculturation process that is so very fascinating to preadolescents that they are virtually helpless in overlooking the Internet and its perspective expanding content.

**Bandura, Social Learning Theory, Schema Theory and Acculturation in a Non-Veridical Reality**

In a further explication of why preadolescents are so very interested in the Internet, I will summarize Albert Bandura's Social Learning Theory, recent research in Schema Theory, and bring these two theoretical developments together to articulate the cumulative acculturation process that offers preadolescents opportunities for experiences
that are not offered to them anywhere else in their everyday existence. I will argue that these cumulative factors make the Internet a particularly potent type of medium for preadolescents.

There are many theories that inform this study of preadolescent Internet usage. The first theory to be considered is Social Learning Theory by Albert Bandura. Through decades of research, Bandura has shown that the learning of new behaviours and the resulting attitudes towards said behaviour, is acquired either through direct experience, or indirectly by means of observing the behaviour modelled (Allen, 1997; Bandura, 1977, 1989, 1994a; Donnerstein & Smith, 2001). Research informed by Bandura's theory indicates that children acquire novel behaviours by observing models (Allen, 1997; Donnerstein & Smith, 2001).

Bandura further posits that the media is influential in our lives because it taps into and makes use of our cognitions, emotions, behaviours, and environment. The media sends messages using these mechanisms, which in turn influence each other bi-directionally. Thus, if a preadolescent is playing Internet games on, for example, the Web site, Bonus.com, and is constantly flashed an advertisement of a brightly-striped fun-loving tiger who jauntily reminds the young person of how much fun it is to eat the tiger's product, and the preadolescent is playing the Internet because she/he is trying to stave off boredom, and possibly loneliness (Valkenburg & Soeters, 2001), Bandura would argue that the cognitions of the "fun" advertisement will influence the recipient's affect, so much so that it may influence the individual's behaviour and ultimately his/her environment. Hence, seeing the ad of the cereal will influence the behaviour of eating the
cereal and further prime the individual to this type of reaction when she/he is exposed to future media messages (Bandura, 2002; Horgen et al., 2001).

This is what makes Bandura's research on Social Learning Theory and the media so very prescient when applied to the Internet. Preadolescents are a unique target for media messages. They are at a formative time in their lives, they are impressionable, and they are "fluent at" using the Internet. Thus, Bandura argues that the media impacts our cognitions, emotions, behaviours, and environment through the process of integration and internalization of the message, and that furthermore, our social and emotional cognitive constructs (sociocognitive constructs) are more susceptible to future messages due to the priming of our expectations for messages that affect our cognitions, emotions, behaviours and environment, which further primes us to respond in an commensurate manner (Bandura, 2002). In other words, Bandura argues that the media's effects are so very powerful on us because they impact personal, behavioural, and environmental determinants (Bandura, 2002) and that when one of these is accessed, it shapes both socially and cognitively how we react to the medium in the future.

Thus, when Social Learning Theory is applied to preadolescent Internet usage, we come to understand that there is a dialectical relationship involved; that is, we understand that preadolescents are attracted to the medium of the Internet for the content and the messages that they may learn, but also because they become accustomed to having the message delivered in a certain form, as their sociocognitive constructs become primed to be inundated and stimulated to a certain threshold of arousal. Therefore, the Internet not only shapes what preadolescents learn, but how they learn, by way of shaping cognitive schemas and neural networks.
Internet Usage and Recent Research in Cognitive Priming and Schema Theory

Another theory that may inform the Internet usage of these preadolescents is the notion of cognitive priming and schema theory. Proponents of cognitive psychology argue that Social Learning Theory cannot account for the lasting effects of learning new behaviour or attitudes (Berkowitz & Rogers, 1986; Roskos-Ewoldsen, Roskos-Ewoldsen, & Dillman Carpentier, 2002). Cognitive psychologists argue that upon observing a certain behaviour or message, neural networks begin to create related areas of knowledge called schemas (Berkowitz & Rogers, 1986; Byrnes, 2001; Mayer, 1999, 2003). Upon activation, these schemas set up a "priming effect" that intrinsically predisposes the observer to continually activate already established schemas, while simultaneously enlarging associated schemas and neural networks (Berkowitz & Rogers, 1986). For example, if a preadolescent views violence in a Internet game, say The SkullKid at Newgrounds.com, then the schema "violence" and all the associations in the neural net "violence" (killing, sawing bodies in half, blood, shooting, being killed, wearing a skull mask, wearing green khaki pants) become associated to the schema "game" and all the neural net associations activated in the schema "game" (Byrnes, 2001; Donnerstein & Smith, 2001; Mayer, 1999, 2003; Roskos-Ewoldsen et al., 2002). Further, the interactive, repetitive reward cycle means the player must play violently to win at violent games (Funk et al., 1999), which further heightens and reinforces the schema of "violence" through sensory stimulation. Thus, it has been shown that exposure reinforces "enduring cognitive scripts" that can and will be extrapolated to social scripts and norms (Funk et al., 1999) and be further reinforced through the process of electronic acculturation.
Examples of Cognitive Scripts From the Data

In this study many preadolescents linked specific associations with certain types of behaviours. For example, 1 participant who has been cited before in the study, associates killing famous people on Newgrounds.com with the "souped-up car thing" (2AAM00705). Another participant used the words "cool games" with the phrase "really addicting" (2AAM0702) in his answer. A female participant relates that she associates "seeing stick people die" with it being fun "to see them get [sic] hurt" (2AAF0707), while another female participant expresses that she associates talking with strangers to having fun in the quote (it is) "fun to talk with people you don't know" (2WMF0712).

While these are negative cognitive scripts that may be enduring, this theory applies to positive cognitive scripts as well. In the behaviour of IM or chat 1 participant reveals that she associates talking with friends to having fun (2WMF0704), while another participant relates that she associates learning jokes on the Web site www.00fun.com with entertaining her friends (2WMF0710). Another female participant states that she associates tracking the figure skater Jennifer Robinson with understanding Jennifer Robinson's achievements and goals (2TOF0707).

While it may be argued that these cognitive scripts exist in all activities and interactions, the point is that the behaviour of preadolescent Internet usage is another channel that actively reinforces these scripts, and that if the individual user has any long-term exposure to this influence, then we must acknowledge this influence accordingly in our understanding of cognitive development and the extrapolation of cognitive scripts to affect and behaviour.
Acculturation in a Non-Veridical Reality

As Bandura established in Social Learning Theory, learning happens through behaviours, cognitions, and direct experience as well as acculturation (Bandura, 2002). Learning can take place at a conscious level or unintentionally when new information in our environment is primed, coded, verified, and adopted (Bandura, 2002). Much of our learning happens through the symbols communicated by the mass media (Bandura, 2000, 2002). However, what happens when an influential source of preadolescent acculturation and social learning takes place in a non-veridical, symbolic reality such as the Internet?

Identity Experimentation with Possible Selves

One issue that is both a philosophical question and also a matter of developmental importance is the issue of the possibility of preadolescents' experimentation with possible selves while on the Internet. For the first time in history, our youth can experiment at living and learning in a virtual reality (Bellamy & Hanewicz, 2001). This experimentation can take on many forms: adopting alter egos while on MSN or in chat rooms, role-playing in online-interactive games (MUDS – multi-user domains), creating fantasy lives and living out mature, adult scenarios in simulated games.

For example, 1 of the participants in the study stated that she regularly downloaded new furniture and characters for her SIMS game. "The Sims Online," where the trademark expression "Be somebody. Else. With everybody else" (Electronic Arts, 2003) raises the notion of possible selves to literally new dimensions. In "The Sims Online" the player adopts a persona (physical features and personality traits), and then proceeds to obtain a career, run a business, live with real roommates (other people playing on line), explore new communities, meet people and date – all in a virtual reality. While it may be
argued that role-playing and experimentation with possible selves is not a new notion in preadolescent identity formation (as it has always been a vehicle of play open to any youngster with imagination), the Internet allows preadolescents to experiment and become acculturated in novel, interactive nonsolipsistic forms. For example, instead of a preadolescent female losing herself (or for that matter, finding herself) in a Nancy Drew book, or discovering her adult desires through playing with Barbie, a preadolescent female can, literally with the click of a mouse, enter an adult chat room and cyber (have cybersex relations) with a stranger, and in effect become sexually experienced, without ever having left the house.

A theory that may inform these questions of possible selves and the impact on preadolescent identity formation is a specific theory of adolescent development by Erik Erikson (Erikson, 1985, 1963; Turkle, 1997). Erikson called his theory of adolescent identity development, The Psychosocial Moratorium. While Erikson works from a psychoanalytic tradition, his theory of the moratorium of self has relevant, contemporary applications. Erikson thought that adolescence is a time of powerful experimentation and interaction with people and ideas (Abbott, 2001; Allen, 1997; Erikson, 1985, 1963; Turkle, 1997). Arguably in today's contemporary society, preadolescents (due to the perceived phenomenon of early-onset adolescence) are often perceived of as sophisticated as adolescents and consequently, are allowed to pursue the same interests and make the same sophisticated decisions that their more mature adolescent peers make.

In North American society, before Internet access was prevalent, acculturation and experimentation with people and ideas, known in the context of teenage socializing, often required adolescents to leave the confines of their home, thrusting them out into the
world. The real, objective world required adolescents to interact with people face-to-face, demanding all the social skills that are required of authentic communication. Thus, traditionally, adolescence and the experience of adolescence was often restricted to those of a certain age who had shed the identity of childhood and adopted a more mature, adaptable, often vastly different identity during an intense phase of experimentation (Bosma et al., 1994; Erikson, 1963).

However, this has changed with the advent of Internet access in the home, electronic acculturation and by the fact that preadolescents, by virtue of their new status as being sophisticated consumers, are some of the most frequent users of this technology. Since the Internet allows preadolescents to interact with others without leaving the home environment (which has provided parents and guardians a false sense of comfort due to the fact that the child is physically in the home; Biehn, 2002), the social moratorium is now applicable to preadolescents in that they are free to experiment with multiple identities, personality traits, and possible selves.

**Media Convergence Leads to a Potent Medium**

The Internet, to put it metaphorically, is the morphine of all media. While in the past, researchers have discussed the effects of music and TV on preadolescent and adolescent identity formation (J. Arnett, 1992; J. Arnett & Larson, 1995; Drabman & Thomas, 1974; Johnson et al., 2002; Joy et al., 1986; N. Murray et al., 2002), the Internet focuses and synchronizes all forms of media (music, television shows, movies, celebrity news, video games, cheat codes, and hobbies such as skateboarding or horseback riding) into one medium. This effect has been termed Media Convergence by a task force in the United States analyzing the types of research conducted on the Internet and the
subsequent research gaps in this area (Wartella et al., 2000). Critics may question if the addition of a type of medium amounts to a change in the effect of media on preadolescents. Certainly one could argue that if it was a new type of broadcast media (TV, radio, or magazines) wherein the interaction was limited to the individual processing a set, predetermined unilateral message, one would agree that it is not a new type of medium. However, the Internet redefines the term Media. Wherein a preadolescent used to read an interesting novel (and more recently) see the Hollywood version of the novel at the movie theatre, preadolescents now read Harry Potter, see the movie, go on the Web site and find an entire virtual Harry Potter world, where the participant is sorted by the Sorting Hat, shops in Diagon Alley, plays games to test his/her inherent wizardry skills, trades Harry Potter cards online with their Internet friends or joins an online Harry Potter chat group (Warner Brothers, 2003). What I am arguing is that the Internet and the effect of Media Convergence allow for a degree of influence on preadolescents in ways that were previously unimaginable, that in some senses the Internet is the morphine of all media in that it so thoroughly appeals to all of the media senses (text, audio, audiovisual), it is quick at satisfying superficial impulsive curiosity, and the more you use it critically, the more this superficial process is apparent.

In the recent past, before the Internet, reading books or seeing movies was often limited to the temporal time commitment of the physical experience and the trace of the experience left in the preadolescent's imagination. Today with the advent of the Internet, once discrete media exposures are now stretched out into extensive fascinations, hobbies, and even obsessions, the depths of which can literally, given the infinite nature of the Internet, be endless.
It can be argued that one downfall of the Internet is that it does become a surrogate imagination for the preadolescent user. Ten years ago, children may have read a novel such as *Harry Potter and the Philosopher's Stone* (Rowling, 2000) and then played out "Harry" – themed fantasies with his/her friends in the backyard for hours of self-created, internally stoked stimulation. Today, however, preadolescents now play at the less physical and less imaginative Web site, where the content is predetermined, and the level of stimulation is insidiously passive. Every adult who has ever caught themselves staring blankly at a vacuous Web site understands this phenomenon; however, most discerning adults do not go to Web sites that are unadulterated sensory candy, and if they do, they usually have the presence of mind, or schedule commitments that do not allow them to "play" on the Internet. In contrast, preadolescents are not only drawn to the Internet, but are often encouraged to play on it as parents and guardians are lured into believing that the Internet is a safe "toy" because it keeps their children at home in a secure environment (Biehn, 2002). However, if we asked parents if they would consent to putting their children in a Skinner Box as a means of keeping them stimulated (often confused with entertained) and safe – many parents would understandably be unwilling.

**Impulse Seeking and Impulse Gratification on the Web**

After I had analyzed the codes and generated the concepts, I decided to reanalyze the data to see if any overarching patterns became apparent. It was then that I started to study and hear the voices behind the data. What was behind the participants' voices in their Internet usage was an articulation of impulse fulfillment, that is the participants were saying that they used the Internet primarily as a means to seek and gratify impulses.
I listed the main categories and individually analyzed the data associated to each category. From these 8 unique categories there was an overarching theme, and it was an expression of impulse-seeking and gratification. I looked at these expressions of impulse seeking and gratification and thought critically that perhaps this is merely an effect of age – preadolescents are impulsive and thus they may fill out a survey in an impulsive manner. While I agree that there may be some truth to this consideration, I believe that the data express more than an age-influenced stylistic approach. For example, the expressions of impulse seeking and gratification came in a manner of forms, from the way they describe how the Internet works ("fast"), to the types of Web sites they peruse (bored.com), to the activities they engage in when on the Internet.

Many participants made statements that alluded to the speed which they appreciated and even expected from the medium. For example the voices that said "it gets me my info quickly"(2AAM0720, www.yahoo.com), "I think it has everything from search to chat and its [sic] fast" (2AAF0722, www.MSN.com), and "I like when you choose a site it will take you to it instantly," (2EGF0726, www.bored.com).

Not only were there expectations of speed, but also the participants spoke of behaviour that they pursued on the Internet, that they more than likely, would not engage in in RL. For example, numerous participants spoke of chatting to strangers "chatting with people you don't even know" (2TOF0703, www.MSN.com), participants who spoke of killing 2TOF0703, www.JoeCartoon.com), "...kill famous people" (2AAM0705), and "getting killed" (2TOF0720). I would argue that most certainly the behaviour emulated on the Internet is not parallel to standards of behaviour accepted in society. And while I cannot argue if the Internet behaviours that the participants named were planned or
unplanned, I can refer to my own Internet behaviour and the self-study presented earlier on the chapter. I can attest that on that evening I had not planned to visit any sites past the intended first site when I was looking for the Lemonade stand game.

Thus, a reanalysis of the data shows that preadolescents are not only being electronically acculturated, but they are articulating a more perilous predisposition, that the Internet not only primes them on many levels to embrace the medium of the Internet, but that they are being primed to a particular type of functioning and cognitive style - the impulsive style.

In his book *Neurotic Styles*, psychiatrist David Shapiro argues that three formal characteristics mark the impulsive personality style. These characteristics are: speedy action, abrupt behaviour (when compared to normal behaviour), and unplanned behaviour (Shapiro, 1999). Further, and of note for students and educators, Shapiro states that individuals possessing an impulsive functioning style have predisposition to an impulsive cognitive style. Shapiro notes that individuals with an impulsive cognitive style have difficulty concentrating, abstracting, and generalizing, as well as an overall impaired ability for metacognition (Shapiro, 1999). If, in fact, future research does indicate a link between Internet usage and an impulsive cognitive style, the psychoeducational ramifications will be all-encompassing in terms of the effects on attention span, task monitoring, transfer of learning, and strategic reading skills (Perkins, 1992).

In describing the impulsive style of cognition, David Shapiro states that it is marked by a person's inability or deficiency to both generalize and think abstractly, actively concentrate, make long-range plans, and be reflective (Shapiro, 1999). If, as educators, parents, and guardians, we understand that one of the key elements to healthy self-
development is moderating impulse control, and the Internet is so convincingly linked to impulse-seeking and gratification, how can we continue to uncritically accept the Internet as a toy to entertain our impressionable preadolescents? Thus, I argue that if the Internet is a medium that can influence our behaviours, emotions, and cognitive constructs, and research shows that the Internet is a profound medium for the way in which we are accultured in society (Bandura, 2000, 2002; Berkowitz & Rogers, 1986), how can we uncritically accept the Internet as a benign tool when we are already faced with fragile knowledge, decreasing attention spans, and rising drug and alcohol abuse in youth?

Impulse control is one of the cornerstones of mental health. In the *DSM-IV* failed impulse control is an element of many psychological and psychiatric disorders such as Anti-Social Personality Disorder, Substance Related Disorders, Conduct Disorder, Disorders involving paraphilias, Mood disorders, Schizophrenia, Intermittent Explosive Disorder, Pyromania, and Kleptomania (The American Psychiatric Association, 1994). While Internet use will not cease, we can move to a more critical metacognitive understanding of Internet use (Perkins, 1992). We can teach preadolescents to be aware of what they do while on the Internet, and to reflect critically about using the Internet as a form of entertainment. A recent article challenged educators to keep in stride with changes on the Internet to meet the needs of students (Clyde, 1999). I reply that instead of keeping up with the Internet, we should be more consciously critical of what we are keeping.

**Summary: Phase One trials and New Directions for Research**

This study has illustrated that preadolescents have a developmental tendency towards seeking those things and activities that define and grant autonomy. The Internet is a
particularly attractive medium to preadolescents as it is interactive, is tailored to the individual, and thus uniquely appeals to preadolescent interests and culture. However, a synthesis of research shows that the Internet has an affect on cognitions, behaviours, and environment, and the data collected from this study reveal that preadolescents use the Internet in an impulsive manner. Thus, I argue that Internet usage in preadolescents may impair their cognitive, social, and psychological development because of the impulse-seeking and gratification priming that has been reinforced during preadolescence. The Internet is revolutionizing the meaning and experience of preadolescence in deep pedagogical, philosophical, and developmental terms.

If the Internet is the new plug-in drug, I argue that this drug is only in Phase One trials and should not be extended to use on children. While I understand that the Internet may be the vanguard of a new social order (Bellamy & Hanewicz, 2001), I question the mindset that argues that what is new, is a categorical "good"; for what good is a medium that can disseminate knowledge, when there is no mind that can critically receive and reflect on this knowledge?
References


Parents worry... (2001). Parents worry about kid's Internet safety but few use blocking devices. *Canadian Press Newswire*.


Seidel, J. V. ((c) 1998). *Qualitative Data Analysis*


http://harrypotter.warnerbros.com/home.html


Appendix A - Copy of the complete Reading and Viewing Questionnaire

**Questionnaire**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Date:</th>
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<table>
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<tr>
<th>Male:</th>
<th>Female:</th>
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*Please check one*

<table>
<thead>
<tr>
<th>School:</th>
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<td></td>
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<tr>
<td>Age:</td>
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<td>------</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>What language(s) are spoken in your home?</th>
<th>What language(s) do you speak?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Were you born in Canada?</th>
<th>Were your parents born in Canada?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>If you checked &quot;no&quot;, where were you born?</td>
<td>If you checked &quot;no&quot;, where were they born?</td>
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<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The information you provide on this questionnaire will be kept confidential

How many people live in your house?

How old are your brothers and sisters?

Brother(s):__________________  Sister(s):__________________

Do you have a room of your own or do you share a room?

My own  I share

*Please check one*
With whom do you share your room?

What organized activities do you do on each day of the week?

<table>
<thead>
<tr>
<th>MONDAY</th>
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<table>
<thead>
<tr>
<th>TUESDAY</th>
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<table>
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<tr>
<th>WEDNESDAY</th>
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<table>
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<tr>
<th>THURSDAY</th>
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<table>
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<tr>
<th>FRIDAY</th>
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</thead>
</table>
SATURDAY

SUNDAY

Which of these organized activities do you really enjoy?

Which organized activities do your parents choose for you?
<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you receive an allowance?</td>
<td></td>
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<tr>
<td>if yes, what do you do most often with your allowance?</td>
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<tr>
<td>What do you usually do after school?</td>
<td></td>
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<tr>
<td>Do you have a TV in your bedroom?</td>
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<tr>
<td>Does your family own a computer?</td>
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<tr>
<td>Which room is your computer in?</td>
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<tr>
<td>Do you have a computer in your bedroom?</td>
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</tbody>
</table>
List your top 3 favourite things to do for fun.

- 
- 
- 

How much time do you spend doing homework on a typical school night?

a) 0-1/2 hr.

b) ½ - 1 hr

c) 1-2 hr.

d) 2-3 hr.

e) 3-4 hr.

f) hardly ever do homework

Does anyone help you with your homework?  

Yes  |  No

If yes, who usually helps you?

Where do you usually do your homework?
<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are you parents <strong>usually</strong> home after school?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you like school?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is your <strong>favourite</strong> subject?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is your <strong>least favourite</strong> subject?</td>
<td></td>
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<tr>
<td>Write any 5 words that describe you.</td>
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</tbody>
</table>
Who is the kind of person(s) that you would like to be when you grow up?

What is the funniest thing that has ever happened to you or to someone you know?
# VIEWING

**Movies/Videos/DVD's:**

1. Do you go to the movies at the theatre? **Yes** **No**

2. Who *usually* goes with you to the theatre?

3. How often do you go to the movies at the theatre?
   - a) once a week
   - b) once a month
   - c) twice a month
   - d) rarely

4. Do you rent movies from the video store? **Yes** **No**

5. How often do you *usually* watch videos/dvd's?
   - a) more than once a week
   - b) once a week
c) three times a month

d) twice a month

e) rarely

6. Who **usually** watches videos with you?

7. Who **usually** chooses the movies you watch?

8. If you could watch any movie, what would it be about?

9. What are your 2 favourite movies?

   # 1 Movie

   Why do you like this movie?
Describe the best part of this movie.

#2 Movie

Why do you like this movie?

Describe the best part of this movie.
Television:

1. How often do you watch TV?
   a) every day
   b) every other day
   c) a few times per week
   d) mostly on the weekends
   e) do not watch TV

2. If you watch TV everyday, how many hours per day?
   a) an hour or less
   b) more than an hour
   c) 2 hours
   d) more than 2 hours
3. Who **usually** chooses the TV shows you watch?

4. Who **usually** watches TV with you?

5. Does your family have cable TV?  
   Yes  
   No

6. What are your 2 favourite TV shows?

   # 1 TV show__________________________________________________________

   Why do you like this show?
Describe the best part of this show.

Who is your favourite character? why?

# 2 TV show

Why do you like this show?
Describe the best part of this show.

Who is your favourite character? Why?
Video Games:

1. What video games do you play most often?

2. How often do you play video games?
   a) every day
   b) every other day
   c) a few times per week
   d) do not play

3. Who usually chooses the video games that you play?

4. When you play video games, who are you usually with?
   (circle as many as you like)
   a) brothers or sisters
   b) friends
c) parents

d) alone

e) other:________________________

5. If you could play any video game, what would it be about?

Internet:

1.) How often are you usually on the Internet?

a) every day

b) every other day

c) a few times per week

d) Saturday and Sunday

e) only at school
f) do not use the internet

2.) **If daily**, how many hours are you on the internet each day?

a) less than 1 hour

b) 1 hour

c) more than 1 hour

d) 2 hours

e) more than 2 hours

3.) Who do you **usually** spend the most time with on the Internet?

4.) When you are on the Internet do you:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search for information for school?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Surf for interesting material?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Check your favourite sites?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Download music?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Play video games?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Question</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
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</tr>
<tr>
<td>Belong to a chat group?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Use e-mail?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Use instant messaging?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>5.) Do you have the Internet at your house?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>6.) Do you get Internet time at school?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>7.) What are your 2 favourite web sites?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**#1 Web site**

Why do you like this web site?

Describe the best part of this web site.
#2 Web site

Why do you like this web site?

Describe the best part of this web site
# READING

## Books:

1. Do you consider yourself a good reader or a not-so-good reader?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

Why?

2. Do you like to read?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Sometimes</th>
</tr>
</thead>
</table>

Why?
3. About how many books do you own?
   a) None
   b) less than 10
   c) 10-20
   d) 20-40
   e) more than 40

4. About how many books does your family own?
   a) none
   b) less than 10
   c) 10-20
   d) 20-40
5. What do you **usually** see your Mother reading?

6. What do you **usually** see your father reading?

7. Who reads to you?
   a) mother
   b) father
   c) brother or sister
   d) baby sitter
   e) grandparents
   f) other?
   g) no one

8. Who do you read to?
9. If you had a choice to select a book on any topic, what would you choose to read about?

10. Do you go to the public library regularly?  Yes  No

11. Do you ever receive books as gifts?  Yes  No

12. If so, who are they from?

13. What novels have you studied in class this year?
14. What novels do you remember studying in school?

15. What does the teacher read to you?

16. Do you get independent reading time at school?  Yes  No

17. What are your 2 favourite books?

#1 Book

Why do you like this book?
Describe the best part of the book.

# 2 Book

Why do you like this book?

Describe the best part of the book.
Magazines:

1. How often do you read a magazine?
   a) every day
   b) every other day
   c) a few times per week
   d) do not read magazines

2. What magazines do you read?

3. If you could pick any magazine, what would it be about?
12. If yes, how often do you buy yourself a new CD?

13. Do your parents let you buy whatever music you want?  
Yes  No

14. What is your favourite song right now?

15. What is this song about?

16. Why do you like this music?
17. Is there any music that you are not allowed to listen to?  
   Yes  No

18. If yes, what are you not allowed to listen to?

19. Who do you usually listen to music with?

20. What is your least favourite band or singer?
2. What is your favourite group?

3. Who is your favourite group member?

4. Why is he or she your favourite?

5. Who is your favourite solo artist (singer or musician who is different from the one you mentioned)?

6. Why do you like him or her?
7. How often do you listen to music?

a) every day
b) every other day
c) a few times per week

a) about once a week or less
b) I do not listen to music

8. How often do you watch music videos on TV?

a) every day
b) every other day
c) a few times per week
d) do not watch music videos

9. Do you have your own radio?  Yes  No

10. Do you have your own CD or tape player?  Yes  No
11. Do you use your own money to buy music? 

Yes  No

12. If yes, how often do you buy yourself a new CD?

13. Do your parents let you buy whatever music you want? 

Yes  No

14. What is your favourite song right now?

15. What is this song about?

16. Why do you like this music?
17. Is there any music that you are not allowed to listen to?  Yes  No

18. If yes, what are you not allowed to listen to?

19. Who do you usually listen to music with?

20. What is your least favourite band or singer?
Why?

Thank you for answering all the questions!
Appendix B - Copy of Internet Usage Section

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td>Does your family own a computer?</td>
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</tr>
<tr>
<td>Which room is your computer in?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you have a computer in your bedroom?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**Internet:**

1. How often are you *usually* on the Internet?
   
g) every day

h) every other day

i) a few times per week

j) Saturday and Sunday

k) only at school

l) do not use the internet
2. **If daily**, how many hours are you on the Internet each day?

- f) less than 1 hour
- g) 1 hour
- h) more than 1 hour
- i) 2 hours
- j) more than 2 hours

3. Who do you **usually** spend the most time with on the Internet?

4. When you are on the Internet do you:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search for information for school?</td>
<td></td>
<td></td>
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<tr>
<td>Surf for interesting material?</td>
<td></td>
<td></td>
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<tr>
<td>Check your favourite sites?</td>
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<td></td>
</tr>
<tr>
<td>Download music?</td>
<td></td>
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<tr>
<td>Play video games?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belong to a chat group?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Use e-mail? Yes No

Use instant messaging? Yes No

5. Do you have the Internet at your house? Yes No

6. Do you get Internet time at school? Yes No

7. What are your 2 favourite web sites?

#1 Web site

Why do you like this web site?

Describe the best part of this web site.
Why do you like this web site?

Describe the best part of this web site
Appendix C - Informed Consent Form

BROCK UNIVERSITY FACULTY OF EDUCATION

Informed Consent Form

Title of Study: Children’s Stories: Cultural Mirrors

Researchers: Dr. Anne Elliott, Dr. Vera Woloshyn, Dr. Sandra Bosacki, Dr. Merle Richards, and Dr. Nancy Murray.

Name of Student Participant: (please print)__________________________________________

Grade and School:______________________________________________________________

Name of Parent: (please print)_____________________________________________________

I understand this study in which I have agreed to allow my child to participate will involve completing a questionnaire related to viewing and reading habits and interests once a year for each of three years. The questionnaire asks for the identification and retelling of my child’s favourite stories from literacy and media sources. This questionnaire will be administered to the entire group of consenting students in my child’s class by one of the researchers or a research assistant over 2 30-minute periods of time each year. The teacher will select the most appropriate time for the questionnaire in light of classroom instruction. The primary purpose is to analyze the stories for recurring patterns as a way of determining the kinds of messages young children are learning via the stories they hear. I understand that my child’s anonymity in the study is assured,
as each child who completes the questionnaire will be assigned a numerical code for purposes of identification.

I also understand this study, in which I have agreed to allow my child to participate, may involve an individual interview of between 20 and 30 minutes that will be conducted by either the above researchers or a research assistant under their guidance and training. The interviews will be conducted with 2 boys and 2 girls from each group that completes the questionnaire once each year for three years. During each interview, my child will be asked to recount in detail his or her favourite stories from personal experience, favourite media-based stories and favourite literature-based stories. The primary purpose of the interview is to analyze the stories for recurring patterns as a way of determining the kinds of messages young children are learning from the stories they hear. As with the questionnaire, I understand that my child’s anonymity in the interview part of the study is assured, as he or she will be allocated a fictitious name.

If my child is selected for the interview portion of the study, he or she will be interviewed individually for about 30 minutes in each of the three years. Interviews will be taped and transcribed. All interviews will be held in an open area with the door open. Every attempt will be made to ensure that my child is comfortable and at ease. For instance, the researcher will spend some time in the classroom talking to the children about the process to build rapport prior to the interview process. 2 years after the completion of the project, all tapes will be destroyed and all transcripts shredded. Analysis will be on overall patterns and no individual results will be tabulated.

Each year I will receive interim a summary of all interim results. I also understand that when the study is completed final results will be available to me. I have put my address at the bottom of this form because I wish to obtain a personal copy of the overall results.
I understand that my child’s participation in this study is voluntary and that he or she may withdraw from the study or any part of the study at any time and for any reason without penalty.

I understand that all personal data will be kept strictly confidential and that all information will be coded so that my child’s name is not associated with any stories. I understand that only the researchers named above will have access to the data.

I provide consent for my child to participate in the questionnaire component of this study over a three-year period.

Parent Signature ___________________________ Date __________________

Child Signature ___________________________ Date __________________

I provide consent for my child to participate in the interview component of this study in each of three years. I understand my child may or may not be selected for an interview.

Parent Signature ___________________________ Date __________________

Child Signature ___________________________ Date __________________

If you have any questions or concerns about your child’s participation in the study, you can contact Dr. Anne Elliott at Brock University (905) 688-5550 # 3934 of the Office of Research Services (905) 688-5550 # 3one27.
Interim feedback about the results of the data will be available during the month of August each year at the school. If you would like a personal copy of results please place your address at the bottom of this form. When the final report is complete at the end of the three years, copies will also be available to all participants. This study has been approved by Brock University Research Ethics Board (File # 00-263)

Thank you for your help! Please take one copy of this form with you for further reference.

I have fully explained the procedures of this study to the above participant.

Researcher’s Signature ___________________________ Date: ________________________

Your
Address:_____________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

Phone: ________________________________

e-mail: ______________________________________________________________________

Please name the language(s) spoken at
home: _______________________________________________________________________

In what country were you born? Husband ____________________

Wife ____________________
In what country was your child born?

______________________________
Appendix D - Internet Reference sites for Preadolescent Internet Usage

www.media-awareness.ca - By the Media Awareness Network

GetNetwise.com or www.getnetwise.org/tools- U.S. based; discusses online safety issues

strategis.gc.ca - Industry Canada; information on net filters

www.caip.ca - The Protection Portal By the Canadian Association of Internet Providers; discusses online threats to kids and safety guidelines

www.safekids.com - U.S. based; offers family rules for safe surfing, including printable safety pledges that are to be signed by both child and parent

www.yahooligans.com - Youth oriented search engine

www.ajkids.com - Ask Jeeves for Kids; youth oriented search engine

http://sunsite.berkeley.edu/KidsClick/ - Youth oriented search engine
Appendix E - Ethics/Risk

Senate Research Ethics Board

DATE: April 22, 2003

FROM: Joe Engemann, Chair
Senate Research Ethics Board (REB)

TO: Anne Elliott, Education
Dawn Pollon

FILE: 02-302, Pollon

TITLE: A longitudinal inquiry into preadolescent Internet usage: Psychoeducational and psychosocial outcomes

The Brock University Research Ethics Board has reviewed the above research proposal.

DECISION: 2ndary Use of Data request approved.

This project has been approved for the period of April 22, 2003 to January 30, 2004 subject to full REB ratification at the Research Ethics Board's next scheduled meeting. The approval may be extended upon request. The study may now proceed.

Please note that the Research Ethics Board (REB) requires that you adhere to the protocol as last reviewed and approved by the REB. The Board must approve any modifications before they can be implemented. If you wish to modify your research project, please refer to www.BrockU.CA/researchservices/forms.html to complete the appropriate form REB-03 (200one) Request for Clearance of a Revision or Modification to an Ongoing Application.

Adverse or unexpected events must be reported to the REB as soon as possible with an indication of how these events affect, in the view of the Principal Investigator, the safety of the participants and the continuation of the protocol.

If research participants are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and approvals of those facilities or institutions...
are obtained and filed with the REB prior to the initiation of any research protocols.

The Tri-Council Policy Statement requires that ongoing research be monitored. A Final Report is required for all projects, with the exception of undergraduate projects, upon completion of the project. Researchers with projects lasting more than one year are required to submit a Continuing Review Report annually. The Office of Research Services will contact you when this form REB-02 (200one) Continuing Review/Final Report is required.

Please quote your REB file number on all future correspondence.

Deborah Van Oosten
Research Ethics Officer
Brock University  http://www.brocku.ca/researchservices/
phone: (905)688-5550, ext. 3035  fax: (905)688-0748
## Appendix F - SPSS Output

### Who do you usually spend the most time with on the Internet Yr.1

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<th>Valid Percent</th>
<th>Cumulative Percent</th>
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