

**An exploration of student teachers'
interaction with on-line activities, and their
influence on their teaching topics such as
netiquette and cyber-bullying: an
Australian and Chinese study**

Xiao Hong ZHANG
LLB, M.Ed

School of Education and Professional Studies
Faculty of Education
Griffith University

Submitted in fulfillment of the requirements of the degree of
Doctor of Education

August 2009

Abstract

The Internet has undergone unprecedented development around the world in the last ten years. Increasingly, many millions of people are becoming involved in a wide variety of on-line activities. However, Internet Chat Rooms (ICRs) have become a focus for various crimes and unethical behaviour because of their anonymity and freedom, especially in activities related to sexual solicitation, violence and bullying.

This study aims to investigate Australian and Chinese student teachers' engagement in three on-line activities in Internet chat rooms, namely; playing on-line games; making friends and sexual solicitation; and cyber-bullying. This study also examines how student teachers perceive the effect of these three specific activities on themselves. In light of student teachers' perceptions of these three activities, and their own practice of netiquette in on-line chat rooms, these student teachers' beliefs about what should be taught to 11-year-old Primary school students are also investigated, including cyber-ethics and cyber-legal issues. Based on this broad aim, six specific research questions are posed.

The sample for this study included current university second-year Bachelor of Education Primary School student teachers at a large state university in South East Queensland, Australia, and also at a large state university in East China. This study used a questionnaire that gathered both quantitative and qualitative data. The findings from this study show that these Australian and Chinese student teachers showed they did not consider that playing on-line games would affect their behaviour either in ICRs or in the real world. Australian student teachers thought that ICRs are safe places to make friends,

but Chinese student teachers did not think so. Australian and Chinese student teachers predicted that when they become qualified teachers, they would like to teach upper Primary students about issues of cyber-bullying and playing on-line games. The Australian student teachers were willing to consider teaching upper Primary school students about making friends and sexual solicitation in ICRs, while Chinese student teachers were not willing to do so. Regarding netiquette, Australian student teachers indicated that they were not confident that ethical knowledge and ethical legislation can control on-line activities. However, Chinese student teachers were.

The findings of the study appear to support three theories that were applied in this research to explain the reasons of youth on-line behaviour, namely, Cyber Psychological Theory, Moral Development Theory, and Space Transition Theory. The findings also recommend that teachers, parents, and Departments of Education should work together to protect youth on-line. Cyber-ethical and cyber-legal knowledge should be included in formal education curricula in Primary schools in both countries to protect young people on-line, as well as prevent young people from possible dangerous situations generated in the real off –line world resulting from participating in ICRs.

DECLARATION OF ORIGINALITY

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

XIAOHONG ZHANG
Aug, 2009

TABLE OF CONTENTS

Abstract.....	i
Declaration of Originality.....	iii
Table of Contents.....	iv
List of Tables.....	ix
List of Figures.....	xi
Acknowledge.....	xii

Chapter One Introduction.....	1
1.1 Introduction.....	1
1.2 Research Aim and Research Questions.....	2
1.3 Impetus for the Research.....	3
1.4 Rationale of This Study.....	6
1.4.1 Why This Study Focuses on Internet Chat Rooms.....	6
1.4.2 Why Student Teachers are the Target Population of This Study.....	7
1.4.3 Why This Study is Being Conducted in Australia and China.....	9
1.4.4 Why This Study Focuses on Three Specific On-line Activities.....	11
1.4.5 Why This Study Focuses on Cyber-ethics and Cyber-legal Education.....	13
1.5 Significance of the Research Being Conducted.....	15
1.6 Concepts Defined.....	17
1.7 Outline of Dissertation.....	21
1.8 Summary.....	23
Chapter Two Background.....	25
2.1 Introduction.....	25
2.2 An Introduction to the Internet and On-line Chat Rooms.....	25
2.2.1 The Development of the Internet	25
2.2.2 The Development of Internet Chat Rooms.....	28
2.3 Three Specific Activities Found in Internet Chat Rooms.....	29
2.3.1 Playing On-line Games	29
2.3.2 Forming Relationships and Sexual Solicitations.....	31
2.3.3 Cyber-bullying.....	32
2.4 Australian Internet Development and Ethical and Legal Issues.....	35
2.4.1 Internet Development in Australia.....	35
2.4.2 Australian Ethics and Censorship in Relation to the Internet.....	36
2.4.2.1 Australian Ethical Issues.....	36
2.4.2.2 Australian Internet Censorship.....	38
2.5 Chinese Internet Development and Ethical and Legal Issues.....	40
2.5.1 Internet Development in China.....	40
2.5.2 Internet Cafés	41
2.5.3 Chinese Ethics and Censorship in Relation to the Internet.....	42
2.5.3.1 Chinese Ethical Issues.....	42
2.5.3.2 Chinese Internet Censorship.....	43
2.6 Summary.....	46

Chapter Three Literature Review.....	48
3.1 Introduction.....	48
3.2 Overview of the Internet and On-line Chat Rooms.....	48
3.2.1 The Internet Models and Their Influences.....	49
3.2.1.1 Three Models of the Internet; Cognitive, Cultural and Social Environments.....	49
3.2.1.2 The Positive and Negative Influences of the Internet.....	50
3.2.2 Internet Chat Rooms	55
3.2.2.1 Characteristics of Internet Chat Rooms	56
3.2.2.2 Positive and Negative Influences of Internet Chat Rooms.....	59
3.2.3 Instant Messaging.....	62
3.2.3.1 Instant Messaging in the World.....	62
3.2.3.2 Instant Messaging in China.....	67
3.3 Young People's Activities in Internet Chat Rooms.....	69
3.3.1 Net Generation.....	69
3.3.2 Young People and On-line Dangers.....	71
3.4 Playing On-line Games and Internet Addiction.....	73
3.4.1 Types of On-line Games.....	73
3.4.2 On-line Games with Young People.....	74
3.4.3 Influences of Playing On-line Games.....	76
3.5 Forming Relationships and Sexual Solicitations in Internet Chat Rooms.....	79
3.5.1 Making Friends and Young People.....	81
3.5.2 Influences of Making On-line Friends.....	83
3.6 Cyber-bullying in Internet Chat Rooms.....	84
3.6.1 Definition and Characteristics of Cyber-bullying.....	85
3.6.2 Cyber-bullying among Young People.....	86
3.6.3 Influences of Cyber-bullying.....	89
3.6.3.1 Effects of Cyber-bullying on Girls.....	90
3.6.3.2 Protecting Youth on the Internet.....	90
3.6.4 Cyber-rape.....	92
3.7 The Role of Parents, Teachers, and Other Authorities Towards helping Children's On-line Activities.....	93
3.8 Australia's Young People's Activities on the Internet.....	96
3.8.1 Australian Government Attempts at Regulating On-line Chat Rooms.....	99
3.8.2 Legal Efforts to Protect Young People and Children.....	100
3.9 China's Young People's Activities on the Internet.....	101
3.9.1 Chinese Internet Café.....	103
3.9.2 Internet Addiction in China.....	106
3.9.3 School Sexuality Education	107
3.9.4 Government Attempts at Regulation.....	110
3.10 Internet Ethical Issues and Cyber-legal Education.....	112
3.10.1 Netiquette and its Core Rules.....	112
3.10.2 Cyber-ethics Education	119
3.10.3 Cyber-legal Education.....	122
3.11 Summary.....	126

Chapter Four Relevant Theories of the Internet.....	128
4.1 Introduction.....	128
4.2 Cyber Psychological Theory and its Implications in Cyberspace.....	129
4.3 The Moral Development Theory and its Implications in Cyberspace.....	133
4.4 Space Transition Theory of Cyber-crime and its Implications in Cyberspace.....	137
4.4.1 Definition and Categories of Cyber-crime.....	137
4.4.2 Space Transition Theory of Cyber-crime.....	138
4.4.2.1 Definition of Space Transition Theory.....	138
4.4.2.2 Propositions of Space Transition Theory.....	138
4.4.2.3 Understanding the Space Transition Theory.....	140
4.4.3 Linking Theories: Psychology, Moral Development and Space Transition in Internet Chat Rooms.....	142
4.5 Summary.....	145
Chapter Five Method.....	147
5.1 Introduction.....	147
5.2 Qualitative and Quantitative Research for This Study.....	148
5.3 Research Design.....	149
5.4 Ethical Considerations.....	150
5.5 Sample.....	151
5.6 Questionnaire.....	152
5.6.1 Questionnaire Design.....	154
5.6.2 Chinese Version of the Questionnaire.....	157
5.6.3 Pre-test Study.....	157
5.7 Data Collection Procedure.....	159
5.7.1 Australian Data Collection Procedure.....	159
5.7.2 Chinese Data Collection Procedure.....	159
5.8 Data Analysis.....	160
5.9 Summary.....	161
Chapter Six Results.....	162
6.1 Introduction.....	162
6.2 Sample Demographics	163
6.2.1 Age of Australian and Chinese Student teachers Sampled.....	163
6.2.2 Gender of Australian and Chinese Student teachers Sampled.....	164
6.2.3 Hours of use of Internet Chat Rooms by Australian and Chinese Student teachers Sampled.....	164
6.2.4 Location Where Australian and Chinese Student teachers Access Internet Chat Rooms.....	165
6.3 On-line Activities Undertaken by Australian and Chinese Student Teachers in Internet Chat Rooms.....	166
6.4 The Influences of, and Teaching Views about, Three On-line Activities Australian and Chinese Student teachers.....	168
6.4.1 The Influence of Three On-line Activities on Australian and Chinese Student teachers.....	168
6.4.1.1 The Influence of Playing On-line Games on Australian and Chinese Student teacher.....	168

6.4.1.2 Australian and Chinese Student teachers' Views about Making Friends and Solicitation.....	171
6.4.1.3 Australian and Chinese Student teachers' Views about Cyber-bullying.....	174
6.4.2 Views of Australian and Chinese Student teachers about Teaching Issues in Relation to Three On-line Activities.....	176
6.4.3 Australian and Chinese Student teachers' Understanding about Three On-line Activities.....	179
6.5 Netiquette for Australian and Chinese Student teachers in Internet Chat Rooms and Views on Teaching Netiquette to 11 year-old Primary School Students.....	181
6.5.1 Netiquette That Australian and Chinese Student teachers Follow in Internet Chat Rooms	181
6.5.1.1 Results of Student teachers' Netiquette Using the Kruskal Wallis Test.....	181
6.5.1.2 Results of Student teachers' Netiquette From Chi-Square Test.....	183
6.5.1.3 Results of Student teachers' Netiquette From t-test.....	184
6.5.2 Australian and Chinese Student teachers ' Views about Teaching Netiquette for Internet Chat Rooms.....	186
6.5.2.1 Kruskal Wallis Test of Whether Student teachers Want to Teach Netiquette to 11 year-old Primary School Students.....	186
6.5.2.2 Results of whether Student teachers Want to Teach Netiquette to 11 year-old Primary School Students from Chi-Square Test.....	188
6.6 Legal and Ethics Education about Internet Chat Rooms That Australian and Chinese Student teachers Intend to Teach in the Future.....	190
6.6.1 Student teachers' Desire to Provide Legal and Ethics Education About Internet Chat Rooms to 11 Year-old Primary School Students, t-test.....	190
6.6.2 Student teachers' Desire to Provide Legal and Ethics Education About Internet Chat Rooms to 11 Year-old Primary School Students, Mean Statistics.....	192
6.7 Qualitative Results of Teaching Netiquette and Legal Issues to Future Primary School Students.....	194
6.7.1 Qualitative Results of Teaching Netiquette to Future Primary School Students.....	194
6.7.2 Qualitative Results of Teaching Legal Issues to Future Primary School Students.....	197
6.8 Summary.....	200
Chapter Seven Discussion and Conclusion.....	201
7.1 Introduction.....	203
7.2 Quantitative Discussion.....	203
7.2.1 Age, Gender and Hours On-line.....	203
7.2.2 The Influences of Three On-line Activities: Analysis.....	205
7.2.2.1 The Influences of Playing On-line Games.....	205
7.2.2.2 The Influences of Making Friends and Sexual Solicitation.....	206
7.2.2.3 The Influences of Cyber-bullying.....	208

7.2.3 Teaching Issues in Relation to Three On-line Activities: Analysis.....	209
7.2.3.1 Teaching Issues of Playing On-line Games.....	209
7.2.3.2 Teaching Issues of Making Friends and Sexual Solicitation.....	210
7.2.3.3 Teaching Issues of Cyber-bullying.....	212
7.2.4 Netiquette.....	213
7.2.5 Cyber-Ethics and Cyber-Legal Education About Internet Chat Rooms.....	214
7.3 Qualitative Discussion.....	216
7.3.1 Teaching Netiquette to Future Primary School Students.....	216
7.3.2 Teaching Legal Issues About Internet Chat Rooms to Future Primary School Students.....	217
7.4 Limitations.....	219
7.5 Implications and Recommendations.....	220
7.6 Conclusion.....	221
7.7 Future research.....	225
References.....	227

Appendix A:

- Questionnaire (in English)

Appendix B:

- Consent Documents(in Chinese)
- Questionnaire (in Chinese)

Appendix C: SPSS Analyses by Gender

Note: Many electronic sources do not provide page numbers. In this dissertation, the symbol ¶ is used in place of page number.

List of Tables

	Page
Table 6.1 Age of Australian and Chinese Student teachers Sampled.....	163
Table 6.2 Gender of Australian and Chinese Student teachers Sampled.....	164
Table 6.3 Hours of use of Internet Chat Rooms in one Week by Australian and Chinese Student teachers.....	165
Table 6.4 Location Where Australian and Chinese Student teachers Access Internet Chat Rooms.....	166
Table 6.5 Purpose of On-line Activities of Australian and Chinese Student teachers.....	167
Table 6.6 Australian and Chinese Student teachers' Views about Playing On-line Games.....	169
Table 6.7 Student teachers View about Playing On-line Games (Chi square statistic).	170
Table 6.8 Social Interaction by Gender (crosstabs).....	170
Table 6.9 Prosocial Behaviour by Gender (crosstabs)	171
Table 6.10 Australian and Chinese Student teachers' Views about Making Friends and about Sexual Solicitation.....	172
Table 6.11 Student teachers' Views about Making Friends and Sexual Solicitation in Internet Chat Rooms.....	173
Table 6.12 Australian and Chinese Student teachers' Views on Cyber-bullying.....	175
Table 6.13 Student teachers' Views about Cyber-bullying	176
Table 6.14 Student teachers' Views about Teaching Relevant Knowledge to 11 Year-old Primary School Students by Chi-Square Test.....	177
Table 6.15 T-test of the Understanding of Australian and Chinese Student teachers About Cyber-bullying, Sexual Solicitation, and Internet Addiction.....	179
Table 6.16 Mean Test of Australian and Chinese Student teachers on Cyber-bullying, Sexual Solicitation, and Internet Addiction.....	180
Table 6.17 Australian and Chinese Student teachers Netiquette Followed in Internet Chat Rooms.....	182
Table 6.18 Australian and Chinese Student teachers' Netiquette Practices in Internet Chat Rooms Evaluated by Chi-Square Test Statistics.....	183
Table 6.19 T-test of Netiquette Australian and Chinese Student teachers Followed in Internet Chat Rooms.....	185
Table 6.20 Australian and Chinese Student teachers Views about Teaching Netiquette	187
Table 6.21 Views of Australian and Chinese Student teachers about Teaching Netiquette by t-test Statistics	189

Table 6.22 Views Held by Australian and Chinese Student teachers on Legal and Ethics Education for Internet Chat Rooms.....	191
Table 6.23 Views held by Australian and Chinese Student teachers on Legal and Ethics Education for Internet Chat Rooms, Mean Statistics	193
Table 6.24 Examples of Comments by Australian and Chinese Student teachers on Their Future Teaching Careers and the Influence of Netiquette on Children's On-line Chat Room Activities.....	195
Table 6.25 Examples of Opinions of Australian and Chinese Student teachers on the Influence of Legal Issues on Children's On-line Chat Room Activities in Their Future Teaching careers.....	198

List of Figures

Figure 3.1 Comparison Between Global and US User Numbers of Global TOP3 Instant Messaging (IM) Providers.....	65
Figure 3.2 The Usage of Instant Communication Tools in China on December, 2006....	68
Figure 3.3 Proportion of Children Aged 5-14 Years Accessing the Internet: Internet Activities - Queensland - April 2009.....	98
Figure 3.4 The Ages of Young People Accessing on the Internet.....	103

Acknowledgements

I would like to thank my supervisors Dr. Juliette Goldman and Professor Mervyn Hyde for their wise guidance and direction throughout my entire doctoral endeavour. You are both a friend and mentor, and as such, set an example for what a supervisor should be.

I would like to thank my statistical adviser Dr. Peter Grimbeek for his careful review of the manuscript and timely advice. I particularly appreciated his assistance in ensuring the integrity of the research, and his ongoing statistical analysis support. His calm approach has assisted the completion of this project.

Thank you also to my parents for their unconditional love, emotional and financial support. My parents, Yazhou ZHANG and Yuxia LIU, had a dream to see all of their children graduate from university. All three of their children have achieved that aim.

It would be impossible for me to acknowledge everyone who has positively influenced my studies and contributed to my academic growth. However, to each and every one of you, your influence and contributions have never gone without my heartfelt thanks.

Chapter One

Introduction

1.1 Introduction

The Internet has had a profound influence on many societies. It provides overwhelming amounts of information as well as a most efficient way to integrate the necessary responsibilities of daily living such as shopping, banking, communication, dating, and learning. Newspapers, radio, television and other media are now encompassed in this new medium. The Internet is not only changing the way people live, work and study, but also the way people think (Subrahmanyam, Kraut, Greenfield, & Gross, 2000).

With the increasing pervasiveness of the Internet, the “Internet Chat Room” is becoming increasingly popular. Millions of people participate in on-line chat rooms to do business, make friends, watch on-line movies, and play interactive games. Young people are gradually becoming more computer-savvy, and are gaining competence in the use of the wide range of functions available on the Internet, such as instant messaging and email. With these skills, young users can easily access the Internet in school, at home, or in other public areas in order to obtain a vast array of information and discover interesting on-line forums information, such as accessing social web sites.

There are an increasing number of on-line chat rooms, but there is a growing concern over the negative effects of these venues on young people and children (Mishra, 2006). Similar to earlier media technology such as the radio, the Internet has brought social and educational benefits, but it has also brought substantial concern for children’s exposure

to inappropriate and harmful content. While surfing the Internet, young people and children may encounter inappropriate commercial, sexual, and violent content (National School Boards Foundation [NSBF], 2000). However, because of the anonymity which is characteristic of on-line encounters, behaviour in virtual worlds can press the boundaries of acceptability, and can also be difficult to control. Internet etiquette, or “netiquette”, has been established to guide users’ behaviour in on-line chat rooms, and to dictate the execution of people’s roles in those chat rooms. Parents, teachers, and other people who work with young people can guide and support them in their efforts to network via this new venue of chat rooms. Specifically, teachers and parents can educate young people in netiquette practices to ensure that they use the Internet effectively and responsibly.

This chapter explores the broad aim of this research and its six specific research questions. From the impetus and rationale for this work, the significance of the study is also explored and relevant concepts are explained.

1.2 Research Aim and Research Questions

The broad aim of this study is to investigate Australian and Chinese student teachers’ engagement in three on-line activities in Internet chat rooms, namely; playing on-line games; making friends and sexual solicitation; and cyber-bullying. The study examines how student teachers perceive the effect of these three specific activities on themselves. In light of these student teachers’ perceptions of these three activities, and their own practice of netiquette in on-line chat rooms, the student teachers’ beliefs about what should be taught to 11 year-old Primary school students, including cyber-ethics and cyber-legal issues

are investigated. Based on this broad aim, six specific research questions are posed.

- (1a) How do Australian and Chinese student teachers perceive they are affected by three specific types of on-line activities, namely; playing on-line games; making friends and sexual solicitation; and cyber-bullying?
- (1b) Which issues associated with these three on-line activities do Australian and Chinese student teachers believe they would teach 11 year-old Primary school students?
- (2a) What etiquette, on the Internet, do Australian and Chinese student teachers follow?
- (2b) What netiquette do Australian and Chinese student teachers believe they would teach 11 year-old Primary school students in their future career?
- (3a) What cyber-ethics and cyber-legal issues do Australian and Chinese student teachers follow on-line?
- (3b) What cyber-ethics and cyber-legal issues do Australian and Chinese student teachers believe they would teach 11 year-old Primary school students?

1.3 Impetus for the Research

The Internet has had an impact on societies in every area of government policy, including the economy, entertainment, education and healthcare (Press, 2004). People of all age groups are now on-line, especially the younger generation, that is, people under 25 years old, who access the 'Net to find information, make new friends and get a date, go shopping, and enjoy different entertainments.

The Internet supports many popular communication forums such as Internet chat rooms (ICRs), e-mail, instant messaging, blogs, and bulletin boards. Among these options, Internet chat rooms provide a unique environment that allows millions of people to communicate and participate in diverse discussions (Subrahmanyam, Kraut, Greenfield, & Gross, 2000). Internet chat rooms may be defined as on-line sites that promote synchronous, equal, anonymous participation patterns offering an accessible communication platform where like-minded, and even disparately-minded, individuals share information and make friends across the globe (McKenna & Bargh, 2000). Chat rooms provide an interesting medium because they consist of multiple type-written conversations occurring at the same time. Further, all conversations and activities in Internet chat rooms share the same cyber-space even though they can cover a variety of topics. As a new social environment that hosts children and adolescents, Internet chat rooms are an interactive environment that includes universal youth issues such as identity, sexuality, and a sense of self-awareness (Subrahmanyam, Kraut, Greenfield, & Gross, 2000).

Another important aspect of Internet chat rooms is that they are a global communication tool as well as a cultural tool among young people. Many young people, even children, find Internet chat rooms to be convenient places to make and meet friends and explore their social lives (Aftab, 2000). However, on-line activities in Internet chat rooms draw people for a range of individual psychological reasons, and a range of cyber-ethics and cyber-legal issues. For example, a disturbingly large number of adults take advantage of the anonymity of chat rooms to target unsuspecting youths. These adults use their knowledge of popular fashions in clothes, music and sports to impersonate as children

or adolescents, and gain the trust of other chat room participants (Flood & Hamilton, 2003).

Once they have gained the trust of youth, some unexpected and frequently illegal behaviours such as stalking, bullying and sexual harassment, may occur.

The most significant concern for many educators arising from the chat room phenomenon is that researchers are just beginning to realise the extent of the complex and increasingly prevalent occurrence of Internet-based crimes against youth. Internet chat rooms are considered a cultural product, because within them culture is shared, norms are developed, and these norms (e.g., communication norms) are transmitted to new generations of users who, in turn, create new norms of their own (Greenfield & Subrahmanyam, 2003). Thus, it is important to study this field in order to understand how young people and children grow and adapt in this new, expanding, complex virtual universe, even as they carry on their lives in the real world.

In light of the Internet's power and pervasive presence, it may be of little influence for teachers to simply tell their students that the Internet is a positive or negative force. Rather, in an attempt to prepare students for the complexity of their on-line existences, teachers may be more effective by explaining how chat rooms are used, and what sort of people use them, exploring with young people to realise the potential dangers that exist on-line. Hence, appropriate education will play an important role in helping young people to recognise predatory on-line behaviour and to protect themselves in Internet chat rooms. Further, Internet chat rooms also provide researchers with a bridge into the psychological world of children from which to observe their contemporary developmental issues.

This study explores some of the ways in which Primary school student teachers

behave in Internet chat rooms, and, from this dynamic assesses their degree of reliance on this forum, their social interaction practices, and their ethical positions about their behaviour in Internet chat rooms. Primary school student teachers, when fully qualified, will most likely be expected to take responsibility for teaching their students about these issues, particularly in Upper Primary school, in grades 6 and 7 (age about 11 to 12 years).

1.4 Rationale of This Study

1.4.1 Why This Study Focuses on Internet Chat Rooms

Communication on the Internet can be as small and intimate as in instant messaging, which is a new way of communicating with familiar short pieces of language (Gross, 2004), but it can also be very large, such as national or global. Large national and international networks are common in chat rooms and Bulletin Boards (Subrahmanyam et al., 2001).

In the off-line world, social interactions are limited by time and space. However, in Internet chat rooms these limitations are transcended, and greater possibilities are brought into such interactions. As mentioned earlier, various on-line activities are available in Internet chat rooms, including sharing information, shopping, playing on-line games, making friends, and obtaining professional advice. The synchronous communication that characterises on-line chat rooms is much more attractive to youth than the asynchronous communication such as e-mail (Subrahmanyam et al., 2001). One of the most popular chat room activities involves on-line games that can be played with people on the other side of the world; people who children and adolescents would never have met without accessing Internet chat rooms (Kompas Cyber Media [KCM], 2003).

Clearly, on-line activities in chat rooms can be beneficial for participants. For instance, education on-line can benefit young people by allowing them to quickly exchange information worldwide and participate in on-line learning groups. As well, however, are the negative influences such as Internet addiction, and the growth of illegal activities such as cyber-bullying. Instances of cyber-crime have increased as the number of young people using chat rooms has grown. In one common scenario, young people, especially children, chat with strangers on-line, and then may meet them off-line. This meeting exposes the child to the possibility of dangerous behaviours such as date rape. Even when people chat for a long time in Internet chat rooms, they are still strangers when they meet (Mishra, 2006).

On-line chat rooms are a diverse and a much discussed communication form that makes possible both on-line and off-line interaction. Research on Internet chat rooms draws on theories and practices from the Education discipline. Internet chat rooms are a relatively new field of study, and little is known about the potential impact of this environment on student teachers, their perception of this new medium, and how they may educate their future students about it and its characteristics.

1.4.2 Why Student Teachers are the Target Population of This Study

Student teachers are the target group for this research for two reasons. First, they are training to be role models who will teach generations of school children. Second, they are young people who also need to be protected from the potential perils of Internet chat rooms. Like many young people, many student teachers frequently participate in on-line activities

and, in the process, develop their own ethical and behavioural standards. These behaviours and beliefs may not only affect their own perceptions, but also their attitudes to teaching their future Primary school students, especially in computer-based technologies.

Teachers' skills and abilities play a very important role in ensuring the educational success of children (Roschelle, Pea, Hoadley, Gordin, & Means, 2000). In recognising the important role of teachers, the Clinton administration in the U.S.A. set as its first goal in the 1996 National Educational Technology Plan, that "all teachers in the nation will have the training and support they need to help students learn how to use computers and the information superhighway" (U.S. Department of Education [USDE], 1996). Given this mandate, student teachers need to become familiar with the technical knowledge necessary to educate students for a digital adult world. If teachers lack the expertise to use the more sophisticated computer-based applications, they will not be equipped to use technology to enhance student learning. Teachers need to be provided with appropriate training so that they know which software applications are available, how they can be integrated effectively into the Primary school curriculum, what on-line dangers exist, and what factors promote these dangers. If student teachers do not have appropriate on-line behaviour themselves, their beliefs may be transmitted through their teaching practices, to their future students.

Teachers are also viewed as role models for students. Teachers are expected to educate through professional example, as well as by instruction (Roschelle et al., 2000). Verbal instruction helps students acquire knowledge, while personal example offers students role models from which to learn. Both of these pedagogies can strengthen young

people's ethical knowledge (Roschelle et al., 2000). Through both instructional methods, teachers can aim towards the goal of ethical and legal education for young people. The generation entering Primary school now will become the first cohort using the Internet from their early childhood. Therefore, adequate and appropriate education which addresses pre-service teachers' on-line activities, including misconduct may need to be undertaken to prepare this first cohort for the complexities of cyber-ethics and cyber-legal issues.

1.4.3 Why This Study is Being Conducted in Australia and China

Education exchanges and co-operation between Australia and China have resulted in significant advancements in the field of education since diplomatic ties were established 36 years ago. One example of this co-operation can be found in the mutual registration of Australian and Chinese students. In 2006, approximately 90,287 Chinese students were registered with the Australian Department of Education, which included 51% studying in universities, and 16% in Vocational institutions (Australian Education International [AEI], 2006). China has been the most active country in seeking foreign educational opportunities. One out of every four international students in Australia is from China (Zhang, 2008). Because so many Chinese students funnel into the Australian tertiary education system, Australian education practice is an important learning source also for the Chinese Ministry of Education [CME].

At the Forum of China Education Center of Sydney University on September 26, 2008, Ambassador Zhang Junsai of China delivered a speech in which he outlined three major achievements in the field of education resulting from the cooperation between

Australian and China. First, the outstanding results of the China-Australia co operation show that:

By the end of the year 2007, there were 56 educational projects jointly operated by [the] educational institutions of [the] two countries, which accounted for 36% of all Chinese-Foreign cooperatively-run educational projects. More than 30,000 Chinese students benefited from those schools and projects. Compared with other countries and regions, Australia is clearly one of the leaders in this regard (Zhang, 2008, ¶1).

Second, Zhang has pointed out that the cooperation between Australia and China has been expanded to cultivate high-level talent. In recent years, the China Scholarship Council has become involved in Australian research fields such as “energy, resources, environment, information, space, nanotechnology, oceanography, [and] new material” (Zhang, 2008, ¶1). Third, the education exchanges move both ways. An increasing number of Australians are interested in learning Chinese language and culture. “There are 569 schools in Australia that have Chinese language course[s], with nearly 1,000 Chinese language teachers and more than 100,000 Australian students studying Chinese” (Zhang, 2008, ¶1). In 2007, nearly 1,500 Australians went to China to study the Chinese language and culture, through which “they get a better understanding and knowledge on China” (Zhang, 2008, ¶1). China’s increasing willingness to share information with outsiders and the resulting development of China-Australia relations, will escalate the Australian and Chinese people’s desire to know more about each other, and enhance educational exchanges between the two countries.

Consequently, the two countries’ educational exchanges and cooperation have produced ‘win-win’ results (Zhang, 2008). The Australian education system is renowned

for its excellence and quality. Therefore, China can learn much from Australia, especially in areas such as business, accounting, agriculture, and biomedicine (Zhang, 2008). For its part, Australia stands to benefit from China's rising status in the world, and the country's position as the most populous nation in the world with a population of about 1.3 billion.

1.4.4 Why This Study Focuses on Three Specific On-line Activities

The unlimited amount of information accessible on-line makes it is impossible for this dissertation to explore *all* types of activities available on the Internet. Because the target population of this study is student teachers, who are mostly aged in their early twenties, three activities in which this age-group commonly engage while in Internet chat rooms are analysed. They are: playing on-line games; making friends; and participation in cyber-bullying. These on-line activities are analysed in order to gather an understanding of the factors contributing to the student teachers' experiences of Internet chat rooms. On-line games, in particular multiplayer on-line games (MOGs), have become a popular activity on the Internet (Wan, Xu, & Zhou, 2006). For example, according to "Pacific Epoch's 2006 On-line Game Report" (Koo, 2005), China had 30.4 million on-line gamers by the end of 2006. MOGs enable players to cooperate or compete with each other through communication, interaction, and collaboration. These games also gain some of their appeal from the feeling they impart. For example, when players participate in MOGs, they may have the sense of "real feeling [s]," mimicking feelings experienced in the real world (Wan et al., 2006, p. 25). This "real feeling" attracts millions of participants, especially young people, to play these games, often devoting significant amounts of time to such activities.

Considering the significant influence of these games on young people (Markow, 2008), including student teachers, the behaviours developed in response to them need to be explored. Further, the student teachers themselves, should be questioned about whether their behaviour meets netiquette standards, and whether they perceive any negative psychological effects from the games.

Another popular activity in Internet chat rooms is making friends. Teenagers, especially, report that keeping up with local and distant friends is a very important use of the Internet for them (Subrahmanyam et al., 2000). Subrahmanyam et al. (2000) found that young Internet users communicate as their “real selves” when they portray themselves on-line. Young users feel they communicate more authentically on-line than in face-to-face communication. However, because anonymous communication is possible in these on-line chats, participants may converse with others with as much, or as little, accuracy as they choose. Thus, it is easy to make “friends”, which may result in negative outcomes such as sexual solicitation or date rape.

Cyber-bullying is another negative aspect of on-line communication. It continues to grow as more adolescents gain access to the Internet. Accessibility is the most probable cause of this increase; as more teenagers participate in on-line chats, more fall victim to cyber-bullying. Previously, children may have been able to escape bullies at school by going straight home, but with technological advances and synchronous communication, children cannot escape their enemies in cyberspace, and their enemies accompany them home (Hanewald, 2008). However, there is little material that explores the complexities of cyber-abuse from an educational perspective (Hanewald, 2008). Most researchers focus on

cyber-bullying from a legal perspective, such as policing and regulating cyber-crimes, or from a technological perspective, such as prevention and detection software; or from a psychological perspective, for example, studying human relationships (Hanewald, 2008). In this dissertation, appropriate education on the causes, consequences, and prevention of cyber-bullying is considered a suitable topic in the curriculum of student teachers (Goff, 2007).

1.4.5 Why This Study Focuses on Cyber-ethics and Cyber-legal

Education

Research on earlier media forms such as TV and radio, suggests that the media play an important role in a child's social development (Wartella & Jennings, 2000). Children who watch television programs or movies with high levels of aggression tend to remember and resurrect the violence later in real life if they have unsatisfactory relationships with their family members or peer groups (Wartella & Jennings, 2000). With the pervasiveness of the Internet, children could seek to develop their self-concept or identity on-line, and reliance on this largely unregulated medium could affect a child's socialisation in a variety of ways (Wartella & Jennings, 2000). For example, children may experience enhanced interactivity with other users when they play on-line games.

From the mid-1990s, public concern has focussed on two key issues about children's activities on the Internet. One well-known concern is that because of the Net's anonymity and children's easy interaction with strangers, children may encounter on-line pedophiles. The second concern is the possibility that children can access objectionable

content, including pornographic or violence-promoting sites, as well as sites that promote hatred against specific groups (Fun, 1995). The challenge of regulating children's use of the Internet has been largely left to the children themselves. Even when parents do monitor children's on-line activity, parents acting like gatekeepers are an inadequate means of safeguarding children from the potentially harmful effects of Internet use (Wartella & Jennings, 2000). Therefore, in addition to providing support for parents, various government and educational organisations need to teach children to protect themselves when surfing the Internet.

Generally, most children's formal education is acquired in Primary schools. However, with the growth of the Internet, many opportunities are provided for Primary school students to learn on-line about a wide range of issues, including those not in the school curricula or are inadequately addressed there such as puberty and sexuality (Goldman & Zhang, in press), and also prostitution. Thus, the issue of educating students on the appropriate use of Internet chat rooms, and the use of the Internet in general, becomes important to the quality of community development, both in and out of school (Friedland & Boyte, 2000; Wellman, 2001).

The practices of both ethical education and legal education have long existed in the Australian and Chinese school educational systems. Indeed, it is difficult to distinguish guidance among "normal behaviour", "behaviour-destroyed ethics" and "behaviour-avoided crimes" (Kohlberg, 1969). If teachers and parents are not aware of children's unusual behaviours, they are unable to provide guidance or to encourage behaviour modification, and some young school students may shift from delinquents to criminals.

This study also introduces a set of netiquette guidelines from the literature for implementing cyber-legal and cyber-ethics education for youth under the age of 25, in order to prevent anomalous behaviour and to protect young people from potential on-line dangers. In this study, legislation is conceptualised as being able to promote appropriate governance and guide legal punishment, while ethics are based on contemporary social norms. Cyber-legal education may be regarded as a hard instrument, whereas cyber-ethics education may be considered to be a soft instrument used to assist youth to behave appropriately in the virtual environment. In real-world circumstances, ethical education will not have the power of legislation (Salbu, 2001). However, sound cyber-ethics principles are supported by a professional code of legal conduct (Salbu, 2001). Additionally, just as cyber-ethics Education with on-line safety guidelines alone might not be sufficient to ensure compliance by youth, cyber-legal education alone may not fully regulate human behaviour. Therefore, both ethics and the law need to be utilised to guide youth behaviour in Internet chat rooms (Salbu, 2001). Thus, pre-service teachers are encouraged to increase their use of technology in the classroom in order to help children learn to recognise the potential dangers in Internet chat rooms and to develop the appropriate legal knowledge to become strong cybercitizens.

1.5 Significance of the Research Being Conducted

Exponential growth in the use of Internet around the world and in the size of on-line communities has occurred over the past decade. Certainly, many benefits have been derived from Internet usage, such as rapid communication and a steep increase in the sharing of

information. However, some potential problems are not well addressed, such as internet addiction (Morahan-Martin & Schumacher, 2003). There also has been insufficient recognition of the dangers that exist on-line which target young people, especially children (Stanley, 2001). Both the Australian and Chinese governments have made significant efforts to protect children from these on-line dangers (Chinese Youth League [CYL], 2001). For example, in both countries, parents and children have been taught to use specific software to detect factors linked to on-line dangers. School and university education can also make stronger efforts to help young people and children protect themselves from potential dangers rather than emphasising only technical and programming advances.

In addition, Primary school student teachers, as a group, have the double role of both learning as students, and also of teaching young students. Student teachers' on-line behaviour and their understanding of netiquette may influence these students, but few researchers have investigated student teachers' activities on the Internet, especially in on-line chat rooms. As a result, there is very little research into the ethical and legal understanding of student teachers using Internet chat rooms. This study aims to address this gap. After exploring the behaviour of student teachers in Australia and China in Internet chat rooms, suggestions for cyber-ethics and cyber-legal measures from the literature will be offered. These measures are designed to protect Primary school children who participate in on-line activities in Internet chat rooms. These suggestions are directed toward researchers, educators, and legal and social workers, all of whom may be required to identify potential Internet problems for student teachers, and to provide further education on these topics to Primary school teachers.

Previous studies in this field have primarily investigated on-line activities in a single country (Bullen & Harre, 2000; Dellasega & Nixon, 2003). Moreover, no research has been found that addresses the educational or legal knowledge necessary to make informed decisions about curriculum design for Primary school regarding these issues. Yet, curricula can be designed that establishes a context in which young people can be educated in how to minimise the negative impact and maximise the benefits of on-line chat rooms (Berson, 2000). Young people today constitute a generation that occupies a borderless world of communication, where the rules and laws of one nation have no currency in the on-line community. Research is needed to address this factor. This study specifically focuses on university student teachers in Australia and China. No literature has been found that compares the on-line activities undertaken by student teachers in Australia with those in China. This comparison is valuable because China is considered a country that promotes high moral values that inhibit deviant behaviour, especially sexual behaviour (Goldman & Zhang, in press). However, in Australia, systematic legislation regulates sexual solicitation and associated sexual conduct. Thus, this study seeks to make a contribution to the field of pre-service teacher education by investigating the on-line Internet chat rooms activities of Australian and Chinese university student teachers in relation to their own perceptions of teaching 11 year-old students about on-line behaviour.

1.6 Concepts Defined

Some terms that are commonly used in this dissertation are now identified and defined.

- **Internet Chat Rooms (ICR)** are virtual spaces in the cyber world where people congregate for conversations and interactions (Greenfield & Subrahmanyam, 2003).
- **Computer-Mediated Communication (CMC)** refers to “those technologies used for communication where the computer plays a major part. It includes newsgroups, chat rooms, email, and computer-mediated conferencing” (A Dictionary of the Internet [DI], 2001).
- **Children** refer to “People between the ages of birth and eight years” (Early Childhood Australia [ECA], 2003, p. 2).
- **Cyber-bullying** is the use of information and communication technologies, such as email, cell phone and pager text messages, instant messaging, defamatory personal websites, and defamatory on-line personal polling websites, to support deliberate, repeated, and hostile behaviour by an individual or group that is intended to harm others (Belsey, 2004).
- **Etiquette** means “the forms required by good ... [manners] or prescribed by authority to be required in social or official life” (Shea, 1994).
- **Instant Message (IM)** is a comprehensive communication tool with low costs and high efficiency that enables same-platform and cross-platform communication through communication technologies involving multiple platforms and terminals. It is realised through software and relies on the platforms of the Internet and mobile communication for communicating in

multiple information formats (text, pictures, sounds, videos, etc.) (iResearch Consulting Group [iRCG], 2006).

- **Internet** is a global network of networks enabling computers of all kinds to directly and transparently communicate and share services throughout much of the world. Because the Internet is an enormously valuable, enabling capability for so many people and organizations, it also constitutes a shared global resource of information, knowledge, and means of collaboration and cooperation among countless diverse communities. (Internet Society [IS], n.d.)
- **Internet Addiction** has been defined as excessive use of the Internet involving “an impulse-control disorder that does not involve an intoxicant” (Young, 1998, p.238).
- **Internet Relay Chat (IRC)** refers to channels “to develop a readily identifiable character . . . and interaction comes to center on topics that are related to the channel theme” (Paolillo, 1999, p. 3). It is “multi-participant, and message length is very short (typically one or two lines) so that IRC interaction is similar to multi-participant face-to-face conversation” (Paolillo, 1999, p. 3).
- **Netiquette** is a term derived from the words “network etiquette” or “Internet etiquette” (Shea, 1994). The term denotes “the conventions of politeness recognized on Usenet and in mailing lists” (Netcom On-line Communication Services [NOCS], 1996).

- **On-line Community** is a cyberspace that consists of people who wish to interact in cyberspace with each other. Their shared purpose is usually centred on an interest or knowledge exchange, guided by a set of policies and governance, and accessed by computer-mediated communication (Preece, 2000a).
- **On-line Games or Gaming** refers to games played via several means, including web browsers, downloads from the Web, and consoles with on-line features including computers and wireless and interactive television (International Game Developers Association [IGDA], 2003).
- **On-line Social Environments** include on-line communities connected by the interaction of the individual and the group in meaningful and friendly relationships (Preece, 2000b).
- **Pro-social Behaviour** refers to the consequences of a doer's actions rather than the motivations behind those actions. These behaviours include a broad range of activities: sharing, comforting, rescuing, and helping (Knickerbocker, 2003).
- **Sexual Solicitation:** The Crimes against Children Research Centre at the University of New Hampshire has been at the forefront research on this issue. The organisation defines unwanted sexual solicitation as one of following (Wolak, Finkelhor, & Mitchell, 2004).
 - Initiating or continuing a conversation about sex when the young person does not want to speak about it.

- Requesting a sexual act from a young person who does not want sexual contact.
- Asking a young person to provide personal sexual information (e.g., bra size or sexual history) when the young person does not want to provide such information.
- **Student** refers to “a person undertaking study at a secondary or tertiary institution” (ECA, 2003, p. 2), and also to those in Primary schools.
- **Young Person or People:** Generally the term “young person” means anyone up to the age of 26 years, and a “child” is usually someone who has not yet reached puberty. There are few hard and fast rules, and the inherent meaning of “young people” is constantly evolving (Australia Council for the Arts [ACA], 2003). Thus, the target population in this research is student teachers aged 18-26 years.

1.7 Outline of Dissertation

Chapter One has provided a brief outline of this study by identifying its aims, purpose and approaches. The impetus and significance of the study have also been explored to clarify the reasons for conducting this research. A series of terms commonly used in the literature related to this dissertation has also been defined for use in this research.

In Chapter Two, the background for this study examines chat room environments to isolate factors that seem to lead to off-line activities. A set of issues concerning the Internet and chat rooms are explored, and include a short history, characteristics, and global

development of the Internet and chat rooms. To build a framework for this study, the different contexts of Internet development in Australia and China, social factors, ethics, and legislation, are also examined.

In Chapter Three, the relevant literature on Internet chat rooms is reviewed. This includes descriptions of activities in which children (aged up to about 8 years) and adolescents (aged from about 9 to 19 years) engage in while in Internet chat rooms, and the positive and negative impacts of on-line activities on youth. This literature review also provides a discussion of psychological, social, criminal, and cyber-ethics theories. It concludes by identifying the need for an appropriate theoretical framework through which educators may explore the target group's activities in the Internet chat rooms.

Chapter Four describes three major theories relevant to this study, relating them to youth on-line activities, namely; Cyber Psychological Theory; Moral Development Theory; and Space Transition Theory. Together, these three theories provide an integrated theoretical framework for this research on Primary school student teachers' perceptions of applying their own on-line practices and their intention to teach technology to 11 year-old Primary school students.

Chapter Five presents the research methods, involving a mixed method approach that gathers both quantitative and qualitative data. This chapter also includes the measures taken to increase research quality, the research process, and an analysis of the research method. The questionnaire collects quantitative and qualitative data. The questions used in the questionnaire to explore the on-line activities of student teachers and possible reasons

of negative on-line behaviours in chat rooms are also explained. Finally, student teachers' perspectives that inform cyber-ethics and cyber-legal education are outlined.

Chapter Six provides the results of this study that explores student teachers' on-line activities and their intention to teach about issues such as cyber-ethics and cyber-law to 11 year-old Primary school students.

Chapter Seven, the Discussion and Conclusion, provides a summary of the overall research. Based on the views of the sample of Australian and Chinese Primary school student-teacher participants toward cyber-ethics and cyber-crimes, the feasibility of pedagogy in Primary school combining cyber-ethics and cyber-criminal knowledge is discussed. The limitations of the research and implications for future research are also identified.

1.8 Summary

This chapter addresses the general context of the Internet and Internet chat rooms, the problem statement and purpose of this study, the broad research questions giving rise to this work, six specific research questions, and relevant terms related to this dissertation. This study seeks to investigate Australian and Chinese Primary school student teachers' on-line activities in Internet chat rooms and understand three specific activities in which they engage, namely; playing on-line games; making friends; and cyber-bullying. This study also addresses how these student teachers plan to educate their 11 year-old Primary school students in the three rules of netiquette, cyber-ethics and cyber-bullying. Considering the anonymity of Internet chat rooms, some negative behaviours can and do occur. Primary

school students are easily attacked in Internet chat rooms, but lack appropriate protection and education for their on-line activities. Relevant ethical and legal education needs to be provided in Primary schools for children. Student teachers need to be prepared to address these issues with their students. This chapter also provides the rationale for using a sample of student teachers from Australia and China in this study. A series of relevant concepts used in this study is also explained. In the next chapter, the background of this study is explored.

Chapter Two

Background

2.1 Introduction

In this dissertation, the research aims to understand how Australian and Chinese pre-service student teachers perceive how three specific on-line activities, namely, playing games; making friends; and cyber-bullying, influence them in Internet chat rooms. This chapter presents a general context for this focus. First, the development of the Internet and its three models are addressed. Second, relevant characteristics of Internet chat rooms are explored. Third, three specific on-line activities and related negative results are explored in Australian Primary school student-teacher populations and Chinese student-teacher populations, respectively. Finally, a series of Australian and Chinese legislative acts concerning the Internet are examined.

2.2 An Introduction to the Internet and On-line Chat Rooms

2.2.1 The Development of the Internet

The creation of the Internet can be dated to 1969 when a number of military computers in the Pentagon at the U.S. Defence Department were linked in an attempt to survive a possible Soviet military attack (Peter, 2003). A project called Arpanet implemented Internet protocols during the 1970s and, by 1975, the first Internet prototype was being tested (Peter, 2003). Once the Internet left military development, it developed its

characteristic of accessibility. “The Net was invaded by a host of newcomers who turned it into a modern version of the ancient Babylon of the Bible; a frantic market opens to every transaction, an arena in which differing interests competed for public attention” (Mantovani, 2001, p. 47).

According to Internet World Stats (IWS) (2009), by Dec 2009 the world population was 6,767,805,208, while over 1.8 billion people had accessed the Internet. This number constitutes about 26.6% of the world population. In the United States, a report from the Pew Internet and American Life Project shows that since 2000 the number of Internet users has increased, and about 60% of the U.S. population now has access to the Internet (Spooner, 2003). Additionally, by Dec 2009 about 21 million people in Australia had used the Internet, which has reached 61.3% of Oceanian population (IWS, 2009). In China, by December 2009, about 384 million people had used the Internet, which is about 28.7% of population (IWS, 2009).

As an advanced technology, the Internet integrates many characteristics of other mass media, such as the visual appeal of television and the interactive program of radio. The Internet also has unique capabilities such as sending emails, communicating in on-line forums, shopping on-line, surfing the web, connecting with family and friends, and sharing news and information (Armentor, 2005). Each of these functions is classified as one of two styles of computer mediated communication (CMC), namely, asynchronous and synchronous. Asynchronous CMC occurs at different times and includes forms such as email. Synchronous communication takes place in real time and requires simultaneous participation, as occurs in chat rooms (Thurlow, Lengel, & Tomic, 2004). Each of these two

styles has influenced different areas of people's daily life because each provides multiple ways to do business, to learn and to communicate.

The information about how teens use the Internet has been changed in 2009. As the internet has applied to mobile phone, the growing numbers of audiences choose watching video through their handheld devices (Madden, 2009). According to an April 2009 survey by the Pew Research Center's Internet & American Life Project, compared with 8% of internet users using video-sharing sites daily in 2006, there are about 19% of all internet users who use the sites to watch everyday in America (Madden, 2009). By contrast, as a very popular on-line activity among teens and young adults, the numbers of blogging have declined from 7% in 2006 to 11% in 2009 (Lenhart, Purcell, Smith & Zickuhr, 2010). However, for the social network, about "73% of adult profile owners use Facebook, 48% have a profile on MySpace and 14% use LinkedIn", although blogging declines in this age group (Lenhart, Purcell, Smith & Zickuhr, 2010).

In 2009, on-line activity was much more related to the Web interface. The Internet is a massive network of networks in which any computer can communicate with any other computer as long as they are both connected to the Internet. It connects millions of computers together in many different physical ways. The Internet allows anyone to create and develop a new application without needing the permission of any central authority (St. Amour, 2009). Compared with the Internet, the Web is one of many different applications which run over the Internet (St. Amour, 2009). St. Amour, (2009, p. 1) mentioned that "In many ways, the extraordinary success of the Web illustrates the value of the Internet's robust, open model of development and use."

The Australian government has realized that some Internet material is not acceptable. Senator Stephen Conroy (Minister for Broadband, Communications and the Digital Economy) announced the introduction of legislation to force Internet Service Provider (ISP) to block a government blacklist of "refused classification" (RC) websites for all Australian Internet users (Farrell, 2009). However, Sam Johnston (Australian Online Solutions' Founder and CTO) argued that the government can use other methods to deal with the problem, such as educating parents, teachers and children, and improving law enforcement (including cooperation with other countries) rather than filtering (Farrell, 2009). As the popular on-line applications of mobile telephones such as iPhone, those mobile phones allow young children to play on-line games any time at any place. Australian Senator Nick Xenophon called "Kids can become poker machine experts years before they are legally allowed to set eyes on a real machine. It's irresponsible to allow these applications in the hands of children" (People's Daily, 2010, p.1). He also suggested releasing on-line gambling laws in order to protect kids (People's Daily, 2010).

2.2.2 The Development of Internet Chat Rooms

The Internet is a vast environment with different types of applications; one of which is Chat Rooms. The first and still most widely-used on-line chat environment is the Internet Relay Chat (IRC). This multi-user chat room, created by Jarkko Oikarinen of Finland in 1988, has spread to over 60 countries worldwide (Hudson, 2006).

Chat rooms have become one of the most popular Internet applications. Internet chat rooms can provide the opportunity to make new friends and to maintain contact with

old friends, both of whom may be located geographically near or far from the user. Chat is typically text-based and instantaneous. When a message is typed, other participants can respond to it immediately. Chat rooms may be public or private. Public chat rooms are open to anyone with access to the Internet, and responses can be viewed by any user (Oikarinen, 1998). Private chat rooms, such as instant messages, can also exist on public chat networks, but participants must be invited to join by a current member. Private chat rooms can allow one-to-one chats as well as multi-user chats (Oikarinen, 1998). However, audio-based chat is increasingly being offered. Voice chat such as Internet Voice Chat allows users to speak and hear each other, as they might on a phone connection, instead of simply typing on a keyboard. This form of chat requires the computer to be equipped with a microphone and speakers.

2.3 Three Specific Activities Found in Internet Chat Rooms

A wide variety of activities occur in Internet chat rooms, and it is impossible to study all of them in this dissertation. Here, three popular activities, namely; playing on-line games, making friends and sexual solicitation, and participating in, or falling victim to, cyber-bullying, are analyzed, and special attention is paid to how young people can practice the negative impacts of each activity.

2.3.1 Playing On-line Games

Helping to fuel the growth of the Internet, Internet gaming is a popular on-line activity, and is expected to become increasingly popular over the next few decades, perhaps

as popular as other media devices such as cell phones (Akkawi, Schaller, Wellnitz, & Wolf, 2004). Many on-line games are regarded as a popular form of recreation, as well as a means for conducting business.

On-line games, as a popular venue for entertainment, contribute to business development around the world. In 2004, “the sale of entertainment and leisure software across all formats totalled £1.34 billion—an increase of 6.6% over 2003’s record figure” (Entertainment and Leisure Software Publisher Association [ELSPA], 2005, ¶1). The Entertainment Software Association (ESA) stated that U.S. sales of computer and video games reached over \$7 billion in 2003 (Business Wire, 2005). However, in the United Kingdom, 2007 was considered “an unprecedented year for the industry with a staggering growth in sales; the industry saw a 16% increase on units sold from the previous year, taking the total to a huge 75.9 million units sold” (ELSPA, 2005, ¶1). Record sales of interactive entertainment software across all formats totalled £1.72 billion, an increase of over 26% over 2006’s record figures (ELSPA, 2005).

Playing on-line games has been quite a pervasive activity among young people. According to a study conducted by the Media Awareness Network (MAN) (2005) in Canada, from a survey of more than 5,200 respondents, 89% of fourth grade students reported playing on-line games. Young Canadian students admitted that playing games on-line has become their favourite weekday activity. According to a report from the China Internet Network Information Centre (CNNIC) (2008), 73.7% of Chinese minor Internet users had played on-line games within the previous six months. Clearly these games have become a fashionable phenomenon in China.

Although there have been some industry-based benefits derived from on-line gaming, such as learning how to cooperate in a team setting, or learning about cultures in the world, a significant degree of risk also exists. For example, attention has begun to focus upon the addictive possibilities of Internet-mediated games (Young, 2009). Young (2009) claimed that on-line games such as the massive multi-player on-line role-playing games (MMORPGs), are one of the most addictive activities among Internet users. A significant percentage of teenagers spend much more time engaging in on-line games in Internet caf  s than they do in school or on school-related activities (Lo, Wang, & Fang, 2005). Chen, Chen, Hwang, Korba, Song, and Yee (2005) also show that the majority of crimes in Taiwan are related to on-line gaming. In Australia, the video and computer game industry has shown a continuously increase of 47 % from 2007. The sales result of computer games has reached \$1.96 billion for the calendar year (Interactive Entertainment Association of Australia, 2009). Undoubtedly, playing on-line games has brought profound commercial benefits around the world. However, negative influences, which need to be addressed, also accompany these games.

2.3.2 Forming Relationships and Sexual Solicitations

Internet chat rooms, with their anonymity, provide participants with the opportunity to form relationships. A 2002 survey of 1,500 U.S. adolescents who regularly use the Internet showed that 55% of respondents had used chat rooms, internet messaging and other forms of on-line communication to communicate with people they did not know (Fleming & Rickwood, 2004). Approximately 25% reported forming a least one casual on-

line friendship, 14% of respondents claimed to have a close on-line friendship, and approximately 2% had established an on-line romantic relationship (Fleming & Rickwood, 2004). One in five children who frequent used Internet chat rooms, have been approached by pedophiles (Akerman, 2002). An analysis by McKenna and Bargh (2000) revealed that people who form on-line friendships tend to meet and foster relationships with people who have similar interests. These relationships form through chat rooms, instant messaging, and multiuser domains (MUDs). McKenna and Bargh (2000) note that some “real world” relationships may develop from these on-line relationships.

In summary, on-line communication can lead to new relationships. However, in the course of these relationships, young people’s personal information may be exposed to the public, which may lead to illegal behaviour such as sexual harassment.

2.3.3 Cyber-bullying

Bullying is not a new issue, and has been studied since at least the 1970s (Olweus, 1978). In this new millennium, young people encounter bullying from a range of sources, particularly the Internet. Cyber-bullies have used email, chat rooms, websites, instant messaging, and cell phones to taunt their victims. Modern youth face the threat of being bullied anytime of the day or night, often without detection because technological advances provide new means of anonymous communication for perpetrators of cyber-bullying. Children can be harassed electronically by their schoolmates in various forms, including spreading rumours via electronic devices and web pages, designed to insult. Despite little

or no face-to-face interaction with the perpetrators, victims still experience severe social and mental anguish (Froeschle, Mayorga, Castillo, & Hargrave, 2008).

A number of studies have explored the increase in cyber-bullying among young people. Synchronous chat tools such as chat rooms and instant messaging are especially well-suited to the purpose of tormenting peers, because chat tools provide users with the opportunity to speak privately or publicly through a multi-user chat function (Leung, 2002). A 2004 i-SAFE survey of 1,500 students in grades 4 to 8, showed that cyber-bullying in the U.S. is more common than most parents and educators realize. Troubling statistics found by the i-SAFE survey include the following:

- 42% of children have been bullied while on-line.
- 35% of children have been threatened on-line.
- 21% of children have received mean or threatening email or other messages.
- 58% of children admit someone has made unkind or hurtful remarks to them on-line.
- 53% of children admit having made unkind or hurtful remarks to another person on-line (¶1).

In 2005, a study of 770 young people aged 11 to 19 years was conducted by the National Children's Home charity and Tesco Mobile in the U.K (Hanewald, 2008). The study found that about 20% of respondents admitted they had been bullied and victimized on-line. In the United States, the Foundation for Internet Safety Education conducted a nation-wide study with a total of 1,566 elementary (Primary) schools. The results of this survey revealed that more than half (58%) of cyber-victims did not tell their parents or another adult of their on-line experiences because they felt uncomfortable about revealing their cyber-bullying experiences to someone (Hanewald, 2008). Finally, some 13% of

respondents judged cyber-bullying to be “worse than physical bullying” (Windows Live Messenger [WLM], 2006).

The study found concerning cyber-violence in Australia, was carried out in Brisbane with 120 students in Eighth grade (Campbell, 2005). This study found that cyber-bullying was less rampant in Australia, where only 14% of children reported being victimised by cyber-bullies. A more recent study by Cross (2007) indicated that about 10% of students had been bullied through electronic devices including chat rooms, email and mobile devices. The recent research was conducted a sample of students drawn from regional, urban and rural schools by McLoughlin, Burgess and Meyricke (2009). This study reveals that most of the cases of cyber-bullying were conducted through email or in chat rooms. In relation to the frequency of the cyber-bullying, 65% of students reported that they had been bullied less than four times, 17% reported four to 10 times and only 13% reported over 10 times. This thesis of research indicates that cyber-bullying has been a serious problem occurring to many students in Australia (McLoughlin, Burgess & Meyricke, 2009).

In other countries, such as Canada, the U.K., and the U.S., over half of the students surveyed thought that cyber-bullying was increasing. The most popular vehicle for cyber-bullies was texting, followed by chat rooms and then email.

Cyber-bullying has become a serious issue in the world and victims are mainly young people and children. Educators who are in continual contact with this population, need to be aware of the growth of cyber-bullying and possess the skills to address the problem.

2.4 Australian Internet Development and Ethical and Legal Issues

2.4.1 Internet Development in Australia

The population of Australia is currently about 21 million. One in two Australian households is connected to the Internet, and by 2009 the number of internet users had reached about 17 million people (IWS, 2010). According to Australian Bureau of Statistics (2009), the results of Internet Activity Survey (IAS) was collected from all ISPs operating in Australia showed that there were 9.1 million active internet subscribers in Australia at the end of December 2009. The IAS collected wireless connections to the internet via a mobile telephone for the first time. Mobile wireless was showed as ‘the fastest growing technology in internet connections, increasing to 2.8 million’ in December 2009 (Australian Bureau of Statistics, 2009).

Based on a study on the educational performance of 15-year-old students, conducted by the Australian Council for Educational Research (ACER), by 2006, 100% of Australian students had accessed a computer at school, about 94% of Australian students reported having access to a home computer for school work, and about 74% stated that they frequently used the Internet “to look up information about people, things or ideas” (ACER, 2006, p. 11). Because children and adolescents have such ready access to the Internet, both at home and at school, parents need be aware of their children’s on-line activities.

Research conducted by the Australian Government group NetAlert in 2006 investigated how the Internet affects young Australians. NetAlert Limited, with a budget of \$5 million, was established by the Commonwealth Government (Electronic Frontiers Australia [EFA], 2008a) as an independent body with the mission of providing advice to

communities that sought to protect and supervise children who engage in on-line activities. The 2006 study explored case studies related to the Internet, including cyber-bullying, scams and on-line grooming. According to Australian On-line Child Grooming Laws (Australian Institute of Criminology, 2008), child grooming is considered as “a process that commences with sexual predators choosing a target area that is likely to attract children” (p.1). Case studies drawn from the Australian Government NetAlert helpline and law enforcement agencies suggest that young people require education about the dangers of surfing the Internet (Australian Government NetAlert [NetAlert], 2006, p.1). The stated purpose of this organisation is to ensure that “every Australian child is still able to have a fulfilling experience on the Internet while being aware of potential dangers on-line” (NetAlert, 2006, p. 1). To promote this mission, NetAlert encourages Australian youth to become more informed about the dangers of the Internet (Hanewald, 2008).

2.4.2 Australian Ethics and Censorship in Relation to the Internet

2.4.2.1 Australian Ethical Issues

Values education became a strong commitment in Australian school education with the Adelaide Declaration of the National Goals for Schooling in the Twenty-First Century, which was endorsed by all education ministers in 1999 (Australian Government Department of Education, Science and Training [AGDEST], 2005). In this declaration, the national goals were recognised as follows:

Australia’s future depends upon each citizen having the necessary knowledge, understanding, skills and values for a productive and rewarding life in an educated, just and open society. High quality

schooling is central to achieving this vision . . . Schooling provides a foundation for young Australians' intellectual, physical, social, moral, spiritual and aesthetic development (p. 2).

As stated in this quote, education plays a strong role in creating a strong society. In February 2005, following the advice of the Values Education Study (AGDEST, 2005), the National Framework for Values Education in Australian Schools was adopted and endorsed by all State and Territory Ministers of Education. The document was distributed to all schools in Australia and set out four primary precepts:

- A context which declares that the guiding principles of institutions recognise in all circumstances the goal that schools promote, foster and transmit values to all students and that education is as much about building character as it is about equipping students with specific skills
- An underpinning vision for improved values education in Australian schools
- Eight guiding principles to support schools in implementing values education
- Nine values for Australian Schooling that emerged from Australian school communities and from the National Goals for Schooling in Australia in the Twenty-First Century.

There seems to be an assumption in Australia that parents, caregivers and teachers are the primary sources of values education for the children. This framework appears to be useful in government and non-government schools to help children understand, create, and implement a set of their own, appropriate values.

2.4.2.2 Australian Internet Censorship

In Australia, the issue of protecting children on-line, especially with regards to what measures need to be taken to create a safe venue for children, has been a national issue since 1986 (Bromfield & Higgins, 2005). However, there is little public agreement in Australia of the information produced about the process of protecting children (Bromfield & Higgins, 2005). This lack of synthesis has led to a chaotic application of protective efforts. The first person, Boss, to conduct a review of jurisdictional differences in child protection in 1986 (Bromfield & Higgins, 2005), investigated the legislative and administrative features of the six states of Australia, exclusive of the territories, focussing on these features as they structure Internet communication (Bromfield & Higgins, 2005). His study identified “what practitioners are expected or sometimes mandated to do” (p. 5).

The National Child Protection Clearinghouse takes a significant role in investigating the legislative and procedural information pertaining to the protection of young people and children in Australia (Bromfield & Higgins, 2005). Further, in an attempt to draw attention to the need to protect children who go on-line, the Australian government has recognised the possible dangerous factors that youth may encounter on the Internet, and made recommendations regarding these issues. Enacting these recommendations falls to departments responsible for operating the child protection system within each state or territory. Queensland, for example, has a specialised department to conduct the business of child protection (Bromfield & Higgins, 2005).

In Australia, the Commonwealth Government’s Internet censorship legislation, which applies to Internet Content Hosts (ICHs) and Internet Service Providers (ISPs), came

into force on 1 January 2000. In contrast to the focussed application of the censorship legislation, State and Territory criminal laws apply to content providers/creators and Internet users (EFA, 2006). Australian censorship laws relate to the problem of youth's access to pornographic or violent material. According to the report of the Australian Communications and Media Authority (ACMA) (prior to 1 July 2005 called the Australian Broadcasting Authority [ABA]) (2001), there were about 491 websites termed offensive. In that investigation, about 80% of sites contained child pornography or pedophilic activity.

The prohibition of content on the Internet is based on the National Classification Board system for films and videotapes (Stanley, 2001). ACMA, as the Australian government's media regulating body, is charged under the Broadcasting Services Act with regulating prohibited on-line content using a complaints-based mechanism (EFA, 2008a).

Prohibited content includes the following three categories:

- Any on-line content that is classified RC or X 18+ by the Classification Board. This classification includes child pornography, X-rated pornographic material, violence, and instruction in crime, drug use, or terrorism.
- Content which is classified R 18+ and not subject to a restricted access system that prevents access by children.
- Content which is classified MA 15+, provided by a mobile premium service or a service that provides audio or video content upon payment of a fee and that is not subject to a restricted access system (p.1).

When the ACMA receives a complaint from the public, the Authority assesses it against these categories (EFA, 2008a). Questioned material passes through three steps. The first step is an evaluation by the Authority to determine whether the material matches any of the listed criteria. If it matches, or ACMA believes it probably would match, the material

is entered on the blacklist. ACMA then seeks the host of the material to determine whether it is hosted in Australia or another country. If the material is hosted in Australia, the host is sent a “takedown notice”. However, if the material is hosted overseas, it simply stays on the blacklist (EFA, 2008a).

Most currently, the issue of whether Australia should introduce an R18+ rating for computer games has been brought to public attention (EFA, 2008b). A rating of R18+ is given to games with “strong impact” violence or sexual content such as Hill’s Homecoming (EFA, 2008b). Australia is the only developed country without an R18+ classification for computer games. According to a survey of over 1,600 Australian households, 90% of Australian adults, including both game players and non-players, believe Australia should have an R18+ rating for games. Armed with this figure, the EFA has launched a campaign to help Australian gamers to lobby the Attorney General for this rating (EFA, 2008b).

Clearly, as evidenced above, the Australian government has made extensive efforts to protect its young people and children, by launching an educational framework and a series of legal regulations to structure their on-line experience.

2.5 Chinese Internet Development and Ethical and Legal Issues

2.5.1 Internet Development in China

The Internet has experienced booming growth in the last 20 years, and the diffusion of this powerful communication technology has been felt throughout most countries, including China. Over the past few years, Internet development in China has kept pace with other first world nations, and has attracted interest from industry, academia, and policy-

makers alike. China's Internet has developed quickly in a short time, but the integration of this new communication medium has not been an entirely smooth process (Du, 1999). The number of Chinese users has reached to 338 million till June 2009 (CNNIC, 2009). The Internet has often been heralded as posing threats to non-democratic rule and, as such, the co-existence of the Internet and non-democratic rule in China is a unique phenomenon (Taubman, 1998). China's embrace and attempted control of the Internet illustrates one nation's response to the clash of old and new social exigencies (Tan, Mueller, & Foster, 1997).

2.5.2 Internet Cafés

The Internet café (or cyber-café) has been a popular venue for people in developing countries to access the Internet and obtain information (Rogers & Shukla, 2001). People enjoy Internet cafés not only because of the reasonably priced Internet access, but also while there they can enjoy food and beverage service as well as socialise with fellow users. In Malaysia, the Internet café has emerged as the nation's primary entertainment focus (Furuholt & Kristiansen, 2007). In Indonesia, two-thirds of Internet users gain access through Internet cafés (Kristiansen, Furuholt, & Wahid, 2003). In India, cybercafés play an important role as public Internet access points. Almost "70 [%] of Indian Internet users frequent Internet cafés and these are the main access point for almost half of the users" (Haseloff, 2005, p. 9). In other developing countries, such as Tanzania, Internet cafés are the main means of Internet access (The United Republic of Tanzania Ministry of Communications and Transport [URTMCT], 2003).

Accompanying the development of the Internet in China are several obstacles hindering the rate of saturation of the country. Currently, China must address such limitations as a lack of access to the Internet and a lack of skill development in young Chinese people. One response to the growing demand for access to the Internet is the mushrooming number of Internet cafés. Indeed, the Internet café is the place most frequently visited by Chinese students because of the affordable, high quality connections available there (CNNIC, 2007). People can pay just 3 yuan (about 50 cents) per hour to use the Internet. In China, about 120,000 Internet cafés hold over 5 million computers (CNNIC, 2007). The CNNIC's report (2009) revealed that the percentage of young users choose Internet cafés from 57.5% in 2008 to 49.4% in 2009, which related to the development of school net as well as the government control of Internet cafés.

In China, Internet café owners normally pay fixed costs for the purchase of equipment and leased lines while charging users according to the time spent on-line (Furuholt & Kristiansen, 2007). Employees of Internet cafés are available to provide valuable guidance in computer use and information access to inexperienced users (Furuholt & Kristiansen, 2007). Internet cafés also offer additional bar and dining services. Some cafés even have rooms for users to stay up all night.

2.5.3 Chinese Ethics and Censorship in Relation to the Internet

2.5.3.1 Chinese Ethical Issues

The Chinese government has expended large amounts of money and time to censor, monitor, and control the Internet (Fallows, 2007). As part of its program to control

information, the Chinese government is determined to build its own Internet. This objective is an element of the National Infrastructure Initiatives. As another part of the effort to control information, the Chinese central government is considering the suppression of political discourse on the Internet.

Harmony is the highest value of Chinese political philosophy and is part of the Deyu curriculum (the National Ethics Education) (Clark, 2007). Ethics education textbooks are mainly composed of ideology, politics and character development (Clark, 2007). Currently, ethical education is encouraged in the Chinese education system, beginning in the first year of Primary school for children aged about 6 years old. This is followed by compulsory courses in Secondary school, followed in university by mostly compulsory courses (Wang, 2004). The implementation of this course indicates that Chinese ethics education is moving toward nation-wide standardisation. The Outline stipulates, in explicit terms, that great importance should be attached to the teachers' role and model behaviour (Wang, 2004). Teachers are required to instruct students on appropriate educational ideas using *personal examples* as role models, as well as verbal instructions, in order to encourage them to be virtuous and committed to learning.

2.5.3.2 Chinese Internet Censorship

The initial step to control use of the Internet in China was taken in December 1997. State Council Order 147 instituted comprehensive regulation collectively named the Computer Information Network and Internet Security, Protection and Management Regulations governing Internet use. The Ministry stated its goal was “to strengthen the security and the protection of computer information networks and of the Internet and to

preserve the social order and social stability” (State Council, Article 1). This regulation helps government to control Internet usage.

Internet censorship in the People’s Republic of China (PRC) is controlled by the Ministry of Information Industry (MII). The objective of this department is to “supervise, inspect and guide the [country’s] security protection work”, “investigate and prosecute illegal and criminal cases”, and “perform other supervising duties” (Qiu, 2000, p. 11). By using censor-technology, it is possible for this department “to trace all on-line activities of any targeted network terminal located within the firewall, including surfing, chatting, downloading, and e-mail exchange” (Qiu, 2000, p. 13).

According to a report by Human Rights Watch (HRW) (2006), there are three tiers built into China’s Internet infrastructure that result in the desired censorship. At the first tier, the Chinese government seeks to block user access to politically sensitive information. At the second tier, the government prevents Internet Service Providers (ISPs) from operating within the country’s borders. At the third tier, the government limits the influence of Internet Content Providers (ICPs), which may be organisations or individuals either for-profit or non-profit. ICPs provide publicly available content on the Internet on “platforms on which users can communicate and converse with one another (chat rooms and bulletin board systems known commonly as BBS),” or “on which users can create and share text, photographs, audio and video (blogging services, photo- and video-sharing sites, podcasting and audio-sharing services, etc.)” (Human Rights Watch, 2006, p. 14). ICPs must be licensed to provide mobile and Internet chat services and are required to filter politically-sensitive content. For instance, in 2004, Xiao Qiang obtained a blocked or

sensitive word list used by the popular instant messaging service named QQ and owned by the Chinese company Tencent.

In addition to the above, there is currently a project called the Golden Shield Project (Chinese: jīndùn gōngchéng) running in China. It is sometimes known outside of mainland China as the Great Firewall of China (Human Rights Watch, 2006). This project, started in 1998, is owned by the Ministry of Public Security of the People's Republic of China (MPS) and began operating in November 2003. The purpose of Golden Shield Project is described in Walton's report (October 2001):

Old style censorship is being replaced with a massive, ubiquitous architecture of surveillance: the Golden Shield. Ultimately, the aim is to integrate a gigantic on-line database with an all-encompassing surveillance network—incorporating speech and face recognition, closed-circuit television, smart cards, credit records, and Internet surveillance technologies (Human Rights Watch, 2006, p. 7).

Multiple bodies and administrative agencies are employed to support this extensive surveillance in all forms of media, and these agencies apply many requirements and prohibitions to the Internet in China. Thus, China's legal regulation of the Internet is complex and pervasive.

One product of tighter regulations in Internet communication occurred in September 2000 when the “Interim Measures on the Administration of Record and Registration of Profit-making Websites” (1996) formalised registration procedures and required all businesses to list their registration number prominently on their websites. The first content restriction for Internet content providers was created in 2000 by the State Council Order 292. This law stipulates that only “licensed print publishers” have the

authority to print news on-line. Article 14 of this order gives Chinese officials full access to any kind of sensitive information. Article 15, a particularly egregious dictate, officially establishes an on-line dictatorship. This article states that “IIS providers shall not produce, reproduce, release, or disseminate information that: [. . .] endangers national security, [. . .] is detrimental to the honor of the state, [. . .] undermines social stability, the state’s policy towards religion, [. . . or] other information prohibited by the law or administrative regulations.” Finally, Article 12 places all responsibility for any questionable material onto Internet providers by stating that, “content providers are responsible for ensuring the legality of any information disseminated through their services” (The State Education Commission [SEC], 1996).

Overall, China's ethical education on the Internet has greatly expanded the Chinese government's ability to control the Internet content. Moreover, the number of laws pertaining to Internet censorship and control has increased. This increase may also indicate a desire on the part of the government to shape a medium, the Internet, considered vital to economic growth in China.

2.6 Summary

The development of the Internet has affected the lives of people all over the world. This chapter has very briefly addressed the history of this new medium, and the growth and basic functions of the Internet. This chapter has also explored Internet chat rooms and three specific types of on-line activities popular among young people. In these anonymous on-line environments, young people encounter many potential dangers as well as benefits. The

issues associated with the Internet are now global issues. This chapter has addressed information, problems, policies, legislation, and ethics education in schools in relation to the Internet and on-line chat rooms in Australia and China. Following this background framework, the next chapter addresses current research literature about the Internet and on-line activities.

Chapter Three

Literature Review

3.1 Introduction

This literature review addresses Australian and Chinese young people's on-line activities in Internet chat rooms. The review provides an overview of the Internet and chat rooms in the following; three Internet models and the positive and negative influences of the Internet; characteristics of Internet chat rooms; and influences of these on-line spaces. Explored also in this chapter is, Instant messaging, as one function of on-line chat rooms. Three specific activities are investigated, namely, playing on-line games, making friends, cyber-bullying, and the ways these activities challenge psychological, ethical and legal domains. In addition, this chapter examines how researchers in Australia, China and America conceptualise the challenges of cyber-ethics and cyber-crimes in on-line activities.

3.2 Overview of the Internet and On-line Chat Rooms

On-line chat rooms, as an on-line community, are researched in a variety of fields, including Computer Science, Education, Human-Computer Interaction, Psychology, Sociology, Communication, and Library Science (Lazar & Preece, 2002). This section discusses Internet functions and the influences of Internet chat rooms. Instant messaging, as one on-line community, is also presented.

3.2.1 Internet Models and Their Influences

3.2.1.1 Three Models of the Internet; Cognitive, Cultural and Social Environments

Mantovani (2001) examined the Internet using three models: Cognitive, Cultural, and Social Environments. The Cognitive Model “explains how technologies for information seeking, gathering and consumption can respond to the amount of information present in the environment” (Mantovani, 2001, p. 48). This model seeks to explain the relationship between humans seeking information and the environment that they explore. From a human-computer interaction point of view, cognitive modeling can develop theories and computational models of human interactive behavior (Emond & West, 2003). Moreover, it can build blocks for the design, implementation, and evaluation of interactive technologies by using the computational models (Emond & West, 2003). Cognitive modeling also offers the possibility to anchor cyber-psychology theories into cognitive architectures (Emond & West, 2003). From the design and evaluation of socio-technical systems point of view, cognitive models help to simulate users, which can play an important role in usability testing (Emond & West, 2003).

Another useful model for contextualising this exploration of Internet chat rooms is the Cultural Model, which suggests that the Internet is both a real and a virtual space. While the existence of both categories is fundamental, Mantovani believes that it is not necessary to classify every environment as real or artificial because “we inhabit a world that has always been both ‘natural’ and ‘artificial’ in the sense that our experience of it is always mediated by artefacts, both physical and conceptual” (Mantovani, 2001, p. 53). The Internet is a rapidly growing cultural phenomenon that offers unprecedented opportunities

and challenges for individuals. It is a global spread of technology, including intensive worldwide interactions of people and exchanges of goods, services, information, and capital (Hermeking, 2005). People are from different countries with variable cultures being able to access internet to share emotional issues in chat rooms.

Finally, the Social Environments model perceives the Internet as a social technology that provides a space where people can explore their identity and find support from others (Ranon, 2006). Boulos and Wheelert (2007) also stress advancement in sociable interactive technologies which has provided opportunities for people to connect and communicate in a text-based environment through the on-line medium. Through the Internet, communication is no longer geographically bound because connections can cut across time, space and barriers to interaction. Boulos and Wheelert (2007) assert that the internet creating a “social web” (p. 2) which can reduce social isolation and engender connectedness with society. It also enables the sharing and transferring of information and ideas for specific purposes, thus facilitating the development of stronger, reflective communities. Each of these three models is relevant to this study because Internet chat rooms, as one of the most popular functions of the Internet, can be viewed as *social environments* in which university student teachers *seek information* and conduct on-line activities which, though in *virtual* spaces, have very *real* effects (Finkelhor, & Jones, 2004; Greenfield & Subrahmanyam, 2003).

3.2.1.2 The Positive and Negative Influences of the Internet

Today the Internet has become the most powerful tool ever to collect various services and resources. It is not questionable to say that information is probably the

biggest advantage internet is offering. People can use search engines like Google, to obtain a huge amount of information available on the internet, ranging from government law, global conferences, market information, new ideas and technical support and so on (Nielsen NetRatings, 2006).

Communication is the foremost function of the Internet. Internet provides multiple choices for people to communicate in another part of the world such as email, chat rooms, and messengers (Araújo, Cardoso, & Espanha, 2008). It has become very easy to establish a kind of global friendship to share thoughts and explore other cultures of different ethnicity (Araújo, Cardoso, & Espanha, 2008). Teachers have started giving assignments and students are required to research on the Internet (Lowes, 2008).

The Internet also provides many services to do business or on-line banking, job seeking, purchasing tickets for movies, different services on array of topics on the every aspect of life, and hotel reservations (Araújo, Cardoso, & Espanha, 2008). Entertainment is another choice for people when they surf the Internet. As there are numerous games because may be downloaded free from the Internet, the industry of on-line gaming has had dramatic attention by game lovers (Wan, Xu, & Zhou, 2006). Chat rooms are popular because users can meet new and interesting people. Moreover, the Internet has been successfully used by people to find life-long partners (Pearl Research, 2007).

Several studies have found that the Internet is considered an excellent place for people to find emotional, academic, and social support because of its anonymity (Bromberg, 1996; LaRose, Eastin, & Gregg, 2001; Lieberman et al., 2003; Shaw & Gant, 2002; Tichon & Shapiro, 2003; Turner, Grube, & Meyers, 2001; Walther & Boyd, 2002).

The Internet is also viewed as a safe place to form and maintain relationships (Clay, 2000). Psychological and sociological studies suggest that the way people communicate and exchange information on-line has been revolutionised by Internet technology (Pew Research Foundation [PRF], 2002; Turner, Grube, & Meyers, 2001; Walther & Boyd, 2002; Wright, 2000).

However, there has been increased awareness among educators, parents, lawyers and the police of the Internet's potential dangers. For example, Reid (1998) found that "participants feel that they cannot trust anyone, that everything on-line can be a lie, and that no one tells anyone who they really are" (p. 36). Additionally, several studies indicate that intensive Internet use may cause increasing social isolation (Nie, 2001; Nie & Erbring, 2000), depression and loneliness (Kraut, Patterson, Landmark, Kiesler, Mukophadhyay, & Scherlis, 1998), and decrease relationship quality with family and friends (Sanders, Field, Diego, & Kaplan, 2000). A self-reinforcing cycle can then develop, as loneliness has been found to increase the likelihood of adolescents using on-line communication tools, such as using instant messaging, to contact those who are not part of their daily lives (Gross, Juvonen, & Gable, 2002). Nie and Erbring (2000) reported that social isolation increases with the number of hours spent on-line, and that 49% of Internet users in the U.S. average one to five hours of Internet use per week. They also reported that 36% of users work on the Internet five or more hours per week and report "significant changes in their lives" due to Internet use (Nie & Erbring, 2000, p.17). Similarly, Moody (2001) investigated social and emotional loneliness related to Internet use in a sample of 166 freshmen and

sophomore college students. The findings showed that the longer students participate in Internet social networks, the lower their social and emotional loneliness.

Another potential negative impact of the Internet is the possibility of addictive behaviour (Griffiths, 2000; Scherer, 1997; Young, 1999; Young, Pistner, O'Mara, & Buchanan, 1999). Internet addiction is characterised by six criteria, none of which is simply time spent on-line (Griffiths, 2000):

- salience (being on-line becomes the most important activity in the adopter's life);
- mood modification (subjective experiences of arousal or escape);
- tolerance (increasing amounts of Internet use are needed to achieve the mood modifications needed by the adopter);
- withdrawal symptoms (unpleasant subjective experiences that occur when Internet use ceases or decreases);
- interpersonal or other conflicts (loss of control) that concern excessive use of the Internet.

Most or all of these criteria are found in varying degrees in those people who suffer from some form of Internet addiction, but not all addictions are the same. The five general sub-types of Internet addiction identified are cyber-sex, cyber-relationships, on-line stock trading or gambling, information surfing, and computer games (Young, 1999). In implementing an eight-item questionnaire used to develop criteria to determine Internet addiction, Young (1999) found that most Internet addicts used chat rooms, newsgroups, email or MUDs (Multi User Dungeons). They enjoyed meeting new people on-line and

also developed relationships off-line. In contrast, non-addicts tended to focus on gathering information on-line, such as news. Young (1999) also found that excessive Internet use resulted in academic, relationship, financial, occupational and physical impairment.

Differing views exist about whether excessive use of the Internet constitutes an addiction (Beard & Wolf, 2001; Griffiths, 2000; Young, 1999). Some researchers argue that the large number of hours some people spend on-line is simply a necessary adjustment required by the introduction of this technology into western society (Grohol, 1999; Stern, 1999). Analogies drawn from the introduction of earlier technologies have been cited to demonstrate this theory. For example, “movies in the 1920s, radio in the 1930s, and television in the 1940s and 1950s were all criticized for absorbing children’s time and negatively affecting their behaviour” (Stern, 1999, p. 420).

Grohol (1999) views the Internet as one of the latest human innovations, and proposes that this new technology is subject to overuse because it is a novel and challenging technology which can be associated with “dark” behaviours, such as easy accessibility to pornography and attacking governments or individual computer systems by spreading computer viruses. Moreover, as a virtual space, the Internet is ruled by anarchy. No one owns it, no one controls it, and no government has political authority over it (Mantovani, 2001). Due to the assorted purposes to which the Internet may be directed, the treatment for such dysfunctionalities should be tailored to address the underlying problems of the individuals (Stern, 1999).

In summary, convenient access to the Internet is almost universal among young people in many countries. It provides a fast and simple means of maintaining relationships

and offers access to a virtual network that helps millions of people who need support (Figallo & Rhine, 2002). However, Internet use can lead to psychological problems such as loneliness and depression. Additionally, Internet addiction is another issue that may have negative results. Therefore, it is important for teachers and parents to be aware of the varying functions of the Internet, and what young people choose to do on-line.

3.2.2 Internet Chat Rooms

On-line communities have become remarkably popular arenas for people to communicate with others. Depending on their purposes and perspective, on-line communities can be classified based on sociological, psychological or legal theories (Preece & Maloney-Krichmar, 2005). Rheingold and Hiltz (1994), pioneers of research on on-line communities, used the term “on-line community” to denote the intense feelings of camaraderie, empathy and support that they observed among people in the on-line spaces they studied (Bruckman, 2005). Rheingold (1994) traces the emergence of CMC (computer-mediated communication) and discusses his experiences of virtual community from 1985. Rheingold (1998) believes that the virtual, is an extension of reality but he implies that this extension is an ‘illusion’ by describing a virtual reality system as an immersion ‘in an artificial world’ (Rheingold, 1991, p. 16).

Internet chat rooms, one type of on-line community, are popular with children, who are frequently allowed to communicate with all of the site’s participants simply by typing messages. Internet chat rooms are considered stable channels of communication, where participants “appear to develop a readily identifiable character and interaction comes to

centre on topics that are related to the channel theme” (Paolillo, 1999, p. 3). An important characteristic of on-line chat rooms is that they are inherently visual (Greenfield & Subrahmanyam, 2003). Participants generally remain anonymous by using nicknames. Participants “compose responses to a topic simultaneously without knowing what (or even that) others are writing” (Herring, 1999, p.1). Conversation in Internet chat rooms occurs in "real-time: all participants in an interaction must be electronically present at the same time, and messages are immediately transmitted through the intermediate servers to all participants, wherever they may be..." (Paolillo, 1999, p. 3). Participants in these chat rooms communicate with each other by typing messages, voice communications, emotional cues (emoticons) and video streams (Armentor, 2005).

3.2.2.1 Characteristics of Internet Chat Rooms

Literature on chat forums, which first emerged in the early 1990s, and includes chat spaces such as MUDs, MOOS and IRC, draws from a range of disciplines (Bruckman, 1993; Herring, 1999; Reid, 1991). Reid was one of the first researchers to study chat rooms (Armentor, 2005). She explored computer-mediated communication (CMC) and the formation of virtual communities in synchronous chat spaces in her publication, “Electropolis: Communication and Community on Internet Relay Chat” (Reid, 1991). Another early researcher of electronic communication forums, Herring (1999), explored the technological factors contributing to incoherence in CMC by using a computer-mediated discourse analytical approach. While topics may be restricted, those who might play are not. “Most chat rooms are global in nature, meaning that anyone can access a chat room from anywhere in the world” (WestOne, n.d.).

Prior to taking part in any chat room, participants must register and create a screen name or nickname (often called “nicks”). The nickname and the conversations that take place via text are visible to all participants in the chat room (Herring, 1999). Text-based chat technologies such as Internet chat rooms represent a new form of interaction. Multiple users from different countries can connect simultaneously in the same virtual space and communicate by using text (Hudson, 2006). Most chat programs also allow participants to communicate in private chat spaces, which are not revealed to others unless the user permits. In the conversation window, comments are typically placed at the bottom of the screen upon arrival, while older messages automatically scroll to the top of the screen (Hudson, 2006).

The large body of data that quickly accumulated on chat rooms has allowed some generalities to be drawn. Herring (1999) (in Greenfield & Subrahmanyam, 2003, p. 716) points out that on-line conversations typically have four features:

- (1) Several topics are discussed in parallel by partly overlapping groups of people.
- (2) Many comments occur between an utterance and its response.
- (3) People contribute to several conversations.
- (4) Topics decay relatively quickly—i.e., conversations on a given topic are relatively short (p.3).

Herring’s taxonomy, however, is not the only way chat rooms can be divided.

Preece (2000b) summarises the characteristics of on-line chat rooms differently;

- (1) A shared purpose: for example, focus on an interest, need, information, service, or support that provides a reason for belonging to the community.
- (2) People: who interact with each other and who may take roles within the community?
- (3) Policies: language and protocols that guide people's interactions.

- (4) Folklore and rituals: that brings a sense of history and accepted social norms (§1).

Regardless of the taxonomy used, each of these systems emphasises the synchronous dynamic and multiple participants found in chat rooms. The interaction of participants in chat rooms occurs in real-time, therefore, “all participants in an interaction must be electronically present at the same time, and [further] messages are immediately transmitted through the intermediate servers to all participants, wherever they may be” (Paolillo 1999, §1). Thus, what one person writes is visible to anyone in that chat room. The most significant benefit of this system, is, that when in a chat room, a person can communicate with a broad range of people rather than be limited to a single conversation with one person (Coate, 1992).

In contrast to other electronic communication tools such as e-mail and bulletin boards, on-line chat room conversations are a synchronous form of communication because participants communicate with others in the room by writing and reading their own and others’ messages with little time-lag (Herring, 1999). As one of the first researchers of chat rooms, Reid (1998), found that culture and diverse forms of information are shared in communities on Internet Relay Chat because participants from all over the world log in. Reid (1998) also found that participants would like to share a sense of community rather than alienation and hostility. By creating a situation in which people can make contact with any participant who comes into the on-line chat rooms, and without the usual restraints of social norms, Internet chat rooms become exciting and stimulating places (Coate, 1992).

In addition to the characteristics of Internet chat rooms, it is also important to understand the language used in Internet chat rooms. Armentor (2005) explored the

language used in Internet chat rooms and found that brevity is also a characteristic of chat room talk, which conveys much information by few symbols. Participants tend to use abbreviations, initialisms, and acronyms to express ideas and feelings; for example, lol means “laugh out loud,” wb means “welcome back,” and ttyl means “talk to you later.”

3.2.2.2 Positive and Negative Influences of Internet Chat Rooms

Internet chat rooms exert both positive and negative effects on users. Positive effects of chat rooms include the benefits derived from meeting new people, talking with others in order to obtain emotional support, sharing the same interests, and playing highly social, interactive games (Ridings & Gefen, 2004). Additionally, some Internet users gain social confidence from chatting on-line because of the anonymity, and these users find that they can more easily make friends on-line because people tend to be friendlier and more open in these anonymous forums (Morahan-Martina & Schumacher, 2003). On-line chat rooms have become a popular mode of communication among a variety of groups ranging from high school students to staff in large corporations, and the number of users has risen quickly over the past few years (Crowley, 2002).

Internet capabilities have also been rapidly applied to many educational institutions. Primary and Secondary school students (Setzer, Lewis, & Greene, 2005) and college students (Allen & Seaman, 2004) are all engaging more frequently in different forms of on-line education such as in Internet chat rooms. Allen and Seaman (2004) conducted a study to learn more about on-line education in the United States. They discovered that a majority of college and university administrators agreed that “on-line learning is critical to the long-term strategy” of their schools (p. 2). However, because the on-line environment is

different from the face-to-face classroom, there are a number of factors that interact in complex ways that must be investigated (Brown, 1992). For example, many parents and teachers have difficulties determining the exact nature of a student's on-line activity, that is, parents and teachers frequently do not know whether students are studying, making friends or doing other irrelevant activities in Internet chat rooms.

Studies have also found many positive psychosocial consequences experienced through on-line communication where people obtain social support, information, emotional, and network support (Bass, McClendon, Brennan, & McCarthy, 1998; Braithwaite, Waldron, & Finn, 1999; PRF, 2002; Tichon & Shapiro, 2003; Wright, 2000); improved self-esteem (Danowski & Sacks, 1980; McNeely, 1991); improved self-confidence (Clark, 2002); and access to pubertal and Sexuality Education (Goldman & Zhang, in press). Many college freshmen reported that the more they used the Internet, the less depression they experienced (Morgan & Cotton, 2003; LaRose et al., 2001) because frequent email, conversations in chat rooms and instant messaging exchanges increased perceived social support, which in turn alleviated depression (Morgan & Cotton, 2003). Clark (2002) also found that seniors developed trust in their on-line conversation partners, and increased their ability to extend support in return.

As a means of expressing one's personality, a chat room "reflects [a] spontaneous free form, witty and temporally 'present' self" (Suler, 2002, p. 459). Most chat room participants identify themselves by usernames instead of real names, and these names are typically part of the on-line persona. A man can present himself as a little girl, or a married man can present himself as a single person. Chat rooms provide a venue for virtual

masquerade parties that provide the opportunity for people to hide their identities, and a place where they can express themselves freely without being discovered (Ranon, 2006). Thus, “by eliminating time, distance, and body, the architects of the Internet have created an unhindered medium that connects the mind and the spirit” (Rollman, Krug, & Parente, 2000, p. 161).

Internet chat rooms also have negative consequences, including; fear of the Internet (Pew Internet & American Life Project [PIALP], 2000; Gustafson et al., 2001); decline in family communication and size of social circles (Nie & Erbring, 2000; Kraut et al., 1998); increase in loneliness and depression, as mentioned earlier (Kraut et al., 1998); and decrease in usual activities such as time spent watching TV, listening to the radio, or shopping in stores (Nie & Erbring, 2000). Further, due to chat rooms’ anonymity, people may use them to spread their rage, in a form of communication commonly termed ‘hate speech’.

Chatting on the Internet allows people to meet and come to know anonymous people around the world thereby expanding their social circle. Some people seek love or friendships in these exchanges, while others look for information or entertainment. Participants can engage in conversations on any topic they choose. However, because of the anonymity of chat rooms, people do not need to take responsibility for their behaviour in these virtual rooms. Consequently, some legal cases resulting from immoral or illegal behaviour have drawn the public’s attention, such as cases of luring youngsters and women have been the most notorious. Youngsters spend their time in on-line chat rooms staying in touch with loved ones or indulging in on-line games. Many members of Internet chat rooms

including young people, seek to meet face-to-face in off-line physical meetings and the potential perils of such meetings are not limited to date rape.

In summary, the freedom of expression found in chat rooms, generated by anonymity, can lead to more open communication and a similar effect on people's minds. In these "rooms" people can form new friendships and present true feelings. However, this same anonymity may lead to various offensives, and computer-mediated communication can also transmit violent and dangerous ideas. As Reid (1991) noticed, participants in Internet chat rooms can share a sense of community, but they can also "exhibit alienation and hostility" (Armentor, 2005, p. 28).

3.2.3 Instant Messaging

3.2.3.1 Instant Messaging in the World

Instant messaging, one type of Internet chat room, is frequently referred to by participants as private messaging (Armentor, 2005). Many users utilise instant messaging to communicate with their close friends. As Armentor (2005) identified, in theory, participants can simultaneously talk with as many friends as their computers can process by Internet Explore (IE). Beyond text messages, instant messaging incorporates additional features to attract people, which include chatting by using web-cam mobile devices. This feature is used to send images or continuous video frames to websites for display (iResearch Consulting Group, 2006). An instant messaging system can be used as a personal on-line communications style as it enables users to select and control with whom they communicate. Moreover, instant messaging users can receive or transmit information

by the sender and receivers simultaneously. The sender can transmit information to more than one receiver at the same time. Thus, instant messaging becomes an integrated communications platform. In this dissertation, as mentioned in Chapter One, a broad meaning of chat rooms is used, including not only general public chat rooms but also instant messaging as private chat rooms.

The fast growth of the Internet has resulted in the equally fast growth of instant messaging users. According to iResearcher (2006), the numbers of global instant messaging accounts are increasing and are expected to exceed 1.6 billion in 2010. However, account numbers cannot be equated with instant messaging users because users can have more than one account. The total number of instant message users worldwide is expected to reach 0.65 billion in 2010 (iResearch, 2006).

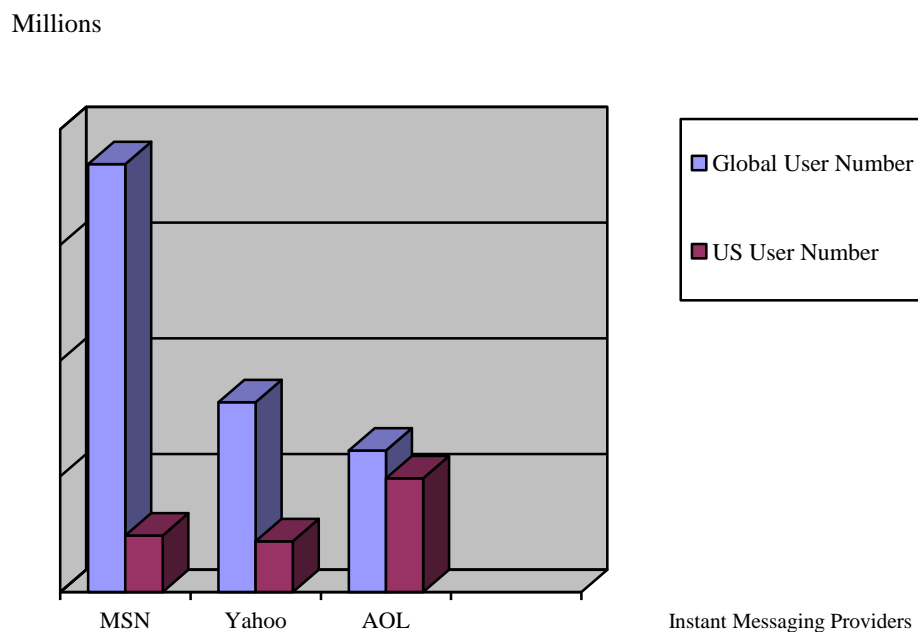
Based on the Statistics on Canadian Youth and Instant Messaging, in 2001, more than half (56%) of Canadian youth aged 9-17 use the Internet for instant messaging, and 27% use it daily, or almost daily (MAN, 2001). Among children and adolescents who use instant messaging, 66% say they most often chat with friends and 13% say they most often instant message with family members (MAN, 2001). Some 12% say they use instant messaging to communicate with people they have only met on the Internet. On average, Secondary school children have ten people on their instant messaging list who they have never met in the real world, and the figure is higher for boys. In 2005, although adults paid more attention to children's on-line activities than in 2001 (13% vs.7%), a larger proportion of children needed to be supervised by a parent (MAN, 2005).

In the U.S., the Pew Internet and American Life Project (2004) revealed that 42% of Internet users, more than 53 million American adults, use on-line instant messaging. Its appeal is especially apparent among young adults and technology enthusiasts. On a typical day, 21% of those who use the Internet use an instant message service. Baron (2008), who reviewed 23 instant messaging conversations and surveyed 158 students in America, found that “female instant messaging looks more like a written genre, while [. . .] male instant messaging looks more like a spoken genre”. Baron (2008) also found that most of the students multi-task during their instant message conversations. That is, they undertake multiple tasks while engaging in conversation. For example, they may surf the Internet, play games, watch TV, listen to music, eat, drink, or study when carrying on a conversation via instant messaging. Notably, younger Americans tend to be the most numerous group using instant messaging. The Pew Internet and American Life Project’s (2004) survey also indicates that nearly two-thirds (62%) of Generation Y (18-27 year olds) internet users have sent instant messages, and 20% do so on a typical day. This figure is significantly higher than the proportion of Internet users in any other generation.

As instant messaging software is offered to the public, free of charge, via the Internet, its popularisation and market share of the software has quickly increased (PIALP, 2004). Major global instant messaging service providers and their products include MSN Messenger by Microsoft, AIM by AOL, and Yahoo Messenger by Yahoo (PIALP, 2004). Among global public instant messaging products, MSN, AIM and Yahoo are arguably the leading players. Although there is a marked difference between the software products and versions actually used by each company’s clients, the number of users cumulatively

covered by MSN, AOL and Yahoo accounts for a comparatively large market share both within the U.S. and in the international instant messaging markets (PIALP, 2004). Figure 3.1 shows a comparison of global and U.S. instant message user numbers employing the top three instant messaging (IM) providers.

Figure 3.1: Comparison Between Global and US User Numbers of Global TOP 3 Instant Messaging (IM) Providers



Source: comScore. Sep 2006. Retrieved January 12, 2007 from www.iresearch.com.cn

In Figure 3.1, in the U.S. market, the number of AOL instant messaging users (61.2 million) has greatly exceeded the number of people using MSN (24.4 million) and Yahoo (24.4 million users). By contrast, in the global market, MSN (24.4 million) ranks first, with 185 million users worldwide, followed by Yahoo (82.1 million users), and AOL (61.2

million users). From these statistics it can be seen that the three major global instant messaging products' providers have different foci in terms of market strategies. AOL successfully emphasises market development within the U.S., with 80% of their users coming from the U.S. whilst Yahoo and MSN focus their marketing efforts on international market exploration, with only 27% of Yahoo users (82.1 million users) living inside the U.S. and only 13% of all MSN users (24.4 million) residing in the U.S. (PIALP, 2004).

Like other synchronous chat tools, instant messaging provides users with the ability to exchange typed messages privately or publicly (Leung, 2002). Aided by abbreviations, instant messaging is quicker and more direct than email. For example, *brb* means "(I will) be right back." Instant messaging provides an opportunity for people to hold conversations with friends, as well as strangers, in real time (Leung, 2002). Also, by incorporating additional technology, instant messaging can be viewed as an integrated communications platform using the Internet to access mobile phones, personal digital assistants, or PCs (personal computers) (Leung, 2002). However, with this degree of Internet openness, personal information may be inadvertently released to all users, and young people may be exposed to a number of risks such as cyber-bullying, which is addressed in more detail later.

On-line instant messaging has become a communication tool familiar to the general public. However, all instant message service providers are seeking innovations and breakthroughs as a means of attracting more users. These innovations are readily adopted by youth for on-line chatting, and people who work closely with this population need be aware of potentially dangerous factors, such as cyber-bullying via instant messaging.

3.2.3.2 Instant Messaging in China

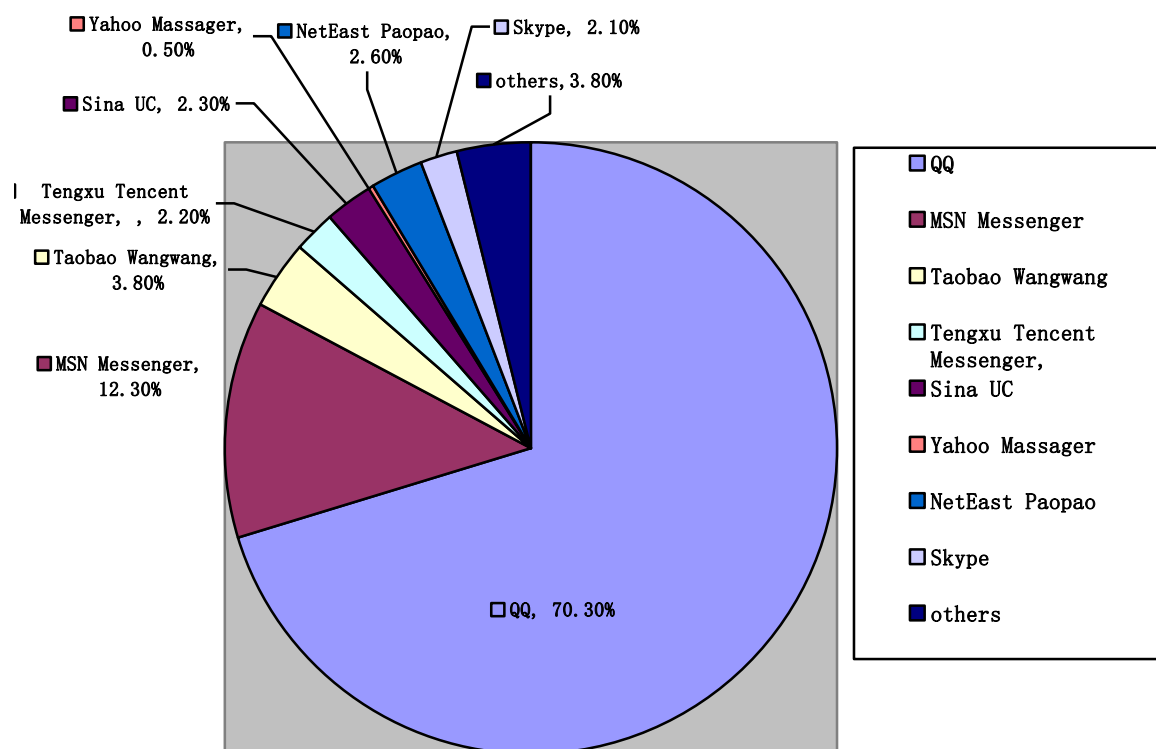
Currently, instant messaging is the most popular form of Internet communication among Chinese Internet users. It exceeds all other forms, such as email (iResearch, 2006). In the second quarter of 2006, the number of registered instant messaging accounts in China was 830 million, which accounted for 80% market share of all forms of Internet communication. Of all possible communication functions, 80% of “users stuck to voice chatting,” 50% of users employed the video conferencing function, and over 40% of users “used multi-person voice conference[ing] on a regular basis” (iResearch, 2006, p. 52).

Like other Internet services and operation modes such as websites and email in China, the technology that makes instant messaging possible is largely borrowed from other countries, with one exception. The company Tencent QQ, generally referred to as QQ, is the most popular free instant messaging computer program in China. The original name of QQ was OICQ (formally denoting Open ICQ and informally denoting Oh, I seek you). However, because of possible trademark infringement with another popular instant messenger (ICQ), the name was changed to QQ (Wan et al., 2006). Tencent QQ was founded in Shenzhen, China in November 1998. After years of strong business growth, on July 16, 2004, Tencent Holdings Limited (SEHK 700) went public on the main board of the Hong Kong Stock Exchange. On October 3, 2007 Tencent launched its first expansion into the American market with QQ Games (Holtkamp, 2006).

After 2000, with the application of Internet telephony, messaging services extended worldwide from typing to speaking. With this new technology, Chinese users could communicate with any person, as long as that person had Internet access (iReserach, 2006).

Services crossing Internet and mobile communication platforms became a new communication tool for instant messaging users: “instant messaging, inter connection/communication and user end weblization have become a new growth point of the instant messaging market” (iReserach, 2006, p. 53).

Figure 3.2: The Usage of Instant Communication Tools in China on December, 2006



Source: report was conducted by iUserTracker in 2006. Retrieved May3, 2010 from www.iresearch.com.cn

The result of the iResearch user survey, listed above, frequently used instant messaging products in China (based on usage frequency), for example: QQ, MSN Messenger, Tengxu Tencent Messenger, Sina UC, Taobao Wangwang, NetEast Paopao, Skype and others (iResearcher, 2006). Apart from the most popular functions such as text

chatting and file transfer, video chatting with emoticons which are specialized combinations of characters as digital culture form of expression, for example, :) is a widely known emoticon known as the smiley face, and :(is known as the frowny face, and voice chat have become the most widely used instant messaging functions (iResearcher, 2006).

3.3 Young People's Activities in Internet Chat Rooms

3.3.1 Net Generation

People born after 1980 live in an environment that places a premium on knowledge of technology, and are referred to as “Digital Natives” or the “Net Gen” (Zemke, Raines, & Filipczak, 2000). These young people view the Internet as a tool for communication and social connectivity (Ybarra, 2004) and are considered technologically savvy. Lenhart, Rainie, and Lewis (2001) report that 17 million American youths between the ages of 12 and 17 years use the Internet regularly. In 2001, more than 71% of U.S. families with children under the age of 18 owned a computer with Internet service.

Lenhart et al, (2001) found that the Internet plays a significant role in a teenager's relationships with friends, family, and school. According to the Pew Internet and American Life Project (2004), 75% of people in the 18-29 year-old group have Internet access. In Britain, between 2001 and 2002, use of the Internet by young people increased from 45% to 56% at home and at school in the same period, the rate increased from 56% to 71% (Hayward, Alty, Pearson, & Martin, 2002). By 2004, 97% of youth in the U.S. (ages 12 to 18 years) were connected to the Internet (Ybarra, 2004).

Young people use the Internet to maintain and make new friendships, play games, and access educational resources or entertainment information (Bullen & Harre, 2000; Gross, 2004; Lenhart et al., 2001). In the United States, in 2000, Internet-based “exploring” activities increased from 22% to 58% (enGauge, 2003). Another survey conducted by America On-line in 2004 (Fleming & Rickwood, 2004), found that of 6,700 adolescents aged 12 to 17 years surveyed;

- 81% used their computers for email,
- 70% used their computers for instant messaging,
- 70% used their computers to play on-line games,
- 58% used their computers for homework research,
- 55% used their computers for listening to and downloading music.

Research indicates that young people represent the group most involved in on-line activities. Further, some researchers have found that the most common recreational activities in which young people engage are playing games and communicating through instant messaging (Brown, 2000; the Cheskin Group, 2002; Prensky, 2001; Roberts, Foehr, & Rideout, 2005). Facer, Sutherland, Furlong, and Furlong (2001) found that children utilised email, chat rooms, and interactive games during 65% of their time on-line. Boys and girls have been found to have different preferences when they access the Internet. Boys are more likely to spend their time on-line surfing the Internet and playing games, while girls prefer to participate in chat rooms, using instant messaging, and shop on-line (Gross, 2004).

Livingstone and Bober (2004) reported that young people are much more interested in communication, identity and participation than are older people. Young people also use communication technologies such as chat rooms to find information and gain new knowledge more frequently than older people. In addition, because chat rooms provide a measure of freedom of expression and facilitate creating meaningful relationships, young learners appear to have more opportunities to be themselves in these venues. Thomas (2005) found that young people work co-operatively in chat rooms without experts to guide them. Their understanding and skills in using the Internet may exceed those of many of their teachers in schools. Facer et al. (2001) tried to understand information and communication technology use from a young person's perspective. They found that young people view their ICT use as a way to achieve objectives in their daily lives, such as looking for academic resources for their studies.

3.3.2 Young People and On-line Dangers

The Internet has implications for the physical, cognitive, social, and behavioural development of children and adolescents (Finkelhor & Jones, 2004; Greenfield & Subrahmanyam, 2003). Children's and adolescents' understanding of the Internet has a specific and important effect of their Internet experience, and provides an interesting and relevant manifestation of their conceptual development. Because increasingly younger people are engaging in various forms of on-line chat, some dangers arise. For example, the danger of being asked about, or typing in, potentially identifiable information, such as an

email address and other personal information, multiplies as more people enter Internet chat rooms (Mitrano, 2006).

Another danger arises because people do not know with whom they are chatting, their real names, or gender. These unknowns create an environment in which there can be many intrusions into participants' on-line activities, which can lead to a young person being cyber-stalked, sent pornography, or even invited to a real-world meeting (MAN, 2004). Based on i-SAFE, which is the worldwide leader in Internet safety education, 65% of American high school students admit to experiencing unsafe, inappropriate, or illegal activities on-line, and 38% of high school students sometimes hide their on-line activities from their parents (i-SAFE, 2006).

Loss of interpersonal connections is another danger inherent in on-line activities. People who spend a lot of time on the Internet are more likely than others to lose contact with their social environment (Nie & Erbring, 2000) and are more likely to become a victim of Internet harassment (Ybarra, 2004). The risks faced by young Internet users may be grouped into five categories (Bullen & Harre, 2000):

- (1) The uncensored nature of the Internet.
- (2) Potential dangers associated with giving out personal information.
- (3) Negative effects of exposure to unsolicited pornography.
- (4) The occurrence and effects of sexual solicitation.
- (5) The effects of exposure to hate sites and threatening or harassing material (p.14).

In sum, people, especially young people, are increasingly encountering potential dangers when they participate in various on-line activities. Protecting young people on-line is an important task about which parents, teachers, and governments should be concerned.

3.4 Playing On-line Games and Internet Addiction

3.4.1 Types of On-line Games

With the advance of technology in the digital era of the late 20th and early 21st centuries, people are enjoying a new e-lifestyle, full of modern electronic devices, and connecting with the Internet (Kim & Shim, 2002). As the Internet takes on an important and increasing role in entertainment, the number of players involved in the virtual world of on-line games has increased, and playing computer and video games has become one of the most popular leisure activities available today (Roy, 2001a, 2001b). iResearch Consulting Group (2006) reported that the global on-line game industry has experienced rapid development; a trend to which the numbers attest. The global on-line game market reached \$6.5 billion U.S. in 2006, which is approximately 35% higher than the 2005 figure. iResearch Consulting Group (2006) estimated that by 2010, this number would reach \$12 billion U.S. and predicted that the Asian Pacific on-line game market would experience very rapid growth, especially in China.

Compared to playing off-line games alone, playing on-line games with others can be very exciting. Particularly engaging games are those that require simultaneous interaction in a combat situation such as those played on mobile phones or role-playing games. Consequently, the concept of the Massive Multiplayer On-line Game (MMOG) was created. The MMOG is a type of video game that enables a computer user to enter an on-line game and network with objects and hundreds or thousands of players simultaneously (Wan et al., 2006). MMOGs include a variety of types, such as Massively multiplayer On-line Role-Playing Games (MMORPG), Massively Multiplayer On-line First-Person

Shooter (MMOFPS), Massively Multiplayer On-line Real-Time Strategy (MMORTS), Massively Multiplayer On-line Rhythm Games (MMORGs), Massively Multiplayer On-line Manager Games (MMOMGs), Massively Multiplayer On-line Racing (MMOR), Massively Multiplayer On-line Tycoon Games (MMOTG), and Massively Multiplayer On-line Sports Games (MMOSG). These games provide opportunities for young people to interact. In contrast to other role-playing activities such as drama, participants do not know whether “one is interacting with a character that is a ‘real self’ or with a character that is someone’s alternative identity” (Subrahmanyam et al., 2001, p. 137). Subrahmanyam et al., (2001) also point out that in multiuser domains (MUDs) role-playing on the Internet reinforces the integration of simulated life into real life, and strongly affects interactions with others in the real world.

3.4.2 On-line Games with Young People

Playing games has long been the most popular activity for children, especially younger boys. Studies have examined participants’ reasons for playing on-line. Bartle (1990) concluded that these games appeal to people who enjoy chatting, playing games, and a challenge, and who enjoy experiencing activities that are forbidden in real life, such as killing a person. On-line games also attract a number of children because of the high-quality graphics and sound. Another attraction is that these games can be replayed, so players may return to retest their skills. Chat rooms also help players talk with others, build new friendships, and enhance their knowledge about a particular game. If children spend considerable time conquering different game levels, they may be able to build a virtual

community (Juul, 1999). Therefore, the main purpose of on-line games is to replay the games with an existing partner, rather than to play the same games with new partners.

The wide range of accessible computer and on-line games vary in content as well as potential effects. According to Roschelle et al. (2000), some on-line games, such as Duke Nukem and Doom, have extremely violent content while some, such as SimCity, have educational benefits. Subrahmanyam et al. (2000) reported that some studies suggest that limited time spent playing games can improve children's visual skills in a three-dimensional space. Some research (Zillman & Weaver, 1999) found that watching violent films and television programming could lead to increased hostility and aggression in children. Calvert and Tan (1996) also found that college students who are immersed in playing on-line games are more likely to have aggressive thoughts than those who do not game. Extended use of the Internet to access a virtual world of MUDs, multi-identity chat rooms, and multiparty games has been linked to increases in loneliness and depression and to the possible blurring of a child's ability to distinguish real life from simulation (Subrahmanyam et al., 2000). Some research suggests an association between playing violent computer games and subsequent aggressive behaviour (Fling, Smith, Rodriguez, Thornton, Atkins, & Nixon, 1992). Subrahmanyam et al., (2000) also explore the concern that parents are often unaware of the extent of the violence in the most popular games their children are exposed to.

3.4.3 Influences of Playing On-line Games

A web-based survey administered to determine the profile of the Asia-Pacific Internet gamer was undertaken by Intel (KCM, 2003). In that study, 2000 participants from Australia, China, Korea, Malaysia, and Taiwan participated. The survey revealed that 97% of the participants were males, and 54% were students (KCM, 2003). More than half of the Chinese gamers were 21 to 25 years of age, while 59% of participants from the other countries were younger than 21 years of age. In the Asia Pacific countries, 83% of gamers played at home (KCM, 2003). Malaysian and Chinese people preferred to play on the Internet, while 57% of Australian gamers used a Local Area Network. DFC Intelligence (2004) estimated that by 2009, the proportion of total on-line gaming will rise from 65% of global Internet usage in 2003 to 73%.

A study conducted by Said and Mizerski (2003) in Australian and Indonesian universities found that university students represent an important market for on-line games because this population is sufficiently computer-literate to play on-line games, and their age range covers the largest segment of on-line game users (KCM, 2003; Young, Lee, & Doyle, 2003). According to Young et al. (2003), approximately 50% of gamers in both Australian and Indonesian samples play on-line games for fun and relaxation. On-line games are also an emerging market with significant potential because of the increasing number of players. Because the potential is augmented by an additional application, on-line games are used in related industries such as console games and advertising. Clearly the popularity of playing computer and video games is increasing.

On-line games bring challenges to researchers as they investigate possible controversial issues and negative effects such as the potential addiction of game playing and the provocative game contents involving sex, violence and explicit drug use (Totilo, 2005). According to the Entertainment Software Rating Board, since 1994, almost 3000 games have been identified as violent, and 40 games were found to include drug-related content (Totilo, 2005). Previous research indicates that some positive influences of playing computer games exist, such as bringing family members together for interaction (Mitchell, 1985). However, others argue that there is no evidence to support the idea that children's social skills are enhanced or degraded by playing on-line games (Subrahmanyam et al., 2001).

Research has found that if people spend 20 hours or more per week on playing video games, it leads to negative effects on well-being, including negative mood, symptoms of depression and poor relationships (Park, 2009). Computer game addiction is now a significant problem among the US, Holland and China. Camps and clinics for the treatment of internet have been established and attract thousands of users (Park, 2009).

In some on-line games, players acquire more weapons and skills to become more powerful, and this power is then used to achieve a higher level in the game. The skill set required to advance in the game necessitates long hours of game-play and this time investment is suggested as a cause of addiction in multiplayer, on-line games (Miller, 2002). To increase awareness of the risk of addiction and the risks of sexual content in some games (Marriott, 2002; Miller, 2002; Morris, 2002a, 2002b), governments in many countries have mandated warnings on game packaging about the negative effects of playing

popular games (Miller, 2002). Other researchers have focussed their attention on other addictive characteristics of Internet-mediated games. For example, college students exhibiting several indicators of pathological Internet use have been shown to play on-line games more than those exhibiting few or no indicators (Morahan-Martin & Schumacher, 2003).

In China, parents have been bringing teenagers to the Addiction Medical Center (AMC) at the General Hospital of the Beijing Military Region for several years. The founder of a youth rehabilitation center on a Beijing army base, Tao Ran, has designed the treatment program for teenagers who are antisocial, doing poorly in school and are sometimes depressed (Fletcher, 2009). Tao found on-line games are “the main culprit in most internet addiction cases he handles” and on-line chat programs more attract girls than boys based on the cases of Tao's current 70 patients (Fletcher, 2009, p.1).

In summary, on-line games are an exciting new trend in entertainment, and are considered the most popular on-line activity for young people (Subrahmanyam et al., 2000). Playing different styles of on-line games can result in both positive and negative consequences. Players learn how to form multiple identities in the virtual world by playing games but may also suffer problems such as a susceptibility to inflicting violence and Internet addiction. Because on-line games are prevalent in young people's everyday lives, it becomes increasingly important to understand the impact of playing on-line games on young people.

3.5 Forming Relationships and Sexual Solicitations in Internet Chat Rooms

On-line chat rooms are considered the most popular social interaction facility on the Internet among young people (Ali, 2005), and these forums play an important role in the social and psychological worlds of this age group (Griffiths, 2001; Schwartz & Southern, 2000). For instance, some people look on-line for interpersonal relationships if they have been unable to express their interpersonal or sexual needs in real life (Ali, 2005). Donn and Sherman (2002) found that most American university students had developed a relationship with a person they met on-line.

Finkelhor and his colleagues in the Crimes against Children Research Centre at the University of New Hampshire (2004) conducted two surveys, one in 1999 and another in 2004, as part of the *Youth Internet Safety Survey*. They interviewed 1,501 adolescents between the ages of 10 and 17 from across the U.S. who used the Internet regularly. The survey focussed on the four types of on-line victimisation of youth, which Finkelhor and Jones (2004) defined as:

- Sexual solicitation and approaches: Requests, made by an adult, to engage in sexual activities or sexual talk, or to give personal sexual information, regardless of whether the requests were wanted or not.
- Aggressive sexual solicitation: Sexual solicitation involving off-line contact with the perpetrator through mail, by telephone, or in person, or attempts or requests for off-line contact.

- Unwanted exposure to sexual material: When on-line, opening email, or opening email links that expose the viewer to pictures of naked people or people having sex while not seeking or expecting sexual material.
- Harassment: Threats or other offensive content (not sexual solicitation) sent on-line to children or adolescents or posted on-line for others to see.

According to Finkelhor and Jones (2004), nearly one in five youths who regularly use the Internet have experienced sexual solicitations or approaches in one year. About 48% of the offenders were other youths, and 77% of targeted youth were aged 14 years or older, which is not an age targeted by pedophiles (Wolak et al., 2004). Moreover, results from Finkelhor and Jones's survey have been quoted in support of the U.S. *Deleting On-line Predators Act of 2006*, stating that one in five children had received an unwanted on-line solicitation of a sexual nature. In Finkelhor and Jones's study, sexual solicitation consisted of attempts at sexual abuse, off-line contact with the perpetrator, Internet pornography, and harassment.

Another survey conducted in 2002 among adolescents in the U.S. who regularly used the Internet showed that 55% of respondents had used chat rooms, internet messaging and other forms of on-line communication to communicate with people they did not know (Fleming & Rickwood, 2004). Some 25% of respondents formed a casual on-line friendship and 14 % formed a close on-line friendship (Fleming & Rickwood, 2004), and 2% had established an on-line romantic relationship. However, one in five children who

used computer chat rooms had been approached over the Internet by pedophiles (Safer Internet [SI], 2002).

3.5.1 Making Friends and Young People

A National Secondary School Youth Health Survey conducted in New Zealand in 2003 showed that about 23% of 7-10 year olds and 37% of those aged 16 years or older reported meeting someone face to face that they had met over the Internet (Butterfield, 2003, p.6). In 2003, MSN restricted sexual conversation leading to sexual contact from adults in order to protect children in MSN chat rooms (Darlington, n.d.). A national Internet survey of teenagers funded by Cox Communications in partnership with the National Center for Missing and Exploited Children (NCMEC) and Walsh in the U.S. (2007) showed that among 1,070 U.S. teenagers, 69% of those aged 13 to 17 years, regularly received personal messages on-line from people they did not know, and most of them did not tell a trusted adult about the experience. In that survey 16% of teenagers revealed that they considered meeting, and 8% of teenagers revealed that they have met, face-to-face, with someone they had only talked to on-line. Compared to numbers collected in a similar study in 2006, which found that 30% of adolescents considered such a meeting and 14% of adolescents met their conversation partners in person, the 2007 figures represent a significant drop, but the percentages still represent a large at-risk group.

Similar findings from i-SAFE Inc. (2006) found that 50 % of America's high school students "talk" in chat rooms or use instant messaging (IM) with strangers. According to the study, 20% of students in Middle and High school admit that they have met face-to-face

with someone they first met on the Internet. Another survey conducted by the Intelligence Group (IG) (2006) revealed that 58% of teenagers and 29% of those teenagers said they have had a “scary” experience on-line. Half of teenagers these aged 13 to 18 years often communicate through the Internet with someone they have not met in person, and one-third of youths aged 8 to 18 years have talked about meeting someone they met through the Internet.

About 30% of 1,000 U.S. girls aged 13 to 18 polled by the Girl Scout Research Institute said they had been sexually harassed in a chat room. However, only 7% told their parents about the harassment because they feared their parents would ban them from going on-line (Girl Scout Research Institute [GSRI], 2002). The same study revealed that 86% of the girls polled said they could chat on-line without their parents' knowledge, while 54% stated they could conduct a cyber relationship (GSRI, 2002). According to the report *On-line Victimization of Youth: Five Years Later* (2006), a study conducted in 2000 found that the rate of adolescents who experienced aggressive solicitations, which are off-line contacts or attempts to make off-line contact with youth, increased slightly from the rate of 3% to 4% (Wolak, Mitchell, & Finkelhor, 2006). Additionally, in 2005, 4% of young Internet users revealed that they were asked for nude or sexually-explicit photographs of themselves (Wolak et al., 2006).

The statistics above show that young people are frequently exposed to sexual material, and are pursued by people, met on-line, to meet face-to-face. Internet chat rooms are anonymous places and provide ideal opportunities for people, especially young people, to communicate with people from around the world. These rooms also provide

opportunities for perpetrators to conduct child grooming, sexual abuse, and even the potential for rape.

3.5.2 Influences of Making On-line Friends

On-line communication is an increasingly popular activity. Young people, especially teenage girls, prefer to use the Internet to maintain contacts with friends, meet new people, obtain personal help, and join groups (Subrahmanyam et al., 2000).

Hasselbring and Williams's study (2000) found that Internet and Internet chat rooms can be used to help youths with special needs. These young people can communicate on-line with other children who have similar challenges to share their stories, to learn from each other, and to make friends with common interests.

Subrahmanyam et al., (2000) explore the notion that in these virtual environments, the distinction between real life and simulation may not always be clear, because people present multiple identities and interact with strangers. In on-line chat rooms, they suggest that there is often no way to know if one is interacting with a real person or with a fabricated character. The anonymity that allows participants to communicate as characters can also lead to poor behaviour such as posting pictures of another person without their consent.

The phenomenon of on-line abuse has recently attracted the attention of researchers. Along with communicating with strangers, the Internet provides children and adolescents access to information about sex through pornographic spam in their email, by inadvertently

clicking on a link to a porn site, and through on-line chats where they may meet partners, or seek romantic and sexual relationships (Adebayo, Udegbe, & Sunmola, 2006). However, the quality of some of that sexual information is poor and insufficient (Goldman & Zhang, in press).

Internet pornography is another serious issue facing users. Kessler (2006) mentioned that in previous years, pornography was relegated to a handful of “adult” bookstores on the outskirts of town, behind a door of a video store, or hidden behind a counter at the local newsagent. It was kept out of sight and mostly out of mind, especially for children and teens who had no way of getting past shop-keepers and store clerks. Today, the anonymity of the Internet provides a comfortable and safe situation in which people may view pornography in a private place. As a result, pornographic chat rooms are flourishing and readily available to satisfy many different psychological or sexual reasons. The problems accompanying Internet pornography are currently conceptualised as a form of youth sexual abuse (Finkelhor & Jones, 2004).

In summary, as young people begin to participate more frequently in Internet chat rooms and simulate environments, it becomes increasingly important to understand the impact of these experiences on children’s development.

3.6 Cyber-bullying in Internet Chat Rooms

Researchers have studied bullying since the 1970s (Olweus, 1993). Previously, schools were considered the most common place where children might be victimised by bullies, while within their home it could be avoided or minimised (Phillips, 2004).

However, this situation no longer prevails. Bullying has moved from the school to the Internet. The Internet provides an easy way for people to attack their victims anonymously. Adolescents now must face the threat of being bullied 24 hours a day, both at school and on-line. Recent news reports have detailed the many different ways bullies operate in cyberspace; by using email, chat rooms, and cell phones (Willard, 2006). For instance, web pages have been used by Lower Primary school cyber-bullies to spread rumours about school-mates' alleged sexual activities. These experiences are socially and personally damaging to the victims, and can be difficult to control because they take place on computers rather than in face-to-face interactions. As more adolescents gain access to the Internet, cyber-bullying continues to grow (Phillips, 2004).

3.6.1 Definition and Characteristics of Cyber-bullying

The term “cyber-bullying” became popular in about 2004 when the phenomenon of bullying on the Internet became widespread (Phillips, 2004). Cyber-bullying produces many negative results for victims including emotional, psychological, and social repercussions (Menesini, Melan, & Pignatti, 2000). Compared to face-to-face bullying, cyber-bullying can be spread to millions of people, every day of the year, by many different types of messages (Willard, 2006). Messages used by cyber-bullies can be classified into six categories (Willard, 2006):

- Flaming (on-line “fights” using electronic messages with angry and vulgar language).
- Harassment (a wide spectrum of offensive behaviour).
- Denigration (or “dissing” someone on-line. Sending or posting cruel gossip or rumours about a person to damage his or her reputation or friendships).

- Exclusion (intentionally excluding someone from an on-line group, such as a “buddy list”).
- Cyber-stalking (repeatedly sending messages that include threats of harm or that are highly intimidating).
- Happy slapping (a fad in which an unsuspecting victim is attacked while an accomplice photographs the assault, usually with a camera phone or a smart-phone).

Taking a different perspective, Belsey (2004), categorises cyber-bullying into two types: direct and indirect. Direct bullying includes acts such as name-calling, threats, cruel teasing, and rumour-mongering (Atkin, Smith, Roberto, Fediuk, & Wagner, 2002; Wolke, Bloomfield, & Karstadt, 2000). Indirect bullying consists of subjecting the victim to social isolation, and manipulating relationships in an effort to cause detriment to the victim (Glover, Gough, Johnson, & Cartwright, 2000; Hawker & Boulton, 2000; Wolke, et al., 2000). It is difficult for on-line bullies to taunt their victims using physical or verbal bullying, unless they know where the victim resides or attends school. Direct cyber-bullying consists of verbal text aggression. Cyber-bullying, with its anonymous character, is increasing rapidly and becoming a significant problem, not only for children, but also for teenagers.

3.6.2 Cyber-bullying among Young People

Users have found numerous ways for bullying to occur in cyberspace. Phillips (2004) found that “cyber-bullies most frequently used synchronous chat tools such as instant messaging to torment their victims” (p. 81), because any individual can hide behind the mask of anonymity to bully without getting caught (Strom & Strom, 2005). An

increasing number of studies are exploring the phenomenon of cyber-bullying, and its increasing popularity among young people. In a survey by the Crimes against Children Research Centre (2000) at the University of New Hampshire, 6% of respondents reported experiencing threats and harassment via negative rumours. Another study by the National Children's Home Charity and Tesco Mobile (NCHCTM) (2005) was conducted among 770 young people between 11 and 19 years of age. Of the total, 24% of respondents had told a parent about a cyber-bullying experience, 14% had told a teacher, and 41% had told a friend (NCHCTM, 2005).

Hinduja and Patchin (2005) found that among 1500 Internet-using American adolescents, one-third of respondents had been cyber-bullied, and over 16% reported cyber-bullying others. Another notable finding of this study is that on-line bullying victims have experienced off-line deviant behaviours as well as on-line abuse; running away from home, cheating on a school test, skipping school, and using alcohol or marijuana were examples reported. A survey conducted on-line by Microsoft Network (MSN) (2006) revealed that about 10% of 12 to 15 year-olds have experienced cyber-bullying and that over 500 British youth had been cyber-bullied through threatening emails, by exclusion from on-line conversations, or by rumour-mongering on the Internet. Other findings from the report revealed that;

- More than twice as many girls (18%) as boys (7%) reported that they had been cyber-bullied and twice as many girls (34%) as boys (17%) knew someone who had been cyber-bullied.
- One in twenty respondents admitted involvement in bullying someone else on-line.

- One in eight reported sending threats to others, while one in twelve admitted to posting fabricated information about someone on a blog (on-line diary).
- About 13% of respondents judged cyber-bullying to be worse than physical bullying (¶1).

Another study by the Opinion Research Corporation (ORC) (2006) found that among 1,000 youths nationwide in the U.S., one in three teens and one in six preteens had been victims of cyber-bullying. Further, the authors of the study estimated that more than 13 million children aged 6 to 17 years were victims of cyber-bullying. Other findings include;

- One-third of all teens (12 to 17 years) and one-sixth of children aged 6 to 11 years have had unkind, threatening, or embarrassing comments directed toward them on-line.
- 10% of the teens and 4% of the younger children were threatened on-line with physical harm.
- 16% of the teens and preteens who were victims told no one about it. About half of children ages 6-11 told their parents of the abuse. Only 30% of older children told their parents of the abuse.
- Preteens were as likely to receive harmful messages at school (45%) as at home (44%). Older children received 30% of harmful messages at school and 70% at home.
- 17% of preteens and 7% of teens said they were worried about bullying as they started a new school year (¶1).

Despite the belief of many researchers that cyber-bullies target children, cyber-bullying also targets teachers, principals, and staff. A survey of U.K. teachers found that 17% had experienced cyber-bullying; messages ranged from “upsetting emails” and unwelcome text messages to malicious use of websites and Internet chat rooms (Pytel, 2007). The study also revealed that, “53% of respondents did not know whether their

school had a cyber-bullying policy, while 39% said their schools did not have a cyber-bullying policy” (Pytel, 2007). “Of those schools which did have a policy, 19% said it was not properly enforced, and 72% did not know if it was” (Pytel, 2007). Teachers may also be targeted by their students using video, because websites do not filter videos (Goff, 2007). Because cyber-bullying can cause emotional distress through threats, sexual remarks, and hate speech (Standler, 2002), anti-bullying policies and legal action against people who post bullying videos have been recommended in order to control the amount of cyber-bullying (Goff, 2007; Internet Safety Advisor [ISA], 2007).

Although cyber-bullying is increasing and is just as hurtful as other types of bullying, it is less likely to be detected or prevented (Blair, 2003). Three factors may account for this phenomenon. First, compared to traditional bullying in public, cyber-bullying usually takes place in the evening in the privacy and safety of the victim’s home (Berson, 2000; Blair, 2003; Zimmerle, 2003). Second, cyber-bullying is more difficult to trace than face-to-face bullying. Third, cyber-bullies can often avoid taking responsibility for their actions because they are difficult to identify. Therefore, the fear of apprehension and punishment is significantly reduced (Cooper, 2005).

3.6.3 Influences of Cyber-bullying

As discussed above, adolescents may now be tormented by bullies outside of the school environment. Strom and Strom (2005) believe that in the perpetration of traditional bullying, the bully can be physically stronger than the victim. However, in the perpetration of cyber-bullying, the bully can be of any size, any age, and either gender. Cyber-bullying

can be more devastating than face-to-face bullying because a message can spread through cyberspace to millions of people around the world. Some researchers have reported that cyber-bullying can have negative effects on emotional, social, and psychological outcomes as well as social, academic and psychological wellbeing (Baldry, 2004; Casey-Cannon, Hayward, & Gowen, 2001; Cullerton-Sen & Crick, 2005; Kahtri, Kupersmidt, & Patterson, 2000; Phillips, 2003). These negative influences can lead to depression, acts of violence, and criminal activity by both victims and bullies (Kaltiala-Heino, Rimpela, Marttunen, Rimpela, & Rantanen, 1999). In extreme cases, victims have committed suicide in order to end the harassment (Bearman, Moody, & Stovel, 2004; Lipman, 2003).

3.6.3.1 Effects of Cyber-bullying on Girls

Phillips (2003) found that the effects of bullying were particularly damaging for adolescent girls. Status as “a victim of indirect bullying is the strongest predictor of withdrawn behaviours, somatic complaints, and anxiety depression” (Baldry, 2004, p. 343). Fear was a very common effect of bullying because the perpetrator was often in a powerful social position. Girls often sought to avoid victimisation whenever possible, even if it meant missing school. Currently, the nature of cyber-bullying allows adolescents of any social status to become the victim, and also the bully, at any hour of the day or night.

3.6.3.2 Protecting Youth on the Internet

There is a great need for research on cyber-bullying among adolescents as such the research is still in its infancy (Bullen & Harre, 2000; Ybarra 2004). Cyberspace is a new territory for all users, including children and teenagers, and often parents and teachers are unsure how to address the issue (Cooper, 2005; Lenhart, Rainie, & Lewis, 2001; Strom &

Strom, 2005). Students are reluctant to tell adults what they are doing or saying on the Internet because they fear their parents may over-react and remove their computer or Internet access (Strom & Strom, 2005). Parents, therapists, and school officials should be aware of this ever-growing problem, and should learn how to best prevent, intervene, and treat the devastating effects of this phenomenon. A common misconception about cyber-bullying is that little can be done about it. However, “cyber-harassment is a crime that resembles other forms of unlawful behaviour and is subject to prosecution” (Strom & Strom, 2005, p. 22). Therefore, it is necessary to educate young people about cyber-legal knowledge so that they may protect themselves.

It is widely known that bullying can have various negative outcomes. However, cyber-bullying seems to have become a more serious issue than face-to-face bullying because of its anonymity and invisibility (McLean, 2007). It is also difficult for parents to intervene because adolescents are emotionally traumatised, fear retaliatory behaviour, or fear that their Internet use will be restricted (McLean, 2007). To avoid attacks by cyber-bullies, schools, educators, legal workers, and parents are duty bound to anticipate dangers and take necessary precautions. Because cyber-bullying is a growing concern in this electronic, educational, and social environment, it is also important for governments to monitor its implementation, performance, and effects on young people (McLean, 2007).

3.6.4 Cyber-rape

The Internet provides a free expression in easily accessible public spaces where people can choose any on-line names that disguise their identities and gender. Turkle (1995), a professor of the Sociology of Science at the Massachusetts Institute of Technology, wrote a fascinating book titled *Life on the Screen* which investigated the impact of computers and networking on society, peoples' perceptions of themselves, and the individual's relationship to machines. Turkle (1995) found software design, user interfaces, simulation, artificial intelligence, artificial life, agents, "bots," virtual reality, and "the on-line way of life" by using Internet MUDs (multi-user domains, or multi-user dungeons). Turkle (1995) explored that some users never submit any information, others stay close to the truth, and still others choose to alter their profiles to reflect whatever role or identity they wish to take on. Meanwhile, the dark side of human sexuality was raised in the interactive chat rooms. She realized the differences between real life and Internet crimes that are committed and questioned the ferocity and dangers of on-line "rape" because of the different responses she has seen.

Cyber rape is not the same as the rape a woman experiences in the physical world. Women on the receiving end of this graphic sexual violence on the Net have indeed reported being traumatized by the experience. According to Clouthier (2009), there is a dangerous link between online fantasy and real-world behavior by lamenting the recent Playboy article about hate f***ing conservative women:

Last week, ten women were the subject of a cyber-rape. That is,

without their consent, they were subjected to one misogynist, Guy Cimbalo, and his rape fantasies, which appeared in his Playboy article titled “Ten Conservative Women I’d Like To Hate F***.”

With computers and the Internet becoming an increasing presence in the lives of children, there are many young people frequenting Internet chat rooms and being influenced by what they encounter (Michaels, 1995). It is important to educate young people about the prevalence of sexual violence on-line, and about the difference between fantasy and reality (Michaels, 1995). Young people need to be taught to know what kind of people may lurk on-line, and be warned not to trust everyone they meet, not to give out personal information, and not to yield their right to this space to cyberspace bullies, or anyone else who tries to manipulate them (Michaels, 1995).

3.7 The Role of Parents, Teachers, and Other Authorities towards Helping Children’s On-line Activities

As the unprecedented amount of personal information available in Internet chat rooms increases, people with malevolent purposes can more easily identify their victims and gain their trust. Based on this trust, predators are able to develop a false sense of security in young people and children, induce them to meet in person, and lead them into dangerous situations, frequently involving sex. Other identified dangers include exposure to inappropriate content, cyber-bullying, and harassment (Campbell, 2005). Young people and children do not have sufficient self-awareness to protect themselves and too often

reveal more than they intend. They do not realise that disclosing their personal information or photos, which may be intended for a benign audience, can have unexpected and undesirable consequences (Campbell, 2005).

Some researchers have pointed out that parents do not know what their children do on-line because often parents are not as skilled in using computers as their children (Bullen & Harre, 2000; Dellasega & Nixon, 2003). Many parents do not discuss with their children the on-line activities in which they participate. Berson (2000) reports that in the U.S., fewer than 4% of teens surveyed indicated that a parent, caretaker, or teacher always discusses their on-line activities with them. Almost 67% of teens indicated that a significant adult rarely or never discusses their on-line activities with them (Berson, 2000). This lack of attention may give children more freedom on the Internet; however, parents and other authorities need to be aware of how the Internet can affect young people and what they can do about it (Ybarra, 2004, p. 255).

Berson (2000) believes that parents, teachers, and peers can have a great influence on young people's cyberspace experiences. He explains,

Their [parents and teachers'] guidance may assist students in making informed decisions, allowing them to apply critical-thinking skills and productive citizenship characteristics on-line. Although efforts to assist students in acquiring civic virtue, evolving their moral character, and enhancing their socioemotional functioning traditionally have been tasks of schools, the application of the acquired knowledge and skills to cyberspace is as yet uncharted territory. (p. 158)

Additionally, Berson (2000) also found that if teens have discussions with a significant adult about their on-line activities, they were more likely to have some sort of

moral code about Internet usage. Traditionally, parents and teachers have been aware of the need to protect children from inappropriate books and movies. Similarly, they need to supervise or control what their children do on the Internet. For example, parents and schools may technologically block access to certain sites (Berson, 2000). Schools can also employ this technology to protect students and to educate them about the extent and consequences of negative Internet behaviours such as cyber-bullying. For example, the Australian government has restricted student access to selected video-sharing websites such as YouTube. Additionally, Campbell (2005) suggests that peer helper programs, buddy programs, and transition programs would support schools' efforts to guide young people in developing positive on-line behaviours. Campbell (2005) also points out that curriculum programs incorporating the direct teaching of values education, empathy training, and the direct teaching of netiquette could help to reduce negative on-line behaviours.

In summary, it is clear that certain children's on-line activities should be restricted and that parents, teachers, and schools are the most appropriate entities to manage children's Internet behaviour. Internet addiction, sexual solicitation, and cyber-bullying of young people should be honestly discussed in order to apply prevention strategies efficiently. Society needs to be conscious of the potential dangers of the vast on-line environment. Therefore, it is also important for teachers and parents to be educated in this new information area.

3.8 Australia's Young People's Activities on the Internet

The Internet's emergence as a popular medium for mass and personal communications, as well as its potential to enhance global competitiveness, has resulted in Australia's young people becoming increasingly involved in this technology. In 2005-2006, 70% of Australian households had access to a home computer and 60% had home Internet access (Australian Bureau of Statistics [ABS], 2006). According to the Australian Bureau of Statistics (2006), 84% of Australian young people aged 18 to 24 years used the Internet during 2002. Australian children have engaged mostly in entertainment activities such as downloading games and music, participating in chat rooms, and utilising instant messaging services (Aisbett, 2001).

In 2005, a study was conducted by the Australian Broadcasting Authority (ABA) and NetAlert Ltd (McLean, 2007) to explore the behaviours and attitudes of both young people (particularly those aged 8 to 13 years), and their parents, regarding Internet use at home (McLean, 2007). Key findings were that "37% of children accessed the Internet on a daily basis with a further 33% accessing it two to three times per week" (p. 2).

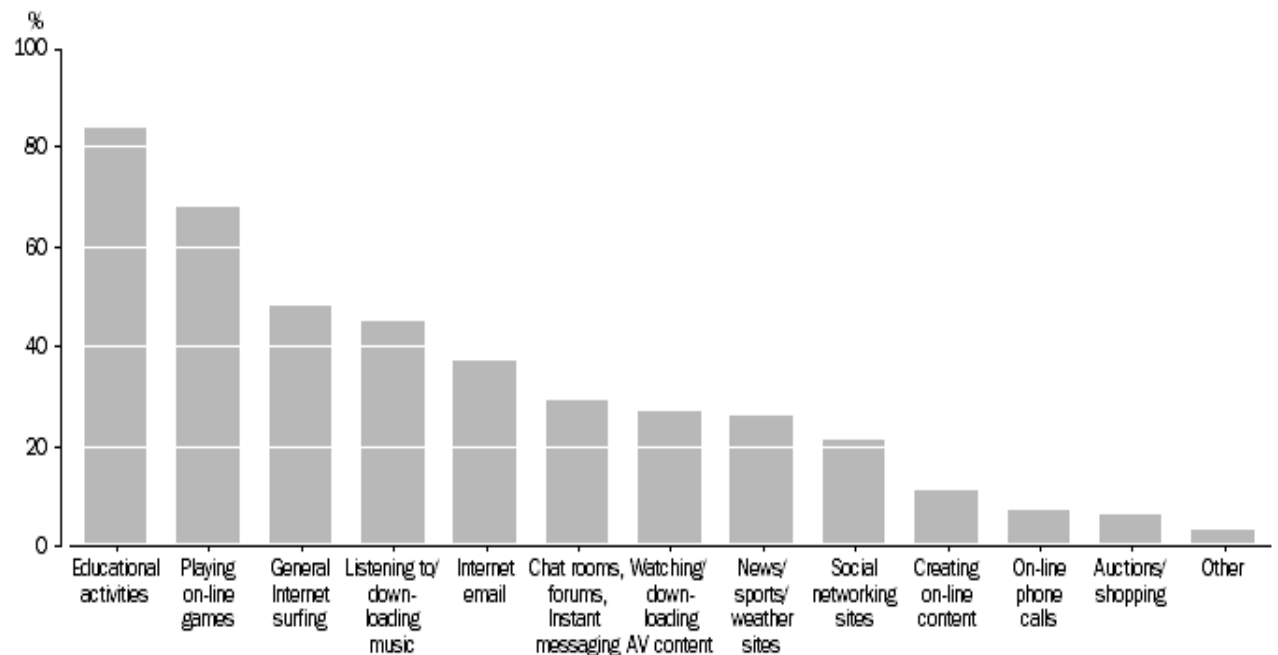
Internet chat rooms, as important social interaction tools, are becoming a very popular instrument for facilitating interpersonal relationships because of the rooms' anonymity and flexibility. About 67% of Australian young people aged between 12 and 14 years were found to use chat rooms to form on-line relationships (Hardie, 2006). Flood and Hamilton (2003) examined the prevalence of Internet pornography among Australian teenagers aged 16-17 years. They reported that about 84% of boys and 60% of girls have been exposed to Internet pornography. In addition, approximately 38% of boys and 2% of

girls had deliberately looked for websites with sexual content such as pornography (Flood & Hamilton, 2003).

A pilot study at Flinders University in South Australia collected data through group discussions with 114 Secondary school students (aged 13 to 17 years), and examined teenagers' use of Internet chat rooms. The study found that 62% of respondents expressed a need for professional help in order to deal with the problems of chat room use (Ali, 2005). Over one-quarter of respondents claimed that using the Internet plays "an important part" in their daily lives. Moreover, the average Internet use of respondents was 13 hours per week, and 7% of respondents reported that they were "becoming addicted to the routine of accessing the Internet" (Ali, 2005, ¶ 1).

The 2009 Children's Participation in Cultural and Leisure Activities survey (Australian Bureau of Statistics, 2009a) reported that among 2.7 million children aged 5 to 14 years. About 2.0 million children accessing the internet at home in 2009, educational activities (85%) and playing on-line games (69%) were the most common activities. Less than half (42%) of children who used the internet at home did so for 2 hours or less per week, while 4% were on-line for 20 hours or more (Australian Bureau of Statistics, 2009a). In 2009 an estimated 841,000 children, the majority (60%) used their mobile phone mostly to contact family (Australian Bureau of Statistics, 2009a). Only a small proportion of children (4%) used their mobile phone to access the internet in 2009 (Australian Bureau of Statistics, 2009a).

Figure 3.3: Proportion of Children Aged 5-14 Years Accessing the Internet: Internet Activities - Queensland - April 2009



Source: Household Use of Information Technology, 2008-09 (cat. no. 8146.0)

In April 2009, the Internet was accessed at home by 417,000 Queensland children (Australian Bureau of Statistics, 2009b). Educational activity was the most common reason for accessing the Internet at home with 84% of children involved in this activity (Australian Bureau of Statistics, 2009b). According to the Australian Bureau of Statistics (2009b, p.1), there are activities such as “playing on-line games (68%), general Internet surfing or web browsing (48%), listening to or downloading music (45%), Internet emailing (37%), using chat rooms, forums or instant messaging (29%), watching or downloading audio-visual content (27%), visiting news, sports or weather sites (26%), visiting or using social networking websites (21%), creating own on-line content (11%), making phone calls on-line (7%), using auction sites or Internet shopping (6%) and other activities (3%)”.

3.8.1 Australian Government Attempts at Regulating On-line Chat

Rooms

Australia's young people are involved in a wide variety of on-line activities, and face the same issues, such as Internet addiction, as young people in other countries. Moreover, on-line safety and problematic use of the Internet have become important issues in Australia (Ali, 2005). For example, if a young person or a child enters an on-line chat room, he or she may encounter an adult masquerading as a child. This adult is likely to be searching for a child to sexually exploit and is able to "send obscene images, obtain sexually explicit pictures, engage in cybersex or meet for sex off-line" (Krone, 2005, p. 1). More parental supervision and assistance will help protect children who venture on-line and prevent such encounters.

National Safe Schools Week 2007 was launched by the Minister for Education, Science and Training, Julie Bishop, MP. to highlight Australian schools' efforts to protect their students. Bishop states, "This important, annual week focuses on the outstanding achievements of our schools in providing a learning environment free from all forms of bullying, harassment, violence, abuse and neglect" (McLean, 2007, p. 4). In addition, a collaborative effort by the Australian State and Territory government and non-government school authorities launched the National Safe Schools Framework (McLean, 2007). This framework was developed to help schools and communities address "issues of bullying, harassment, violence, and child abuse and neglect" (McLean, 2007, p. 4).

3.8.2 Legal Efforts to Protect Young People and Children

A number of laws have been enacted by the Australian government to protect children on the Internet in all states and territories of Australia. In one such piece of legislation, the Australian government enacted an anti-grooming law in the *Crimes Legislation Amendment (Telecommunications Offences and Other Measures) Act (No. 2) 2004* (Commonwealth Consolidated Acts) (Krone, 2005). Krone explains the act, stating,

The provision makes it an offence for an adult to use electronic communication (such as email, internet chat rooms, SMS messages, real time audio/video or other similar communication) with the intention of procuring a person under the age of 16 years (or whom the adult believes to be under 16 years) to engage in a sexual act (p. 2).

Because contact in virtual worlds engenders new dynamics for human interaction, the definition of sexual intercourse is not limited to acts involving physical contact in the provision. The Act has also provided a maximum penalty of five years imprisonment. If the child pursued is, or is believed by the adult to be, younger than 12 years of age the penalty can be increased to ten years (Krone, 2005). Additionally, in order to protect youth on-line, Queensland police agencies have used stings to investigate predatory behaviour by men seeking sex with children through on-line chat rooms. Krone (2005) conducted a study to explore the aggressive and rapid way that children are targeted by adults for sexual purposes. Police ‘stings’ can disrupt offending behaviour and introduce an element of deterrence for people who seek children on-line for sexual purposes. Krone revealed that in 68% of cases the adult sought off-line contact with the child”, and in 48% of cases the adult suspect was “arrested at the intended rendezvous with the child” (p. 1).

The Australian Federal, State, and Territory Governments and other departments have made efforts to prevent young people and children from on-line dangers. School authorities are likely to play an important role in helping young people and children understand negative issues that can accompany on-line activities, and issues such as cyber-bullying and harassment. However, education is not enough to prohibit dangerous behaviour on-line. Consequently, legislation to protect children on-line is an appropriate means of ensuring that on-line conduct is monitored and enforced to promote Internet safety.

3.9 China's Young People's Activities on the Internet

The China Internet Network Information Centre (CNNIC) published *Research Report of China Youth Internet Behaviours in 2009*. The data contained in this report claim that by the end of 2009, the number of young netizens under the age of 25 years reached 195 million, which is almost a half of the total number of Internet users in China. Youth have been the largest age group of Internet users in China, which reflects a potential for growth and development (CNNIC, 2009). Another interesting result shows that there are about 144 million of young people using mobile phone to access the Internet (CNNIC, 2009). It is the first time that the amount of young users to use mobile on-line is more than the amount of using desktop (CNNIC, 2009).

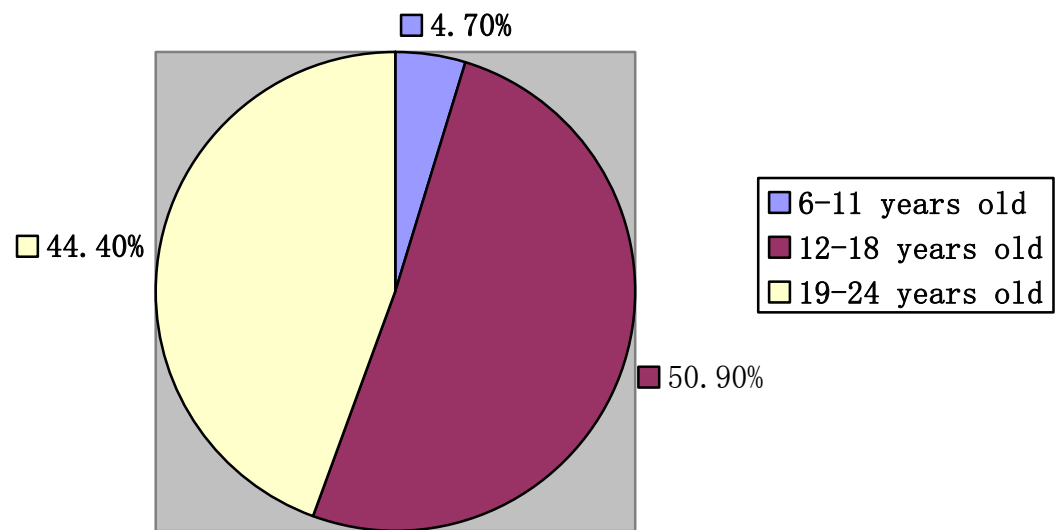
College students who do not have their own computers or Internet services represent potential adopters of the new technology (CNNIC, 2009). These college students are young, computer-literate English-users, and their adoption of technology is restricted

only by their financial limitations. For them, the Internet represents a window to the world beyond schools and families, from which they can access vast amounts of information, make friends and obtain advanced knowledge (CNNIC, 2009).

Pearl Research (PR) (2007) revealed that there are more than 370 million Instant Messaging Users in China, especially via QQ, who primarily use the technology to meet friends and date. Pearl Research (2007) also suggests that as the number of broadband connections increases, young Chinese users are increasingly using the Internet for activities such as games, blogging, on-line shopping, and music downloads. Indeed, China and Japan have been the two fastest growing countries for on-line games (Cole, 2004). Computer gaming has become the top leisure activity in China, and game-related cheating and fraud are rampant (PR, 2007). Chinese players also meet friends on-line through on-line games (PR, 2007). Based on an estimate from Pearl Research in 2007, the Chinese games market exceeded \$1 billion in 2007, and may reach \$2 billion within five years. The leading on-line games products in China can each generate more than \$120 million annually.

Further to the above research, the latest data from the China Internet Network Information Centre (CNNIC) published *Research Report of China Youth Internet Behaviours in 2009*, indicates that the age of users accessing Internet has become younger and younger (see figure 3.2).

Figure 3.4: The Ages of Young People Accessing on the Internet



Source: Research Report of China Youth Internet Behaviours in 2009. Retrieved May 7, 2010, from <http://www.cnnic.cn/uploadfiles/pdf/2009/4/13/164657.pdf>

In general, the Internet provides unique tools for young people to broaden the world in which they live. Chinese young people have maximised the number of on-line activities they can access. Furthermore, the Internet brings extensive business profits as well as educational benefits. However, the Internet is a “double-edged” sword, which can be used to help students develop their social styles, but also brings some negative influences (Wang, 2007). Concomitantly, a salient concern about Chinese young people’s exposure to inappropriate and harmful content, such as pornography, has been raised by the community.

3.9.1 Chinese Internet Cafés

In Asia and Africa, Internet cafés are viewed as the primary venues to use to gain access to digital information and communication (Furuholt, & Kristiansen, 2007). Internet

cafés, or Wang ba, have become gathering places for people who may not own a computer. In these cafés they obtain access to information and opportunities to communicate. Internet cafés also help people to overcome skill deficits that would normally exclude them from access to information and new technologies (Haseloff, 2005).

Although Mwesige (2004, p. 84) notes that “the world-wide boom of Internet cafés has not seen [a] corresponding inquiry into this form of public access to the Internet”, some researchers have realised that internet cafés, may represent a threat to traditions and cultural values (Furuholt, & Kristiansen, 2007). However, in Malaysia, illicit activities have occurred in some of these cafés and the government has worked relentlessly to reduce the “evilness” associated with cybercafés (Furuholt, & Kristiansen, 2007).

The Internet café is the most frequently visited place in China because it is inexpensive to access the computers and high quality Internet connections there (Liu, 2006). In China, a total of 120,000 Internet cafés offer access to over 5 million computers (Liu, 2006). They are generally considered morally unsuitable public places and a source of many juvenile problems in China (Jenkins, 2002), for example,

The environment at Web bars is troubling. Web bars are narrow, dark, stuffy, and the air in them is foul. Fire-fighting installations in some Web bars are crude and present serious safety hazards. Web bars provide their habitues with a dissolute cultural atmosphere in which they can behave without any inhibitions. A substantial number of the netizens at Web bars are students, but undesirable young people from society can be found. Some Web bars sell various kinds of cigarettes and cigars, wine, soft drinks, and snacks. Youngsters do as they please here, get in[to] the bad habits of smoking and drinking, and frequently create disturbances. All these things have highly deleterious effects on youngsters’ physical and mental health (Yang, 2006, p. 73).

Despite this characterisation, however, a substantial number of users continue to visit Internet cafés, only some of which have been licensed in recent years. As people's interest in using Internet cafés grows, Chinese authorities have faced the difficult dilemma between promoting information while resisting democratisation by this means (HRW, 2006). Because an increasing number of minors use Internet cafés for commercial gambling, violent games, and viewing pornography, a large number of Chinese Internet cafés have been shut down by authorities in order to fight “unethical” use of the Internet and to build a safer environment for young Chinese people (Shi, 2005).

As one means of controlling activities in the cafés, the city of Shanghai requires people to use swipe cards to access the Internet cafés (French, 2004). When swiped these cards allow the authorities to record the owner's national identity number and to track his or her Internet use (French, 2004). By law, all Internet cafés must be licensed. Both the operator and the user are required to provide identification and registration. Therefore, it is not surprising that about 60% of Chinese Internet cafés remain unlicensed. The lack of licensing has introduced some unsafe factors. For example, in May 2002, a devastating fire in an unlicensed café killed 25 people and prompted another nationwide crackdown (The Guardian, 2002). The victims of this tragedy were mainly young people. In response to the fire, the State Council conducted a three-month investigation into public Internet providers, and shut down 8,600 “illegal” Internet cafés in China (HRW, 2006). During 2005, in an attempt to control on-line browsing, the Beijing Internet Safety Service Centre of the Beijing Public Security Bureau recruited 4,000 web watchdogs to put Internet cafés and Internet service providers in Beijing under surveillance (Shi, 2005).

3.9.2 Internet Addiction in China

Beginning in late 2005 and early 2006, activities termed “Internet suicide” and “Internet addiction” in the People’s Republic of China began to be reported in the American mainstream media. Internet addiction is becoming a serious issue among Chinese youth. According to a report from the CINIC (2008), almost 30% of young Internet users show symptoms of network addiction. The report shows that the problem of youth addiction needs more attention from the public and the government, and these entities should take into account, the time and preference of network application shown by users.

Li’s (2004) analysis found that Chinese youth have become addicted to the Internet because of their isolation; an isolation that derives from the belief that studying is the most important activity in their lives. Consequently, if young people have low academic achievement, they may feel frustration and pressure. Many adolescents become addicted to the Internet in reaction to heavy educational pressure from parents and teachers, and pressure induced by other expectations (Li, 2004) such as from peers. Internet chat rooms provide an opportunity for them to anonymously share their feelings with strangers. An instructive, open, and enlightened education is considered by the Chinese Education Department as a better way to deal with the issue of young people’s Internet addiction than oppressive controlling ways.

Two new guidelines have been issued in China to assist parents in working with their children to avoid the horrible affliction of Internet addiction (ChinaTechNews.com, 2009). In 2009, Chinese Teenager Mental Growth Bases of the General Hospital of Beijing Military Area Command of Chinese PLA, and the China Youth Association for Internet

Development have jointly launched two guidelines in the hope of helping Chinese parents keep their child away from becoming addicts (ChinaTechNews.com, 2009). Two guidelines are named as "Guidelines on Preventing Network Addiction at Home" and "Basic Principles for a Harmonious Family", respectively. Considering a harmonious family with correct guidance can help the children develop in a better way say, experts from the Chinese Teenager Mental Growth Bases of the General Hospital of Beijing Military Area Command of Chinese PLA and have put forward concrete measures for preventing Internet addiction at home (ChinaTechNews.com, 2009).

Young people are attracted by the abundant amount of information provided on the Internet, whether legal, illegal or sexually explicit (Li, 2004). People working with youth, who are in the process of developing a set of values and who have poorly-developed self-control, must consider how to help them to develop an ethical consciousness, and to use that consciousness when using computer networks. CINIC (2008) provides some recommendations including, “cooperation in governmental departments, intensify the management of the Internet industry, and vigorously promote balanced and health[y] development of the internet as well as in-depth development of it” (p. 1).

3.9.3 School Sexuality Education

In China, sexuality education remains limited not only at home, but also in Chinese schools (Lu, 2006). It was first introduced into some schools in China in the late 1980s, but many teachers and parents strongly opposed this introduction to the curriculum. They were afraid that students would be stimulated by sex education and engage in sexual

experimentation. “Some critics even put the blame upon sexuality educators and accuse them of encouraging moral degeneration or criminal behaviour in teenagers,” stated Professor Hu from Peking University and Secretary-General of the Chinese Sexology Association (Chen, 2003, p. 1).

According to the “Beijing City Secondary Students’ Sexual Education Report” (“Qiao qiao Hua,” 2004), 60.7% of students stated that they wanted to learn biological knowledge, 15.5% wanted sexual psychological knowledge, 10.9% wanted knowledge of sexual health issues, 9.2% wanted sexual moral theory, 2.5% wanted to know about sexually transmitted diseases and their prevention, and 0.8% wanted more information about contraception. Chen (2003) found that Chinese teenagers needed to know about relationships, love and commitment, and about marriage and partnership. They need to know about legislation and morality related to sexual behaviours and relationships. Young people also want to be provided with information about abortion and sexuality, as well as sources of advice and support available in the community and nationally. Chinese sexuality education in secondary schools should focus on the kinds of knowledge that secondary students need, rather than on what teachers want to tell them (Chen, 2003).

Due to the lack of sexuality education at home and in school, Chinese adolescents use the Internet to research sexuality and pubertal issues (Goldman & Zhang, in press; “Sexuality Education Urged”, 2003). The ease and anonymity of the on-line environment allows on-line-seekers to obtain advice and reassurance, particularly regarding sensitive and sexual topics (Kanuga, 2004). The international company, Durex (2003), undertook a global sexuality survey and found in their sample of Chinese young people that 32% gained

sexual information from books, 29% from the Internet, 13% from magazines, 7% from friends, 6% from doctors, 4% from teachers, 3% from TV, 2% from parents, 1% from public broadcasts and 3% from others. No respondent gained this information from siblings (Durex, 2003). As a source of sexuality information, the Internet has a greater influence on adolescent sexual education than other information sources (United Nations Population Fund [UNPF], 1997). The Internet provides easy access for adolescents to desired information because of the venue's anonymity and confidentiality (Goldman & Zhang, in press). Young people are able to seek answers to their questions without running the risk of their parents discovering their sexual concerns ("Sexuality Education Urged," 2003).

Young people often welcome the opportunity to talk about issues on which they have strong views such as contraception and abortion, sex before marriage, and lesbian and gay issues. The Internet has been quite helpful in addressing such issues for many young Chinese people experiencing puberty and adolescence (Yin, 2002). However, these same benefits often become a "double-edged sword". For instance, when adolescents search for answers to questions about sexuality issues (Jones, 2005), they may unexpectedly find "sex-seeking chat rooms and pornographic websites". Therefore, there needs to be a coordinated, responsible approach by educational and media channels, in the central government's policy-making, in textbook and syllabus design, in media editing, and in school teaching.

3.9.4 Government Attempts at Regulation

Due to the increasing number of Chinese young people participating in on-line activities, the Chinese Youth League (Zhōngguó Gòngchǎndǎng Zhúyì Qíngniántuán) (2001) published the National Internet Civilization Convention for Teenagers in order to enhance youths' self-discipline. This publication, a policy of the Chinese government, pioneered the idea of addressing young people's on-line activities around the world. It includes the following recommendations. Youth should focus on;

- studying on-line rather than viewing negative information;
- communicating honestly rather than cheating on-line;
- enhancing self-protection rather than dating strangers off-line; and
- Internet safety rather than avoiding the Internet.

These recommendations have resulted in a series of government attempts to regulate Internet cafés (Qiu & Zhou, 2005). Most recently, for instance, the Chinese government announced a one-year moratorium on licensing new Internet cafés (USA TODAY, 2007). Further, the Chinese government is determined to build its own Internet as part of the National Infrastructure Initiatives, and is taking a proactive role in promoting the development of the Internet for the informatisation of China's economy.

University students with a high level of computer familiarity are often believed to have web-sense. According to the study undertaken by the Chinese Communist Youth League in 2004, the Internet has been a very important platform through which students share their knowledge, look for entertainment, and communicate. This platform also

enhances relationships among young people. However, the Internet has some negative aspects such as overuse, access to pornographic websites, and encouraging the dating of strangers, as mentioned earlier. Therefore, in December 2005, an amendment to Chinese law on the protection of minors was approved by the Standing Committee of the National People's Congress and went into force on 1 June 2007. The rising concern is that young people are increasingly becoming addicted to the Internet (Gao, 2007). This amendment encourages the development of technology such as software that can terminate on-line games at a fixed time. The Amendment also bans Internet cafés from admitting minors (children younger than 18 years).

In addition, one of the obligations defined by the Teachers' Law of the People's Republic of China (adopted at the Fourth Meeting of the Standing Committee of the Eighth National People's Congress on October 31, 1993, promulgated by Order 15 of the President of the People's Republic of China and effective as of January 1, 1994) expresses clearly that students should not only be taught the basic principles stipulated by the Constitution, patriotism and national unity, but also laws and regulations, ideology and moral character, culture and scientific technology, and that students should be organized to carry out beneficial social activities. Therefore, it is evident that educating and cultivating students is one of the basic obligations of teachers through all school subjects as well as in the state-approved methods of accessing the Internet and the netiquette of cyberspace.

In summary, the number of Chinese Internet users has increased significantly and young, highly educated people are considered the predominant group who access the Internet. Internet cafés have been the most popular place for Chinese young people

accessing the Internet because these locations are out of the sight of parents and other authorities. The cafés provide opportunities for young people to find on-line friends, play games, and participate in other activities because they do not need to worry about parents monitoring them. Moreover, Internet addiction, once considered a medical issue, has also become a serious social problem in China. Accordingly, relevant legislation is promulgated to regulate on-line behaviour and protect youth from possible threats.

3.10 Internet Ethical Issues and Cyber-legal Education

The terms “Internet ethics”, “cyber-ethics”, “cyber-law”, “netiquette”, and others have been applied to discussions in the legal, ethical and moral domains as they overlap with the virtual world. The terms denote issues linked to the emergence of information technologies. Because of the openness of the Internet, young people are allowed to chat, argue, flirt, and play with people they will never meet in real world. Consequently, they may be exposed on the Internet, to inappropriate material for their age such as sexual conversation or violent games (Bremer & Rauch, 1998). The issue of Internet use has raised complex ethical and legal concerns with particular attention to the needs of children (Bremer & Rauch, 1998). Thus, it is helpful to define and categorise the kinds of behavioural issues that parents and educators must address as their children and students go on-line (Willard, 2006).

3.10.1 Netiquette and its Core Rules

Compared with other communication forums, Internet chat rooms have received

more attention, as users and people who are responsible for those users seek to limit undesirable behaviour. These venues allow participants to construct and maintain communities through virtual environments (Pankoke-Babitz & Jeffrey, 2002). The key difference between virtual communities and those off-line is that Internet chat rooms allow individuals and groups to “collaborate, interact, and communicate in one space that through shared meaning, understanding and identification may be perceived as a place” (Pankoke-Babitz & Jeffrey, 2002, p. 219). However, as Pankoke-Babatz and Jeffrey (2002) suggest, virtual communities are similar to those off-line because they follow documented cultural norms or “netiquette” such as politeness, style, and limiting undesirable behaviour such as “flaming” (Pankoke-Babatz & Jeffrey, 2002).

As mentioned earlier, “etiquette” may be defined as “the forms required by good breeding or prescribed by authority to be required in social or official life” (Shea, 1994, p.1). The term usually refers to exhibiting good manners, being polite and being considerate of other people. The term “netiquette” is a contraction of “network etiquette” and is also known by the term “Internet etiquette” (Shea, 1994). In other words, netiquette is a set of rules for behaving appropriately on-line. It is a term denoting the conventions of politeness and respect, in order to address the relationship between personal behaviour and group phenomena in a variety of Internet functions (Sims & Felton, 2005).

According to Hambridge (1995), on-line communication in general can be divided into three types:

- One-to-one communication such as mail and talk.
- One-to-many communication such as mailing lists and NetNews.
- Information Services such as ftp, WWW, Wais, Gopher, MUDs (Multi-User Dungeon or Dimension), and MOOs (Mud, Object Oriented).

The variety of users and forms of communication necessitates a basic guideline of normative behaviour for the Internet (Hambridge, 1995). This guideline, or netiquette, should help people avoid mistakes and prevent the potential for being attacked. Different rules of netiquette have been developed for the different forms of on-line communication, e.g., for newsgroups, private email, web forums, and Internet Relay Chat. Shea (1994) listed ten core rules guiding cyberspace behaviour that can be used to solve netiquette dilemmas. Awareness of these rules will help users to communicate and interact appropriately:

- *Rule 1: Remember the Human.*

When people have conversations on-line, communication typically relies on typed words rather than facial expressions and gestures, though these latter means can be achieved by some webcams. Therefore, it is easy to misunderstand the user's meaning. Shea (1994) suggests that when on-line, people should try to imagine their correspondent's feelings and be tolerant.

- *Rule 2: Adhere to the same standards of behaviour on-line that you follow in real life.*

In real life, most people conform to laws and a moral standard because they fear

apprehension and punishment. However, in cyberspace where people can be anonymous, the chance of detection is small. Thus, Shea (1994) warned that a lower standard of ethics or personal behaviour is considered acceptable in cyberspace, but might result in illegal or immoral behaviour if ethical standards are not applied.

- *Rule 3: Know where you are in cyberspace.*

People who surf the Internet come from many different countries around the world and have different world views. Netiquette varies from place to place, so some acceptable behaviour in one situation may be viewed as rude in another. Therefore, participants should keep an open mind, spend some time lurking (anonymously observing) groups, and be open to listening to what they have to say before entering a new domain of cyberspace (Jason, n.d.). Similarly, Shea (1994) suggests participating in a chat room or forum only after knowing how people act by “listening to the chat or reading the archives.”

- *Rule 4: Respect other people's time and bandwidth.*

In this competitive age, many people are busy working and/or studying, and they seem to have less time than ever before. Be sure of the worth of posting information on-line so it will not waste other people's time to read. As a matter of respect, people should not ask inane questions in discussion groups. If it is a simple question that has likely already been asked, simply go to Google or the Frequently Asked Questions (FAQ) part of a site.

- *Rule 5: Make yourself look good on-line.*

When people make friends in real life, others judge them by their appearance. On the Internet, it is different. People are judged primarily by the quality of their writing.

Correct spelling and good grammar enhance a participant's clarity and, thus, virtual

“appearance”.

- *Rule 6: Share expert knowledge.*

On the Internet, people can obtain almost any sort of information as well as share knowledge because of the numerous on-line participants around the world. For example, when one question is posted, many answers might be provided at the same moment. Thus, Shea (1994) advises that once people obtain a sufficient number of responses to a question, it is polite to write a summary and post it in the public area of the site. This summary would be beneficial for others who encounter the same problem, and may save time for those who may not choose to decipher the series of answers from other people in that discussion group.

- *Rule 7: Help keep flame wars under control.*

“Flaming” is “what people do when they express a strongly held opinion without holding back any emotion” (Shea, 1994, p. 43). Flaming should be avoided. Flame wars such as a series of angry letters are unfair to other members of the group. The key point to keep in mind is to avoid hurting people’s feelings or insulting others when posting.

- *Rule 8: Respect other people's privacy.*

In real life, it is poor behaviour to read other people’s letters or reveal others’ personal information. Naturally, in cyberspace, reading people’s emails or posting their personal information also violates other people’s privacy. It should be forbidden. Thus, people should consider the privacy of other participants before sending a private message. It is often more polite to publicly request a private conversation before starting one than to simply initiate a private conversation with unfamiliar people.

- *Rule 9: Do not abuse your power.*

The many functions available on the Internet create inequalities and some people in cyberspace have more power than others. Those with more power are frequently called wizards in on-line games, and system administrators in every system. They have the power to obtain netizens' information through registration records and other databases. However, this power does not mean that wizards and system administrators have the right to take advantage of other netizens. On the contrary, people with such special powers should refuse to abuse their power and should actively track immoral or illegal on-line behaviour.

- *Rule 10: Be forgiving of other people's mistakes.*

It is always possible to detect a user's mistakes or disagree with a poster's position in an on-line conversation. However, it is polite to give people the benefit of the doubt and try to clarify one's own position. Shea (1994) suggests that polite behaviour demands that a participant identify a mistake through private email, rather than in public, and without an arrogant or self-righteous attitude.

According to the Australian Government's NetAlert (2006), the Golden Rules for young people for chatting on a website are:

- You can never be sure that someone is who he or she says they are.
- Never give anyone your real name, use a handle (a pseudonym).
- Do not give any details about where you live, your phone numbers, where you go to school or who your family is.
- Make sure you understand the rules of any chat room you may be in.
- Remember, you may think you can stay anonymous on the Internet, but often people can trace who posted information on-line, so always be nice to others (§1).

Additionally, the ten golden rules of Request For Comments (RFC) 1855:

Netiquette Guidelines are cited by the United Nations Educational, Scientific and Culture Organization (UNESCO) (Hambridge, 1995). These Golden Rules of chat rooms and On-line Communication are:

- If you feel pressured by someone on-line, seek advice from a responsible adult.
- Only give your email address to known friends; never to strangers.
- Seek advice from a responsible adult; never be tempted or pressured to meet someone in real life whom you have met on-line.
- If someone or something disturbs you in a chat room, leave and find one that your parents have agreed you can use (§1).

The Golden Rules of Netiquette are:

- Speaking in all capital letters is considered SHOUTING.
- Be polite, avoid flame wars.
- Do not give out your personal details.
- Do not say anything on-line you would not say face-to-face. Simply because you cannot see someone, does not mean he or she does not have feelings (§1).

Australian Government's NetAlert and RFC 1855: Netiquette Guidelines provide general recommendations for proper netiquette. These rules assist young people as they form appropriate on-line codes of behaviour and help them avoid personal attacks. These rules also provide standards in Internet chat rooms, and guide young people as they take responsibility for their decisions. As good Net behaviour is encouraged by all on-line service providers and governments, Internet users may be punished if they breach netiquette standards of politeness and courtesy (Scheuermann & Taylor, 1997). A user, who does not type properly in Internet chat rooms, may be removed by other participants or the administrator of the chat room.

Netiquette breaches do not bring any legal consequences, however, people who know the rules of politeness and courtesy on-line may behave themselves, and have an advantage over those who do.

3.10.2 Cyber-ethics Education

The study of ethics was developed as far back as 2,300 years ago when Western philosophers formulated the principles still in use today (Sims & Felton, 2005). Ethics education has been interwoven with aspects of every other professional education in the new millennia (Sims & Felton, 2005). The influence of ethics teaching on students has been researched by Kohlberg (1981) who investigated whether a person's ability to successfully confront ethical issues can develop in later life, and whether education can affect that development. Kohlberg divided the development of the ability to think morally into three stages: pre-conventional, conventional, and post-conventional (1981). Kohlberg found that although many factors contribute to a person's growth through the three levels of moral development, the most crucial factor is education.

Other research has generally supported Kohlberg's findings. Alam (1999) pointed out that people can develop moral behaviour through a thorough understanding of ethical concepts and relevant ethical issues. According to a report from McCabe, Dukerich, & Dutton, (1991) education is one of the most consistent and powerful linkages to the development of moral judgment in individuals. Moreover, Weber and Glyptis (2000) found that courses in ethics have a significant impact on students' ethical sensitivity and reasoning skills. In addition, Gioia (2002) found that educators influence students in their

learning about business ethics.

Teachers are the significant professionals responsible for imparting ethics and, therefore, must be aware of the ongoing changes in themselves and students in the information age (Sims & Felton, 2005). Teachers also need to learn how to use new techniques such as the Internet, and examine their choice of pedagogy to achieve a variety of educational goals rather than rely on their familiar teaching styles (Sims & Felton, 2005). In Australia, the Department of Education, Science and Training has contracted the Curriculum Corporation to produce a Values Education curriculum and a compilation of professional learning resources. The execution of this project proceeded in three stages between 2005 and 2008. In the first stage (developed 2005-2006), values education was addressed and included the following precepts:

- Exist across Key Learning Areas (KLAs) in the school curriculum.
- Incorporate into school mission/ethos, organisation and policies.

Stage two (developed 2006-2007) was designed to help schools integrate values with student behaviour and social skills. These goals included the following goals:

- The application of values in real life situations, including the dilemmas faced by students.
- The exploration of world views and the beliefs behind values.
- The demonstration of links between values education and the development of student responsibility in local, national, and global contexts.
- The building of student resilience.

In the last stage (implemented 2007-2008), schools have been and will be supported, as they explore values in global contexts, based on the curriculum. Values education can be a useful program to help schools develop a curriculum that assists youth as they develop in a virtual environment.

In Australia, subjects about ethics in information technology have then introduced in cyber-ethical courses only in the last three to four years (Thurairasa & Johnson, n.d.). These courses are designed to allow students to discuss with industry associates who come into classrooms to help build this awareness of good ethical behavior (Thurairasa & Johnson, n.d.). Thurairasa and Johnson also started research to explore the integration of cyber-ethics into the curriculum for the middle school, for Year 6 to 8, in Australia and New Zealand. In 2008, a survey was conducted to explore the nature of cyber-ethics, cyber-safety and cyber-security educational awareness policies, initiatives, curriculum and practices currently taking place in the U.S. public and private K-12 educational settings (Pruitt-Mentle, 2008). According to Pruitt-Mentle (2008), the following framework is suggested to apply to students at different ages;

PK-Grade 2, (Ages 4-8)

- Demonstrate safe and cooperative use of technology.

Grades 3-5 (ages 8-11)

- Practice injury prevention by applying a variety of ergonomic strategies when using technology.
- Debate the effect of existing and emerging technologies on individuals, society, and the global community.

Grades 6-8 (ages 11-14)

- Use collaborative electronic authoring tools to explore common curriculum content from multicultural perspectives with other

learners. (2.3.4.5)

Grades 9-12 (ages 14-18)

- Analyze the capabilities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning, and career needs. Design a website that meets accessibility requirements.
- Model legal and ethical behaviours when using information and technology by properly selecting, acquiring, and citing resources.
- Create media-rich presentations for other students on the appropriate and ethical use of digital tools and resources.

That author examined a study by Educational Technology, Policy, Research, and Outreach to determine that schools need enhanced Cyber-ethics, Cyber-safety, and Cyber-security instruction (Pruitt-Mentle, 2008). If teachers do not teach children about appropriate technology use, they risk cheating and ethics violations (Pruitt-Mentle, 2008).

3.10.3 Cyber-legal Education

Along with the openness of the Internet and Internet chat rooms comes the issue of maintaining a balance between “free speech” and “the receipt of material that is unwanted, illegal or both” (Carr, 1998, p. 1). This balance continues to vex professionals in the legal and educational fields (Carr, 1998). Some legal issues such as email privacy, copyright, hacking, spam, on-line pornography, and Internet censorship are topics that, once rare, have become commonplace and directly affect youth who go on-line (Heaverin, 2005). Many narratives exist describing the negative effects of the Internet upon young people, especially children. These tales typically describe children “being exposed to pornography, being tricked into giving out personal information, and being kidnapped and/or murdered by people that they had initially “met” on-line through Internet chat rooms” (i-SAFE, 2002,

p. 1). The prevalence of such narratives suggests that youth must be protected from the danger that the virtual world offers. Challenges also have been created for educators. The need to teach relevant cyber-legal issues in schools has grown, but is complicated by the fact that teachers may have no authority over students' off-campus behaviour (Heaverin, 2005). Educators must be aware of the law as well as the policies in place to protect them, their students, and their schools.

Cyber-legal education may be conceptualised as consisting of two parts: cyber education and the law. With the popularity of the Internet, traditional school education faces many challenges. For instance, children may encounter sexual abuse on-line, and they may not know how to use legal knowledge to protect themselves. It is impossible to forbid children from using technology such as the Internet. Therefore, Departments of Education are faced with providing suitable legal and ethical knowledge to encourage young people use the Internet responsibly. The Queensland Studies Authority (QSA, 2007) has included the Information and Communication Technology Education Curriculum in its compulsory Primary, Middle and Secondary education system. This curriculum attempts to provide a context in which students may develop knowledge, practices and dispositions from the Key Learning Areas of Technology program. Students are encouraged to analyse information and to construct personal meanings so that they may better understand information and more clearly resolve communication challenges.

During the compulsory years of schooling in Queensland there are two parts to the school curriculum. The first is called "Core Learning Outcomes," which is a selection of essential skills each student is expected to master. The second is called "Discretionary

Learning Outcomes,” which describes what students know and can do *beyond* what is essential at a particular level (QSA, 2007). When students are in the later years of compulsory schooling they engage in specialised studies in specific contexts. One of the seven Key Learning Areas (KLAs) in schools, Information and Communication Technology Education is designed to assist each student to become a lifelong learner who is a:

- knowledgeable person with deep understanding ;
- complex thinker;
- active investigator;
- responsive creator;
- effective communicator;
- participant in an interdependent world;
- reflective and self-directed learner;

In the Information and Communication Technology Education Curriculum, students have opportunities to understand technological implications in the modern, knowledge-based society (QSA, 2007). They learn independently and collaboratively in on-line communities. They also learn to take responsibility for their actions and decisions. A newly evolving curriculum, from the QSA, called “Essential Learnings” describes “the knowledge, understanding and ways of working that students need for ongoing learning, social and personal competence and participation in a democratic society” (QSA, 2007, p.1). In the Technology curriculum, students could design and make a greeting card or use computers, software, and mobile phone for everyday activities. Technology is considered a human endeavor and part of daily life (QSA, 2007, p. 1). Consequently, legal and social issues arise that are associated with technological development. To confront these issues, children need to be informed about their legal position and their rights and responsibilities.

For instance, in Internet chat rooms, children must be able to identify predators, and be aware of how the legal system affects their basic rights, obligations, and responsibilities.

The Queensland Studies Authority provides a Legal Studies Syllabus for secondary school teachers so that they can help students to collect, analyse and solve problems inherent in society. For example, during Legal Studies students are encouraged to understand the impact of the law, legal systems, and legal processes in their daily lives.

QSA suggests that different tasks be addressed at different grade levels such as

- KC1 (Key Characteristic): collecting, analysing, and organising information;
- KC2: communicating ideas and information;
- KC3: planning and organising activities;
- KC4: working with others and in teams;
- KC5: using mathematical ideas and techniques;
- KC6: solving problems;
- KC7: using technology.

In summary, as the use of the Internet and Internet chat rooms has grown, the challenge for educators is to teach cyber-legal issues to youth, especially children, in order to protect them. Considering that Internet chat rooms are invisible places which authorities rarely enter, young students risk exposure to various negative events, and they must learn to protect themselves using social and legal knowledge. In accordance with the QSA legal curricula, young people need to know basic technological and legal issues, and also how to protect themselves from potentially negative and demeaning interactions on-line. Legal

knowledge may also help young people protect themselves when they encounter on-line dangers. Further, they may behave better as they become aware of legal punishment.

3.11 Summary

This review of literature addressed the development of the Internet and its characteristic ability to provide young people access to unprecedented amounts of information. Some facilities available on the Internet permit people to “meet” and conduct discussions with others whom they may never meet in real life; these facilities include Internet chat rooms. Although the Internet is a fun and educational tool, it can also be very dangerous for young people and may expose them to unsuitable activities. This dissertation focuses on how youth, particularly university student teachers, behave in on-line chat rooms. Previous studies of psychological, criminological, educational and sociological approaches were addressed in the literature. In addition, relevant studies conducted in Australia and China were also discussed in order to identify the different reasons for, and applications of, young people’s on-line activities.

Along with civil liberties on the Internet, young people can be exposed to dangers as they explore the information highway. For example, some people attempt to sexually exploit children through the use of on-line services or through the use of on-line attention, affection, kindness, and even gifts. Others seek face-to-face meetings via on-line contacts, which may result in sexual assault in real life. Therefore, legal knowledge should be provided to all young people so that they may protect themselves and regulate their behaviour. In terms of a balanced assessment of risks and opportunities, the research

suggests that there is a need for relevant legislation to guide and protect young people in using the Internet. Moreover, legislation may ensure punishment for those who abuse the communication opportunities found on the Internet, and in so doing help prevent young people from engaging in, or becoming victims of, cyber-crime.

Chapter Four

Theories underlying behaviours in on-line chat

4.1 Introduction

As the phenomenon of young people congregating on-line continues to draw attention and concern from theorists worldwide, the emergence of the Internet and Internet chat rooms has created some exciting theoretical challenges for researchers. The broad aim of this dissertation is to explore three activities in which young people participate, and the negative impacts on them of some of the experiences encountered in Internet chat rooms. Internet activities can be associated with unpredicted and unexpected psychological, social, and legal results. Consequently, cyber-ethics and cyber-legal education are suggested for youth so that they might avoid potential dangers. Thus, this study involves psychological, ethical, and legal issues.

This chapter examines three theories, namely, Cyber Psychological theory, Moral Development theory, and Space Transition theory from different perspectives to address the complex phenomena in Internet chat rooms. Cyber Psychological theory explores psychological reasons why youth might enjoy participating in Internet chat rooms. The theory of Moral Development provides guidance to educators as to how they may apply cyber-ethics education at different stages of children's development. Considering the transition between real life and the virtual world mandated by entrance into chat rooms, theories from Space Transition theory is also useful in contextualising on-line behaviour.

Finally, the Internet provides a place without boundaries where criminals can engage in illegal actions. Therefore, this chapter also explains on-line criminal behaviour from a criminological perspective.

4.2 Cyber Psychological Theory and its Implications in

Cyberspace

The extensive utilisation of the Internet and Internet chat rooms by young adults has drawn attention to psychological analyses of youth and adolescents. Relevant psychological research has concentrated on problem behaviours in young people. Such behaviours are considered deviant from society's expectations and a "social problem" that needs to be controlled (Suler, 1996). Psychologically, the virtual world is different from the face-to-face world, and some psychological researchers assume that one's experiences of cyberspace are like an extension of one's mind that is different from an experience in real life because on the Internet people construct their identities, and "vent their fantasies and the frustrations, anxieties, and desires that fuel those fantasies" (Suler, 1996, p. 1).

A number of researchers have suggested that participants reveal much more personal information on the Internet than in other media (Joinson, 2001a, 2001b).

Interactions in chat rooms tend to include social inhibitions and psychological disinhibitions (Joinson, 1998; Joinson, 2003; Postmes & Spears, 1998; Spears, Lea, & Postmes, 2001). Due to the Internet's characteristics such as anonymity, invisibility, solipsistic introjections, dissociative imaginings, and minimalisation of authority, the "disinhibition effect" has two categories (Suler, 2002). The first category, called benign

disinhibition, includes acts such as sharing fears and encouraging others (Suler, 2002). The second category, toxic disinhibition, includes acts such as exploring pornography and violence (Suler, 2002). Holland (1996) argues that users exhibit a disinhibition to sexual and aggressive acting out if they “see the computer as human and other people as something less than human” (p. 1). Similarly, some researchers posit the “disinhibition effect” to explain why people say and do things in cyberspace that they would not ordinarily say or do in the real world (Suler, 2004). Consequently, Joinson (2003) found that disinhibition easily leads to negative forms of interaction, such as flaming.

Some researchers have explored the relationship between the disinhibition effect and self-awareness. Duval and Wicklund (1972) pointed out that there are two forms of self-awareness, that is, public self-awareness and private self-awareness. The former refers to the awareness an individual has of how others perceive and judge him/her. Conversely, private self-awareness focuses on inner feelings, attitudes and values. A further distinction of the self was made by Carver and Scheier (1981), who speculated about the relationship between public self-awareness and private self-awareness. When public self-awareness decreases, individuals will behave in less inhibited ways because they are less concerned about the judgments of others. In contrast, when private self-awareness increases, individuals become more focussed on their own plans. Therefore, greater disinhibition could be brought about by decreased public self-awareness and increased private self-awareness.

In on-line environments, anonymity allows users to hide their real identities and decrease their public self-awareness. This reduction of public self-awareness is positive

because it may lead to more honest, open, and generous interactions. However, some participants may be honest, open, and generous in a way that abuses other people. Thus, the anonymity associated with on-line interaction can lead to less accountability for one's actions. Matheson and Zanna (1988) identified a relationship between heightened private and reduced public self-awareness. They found that "users of CMC (computer-mediated communication) reported greater private self-awareness and marginally lower public self-awareness than subjects [who engage in] communication face-to-face" (p. 228). Objective and subjective self-awareness can move people's attention to an inward environment or to an outward environment, respectively (Duval & Wicklund, 1972). Joinson (2003) noted that public self-awareness tends to influence behaviour by "managing the impression we make, and monitoring feedback from others," while behaviour evoked from private self-awareness focus on "our internal motives, needs or stands" (p. 39).

In addition to the relationship between the disinhibition effect and self-awareness, psychologists have found that Internet users create "on-line personas," frequently using these personas to alter their moods or to avoid difficult situations such as divorce, job loss or emotions such as anxiety, or depression (Young, 1998). This practice is consistent with the Theory of Fantasies by Person (1995) who speculated that fantasies have "multiple functions: maintaining self-esteem, containing fears, denying unpleasant realities, regulating emotions, undoing traumas, substituting gratification for what is lacking, addressing transitory emotional needs, healing, mastering situations and rehearsing for the future" (cited by Ranon, 2006, p. 1). These fantasies are based on the hopes and dreams that are mostly related to career, family and romantic goals. Generative fantasies are

considered as a guide for future orientation and repeating fantasies are related to the unconscious (Person, 1995). Young (1998) explains how fantasies are played out on the Internet.

On-line, you can express whatever impulses you believe you must repress in your everyday life and get the message back that it's perfectly okay in the free-for-all Internet environment. If you ever consciously or unconsciously imagined hitting your demanding boss, you can go into [a] MUD and blow up an enemy instead. If you've had images of tearing the clothes off the attractive man or woman next door, you can create a reasonable facsimile for a cybersex encounter. And as you engage in fantasy after fantasy, you don't want to let go. Once we bring our unconscious drives to the front, we don't much want to shove them onto the back burner again (p. 109).

Cyber-psychological theories explain why young people are involved in different types of chat rooms with similar motives. For example, if a young person feels pressured to study, in real life s/he may not find a person who can understand the dilemma. Internet chat rooms can play a role for youth seeking such sympathy, a role that involves sharing their unexpressed feelings. Young people may feel closer to the person with whom they communicate such feelings to on-line, than to a person with whom they do not communicate the same face-to-face. This possibility could be a significant reason why young people want to make friends in Internet chat rooms. Moreover, people in chat rooms are likely to focus on their feelings, values, and attitudes that reduce their concern for any public evaluation of their behaviours. Therefore, uninhibited communication can be considered a valid representation of a person's true feeling.

Despite the wish for anonymity, some personal characteristics may still be revealed in text communication, specifically through language proficiency, local or international

culture, age-specific slang, or level of education. What anonymity remains can encourage people to engage in behaviours that they want to do, but cannot do, in daily life such as abuse others or make sexual friends in Internet chat rooms. The reasons for this behaviour are related to three models of Internet interaction, as mentioned in the previous chapter, namely, cognitive, cultural and social, as well as the Internet's well-known capacity to promote self-expression (Ranon, 2006). Bargh, McKenna, and Fitzsimons (2002) found that the actual self (i.e., the way in which people actually present themselves to others) was more accessible to the person after face-to-face interactions, and the true self was more accessible to the person constructing that self after Internet interactions. Thus, under a condition of anonymity, participants' uninhibited communication can be considered a representation of a person's true feeling and as a representation of an idealised ego to their chat mates.

During adolescence, young people seek answers to questions related to identity, intimacy, and belonging, especially sexual relationships (Suler, 2004). On the Internet, there is an almost limitless array of people and groups with whom a participant may interact, and these chat partners possess diverse personalities, backgrounds, values, and interests.

4.3 The Moral Development Theory and its Implications in Cyberspace

Teaching about ethical behaviour can be dated to almost 2,500 years ago when Socrates held the view that ethics as knowledge can be taught (Sims & Felton, 2005). This

point of view is supported by many researchers in the field of moral development (Kohlberg, 1969; Piaget, 1950; Rest, 1986). Rest (1986) found that individuals in their 20s and 30s experience dramatic changes of their “problem-solving strategies” in order to deal with ethical issues. Rest (1986) also found these changes are linked to the years of formal education such as college or professional school, and formal curriculum. People’s behaviour is influenced by their moral perception and moral judgments. Kohlberg (1969) first examined whether education can affect a person’s ability to productively resolve ethical issues. Kohlberg (1969) found that education plays the most crucial role in moving the student through the three levels of moral development, though many factors contribute at each level.

Prior to the moral development theory developed by Kohlberg, Piaget (founder of the study of moral development and proponent of the idea that moral reasoning follows an orderly progression), identified two broad stages of development in children between six and 12 years of age (Piaget, 1950). The first and earliest stage is heteronomy. In this stage, children make judgments on the basis of objective responsibility. In the second stage, the autonomous stage, behaviours are judged on the basis of subjective responsibility. Children begin to use logic and abstract thought as mature adults. Built on Piaget’s theory, Kohlberg (1969) created a more nuanced theory of moral development. He separated moral development into six stages that fall into three levels as follows:

- The first and lowest level of moral development is the Pre-Conventional level.

At this level, children learn to take responsibility for themselves and to meet their own needs. Children make judgments of wrong or right based on

whether their behaviours would result in punishment or reward (Kohlberg, 1969). Some young people remain at this level, basing their judgments on the reaping of rewards or the avoidance of unpleasant consequences (Kohlberg, 1969).

- At the second level, termed Convention, people begin to make judgments with intent and concern for others and by “putting themselves in the other person’s shoes” (Kohlberg, 1969). This level is reached by most adolescents.

Adolescents tend to judge right and wrong by relying on the norms of groups with whom they live. Group values derive from what their families have taught them, or what their friends think (Kohlberg, 1969). For young people who remain at this level, ethical education can focus on providing value systems derived from society norms or what laws require.

- The third and highest level is the Autonomous level, also known as the Post-Conventional level by Kohlberg (1969). At this moral level, people realise that individual rights should be uniform across a society, which would demand that the principles of justice, equality, and respect for human life become obligations (Kohlberg, 1969). For young people who reach this stage, ethical education can address individual behaviour or examine issues from a universal sociological point of view.

Kohlberg’s (1969) framework may be used to explain the moral reasoning of young people in the information age. Children appear to become strongly interested in Internet

communication because there is no risk of authoritarian punishment. Here children can be judged on what they write (type), not who they are. They have opportunities to act out different personas. Young people and children enjoy on-line activities because their behaviours are accepted or even encouraged by peers and families.

To teach children relevant ethical issues, it is helpful to understand how children develop their ethical reasoning about on-line behaviours. If a child is in the Pre-Conventional level of moral development, teaching strategies need to link awards or punishment to behaviour in order to let the child know which on-line behaviours are acceptable and which are not. If a child is in the Convention stage, the teacher should be aware of, and willing to use, the influences of groups with whom the child lives or the friends s/he has made in Internet chat rooms. Accordingly, it is important to cooperate with other people who are close to a child or to introduce him or her to suitable on-line chat rooms. Young people who are aware of the consequences to themselves and others resulting from their on-line activities may reach the highest moral level. Ethics education alone may not be sufficient to prevent deviants from engaging in anti-social behaviours on the Internet. However, laws may then be applied in cyberspace.

In summary, young people's interactions on the Internet appear to be shaped by their level of cognitive development, moral values, social conventions, and personal choice (Turiel, 1983).

4.4 Space Transition Theory of Cyber-crime and its Implications in Cyberspace

As a virtual space, it is not surprising that young people, especially children, encounter potential dangers in Internet chat rooms. The Internet, therefore, is a challenge for criminologists who realise the importance of conducting research into new forms of deviance, crime, and social control (Littlewood, 2003; McKenzie, 2000; Thomas & Loader, 2000; Yar, 2005a, 2005b). The majority of people on the Internet are well behaved, law-abiding citizens (Danda, Danda, & Purcell, 2001). Such people carefully express opinions, do not try to hurt others' feelings, and are responsible in spreading verified information. However, some people on the Internet do "act inappropriately, break the law, or otherwise use illicit means to take advantage of others" (Jaishankar, 2008, p. 1).

4.4.1 Definition and Categories of Cyber-crime

Cyberspace presents a virtual world that is full of new forms of deviance, criminal activity, and social control, which is challenging traditional criminology (Littlewood, 2003; McKenzie, 2000; Thomas & Loader 2000; Yar 2005a, 2005b). Various definitions of cyber-crime exist in the literature. For example, cyber-crime is called computer crime, digital crime, information technology crime, Internet crime, virtual crime and e-crime (Lastowka & Hunter, 2004; Matt, 2004; Wall, 2001). There are two broad categories of cyber-crime (Carter, 1995; Davis & Hutchison, 1997; Deflem & Shutt, 2006). The first category views the computer as the tool of the crime. The second category views the computer as the target of the crime by means of attacks on a network's "confidentiality,

integrity, and availability” (Australian Institute of Criminology, 2006, p. 1). Kelly (2001) defined the cyber-criminal as “someone whose knowledge and use of computers and/or the Internet has enabled him or her to commit the crime of choice” (p. 1). This definition acknowledges that cyber-crime is committed by people, including teenagers and terrorists who may target a nation (Kelly, 2001).

4.4.2 Space Transition Theory of Cyber-crime

4.4.2.1 Definition of Space Transition Theory

Rogers (2000) asserts that traditional theories can only be applied to limited types of cyber-crimes, although some traditional theories such as Differential Reinforcement Theory (Rogers, 2001); Deindividuation Theory (Demetriou & Silke, 2003), and Routine Activities Theory (Grabosky, 2001; McKenzie, 2000; Pease, 2001) have been employed to explain the phenomenon of cyber-crime. Criminologists have started viewing cyberspace as a new locus, and stress that a new theory is needed to explain why cyber-crime occurs. Based on policing theories, Darin, Brock and Stuart (2006) developed a new concept called Faceless Oriented Policing (FOP) to analyse cyber-crimes. FOP policing theory is centred on understanding cyber-world crimes. Many traditional policing theories do not apply when crimes are committed on-line such as Problem-Oriented Policing (POP) and Community-Oriented Policing (COP). FOP has multiple tenets outlining the explanation of policing utilising the Internet as a faceless venue to investigate these crimes.

4.4.2.2 Propositions of Space Transition Theory

A pioneer in the new field of “cyber-criminology” Jaishankar (2008), developed a

theory called Space Transition Theory to explain criminal behaviour on the Internet. Space Transition Theory investigates “the nature of the behaviour of the persons who bring out their conforming and non-conforming behaviour in the physical space and cyberspace” (Jaishankar 2008, p. 1). This theory argues that people behave differently when they move from physical space to cyberspace (and vice versa).

The Space Transition Theory has the following seven propositions:

- (1) Persons with repressed criminal behaviour (in the physical space) have a propensity to commit crime in cyberspace, which they otherwise would not commit in physical space, due to their status and position.
- (2) Identity flexibility, dissociative anonymity, and lack of a deterrence factor in cyberspace provide the offenders the choice to commit cyber-crime.
- (3) Criminal behaviour of offenders in cyberspace is likely to be imported to a physical space, which, in turn, may be exported to cyberspace.
- (4) Intermittent ventures of offenders into cyberspace and the dynamic spatio-temporal nature of cyberspace provide the chance to escape.
- (5) (a) Strangers are likely to unite in cyberspace to commit crime in physical space; (b) Associates of physical space are likely to unite to commit crime in cyberspace.
- (6) Persons from a closed society are more likely to commit crimes in cyberspace than persons from an open society.
- (7) The conflict of norms and values practised in physical space with the

norms and values practised in cyberspace may lead to cyber-crimes

(Jaishankar, 2008, p. 1).

4.4.2.3 Understanding the Space Transition Theory

To understand Space Transition Theory, it is necessary to explain the relationship of the above seven propositions to the nature of the behaviour of people in the physical space and cyberspace.

The first proposition of Space Transition Theory is related to the criminals' social status and position in the real world. Based on Arbak's (2005) model of social status and crime, people experience varying degrees of self-reproach if they break the law in physical space, because they are concerned with their social status and others' perceptions of their status. However, on the Internet, a virtual world, the same persons may commit a crime because they are not concerned about their social status in physical space (Arbak, 2005). Jaishankar (2008) agrees with Arbak, and proposes that some criminal behaviours that are repressed in physical space due to status and position, will be expressed in cyberspace.

The second proposition is related to the characteristics of the Internet. Due to identity flexibility, dissociative anonymity, and lack of a deterrence factor, the Internet can lead people to behave more selfishly, more aggressively, and even commit a crime without worrying about being apprehended (Jaishankar, 2008). Jaishankar (2008), therefore, offers the third proposition which states that offenders use the Internet as a tool to conduct criminal actions such as fraud, rather than as tool of communication, though both acts—

fraud and communication, can proceed under a cloak of perpetrator anonymity. Those criminal acts of fraud are likely to be exported off-line.

Differing from the spatial-temporal restrictions imposed upon traditional crime, the Internet provides participants with a world without boundaries. In other words, offenders have the opportunity to escape after committing cyber-crime and need not worry about geographic limitations (Woolgar, 2002). In addition, the Internet has diverse communication functions, such as chat rooms, where criminals may recruit partners and plot illegal action as well as execute their criminal acts (Jaishankar, 2008). These communication tools facilitate criminal activity by eliminating geographic boundaries inherent in physical space (Jaishankar, 2008). Moreover, Jaishankar (2008) found that “persons from a closed society are more likely to commit crimes in cyberspace than persons from an open society” (Jaishankar, 2008, p.1). People from a closed society may engage in criminal activities because they can find solace in cyberspace (Deville, 2005; Shelley, 2003; Weimann, 2004).

Cyberspace is a place that has its own norms and values (Jaishankar, 2008). The behaviour of one person may differ from the behaviour of another person, but the behaviour of each is traceable to external influences. Human identity may be classified as social identity and personal identity (Tajfel & Turner, 1979). Social identity is derived from the groups to which people belong. People attempt to match their behaviour and attitudes to the norms of the group if they want to be involved with that group (Joinson, 2003). When people have the opportunity to separate their actions from their real world and identity, they feel less vulnerable because what they say or do cannot be directly linked to them. When

acting upon hostile feelings, people need not take responsibility for their actions. In fact, people might even convince themselves that those behaviours “aren’t me at all”. This removal of the act from the self is termed dissociation (Suler, 2005).

Applying this Space Transition Theory to Internet chat rooms implies that if people want to be involved in a specific chat room, they will attempt to follow the norms of that chat room. Thus, student teachers can teach children that by properly addressing the norms of chat rooms they will more fully enjoy those chat rooms’ benefits. When student teachers instruct their students, they can use their knowledge of social motivators to understand why children remain on the Internet, and what psychological changes children may experience on-line.

4.4.3 Linking Theories: Psychology, Moral Development and Space Transition in Internet Chat Rooms

Cyber Psychological theories, Moral Development, and Theory and Space Transition theory seem to belong to three academic fields, namely, cyber psychological, ethical, and cyber-legal. However, when people use the Internet, the relationship between these theories seems to become manifest in people’s behaviour. Suler (2005) identifies the locale created on the Internet as a psychological “space”. He supports this proposition by noting that many users conceptualise connecting to the Internet as “going someplace”. The cyberspace entered serves as an extension of the individual’s intra-psychic world, where s/he may explore her/his mind and personality. In psychoanalytic terms, computers and cyberspace may become a type of transitional space (Suler 2005). This approach is

consistent with Jaishankar's (2008) view that space can be inhabited, and that behaviour can be imported into a physical space as well as to cyberspace.

Kohlberg (1969) applied his Moral Development Theory to issues in criminology and found that serious offenders and law-abiding citizens may have different moral orientations. Kohlberg's (1969) study showed that criminals have significantly lower moral judgment development than non-criminals with the same social background. Based on his findings, researchers have continued to show that criminal offenders are more likely to be classified at the lowest level of moral reasoning, while non-offenders reach higher moral development levels (Siegel, 2004).

A person's level of moral development may influence his or her decisions about engaging in criminal behaviour (Siegel, 2004). People at the lowest moral development levels are likely to desist from crime because they are afraid of sanctions. Those in the middle stages of development eschew criminal behaviour because they consider the reactions of family and friends. Those at the highest stages of moral development refrain from crime because they believe in a duty to others and in universal rights (Veneziano & Veneziano, 1992). Moral Development Theory suggests that people who obey the law simply to avoid punishment, or who are mainly characterised by self-interest, are more likely to commit crimes, while those who consider the law a guideline that benefits all of society tend to exhibit non-criminal behaviour (Siegel, 2004).

In contrast, Rogers (2000) argues that Kohlberg's Moral Development Theory can explain only the initial involvement of the perpetrator and can only partially explain cyber-criminal behaviours. Fear of informal sanctions may have a greater crime-reducing impact

than fear of formal legal punishment (Foglia, 1997). The term “deviance,” which has such significance in explanations of criminal behaviour, is increasingly seen in medical terms. Over time it has become redefined as “sick” rather than “bad” behaviour (Conrad & Schneider, 1980). Deviant criminal activity may be inhibited by state-imposed penalties. Informal sanctions also inhibit deviant behaviour. These sanctions may operate when significant others, such as parents, peers, neighbours or teachers, show their disapproval, anger, or indignation toward an offender, or stigmatise that offender. Research has shown that the threat of informal sanctions can be a more effective deterrent than the threat of formal sanctions (Siegel, 2004). Therefore, the level of a person’s moral development may be linked to the deterrent effect of informal sanctions and feelings of shame (Siegel, 2004). The lower one’s state of moral development, the less impact informal sanctions may have, and, conversely, higher levels of moral development may respond better to informal sanctions. Thus, a perpetrator’s moral development will dictate the best method of controlling crime (Siegel, 2004).

Returning to the activities of youth, these theories help frame the temporary loss of inhibition that they undergo when in engaging in various on-line activities. Facing strong competition in society, the young generation can relieve their stress and depression by sharing their bitterness, only because the anonymity of Internet chat rooms allows them to distance themselves from any perceived deviant behaviour. They may also possibly undertake criminal activities on-line, such as abuse or bullying, for similar reasons.

Jaishankar (2008) hypothesised that people with a low propensity for guilt may avoid engaging in illegal activities in order to maintain their social status, or to avoid

embarrassment, rather than as a result of facing any internal sanctions. In other words, if young people are sufficiently concerned about their positive impression on others, they may be inclined to act ethically. This proposition is consistent with the Moral Development Theory.

Overall, Cyber Psychology Theory, Moral Development Theory and Space Transition Theory appear to belong to three academic fields addressing human behaviour. However, they all contribute to an understanding of the role of anonymity in Internet use and in chat rooms. The disinhibition effect can cause people to engage in activities, such as attacking others on-line, in which they do not dare to engage in real life. These activities may relate to the person's level of moral development. Specifically, the level of a person's moral development may be linked to that person's criminal behaviours through concepts of space transition between the cyberworld and real life.

4.5 Summary

In this chapter, Cyber Psychology Theory, Moral Development Theory and Space Transition Theory were briefly presented to explain the various theoretical reasoning for young people's engagement in on-line activities and on-line criminal behaviour. Cyber-psychologists describe Internet chat rooms and other on-line communities as extensions of participants' minds and personalities. The psychological disinhibition effect and the aspect of self-awareness are mental constructs that help explain why some young people participate in various on-line activities and may take part in criminal attacks in Internet chat rooms. Moral Development Theory addresses children's psychological and physical

changes in different stages of their development, and knowledge of these stages can contribute to the construction of suitable instruments to educate them. Since cyber-crimes are different from crimes in physical society, the Space Transition Theory, as a distinctive criminological theory, provides an explanation for criminal behaviour in cyberspace, presenting seven propositions by which deviant behaviour may be understood.

Young people's on-line activities are not just exciting for them, but may also lapse into harassment and even Internet criminal acts. These acts, such as hate speech, cyber-bullying, sexual exploitation, viewing child pornography, child grooming for sexual abuse, and cyber-stalking, all have legal consequences. However, the most significant consequence of children's on-line activities, one that researchers are only beginning to investigate, is the extent of the complex and increasingly prevalent phenomenon of Internet-based crimes against children.

Chapter Five

Method

5.1 Introduction

The aim of this study is to investigate Australian and Chinese student teachers' engagement in three on-line activities in Internet chat rooms, namely; playing on-line games; making friends and sexual solicitation; and cyber-bullying. The study also investigates that how student teachers perceive the effect of these three specific activities on themselves as well as the student teachers' beliefs about what should be taught to 11 year-old Primary school students. Based on these purposes, this chapter addresses the research strategy, choice of methods, and ethical concerns relevant to this study. A broad range of research methods have been used by other researchers, as presented in the Chapter Three Literature Review, and are also briefly examined in this chapter as a means of highlighting the limitations of particular methods and selecting methods most appropriate to this research study. The diversity of methods employed to understand the Internet environment and on-line activities in Internet chat rooms is not surprising given users' varying motives in this virtual space. This dissertation employs a Mixed Methods approach, where both quantitative and qualitative are collected using a questionnaire and subsequently analysed.

The study employs a questionnaire survey of second-year Bachelor of Education university student teachers in both Australia and China, to explore three on-line activities in

which they may participate, and their teaching perspectives on those activities. The chapter begins by addressing the research design and sample selection used in this study, including the questionnaires used to collect data. A brief explanation of the study's methodological limitations and the ethical issues that inform the research design are also discussed.

5.2 Qualitative and Quantitative Research for This Study

Ethnography was used by many early researchers (Baym, 2000; Hine, 2000) in attempts to understand issues such as: what people do in virtual spaces, how they express themselves, what motivates them, and why people participate. Although ethnographic methods can make extensive use of the written materials that accumulate on-line and in a culture, people's behaviours are easily not observed or fully explained by these methods (Thomsen, Straubhaar, & Bolyard, 1998). Interviewing presents the possibility of meeting people face-to-face, however, the results of interviews, by the themselves, may not generate reliable or comprehensive information about most on-line, interactive activities (Thomsen, Straubhaar, & Bolyard, 1998).

The use of ethnography or interviews in qualitative research methods often relies upon young people's abilities to accurately recall their on-line experiences, and to explain the positive and negative influences to which they were subjected. There is also the risk in such approaches that they may cause distress for participants when they attempt to recall or explain an unpleasant or threatening experience.

In consequence, this dissertation uses both quantitative and qualitative data collected in a questionnaire. Questionnaires can be administered face-to-face by asking

respondents to answer a series of questions, either open-ended or forced-choice, or in some combination of the two.. Questionnaires also can be distributed and retrieved by telephone, mail, fax, or the Internet. While there are strengths and weakness associated with the use of surveys, a primary methodological limitation is that respondents must choose to participate, thus, questionnaires are completed by a self-selected sample from the population of interest.

5.3 Research Design

A research design is a “plan, structure or strategy of investigation so conceived so as to obtain answers to research questions or problems” (Kerlinger, 1986, p. 279). As a questionnaire was used in the present study to collect both qualitative and quantitative data and questions in the questionnaire need to be clearly understood to achieve statistical reliability and validity. For the quantitative data, semi-structured questions were designed in order to gain information about Australian and Chinese student teachers’ on-line activities and their reasons for engaging in those activities. For these qualitative data, open-ended questions were designed to explore student teachers’ opinions about the educational and legal implications of teaching relevant principles and practices to 11-year-old children about Internet chat rooms.

The questionnaire needed to identify Internet chat rooms that combine various on-line activities. After these chat rooms had been identified, it was then feasible to analyse how these activities might produce negative consequences for Australian and Chinese student teachers. Although the quantitative approach provides an overall perspective of three on-line activities in Internet chat rooms, it does not provide adequate information

about student teachers' understanding of their future careers and their use of the capacity of the internet. Open-ended questions were thus used to obtain information about an individual's insights gained through his or her own experience. This analysis provided a means of aligning qualitative data with quantitative data and, thereby, aimed to attain a depth of information that promoted a better understanding of the phenomena under investigation.

The data were collected in one Australian and one Chinese university, and were used to provide evidence of practices related to on-line activities. However, because it is impossible to compare the ethics, legal issues, and educational systems of two very different countries, the goal was to provide a comparative framework to enhance understanding of Australian and Chinese student teachers' values and social identities.

5.4 Ethical Considerations

Ethical issues in research have become increasingly important. Informed consent, rights to privacy, privacy and confidentiality, and protection from harm, are common ethical concerns (Fontana & Frey, 1994). Aspects such as researcher involvement with the group, and situational ethics have been identified as other kinds of issues with which researchers should be concerned. Prior to beginning this study, ethical approval was obtained from the Griffith University Human Research Ethics Committee. This study posed no psychological, physical, social, or legal risks to participant student teachers. The rights of the participants were protected by explaining the goals of the study, the method for voluntary participation or withdrawal, and the steps taken to maintain their confidentiality.

In order to gain access to student teachers, the consent and approval of both the universities' principals and relevant lecturers in Australia and China was obtained. Further, ethics approval is not needed from Chinese university before beginning this study.

5.5 Sample

The target population for this study was second-year Bachelor of Education student teachers in a large South-Eastern Queensland state university, and also in an Eastern China State university, who volunteered to participate. The researcher does not know these participants. The criteria for participation were that the respondents must: be aged 18 years or above; have accessed to Internet chat rooms from home or other locations; use Internet chat rooms; and have experienced three on-line activities. The total sample size obtained for this study was 96 second-year university students enrolled in Primary school teaching courses in Australia and China. Some 40 participants attended a South-East Queensland State university in Australia, and 56 attended an East China State university. All respondents were volunteers and remained anonymous. All respondents had experience using Internet chat rooms, and thus had an appropriate base from which to draw their views regarding Internet chat rooms.

The student teachers were all given a consent form at the start of the project and a range of related issues were discussed in person. Respondents were also informed that participation in the project was completely voluntary, and would not affect their relationship with the researcher. Moreover, all participants were free to withdraw from the study at any time. Only aggregated data were produced and reported so that no individual

could be identified from the data. Confidentiality, anonymity, and privacy were assured because measures for storage and control of access to the data were strictly under the control of the researcher who vigilantly ensured this information was kept in a secure, locked place.

There are two reasons for choosing Australia and China as the countries to sample with this questionnaire. First, Australia and China have different cultural and educational systems, and so the student teachers from the different systems may have diverse on-line experiences and perspectives. Developing understandings of western and oriental student teachers' on-line activities may contribute to further educational co-operation. Second, Australian and Chinese young people constitute large populations using the Internet.

5.6 Questionnaire

The class-administrated questionnaire was considered a useful instrument for collecting data from “a sample of respondents who [could] naturally be brought together for the purpose” (Wilkinson & Birmingham, 2003). The questionnaire comprised three forms and questioning: closed questions, multiple-choice, and open-ended questions. Closed questions may be used to provide all possible answers to questions. The most often-used form of closed question is the dichotomous question requiring a “yes” or “no” response. Multiple-choice questions are closed questions that provide a number of pre-defined responses that allow the researcher to have some control over the responses given (Wilkinson & Birmingham, 2003). Open-ended questions allow respondents to answer a

question without pre-determined responses or forms and were used to collect qualitative data in this questionnaire.

The questionnaire was a simple and efficient tool for gathering both qualitative and quantitative data. The questions were useful in gaining insight into the activities in which youth participate while visiting Internet chat rooms (see Appendices A and B). The questionnaire was also valuable in building a detailed profile of Australian and Chinese student teachers. The questionnaire provided some understanding of each respondent's experiences with the Internet and, to a lesser degree, personal preferences concerning the Internet (see Appendices A and B). Before using the questionnaire to collect data, ethical issues had been considered and approved by universities and participants, as mentioned earlier.

A Likert-type scale is one of the most frequently used scales to measure a person's attitudes. It gauges what an individual believes, perceives, or feels about himself/herself, others, and various activities (Gay & Airasian, 2000). Likert-type scales were used for all attitudinal items in the questionnaire, for example, questions about the influences of three specific on-line activities.

The questionnaire for this study was anonymous because participants were asked to provide some personal information that might have made them feel apprehensive or threatened. Without this anonymity, respondents might have been reluctant to participate in the survey. The promise of anonymity is thought to increase the accuracy of responses and the percentage of returns (Gay & Airasian, 2000). This research follows university ethical guidelines, respecting the privacy of participants by ensuring their anonymity.

5.6.1 Questionnaire Design

This self-reporting questionnaire gathered quantitative and qualitative data. Participants were asked to complete a 4-page questionnaire (see Appendices A & B), with an additional 2-page coversheet providing information on ethical clearance, the purpose of the study, participation, and instructions.

The questionnaire began by asking questions about demographic information such as respondents' age and gender. Using Likert-type scales and open-ended questions, information concerning student teachers' on-line activities and attitudes toward Internet chat rooms was collected. As well as sections gaining demographic information, the questionnaire sought information about Internet experience, reasons for chat rooms use, on-line behaviours, and the influence of on-line activities. A written outline of the study and questionnaire were presented in English to the research supervisor at the Australian university (see Appendix A), then it was translated into Chinese and posted to the principal of the Chinese university (see Appendix B).

The questionnaire contained seven sections, as follows:

Section A: Demographics Details

The demographics section of the questionnaire included questions on participants' gender, age, and year in university. The purpose of this section was to obtain relevant biographical and demographic data about participants.

Section B: On-line activities in chat rooms

To collect data about student teachers on-line activities in Internet chat rooms, participants were asked how many hours per week they used the Internet, as well as from where they most often accessed Internet chat rooms, and in what kinds of activities they most often participated while in those rooms. For example, they were asked to indicate how many hours per week they chatted in Internet chat rooms, followed by questions on frequency of playing games during the previous week. The response categories were (1) None, (2) 1-4 hours, (3) 5-9 hours, (4) 10-14 hours, and (5) 15 hours or more. Student teachers were asked to identify the place from which they accessed Internet chat rooms most frequently. The response categories for place were (1) at home, (2) Internet café, (3) dormitory, and (4) other.

Section C: Influences of three specific on-line activities

Student teachers were asked to indicate how they view three specific activities related to Internet chat rooms: playing on-line games; making friends and sexual solicitation; and cyber-bullying. They were also asked their opinions about three specific on-line activities. The student teachers answered “yes” or “no” to these questions.

Based on the investigation of three specific activities, student teachers were asked whether 11 year-old children should be taught about these issues. Responses were collected via Likert-type scale questions ranging from 1 to 5 (1=Not at all, 2=slightly, 3=mildly, 4=moderately, 5=a lot).

Section D: Your understanding of the three types of activities

This section investigated how much participants understood about three types of on-line activities: cyber-bullying, sexual solicitation, and Internet addiction. Participants were also asked to state whether they would teach 11 year-old students about these issues in their future career.

Section E: Netiquette

Similarly to investigating student teachers' understanding of three specific activities, respondents were asked questions about their netiquette and whether they would teach the 11 year-old children about netiquette issues. For example, student teachers were asked whether they always share expert knowledge with other people in chat rooms, and also whether they adhere to the same standards of behaviour on-line that they follow in real life.

Section F: Legal and ethics education

This section sought to obtain the perceptions of student teachers towards being taught relevant legal and ethical issues in a university course. Questions employing a Likert-type scale ranging from 1-5 were used in the questionnaire (1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree). The questions requested information about student teachers' opinions about being taught about cyber-bullying; sexual abuse; the psychology of Internet behaviour, and the moral development of a person.

Section G: Reflection on Internet chat rooms

This section included two qualitative questions about netiquette and legal issues for Primary school students. There were two purposes for this section. The main purpose was to ascertain participants' perceptions about the role netiquette may play in the next ten years. This information was collected with the question, "Over the next 10 years of your teaching career, how do you think **Netiquette** will affect children's on-line chat rooms activities?" (question 10). The second purpose of the study was addressed with the question, "Over the next 10 years of your teaching career, how do you think **legal issues** will control 11 year-old children's on-line chat rooms activities?" (question 11).

5.6.2 Chinese Version of the Questionnaire

The questionnaire was also translated into Chinese (see Appendix B) because most Chinese participants have difficulties with the English language. The content was translated into Chinese by the author with advice and assistance from her academic supervisor. After modification, the English and Chinese versions of the questionnaire were used in a pre-test study to test their applicability.

5.6.3 Pre-test Study

A first draft of the questionnaire, consisting of the above seven sections, was developed and conducted. The questionnaire was constructed according to standard principles of test development (Cohen & Moreland, 1992). A pre-test study of the questionnaire was undertaken to assess the appropriateness of the questionnaire items and

to detect any biases. The purpose of the pre-test was to verify the validity and reliability of the instrument.

A pre-test of the questionnaire was undertaken using a sample of eight Primary school student teachers, four from an Australian university and four from a Chinese university. Student teachers were drawn from the Education faculties of each university. The Australian student teachers were studying at a South-East Queensland university, while the Chinese student teachers were studying at an East China State university. The questionnaire for Chinese pre-test student teachers was posted to the Chinese university, and the lecturer distributed the instrument to participants. All pre-test student teachers in the two countries were studying for Bachelor Degrees in Education (Primary) and in each group of four, two were male, and two were female. The questionnaires completed by these eight pre-test student teachers were not included in the final sample.

In the pre-test questionnaire, the eight student teachers were encouraged to write their comments on the Questionnaire (see Appendices A & B). They were also asked to provide any questions that might be added to the questionnaire, or suggestions regarding the clarity of the questionnaire. Student teachers took one hour to complete the pre-test questionnaire, and useful information was provided by them.

Based on comments and suggestions provided by those student teachers in the pre-test survey, a small number of changes were made to the questionnaire, primarily to the wording and question sequence, and some of the questions were rephrased to enhance their clarity. In addition, the pre-test alerted the researcher to potential technical problems. For example, some specific terms were not suitably translated. Chinese students could not

understand the meaning of some English-derived terms, such as sexuality solicitation.

Employing these modifications from the pre-test, the questionnaire was revised and then used to collect data from the two final samples of Australian and Chinese student teachers.

5.7 Data Collection Procedure

5.7.1 Australian Data Collection Procedure

At the South-East Queensland university, there are six available Bachelor programs related to Primary school education. An appointment with one lecturer was made before conducting the survey. The researcher introduced herself and explained the main purpose of the study. The lecturer agreed for this researcher to conduct the survey in his lecture and arranged a suitable time for the researcher to attend the class. On that day, the researcher was introduced by the lecturer, and then she presented the survey introduction to the class. The student teachers were also informed about the confidentiality of their responses, and were assured that the privacy of participants would be respected at all times. The researcher then distributed the questionnaire and a copy of their consent sheet. After completing ethical protocols, the respondents spent about 40 minutes completing the questionnaire. No students left the class prior to submitting the completed questionnaire. After participants returned their questionnaire to the researcher, they were thanked.

5.7.2 Chinese Data Collection Procedure

Before conducting the survey at the East China State university, the researcher contacted the principal by phone and introduced the study. The Principal strongly

supported the researcher's effort to conduct the survey at the university. After obtaining the permission from the university Principal, the researcher flew to China and visited the university on the appointed date. The Principal introduced the researcher to the supervisor whose class would complete the questionnaire. The researcher accompanied the supervisor to the lecture room. All Primary school student teachers who were aged 18 or older in the undergraduate teaching class were invited to complete the questionnaires in the classroom. To ensure informed consent, the researcher explained the nature of the survey in Chinese, and gave assurances of confidentiality and anonymity. Students were provided with a short explanation of the nature and purpose of the research, then questionnaire. They completed the questionnaire in class in order to ensure a high response rate. Respondents spent about 40 minutes completing the questionnaire. The researcher gathered all the completed questionnaires, as well as the unused ones, and later returned to Australia to continue the data analysis there.

5.8 Data Analysis

After the responses were collected from the respective Australian and Chinese universities, the data was entered into Microsoft Excel for preliminary analysis. After ensuring that all of the original data had been accurately entered, the quantitative data was analysed using the Statistical Package for Social Sciences (SPSS) v.13. Quantitative data analysis consisted primarily of calculating frequencies and tabulating responses by categorical or ordinal data types. The qualitative data were presented in the form of 'quotes' from the Australian and Chinese student teachers. These were categorized in

tabular form to allow common themes to emerge and be identified. Descriptive statistics of the demographic variables of the two samples were presented in order to clarify the independent variables. Statistical analyses were conducted to explore the relationships among the independent variables and the dependent variables. Multiple regression analyses were also conducted in order to determine how much of the variance of the dependent variables could be accounted for by the combinations of the independent variables.

5.9 Summary

This chapter describes the methods used in this study to gather data on Australian and Chinese student teachers' perceptions of their behaviour in Internet chat rooms. A quantitative approach focuses on objective statistical analyses of a representative sample of student teachers as the main method for collecting data for this study, while qualitative questions are included in the questionnaire in order to collect information on student teachers' reasoning and elaboration in relation to the issues addressed. The next chapter, Chapter Six, presents the findings of this study by providing the results of the data obtained in relation to the aims of this research.

Chapter Six

Results

6.1 Introduction

This chapter presents the results of the use of the questionnaire to collect data on the use of Internet chat rooms by a sample of Australian and Chinese Primary school student teachers. This study explores three specific on-line activities, namely; playing Internet games; making friends and sexual solicitation, and cyber-bullying in Internet chat rooms, and also explores the similarities and differences between the usage rates of participants in the two countries, Australia and China. This chapter also includes data on student teachers' netiquette behaviour as well as their future teaching practices, specifically, what they think they should teach 11 year-old Primary school students about Internet chat rooms.

Two types of data are presented in this chapter, quantitative and qualitative. The quantitative data were analysed, and include the following statistics: Frequencies, Contingency Tables Chi-Square Tests, Kruskal Wallis Tests, and t-tests. Qualitative data from comments made by student teachers are also reported using categories of response showing the themes identified and the patterns of their discourse.

As indicated in Chapter five, Methods, the data were collected from Australian student teachers at a South-East Queensland university in Australia and from Chinese student teachers at an East China State university. The total sample included 40 Australian student teachers and 56 Chinese student teachers. This chapter first presents descriptive

demographic information from the sample, then, based on the three specific focus questions, explores comparisons of responses between Australian and Chinese student teachers.

6.2 Sample Demographics

The demographic characteristics reported in the tables below include age, gender, the location of Australian and Chinese student teachers access to Internet chat rooms, and the number of hours spent in Internet chat rooms. Each will now be addressed.

6.2.1 Age of Australian and Chinese Student teachers Sampled

The distribution of the sample of Australian and Chinese student teachers by age is shown in Table 6.1. A combined total of 96 codeable responses from the student teachers in the sample for Australia and China were analysed.

Table 6.1 Australian and Chinese Student teachers Sampled

Age groups	Australian	Chinese	Total
18-24 yrs	22 (55.0%)	56 (100.0%)	78 (81.3%)
25-29 yrs	6 (15.0%)	0 (0. %)	6 (6.3%)
30-34yrs	6 (15.0%)	0 (0. %)	6 (6.3%)
More than 34yrs	6 (15.0%)	0 (0. %)	6 (6.3%)
Total	40 (100.0%)	56 (100.0%)	96 (100.0%)

All the Chinese student teachers (n=96) were aged between 18 and 24 years, while 55% (n=22) of Australian student teachers were in this age range, and 15% of Australian student teachers were aged between 25 and 29 years, 15% were between 30 and 34 years of age, and 15% were 35 years old or over. Overall, Chinese student teachers were generally younger than the Australian student teachers.

6.2.2 Gender of Australian and Chinese Student teachers Sampled

The distribution of the Australian and Chinese student teachers by gender is shown in Table 6.2. The proportion of female participants from Australia was about double that of male Australian participants, while the proportion of Chinese female student teachers was three times than that of Chinese male student teachers.

Table 6.2 Gender of Australian and Chinese Student teachers Sampled

Age groups	Australian	Chinese	Total
Male	12 (30.0%)	14 (25.0%)	26 (27.1%)
Female	28 (70.0%)	42 (75.0%)	70 (72.9%)
Total	40 (100.0%)	56 (100.0%)	96 (100.0%)

From Table 6.2, it is clear that female student teachers constitute the largest proportion of each sample in both countries. This is generally reflective of teacher education enrolment patterns.

6.2.3 Hours of use of Internet Chat Rooms by Australian and Chinese Student teachers Sampled

The hours that Australian and Chinese student teachers spend in Internet chat rooms are shown in Table 6.3.

Table 6.3 Hours of Use of Internet Chat Rooms in One Week by Australian and Chinese Student teachers

		Australian	Chinese	Total
Time	None	20 (50.0%)	0 (0%)	20 (20.8%)
	1-4 hours	16 (40.0%)	41 (73.2%)	57 (59.4%)
	5-9 hours	2 (5.0%)	13 (23.2%)	15 (15.6%)
	10-14 hours	2 (5.0%)	2 (3.6%)	4 (4.2%)
Total		40 (100.0%)	56 (100.0%)	96 (100.0%)

About 73% of the Chinese student teachers spent 1 to 4 hours in Internet chat rooms during the week prior to the questionnaire's completion, while only about 4% spent 10 to 14 hours in chat rooms the week prior. About half of Australian student teachers, in comparison to none of the Chinese participants, did not access Internet chat rooms in the week before the questionnaire was completed. About 40% of the Australian cohort spent 1-4 hours per week accessing chat rooms. The results also indicate that only 5% Australian student teachers spent 5-9 hours in Internet chat rooms in the week prior to the administration of the questionnaire. Only 5% of Australian student teachers spent 10-14 hours on-line in the week prior to the survey.

In summary, very few (5% or fewer) student teachers from either of the two countries spent more than 10 hours in Internet chat rooms, with most (57 student teachers) staying on-line for no more than 4 hours in both countries.

6.2.4 Location Where Australian and Chinese Student teachers Access Internet Chat Rooms

Table 6.4 shows that most Australian student teachers accessed the Internet at home

(67.5%), while only about 7.1% of Chinese student teachers did so. More than half of the Chinese participants (76.8%) chose Internet cafés to access Internet chat rooms, while only about 5.0% of Australian student teachers did so.

Table 6.4 Locations Where Australian and Chinese Student teachers Access Internet Chat Rooms

		Australian	Chinese	Total
Location	at home	27 (67.5%)	4 (7.1%)	31 (32.3%)
	internet cafe	2 (5.0%)	43 (76.8%)	45 (46.9%)
	dormitory	0 (.0%)	6 (10.7%)	6 (6.3%)
	others	11 (27.5%)	3 (5.4%)	14 (14.6%)
Total		40 (100.0%)	56 (100.0%)	96 (100.0%)

It was surprising to find that none of the Australian student teachers was connected to the Internet in their dormitories or on-campus accommodation, while about 10.7% of Chinese student teachers reported that they connected to the Internet in dormitories. It might due to Australian participants living with their parents or sharing house with their friends. The majority of Chinese student teachers (76.8%) accessed Internet chat rooms in Internet cafés, while the majority of Australians (67.5.0%) did so in their homes.

6.3 On-line Activities Undertaken By Australian and Chinese Student Teachers in Internet Chat Rooms

Table 6.5 shows that on-line activities are conducted by both Australian and Chinese student teachers.

Table 6.5 Purpose of On-line Activities by Australian and Chinese Student teachers

		Australian	Chinese	Total
Activities	look for academic information	8 (20.0%)	11 (19.6%)	19 (19.8%)
	watch movies	3 (7.5%)	23 (41.1%)	26 (27.1%)
	look for friendship	11 (27.5%)	15 (26.8%)	26 (27.1%)
	look for a boyfriend/girlfriend	6 (15.0%)	3 (5.4%)	9 (9.4%)
	look for a sexual partner	1 (2.5%)	0 (.0%)	1 (1.0%)
	play on-line games	11 (27.5%)	0 (.0%)	11 (11.5%)
	others	0 (.0%)	4 (7.1%)	4 (4.2%)
Total		40 (100.0%)	56 (100.0%)	96 (100.0%)

Table 6.5 indicates that while some 41% of Chinese student teachers viewed movies on-line, only 7.5% of Australians did so. Some 20% of Australian participants used Internet chat rooms to search for academic information. About 27.5% of Australian student teachers played on-line games, and only one respondent, an Australian male, reported seeking a sexual partner in a chat room. It is surprising to note that none of the Chinese student teachers was looking for a sexual partner as well as playing on-line games. It is different to the results in previous literature. It may relate to the research sample. This group of Chinese participants were student teachers who can minimize the possibility of cyber bullying because they did not involve looking for sexual partners and playing on-line games. Consequently, their perceptions of teaching cyber ethics would be different with those who looked for sexual partners and played on-line games.

In summary, both Australian and Chinese student teachers seem to spend most of their time in Internet chat rooms watching movies or looking for friends (27% of all student teachers respectively). That is, the most popular activity for Chinese student teachers was

watching movies, while Australian student teachers preferred to look for friends and play on-line games.

6.4 The Influence of, and Teaching Views about, Three On-line Activities of Australian and Chinese Student teachers

6.4.1 The Influence of Three On-line Activities on Australian and Chinese Student teachers

This study investigated the effect of three on-line activities, namely; playing on-line games; making friends and sexual solicitations; and cyber-bullying; on student teachers in Australia and China. Responses collected from questionnaires about the three on-line activities are shown below in Tables 6.6 through 6.13.

6.4.1.1 The Influence of Playing On-line Games on Australian and Chinese Student teachers

The first on-line activity investigated was playing on-line games. The results are shown in Table 6.6. As indicated, aside from a slight tendency toward pro-social behaviour, in each case, student teachers were more likely to report *not* experiencing that behaviour than to report experiencing it.

Table 6.6 Australian and Chinese Student teachers' Views about Playing On-line Games

		Australian	Chinese	Total
Aggressive thoughts	yes	18 (45.0%)	19 (33.9%)	37 (38.5%)
	no	22 (55.0%)	37 (66.1%)	59 (61.5%)
	Total	40 (100.0%)	56 (100.0%)	96 (100.0%)
Hostile behaviour	yes	12 (30.0%)	7 (12.5%)	19 (19.8%)
	no	28 (70.0%)	49 (87.5%)	77 (80.2%)
	Total	40 (100.0%)	56 (100.0%)	96 (100.0%)
Social interaction	yes	15 (37.5%)	31 (55.4%)	46 (47.9%)
	no	25 (62.5%)	25 (44.6%)	50 (52.1%)
	Total	40 (100.0%)	56 (100.0%)	96 (100.0%)
Prosocial behaviour	yes	21 (52.5%)	21 (37.5%)	42 (43.8%)
	no	19 (47.5%)	35 (62.5%)	54 (56.3%)
	Total	40 (100.0%)	56 (100.0%)	96 (100.0%)
Sexual arousal	yes	10 (25.0%)	10 (17.9%)	20 (20.8%)
	no	30 (75.0%)	46 (82.1%)	76 (79.2%)
	Total	40 (100.0%)	56 (100.0%)	96 (100.0%)

Based on the results shown in Table 6.6, almost half of the Chinese student teachers thought that playing on-line games would result in more social interaction. However, most Australian and Chinese student teachers did not believe that playing on-line games would lead to aggressive thoughts, social interaction, or prosocial behaviour. Some 30% of the Australian student teachers and 12.5% of the Chinese student teachers thought this activity would not be likely to lead to hostile behaviour.

The Kruskal Wallis H test can be useful in evaluating dichotomous variables (i.e., yes/no responses by Chinese and Australian participants) (Bryman & Cramer, 2005).

Table 6.7 Student teachers View about Playing On-line Games (Chi square statistic)

	Aggressive thoughts	Hostile behaviour	Social interaction	Prosocial behaviour	Sexual arousal
Chi-Square	1.207	4.501	2.981	2.133	.722
df	1	1	1	1	1
Asymp. Sig.	.272	.034	.084	.144	.396

Table 6.7 shows the association between country of origin and various student teacher views related to playing on-line games. Australian and Chinese student teachers do not have significantly different views about the influence of on-line games in producing aggressive thoughts, social interaction, prosocial behaviour, and sexual arousal. However, differences for hostile behaviour trended toward significance ($p < .05$).

In summary, for the most part, Australian and Chinese student teachers do not appear to have significantly different views about the influence of playing on-line games. Further, most participants' responses did not differ by gender. The only two variables in which gender affected responses were in relation to social interaction and prosocial behaviour as shown in the following table.

Table 6.8 Social Interaction by Gender (crosstabs)*

		Male	Female	Total
Yes	Count	8	38	46
	Std. Residual	-1.3	.8	
No	Count	18	32	50
	Std. Residual	1.2	-.7	
Total	Count	26	70	96

*Std residual has z-score distribution, with mean of zero and 9% variability = ± 1.96

As indicated in Table 6.8 while responses per cell are for most part as one might expect by chance, the number of males reporting social interaction (Yes) is lower than it should be by chance, with number of females not reporting social interaction higher than it should be by chance ($\chi^2=4.201$ (df=1), $p<.05$). One interpretation is that males are significantly less likely than females to report social interaction behaviour, whereas females are more likely not to report such behaviour when they accessed Internet chat rooms.

Table 6.9 Prosocial Behaviour by Gender (crosstabs)

		Male	Female	Total
Yes	Count	7	35	42
	Std. Residual	-1.3	.8	
No	Count	19	35	54
	Std. Residual	1.1	-.7	
Total	Count	26	70	96

As shown in Table 6.9, about one fourth of male student teachers thought that playing on-line games would result in more prosocial behaviour. In contrast, half of the female student teachers believed that playing on-line games would lead to prosocial behaviour ($\chi^2=4.103$ (df=1), $p<.05$). In sum, the views of male and female student teachers differed in relation to playing on-line games except in terms of social interaction and prosocial behaviour.

6.4.1.2 Australian and Chinese Student teachers' Views about Making Friends and Sexual Solicitation

In Table 6.10, the results of Australian and Chinese student teachers' views about

making friends and sexual solicitation in Internet chat rooms are summarised.

Table 6.10 Australian and Chinese Student teachers' View about Making Friends and about Sexual Solicitation

		Australian	Chinese	Total
Safe places to make friends	yes	21 (52.5%)	9 (16.1%)	30 (31.3%)
	no	19 (47.5%)	47 (83.9%)	66 (68.8%)
	Total	40 (100.0%)	56 (100.0%)	96 (100.0%)
Reliable information	yes	12 (30.0%)	7 (12.5%)	19 (19.8%)
	no	28 (70.0%)	49 (87.5%)	77 (80.2%)
	Total	40 (100.0%)	56 (100.0%)	96 (100.0%)
Sexual verbal assault	yes	18 (45.0%)	28 (50.0%)	46 (47.9%)
	no	22 (55.0%)	28 (50.0%)	50 (52.1%)
	Total	40 (100.0%)	56 (100.0%)	96 (100.0%)
Sexual solicitation	yes	19 (47.5%)	22 (39.3%)	41 (42.7%)
	no	21 (52.5%)	34 (60.7%)	55 (57.3%)
	Total	40 (100.0%)	56 (100.0%)	96 (100.0%)
Encounter sexual advances	yes	19 (47.5%)	6 (10.7%)	25 (26.0%)
	no	21 (52.5%)	50 (89.3%)	71 (74.0%)
	Total	40 (100.0%)	56 (100.0%)	96 (100.0%)

As indicated in Table 6.10, about 52% of Australian student teachers considered Internet chat rooms to be safe places to make friends, while most Chinese respondents (83.9%) felt that these virtual rooms are not safe places to make friends. Some 30% of Australian and almost 13% Chinese student teachers thought that reliable information could be obtained via Internet chat rooms. In addition, a similar number of participants across the two countries believed that they would not experience sexual verbal assault on-line (50% of

Australia's, and 60% of the Chinese). It was also interesting to find that the same percentage of Australian student teachers felt they had risked sexual solicitation in on-line chat rooms as had encountered sexual advances on-line (about 47%). However, a higher number of Chinese respondents (22) than Australian respondents (19) agreed that they might experience sexual solicitation on-line, while only 10% of Chinese student teachers confirmed they had encountered sexual advances in Internet chat rooms.

Chi-Square tests were used to determine whether Australian and Chinese student teachers have significant differences of opinion regarding making friends and sexual solicitation in Internet chat rooms. The data in Table 6.11 show that Australian and Chinese student teachers have significantly different views on whether Internet chat rooms are safe places to make friends ($p < .001$), whether they provide reliable information ($p < .05$), and whether they are likely places to encounter sexual advances ($p < .001$). However, there were no significant differences in views on Internet chat rooms as places where participants may easily experience sexual verbal assault and may likely experience sexual solicitation from other people.

Table 6.11 Student teachers' Views about Making Friends and Sexual Solicitation in Internet Chat Rooms

	Safe places to make friends	Reliable information	Sexual verbal assault	Sexual solicitation	Encounter sexual advances
Chi-Square	14.412	4.501	.234	.643	16.394
df	1	1	1	1	1
Asymp. Sig.	.000	.034	.629	.422	.000

In general, most Chinese respondents did not think that Internet chat rooms are safe places to make friends or that they provide reliable information. About half of these student teachers considered making friends in Internet chat rooms as a dangerous venture that can lead to sexual verbal assault. Compared to Chinese student teachers, some 52% of the Australian student teachers considered Internet chat rooms as safe places to make friends. Although 30% of Australian participants do not trust information obtained in chat rooms, most of them did not think that they would experience sexual verbal assault, sexual solicitation, or encounter sexual advances in Internet chat rooms. As indicated in Table 6.11, Australian and Chinese student teachers differed significantly in their views about making friends and encountering sexual advances (see Appendix C).

6.4.1.3 Australian and Chinese Student teachers' Views about Cyber-bullying

The major finding on cyber-bullying, the third specific focus of this study, was that most Australian and Chinese student teachers said they were not affected by cyber-bullying activities in Internet chat rooms.

Table 6.12 Australian and Chinese Student teachers' View on Cyber-bullying

		Australian	Chinese	Total
Posted pictures	yes	20 (50.0%)	8 (14.3%)	28 (29.2%)
	no	20 (50.0%)	48 (85.7%)	68 (70.8%)
	Total	40 (100.0%)	56 (100.0%)	96 (100.0%)
Pretended another person	ye	17 (42.5%)	17 (30.4%)	34 (35.4%)
	no	23 (57.5%)	39 (69.6%)	62 (64.6%)
	Total	40 (100.0%)	56 (100.0%)	96 (100.0%)
Spread lies and rumours	yes	16 (40.0%)	6 (10.7%)	22 (22.9%)
	no	24 (60.0%)	50 (89.3%)	74 (77.1%)
	Total	40 (100.0%)	56 (100.0%)	96 (100.0%)
Tricked people	yes	15 (37.5%)	6 (10.7%)	21 (21.9%)
	no	25 (62.5%)	50 (89.3%)	75 (78.1%)
	Total	40 (100.0%)	56 (100.0%)	96 (100.0%)
Mean text messages	yes	14 (35.0%)	10 (17.9%)	24 (25.0%)
	no	26 (65.0%)	46 (82.1%)	72 (75.0%)
	Total	40 (100.0%)	56 (100.0%)	96 (100.0%)

Table 6.12 shows that Australian student teachers did not think they were affected by cyber-bullying. For example, about 50% of total sample of Australian student teachers, did not have pictures of themselves posted by users they did not know, and about 60% did not experience users spreading lies or rumours about them on the Internet. Similarly, most Chinese student teachers were unaffected by most aspects of cyber-bullying, such as posting pictures, pretending to be another person on-line, spreading lies and rumours, being tricked into revealing personal information, and receiving malicious text messages.

Table 6.13 shows that Australian and Chinese student teachers have distinctly different experiences in three aspects of cyber-bullying.

Table 6.13 Student teachers' Views about Cyber-bullying

	Posted pictures	Pretended to be another person	Spread lies and rumours	Tricked people	Mean text messages
Chi-Square	14.406	1.504	11.329	9.796	3.657
df	1	1	1	1	1
Asymp. Sig.	.000	.220	.001	.002	.056

Table 6.13 indicates that Australian and Chinese student teachers responses differ statistically in terms of their experience of cyber-bullying. Chi-Square test results for posted pictures ($X^2(1) = 14.406$, $p < .001$); for spread lies and rumours ($X^2(1) = 11.329$, $p < .001$); and for tricked people ($X^2(1) = 9.796$, $p < .05$). However, the other two aspects, pretended to be another person and accepted mean text message, were not found to be statistically significant ($p > 0.05$).

In summary, Australian and Chinese student teachers showed different opinions about most relevant cyber-bullying issues. There were slightly different frequencies between Australian and Chinese student teachers who confirmed that they had pretended to be another person on-line or who had sent cruel text messages. Based on Chi square tests, male and female student teachers did not differ significantly in their views about cyber-bullying (see Appendix C).

6.4.2 Views of Australian and Chinese Student teachers about Teaching Issues in Relation to Three On-line Activities

Australian and Chinese student teachers were asked whether they would teach 11

year-old Primary school students about three specific on-line activities, namely; playing on-line games; making friends and solicitation; and cyber-bullying. The results obtained by a Chi-Square Test are shown in Table 6.14.

Table 6.14 Student teachers' Views about Teaching Relevant Knowledge to 11 Year-old Primary School Students by Chi-Square Test

	Teaching about aggressive thoughts	Teaching about hostile behaviour	Teaching about social interaction	Teaching about pro- social behaviour	Teaching about sexual arousal
Chi-Square	.167	.042	.375	.095	10.116
df	1	1	1	1	1
Asymp. Sig.	.683	.838	.540	.758	.001
	Teaching about whether it is safe	Teaching about reliable information	Teaching about sexual verbal assault	Teaching about sexual solicitation	Teaching about encountering sexual advances
Chi-Square	24.000	5.042	28.167	15.042	28.167
df	1	1	1	1	1
Asymp. Sig.	.000	.025	.000	.000	.000
	Teaching about posting a picture	Teaching about pretending to be another person	Teaching about spreading lies and rumours	Teaching about tricking people	Teaching about sending mean text messages
Chi-Square	.375	.042	2.667	1.042	1.500
df	1	1	1	1	1
Asymp. Sig.	.540	.838	.102	.307	.221

The first on-line activity this study probed was playing on-line games. The data show that in teaching relevant issues about playing on-line games, there were no significant differences between Australian and Chinese student teachers. For example, for some of the possible consequences of playing on-line games, all student teachers from both countries would like to teach relevant knowledge about aggressive thoughts, hostile behaviour, social interaction, and prosocial behaviour. However, concerning teaching relevant issues about sexual arousal that playing on-line games may bring, there was a significant difference in the opinions of Australian respondents and Chinese respondents ($X^2(1) = 10.116, p < .05$).

For the second specific on-line activity, making friends and sexual solicitation, differences between the two surveyed groups were evident. Specifically, the groups differed in the decision to teach Primary school students about issues pertaining to this second activity such as teaching about the reliability of information obtained in chat rooms ($X^2(1) = 5.042, p < .05$), sexual verbal assault ($X^2(1) = 28.167, p < .001$) in order to protect students, sexual solicitation ($X^2(1) = 15.042, p < .001$), and encountering sexual advances ($X^2(1) = 28.167, p < .001$).

In teaching knowledge of cyber-bullying, Table 6.14 shows that there was little difference of opinion evident between Australian and Chinese student teachers in the following five aspects: teaching about posting a picture, teaching about pretending to be another person, teaching about spreading lies and rumours, teaching about tricking people, and teaching about sending mean text messages ($p > .05$).

Generally, Australian and Chinese student teachers have similar views on teaching issues relevant to playing on-line games, but differ on matters of teaching about sexual

arousal issues. That is, based on Table 6.14, Australian and Chinese student teacher opinions differ in terms of teaching about ways to make friends and manage sexual solicitation in Internet chat rooms. However, they did not differ in terms of opinions about teaching issues on cyber-bullying.

6.4.3 Australian and Chinese Student teachers' Understanding about Three On-line Activities

Australian and Chinese student teachers were asked about their understanding of three on-line activities: cyber-bullying, sexual solicitation, and internet addiction.

Responses are summarised in Tables 6.15 and 6.16.

Table 6.15 T-test of the Understanding of Australian and Chinese Student teachers about Cyber-bullying, Sexual Solicitation, and Internet Addiction

T-test for Equality of Means		t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference
Cyber-bullying	Chinese	-3.997	94	.000	-.939	.235
	Australian	-3.754	63.853	.000	-.939	.250
Sexual solicitation	Chinese	-5.189	94	.000	-1.186	.229
	Australian	-4.755	56.722	.000	-1.186	.249
Internet addiction	Chinese	-1.071	94	.287	-.250	.233
	Australian	-1.009	64.725	.317	-.250	.248

An independent-samples t-test was carried out between Australian and Chinese student teachers using ethnicity as the grouping variable. The interesting findings here are

that Australian and Chinese student teachers show significant differences in their understanding of cyber-bullying and sexual solicitation issues. This difference emerges in the following results: cyber-bullying Chinese ($t(94) = -3.997, p < .01$); cyber-bullying Australian ($t(63.8) = -3.754, p < .01$); sexual solicitation Chinese ($t(94) = -5.189, p < .01$); sexual solicitation Australian ($t(56.7) = -4.755, p < .01$).

However, on the Internet addiction issue, student teachers in the two countries have similar viewpoints, as shown in the t significance > 0.05 . These findings can also be verified by examining Table 6.16.

Table 6.16 Mean Test of Australian and Chinese Student teachers on Cyber-bullying, Sexual Solicitation, and Internet Addiction

		N	Mean	Std. Deviation	Std. Error Mean
Cyber-bullying	Australian	40	3.10	1.374	.217
	Chinese	56	2.16	.930	.124
Sexual solicitation	Australian	40	3.03	1.423	.225
	Chinese	56	1.84	.804	.107
Internet addiction	Australian	40	3.25	1.354	.214
	Chinese	56	3.00	.934	.125

Table 6.16 shows that Australian student teachers (mean = 3.10) know much more about cyber-bullying than Chinese student teachers (mean = 2.16). For the sexual solicitation issue, results show that Australian student teachers understand the issue to a small degree, while Chinese student teachers did not know about it to any degree. However, Internet addiction seems to be a popular issue that student teachers in both countries appear to understand quite well.

6.5 Netiquette for Australian and Chinese Student teachers in Internet Chat Rooms and Views on Teaching Netiquette to 11 year-old Primary School Students

6.5.1 Netiquette That Australian and Chinese Student teachers Follow in Internet Chat Rooms

Table 6.17, Table 6.18 and Table 6.19 contain the results of a comparison of the means of the Australian and Chinese Primary school student teachers' responses about whether they follow Netiquette rules and whether they want to teach Netiquette rules to 11 year-old Primary school students.

6.5.1.1 Results of Student teachers' Netiquette Using the Kruskal Wallis Test

Table 6.17 shows the results of Australian and Chinese Primary school student teachers' netiquette using the Kruskal Wallis Test.

Table 6.17 Australian and Chinese Student teachers' Netiquette Followed in Internet Chat Rooms

	Ethnicity	N	Mean Rank
Share expert knowledge	Australian	40	52.23
	Chinese	56	45.84
Adhere to the same standards	Australian	40	51.38
	Chinese	56	46.46
Follow the rules	Australian	40	39.85
	Chinese	56	54.68
Respect other people's time	Australian	40	55.19
	Chinese	56	43.72
Make yourself look good	Australian	40	60.68
	Chinese	56	39.80
Rude words	Australian	40	47.50
	Chinese	55	48.36
Attack other participants	Australian	40	53.24
	Chinese	56	45.12
Respect others	Australian	40	53.24
	Chinese	56	45.12
Abuse your power	Australian	40	53.24
	Chinese	56	45.12
Forgive others	Australian	40	53.24
	Chinese	56	45.12

According to results of the Kruskal Wallis Test, shown in Table 6.17, Australian student teachers have a higher mean score than Chinese student teachers in the categories of sharing expert knowledge, adhering to the same standards, respecting other people's

time, making yourself look good, respecting others, and forgiving others. Chinese student teachers have a positive higher mean score than Australian student teachers only in the category of following the rules. However, similar means results exist for both Australian and Chinese student teachers in the use of rude words, namely $m = 47.50$ and $m = 48.36$, respectively. Most Australian student teachers admitted that they abused their power and attacked other participants in Internet chat rooms.

6.5.1.2 Results of Student teachers' Netiquette From Chi-Square Test

An analysis of netiquette practices of Australian and Chinese student teachers, evaluated by Chi-Square Test, is shown in Table 6.18.

Table 6.18 Australian and Chinese Student teachers' Netiquette Practices in Internet Chat Rooms Evaluated by Chi-Square Test statistics

	Chi-Square	df	Asymp.Sig
Share expert knowledge	.399	1	.241
Adhere to the same standards	1.521	1	.381
Follow the rules	3.319	1	.008
Respect other people's time	1.234	1	.038
Make yourself look good	3.156	1	.000
Rude words	.342	1	.873
Attack other participants	4.295	1	.137
Respect others	.399	1	.527
Abuse your power	1.521	1	.217
Forgive others	3.319	1	.068

Table 6.18 displays the results of a Pearson Chi-Square analysis. Results for three

categories of netiquette practices, namely, following the rules, respecting other people's time and making yourself look good, for both Australian and Chinese student teachers reached the level of $p < 0.05$. For the remaining seven rules of Netiquette, all Pearson Chi-Square results were $p > 0.05$, which means there were no significant differences between Australian and Chinese student teachers. Further, there were only two categories in which Australian and Chinese student teachers showed significant differences. These categories were teaching about respecting other people's time and forgiving others. In their opinions on teaching about the other aspects, there were no obvious differences between Australian and Chinese student teachers.

6.5.1.3 Results of Student teachers' Netiquette From t-test

Table 6.19 shows the results of t-test analysis of Australian and Chinese student teachers' netiquette. Although this study used different statistics to assess student teachers' netiquette attitudes, t-test results are similar to Chi-Square test results.

Table 6.19 shows results that indicate Australian and Chinese participants have distinctly different viewpoints in three categories: following the rules, respecting other people's time, and making yourself look good. For following the rules, Australian results were ($t(59.17) = .007, p < .01$) and the Chinese, $t(94) = .003, p < .01$; for respecting other people's time, Australian results were $t(59.469) = .010, p < .01$, Chinese, $t(94) = .005, p < .01$; and for making yourself look good, Australian results were $t(74.8) = .000, p < .01$, and the Chinese results were $t(94) = .000, p < .01$. For the remaining seven rules of netiquette, there were no significant differences between Australian and Chinese student teachers because all t-test results were $p > 0.05$.

Table 6.19 T-test of Netiquette Australian and Chinese Student teachers Followed in Internet Chat Rooms

T-test for Equality of Means		t	df	Sig (2- tailed)	Mean Difference	Std. Error Difference
Share expert knowledge	Australian	-.945	63.237	.348	-.232	.246
	Chinese	-1.008	94	.316	-.232	.230
Adhere to the same standards	Australian	-1.079	62.023	.285	-.300	.278
	Chinese	-1.155	94	.251	-.300	.260
Follow the rules	Australian	2.817	59.170	.007	.771	.274
	Chinese	3.047	94	.003	.771	.253
Respect other people's time	Australian	-2.654	59.469	.010	-.721	.272
	Chinese	-2.868	94	.005	-.721	.252
Make yourself look good	Australian	-3.827	74.801	.000	-.986	.258
	Chinese	-3.939	94	.000	-.986	.250
Rude words	Australian	.632	69.938	.530	.155	.245
	Chinese	.659	94	.512	.155	.235
Attack other participants	Australian	-.661	71.088	.511	-.161	.243
	Chinese	-6.88	94	.493	-.161	.233
Respect others	Australian	-1.524	61.557	.133	-.425	.279
	Chinese	-1.635	94	.105	-.425	.260
Abuse your power	Australian	-.129	65.989	.898	-.032	.250
	Chinese	-.136	94	.892	-.032	.236
Forgive others	Australian	-2.362	52.014	.022	-.607	.257
	Chinese	-2.625	94	.010	-.607	.231

6.5.2 Australian and Chinese Student teachers' Views about Teaching Netiquette for Internet Chat Rooms

Based on three specific on-line activities, Australian and Chinese student teachers were asked whether they would like to teach their future Primary school students (11 year-old children) about relevant netiquette issues.

6.5.2.1 Kruskal Wallis Test of Whether Student teachers Want to Teach Netiquette to 11 year-old Primary School Students

Table 6.20 summarises the results of the Kruskal Wallis Test, which was applied to each netiquette guideline included in the survey of Australian and Chinese student teachers in order to assess attitudes about teaching netiquette to 11 year-old Primary school students.

Table 6.20 Australian and Chinese Student teachers' Views about Teaching Netiquette

Teaching about:	Ethnicity	N	Mean Rank
Share expert knowledge	Australian	40	45.84
	Chinese	56	52.23
Adhere to the same standards	Australian	40	46.46
	Chinese	56	51.38
Follow the rules	Australian	40	54.68
	Chinese	56	39.85
Respect other people's time	Australian	40	43.72
	Chinese	56	55.19
Make yourself look good	Australian	40	39.80
	Chinese	56	60.68
Rude words	Australian	40	48.36
	Chinese	55	47.50
Attack other participants	Australian	40	45.12
	Chinese	56	53.24
Respect others	Australian	40	45.12
	Chinese	56	53.24
Abuse your power	Australian	40	45.12
	Chinese	56	53.24
Forgive others	Australian	40	45.12
	Chinese	56	53.24

In the teaching of these ten rules of netiquette to 11 year-old Primary school students, Chinese student teachers have higher means than Australian student teachers in all but three categories: teaching about using rude words, teaching about attacking others, and teaching about abusing power. Thus, Chinese student teachers appear to have more positive

attitudes toward teaching netiquette issues than Australians. This might relate to Chinese culture and ethical education. Chinese young people are taught to be polite and tolerant to people around them, and teachers are considered as role models for students (Roschelle et al., 2000). This may be a reason for Chinese student teachers' willingness to teach about netiquette.

6.5.2.2 Results of Whether Student Teachers Want to Teach Netiquette to 11 year-old Primary School Students From Chi-Square Test

In order to compare the views of Australian and Chinese student teachers, a Chi-Square Test was conducted. Results of this test are shown in Table 6.21. Based on the Chi-Square Test, it is evident that, in most aspects, Australian and Chinese student teachers have similar opinions about teaching relevant issues of netiquette to Primary school students. However, for two categories, namely, teaching about respecting other people's time ($\chi^2(1) = 4.295, p < .05$) and teaching about forgiving others ($\chi^2(1) = 5.253, p < .05$), there were significant differences between Australian and Chinese student teachers.

Table 6.21 Views of Australian and Chinese Student teachers about Teaching Netiquette by t-test Statistics

Teaching about;	Chi-Square	df	Asymp. Sig
Share expert knowledge	1.234	1	.267
Adhere to the same standards	3.156	1	.076
Follow the rules	.342	1	.559
Respect other people's time	4.295	1	.038
Make yourself look good	1.422	1	.233
Rude words	.807	1	.369
Attack other participants	1.360	1	.244
Respect others	2.989	1	.084
Abuse your power	2.154	1	.142
Forgive others	5.253	1	.022

Overall, the results of Kruskal Wallis Test indicated that Australian student teachers were more positive than Chinese student teachers in three categories: sharing expert knowledge, adhere to the same standards as practiced in real life, and respecting other participants and their time in chat rooms. Australian student teachers associated more positively than Chinese student teachers with behaving themselves on-line, making themselves look good, and forgiving other people's mistakes. The results for Chinese participants showed that they followed the rules of Internet chat rooms more than Australian participants, and, compared with Australian participants, Chinese respondents used fewer vulgar words, and did not often attack other participants when in Internet chat rooms. Australian and Chinese student teachers hold similar opinions about which issues are most important to teach to 11 year-old Primary school students. However, there were

significantly different opinions between the two groups on teaching about respecting other people's time and forgiving others.

6.6 Legal and Ethics Education about Internet Chat Rooms That Australian and Chinese Student teachers Intend to Teach in the Future

6.6.1 Student teachers' Desire to Provide Legal and Ethics Education About Internet Chat Rooms to 11 Year-old Primary School Students, t-test

Table 6.22 contains t-test results for views held by Australian and Chinese student teachers on legal and ethics education for Internet chat rooms.

Table 6.22 Views Held by Australian and Chinese Student teachers on Legal and Ethics Education for Internet Chat Rooms

T-test for Equality of Means		t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference
Children and youth	Australian	3.086	53.073	.003	.689	.223
	Chinese	3.414	94	.001	.689	.202
Physical development	Australian	.133	56.572	.895	.025	.188
	Chinese	.145	94	.885	.025	.172
Cyber-bullying	Australian	.375	59.486	.709	.082	.219
	Chinese	.405	94	.686	.082	.203
Internet pornography	Australian	-1.846	73.168	.069	-.421	.228
	Chinese	-1.910	94	.059	-.421	.221
Sexual abuse	Australian	1.400	59.769	.167	.300	.214
	Chinese	1.512	94	.134	.300	.198
Cyber-stalking	Australian	2.002	58.701	.050	.421	.211
	Chinese	2.169	94	.033	.421	.194
Internet addiction	Australian	1.475	61.006	.145	.296	.201
	Chinese	1.585	94	.116	.296	.187
Psychology of Internet behaviour	Australian	3.087	63.846	.003	.639	.207
	Chinese	3.287	94	.001	.639	.194
Moral development of a person	Australian	1.837	55.997	.071	.361	.197
	Chinese	2.009	93	.047	.361	.180
Netiquette						

From the statistics shown in Table 6.22, it can be seen that there are no significant differences in most aspects between Australian and Chinese student teachers, except for netiquette practices and attitudes toward teaching specific netiquette practices. For example,

physical development, Australian ($t(53.073) = 3.086, p < .01$), Chinese ($t(94) = 3.414, p < .01$); cyber-bullying, Australian ($t(56.572) = .133, p > .05$), Chinese ($t(94) = .145, p > .05$). However, for the variable of netiquette, Australian and Chinese participants hold different opinions: Australian ($t(55.997) = 1.837, p > .05$), Chinese ($t(93) = 2.009, p > .05$).

6.6.2 Student teachers' Desire to Provide Legal and Ethics Education About Internet Chat Rooms to 11 Year-old Primary School Students, Mean Statistics

Table 6.23 shows the mean statistics of views held by Australian and Chinese student teachers on legal and ethics education for Internet chat rooms.

Table 6.23 Views held by Australian and Chinese Student teachers on Legal and Ethics Education for Internet Chat Rooms, Mean Statistics

		N	Mean	Std. Deviation	Std. Error Mean
Children and youth	Australian	40	3.53	1.301	.206
Physical development	Chinese	56	4.21	.653	.087
Cyber-bullying	Australian	40	3.85	1.075	.170
	Chinese	56	3.88	.605	.081
Internet pornography	Australian	40	3.65	1.231	.195
	Chinese	56	3.73	.751	.100
Sexual abuse	Australian	40	3.85	1.189	.188
	Chinese	56	3.43	.970	.130
Cyber-stalking	Australian	40	3.70	1.203	.190
	Chinese	56	4.00	.739	.099
Internet addiction	Australian	40	3.65	1.189	.188
	Chinese	56	4.07	.710	.095
Psychology of	Australian	40	3.78	1.121	.177
Internet behaviour	Chinese	56	4.07	.710	.095
Moral development of	Australian	40	3.78	1.137	.180
a person	Chinese	56	4.34	.769	.103
Netiquette	Australian	40	3.69	1.104	.177
	Chinese	56	4.05	.644	.086

These statistics uncover an interesting trend. All Australian student teachers have means between 3.53 and 3.85, which indicates that in all aspects of legal and ethics education about Internet chat rooms, they neither agree nor disagree. However, Chinese student teachers agree on teaching relevant legal and ethics education in most aspects, such

as Internet addiction and moral development. Chinese participants indicated “neither agree nor disagree”, for the remaining aspects of legal and ethics education.

6.7 Qualitative Results of Teaching Netiquette and Legal Issues to Future Primary School Students

In addition to analysing the quantitative variables discussed above, this study investigated the opinions of Australian and Chinese student teachers on whether they think netiquette and legal issues will affect children’s on-line chat room activities over the next 10 years of their teaching career. These data are presented below.

6.7.1 Qualitative Results of Teaching Netiquette to Future Primary School Students

Two qualitative questions appeared in the questionnaire. The first question asked, “Over the next 10 years of your teaching career, how do you think netiquette will affect children’s on-line chat rooms activities?” Some 17 Australian participants and 19 Chinese completed this question. The Chinese student teachers’ comments were translated into English and are shown in Table 6.24.

Table 6.24 Examples of Comments by Australian and Chinese Student teachers on Their Future Teaching Careers and the Influence of Netiquette on Children's On-line Chat Room Activities.

Australian student teachers	Chinese student teachers
Children should be taught about netiquette because the Internet is now frequently used by children and will continue like this in the future. (female, 22 years)	Good netiquette is good for children to develop their moral behaviour. (female, 19 years)
I am not sure. (female, 22 years)	Teaching children to judge right or wrong. The key is to teach them acceptable behaviour in daily life which is essential to form good moral behaviour. (female, 19 years)
It will affect it totally. (male, 22 years)	Parents and teachers should work together to use and impart netiquette. (female, 19 years)
I don't think I would use chat rooms for teaching--too dangerous. (female, 23 years)	Children are too young to distinguish right or wrong on-line. Thus, teachers take a role to teach them good netiquette which is good for them to protect themselves in Internet chat rooms. (female, 19 years)
Because more time is spent now on chat rooms, the children will need to learn netiquette and see that it is as important as everyday etiquette. (female, 24 years)	Netiquette in the virtual world can exert a subtle influence on children in their real life. (female, 19 years)
The same as basic manners in classes. I think it will be an increasing issue with increase in technology use. (female, 24 years)	It may make children know dirty words in their early ages. (male, 19 years)
I hope they learn netiquette and actually apply what they have learnt. (female, 25 years)	To some extent, netiquette can limit immoral behaviour. (male, 19 years)
Hopefully it would affect students' behaviour outside of chat rooms. Chat rooms that are monitored by the education department would allow students to chat safely and help promote netiquette. (female, 25 years)	I won't forbid my students to participate in Internet chat rooms, but they should respect other people's privacy, and should not hurt others. (male, 20 years)
Won't have much effect at all on children until they have to start sending emails and communicating through the net to employers or parents. (male, 25 years)	Netiquette is good for children to control themselves. (male, 20 years)
Greatly — sexual predators are ever present. (male, 26 years)	Netiquette can inhibit them to do immoral behaviour. (female, 20 years)
It is important for kids to learn to accept the same rights and responsibilities on the net as in real life. (female, 26 years)	Children can understand which behaviour is immoral and illegal, or praised, by learning netiquette. Then they are able to behave themselves following these rules of netiquette. (female, 20 years)

Australian student teachers (cont.)	Chinese student teachers (cont.)
It will affect children's on-line activities as they will witness a variety of netiquette behaviour. We have to teach them the correct netiquette to use on the net. (female, 26 years)	In the Primary school, most students like teachers and even consider teachers as models. Thus, we should teach relevant moral knowledge to them. We also should obey netiquette. (female, 20 years)
It will make them less active. (female, 27 years)	Formal teaching about netiquette can normalise children's behaviour and chatting vocabulary in the Internet chat rooms. (female, 21 years)
They need to be more informed of the dangers of the evil people who can be found in any chat room at any time (female, 28 years)	Netiquette is able to normalise children's behaviour and avoid some problems. (female, 21 years)
I think they should not be in chat rooms. (female, 30 years)	Teaching netiquette can make students know the right standard they have to follow. (female, 21 years)
Children need to be aware of netiquette so bullying, harassment etc. does not happen. Hopefully it will have a positive affect. (female, 35 years)	Moral education is a necessary and important issue. Thus, netiquette is good for children to learn how to respect other people. (female, 22 years)
Children may have good behaviour once they know some rules of the netiquette. (male, 38 years)	It should make it efficient. (female, 22 years)
	Yes, I think so. (female, 22 years)
	To form a good netiquette, children can follow good moral standards and won't hurt others on-line. (female, 22 years)

Based on the categorical analysis of these comments, most of Australian student teachers (16) think knowledge of netiquette is necessary for Primary school students. However, there is one student teacher who does not believe that on-line chatting is a beneficial or safe teaching tool because he becomes worried about children being affected by irresponsible behaviour. Two Australian student teachers consider "the children will need to learn netiquette and see that it is as important as everyday etiquette." One Australian student teacher particularly pointed to teaching netiquette for avoiding encountering sexual predators.

All 19 Chinese student teachers consider teaching netiquette a necessary program for Primary school students, which may be beneficial not only for on-line activities, but may also affect children's behaviour outside of chat rooms. Only one male student teacher considers that students may get to know dirty words if they did not encounter dangerous issues on-line. Two Chinese student teachers suggested that teachers should work with students together to help children. Another two student teachers view the virtual world interacting with real daily life, and they believe that netiquette helps students' behaviour on-line as well as in daily life.

Student teachers in both Australia and China suggested monitoring of students' on-line activities should be undertaken by parents, teachers, and education departments to ensure students chat safely and to help promote netiquette. Overall, netiquette is seen by both Australian and Chinese student teachers as an important moral normalisation that should be taught to Primary school students in order to protect them from potential dangers.

6.7.2 Qualitative Results of Teaching Legal Issues to Future Primary School Students

The second qualitative question asked, "Over the next 10 years of your teaching career, how do you think legal issues will control 11 year-old children's Internet chat room activities?" Results for this question are shown in Table 6.25.

Table 6.25 Examples of Opinions of Australian and Chinese Student teachers on the Influence of Legal Issues on Children's On-line Chat Room Activities in Their Future Teaching careers

Australian student teachers	Chinese student teachers
Legal issues will constantly be an issue in the future because the Internet will continue to grow in popularity. (female, 22 years)	Need to let them know basic legal knowledge. If they have violated law, the punishment should be conducted at the same standard with what they do in real world. (female, 19 years)
It may well restrict use. (female, 22 years)	Websites should be subject to stronger legitimate control. (female, 19 years)
I hope there are laws against kids using certain sites in the future and laws to protect them from these issues in the future. (female, 23 years)	Children should form good on-line habits since they know law knowledge. Let them know what to do what not to do; in that way their behaviour will be restrained. (male, 19 years)
There will be restrictions and control in accessing unwanted web sites. (male, 23 years)	Certain punishment can make children fear and then law may restrain their behaviour. (female, 19 years)
Limit usage it - times, sites etc. (female, 24 years)	In daily life, children ought to accept corrective education in order to let them know the relevant law article, thus restraining their behaviours. (female, 19 years)
It won't. They can't be controlled. (female, 24)	Internet laws should be improved and carried out to bring them into effect. (female, 19 years)
I am not sure. (female, 24 years)	Law needs to be popularised. (female, 19 years)
I think legal issues should be lied more than they are now. (male, 24 years)	Young students will know which behaviour is good or bad through teaching legal knowledge. (male, 19 years)
Not that much can legal issues control it. (male, 24 years)	It is beneficial to defend their rights; meanwhile legislations can restrain students' behaviour. (female, 19 years)
Strict boundaries and rules. (male, 25 years)	Reinforce education about law knowledge. Foster moral behaviour to the children. (male, 20 years)
It won't make a difference. (male, 25 years)	Teaching law knowledge to children can let them know some network abuse. They should try their best to control self for others live better. (female, 20 years)
Legal issues are going to be helpful to keep children safe. (female, 25 years)	The law knowledge can let children know good and bad behaviour so follow the law on-line. (male, 20 years)
I am not sure. (female, 25)	Strictly supervise the content in websites. Strictly confine children's time of playing on the network (female, 20 years)
Also won't have much effect because there is lots of legislation now but is being ignored and breached. (female, 25 years)	Ought to issue special law, restraining distinct behaviour of the children in network chat room (female, 20 years)

Australian student teachers (cont.)	Chinese student teachers (cont.)
Not sure - may stop children using chat sites in schools? (male, 26 years)	Primary school students know the correlative legal knowledge and possible consequences, which can make them conscious of law during their Internet chatting. (female, 20 years)
Don't think it will. (female, 26 years)	The content of the law demonstrates that some conducts would be punished while children chat in the Internet. Thereby, it restricts children's behaviours and generates a sort of terror for children. (female, 20 years)
They will be at the forefront. (female, 26 years)	Teachers in schools should educate the child relevant legal knowledge. (female, 20 years)
I feel that the laws will only increase. (female, 27 years)	The law should crack down on some bad behaviours in the Internet chat-room. (female, 20 years)
Legal issues of the Internet change every day so it is hard to say. (female, 27 years)	The moral education should be in progress from childhood. (female, 20 years)
There need to be stronger laws/ regulations of Internet use - there are too many predators. Children's use needs to be monitored (female, 28 years)	Asking mandatory popularize law knowledge, let the children know law, and then, using a law to restrain the children (female, 21 years)
It will depend on government legislation but I think it will be more heavily regulated. (female, 29 years)	Parents should monitor and teach children at home. (female, 21 years)
They won't use chat rooms. Too dangerous. (female, 30 years)	Strengthen law would be good for young people in the Internet chat room. (male, 21 years)
Hopefully a lot. (female, 30 years)	Do not allow teenagers to use Internet. Adults have to monitor. (female, 21 years)
I am hoping that children will be protected in all Internet circumstances and educated appropriately. (female, 31 years)	The law should reinforce control of Internet cafés, and all adults working in the Internet café should be taught legal issues. (female, 21 years)
I am not sure. (female, 34 years)	Not sure. (female, 21 years)
Yes, I would say so. (female, 35 years)	I think that the websites ought to be civilised in order to develop a safe network environment. (female, 22 years)
I think they should not be in chat rooms. (male, 38 years)	

Table 6.25 shows that among 27 Australian student teachers, about four Australian student teachers were not as confident as their Chinese counterparts that laws could control on-line activities. Some 5 participants are not sure of the influence of Legal Issues on

Children's On-line Chat Room Activities. This uncertainty can be seen in such comments as "I am not sure" (female, 34) and "It won't. They can't be controlled" (female, 24). Some Australian student teachers suggested that "stronger laws/ regulations" would benefit children when they ventured onto the Internet because "there are too many predators [there]." Both groups of respondents, Australian and Chinese, exhibited a strong desire for children to be protected and monitored on-line.

Some 25 of 26 Chinese student teachers consider teaching legal knowledge about Internet chat rooms is a good way to protect children on-line. In their future careers, they expect to teach legal knowledge to children. They also believe children would be protected if they knew the relevant legal punishments. Chinese student teachers also mentioned legal supervision of Internet cafés, and they thought parents should monitor and teach their children how to act on-line. Only one Chinese student teacher shows she is not sure about the results of applying cyber legal knowledge for her future students.

6.8 Summary

This chapter provided the results from the quantitative and qualitative analyses of the questionnaire data collected from Australian and Chinese student teachers. Three specific research questions concerning Australian and Chinese Primary school student teachers' Internet chat rooms activities and relevant netiquette and legal issues were investigated. This chapter reported the participants' demographic characteristics then provided the results of both quantitative and qualitative data analysis.

The major findings of this study are that most Chinese student teachers in this

sample are female and younger than their Australian counterparts. Neither Australian nor Chinese student teachers spent more than ten hours per week in Internet chat rooms, and most of them spent no more than four hours per week in these virtual spaces. Over one quarter of Australian respondents accessed the Internet from home, while almost half of Chinese student teachers chose Internet caf  s from which to access the Internet.

After analysing three specific on-line activities, namely, playing on-line games, making friends and sexual solicitation, and cyber-bullying, the results showed that there are no significant differences between Australian and Chinese student teachers' views about most influences of playing on-line games. As for the influences of making friends and sexual solicitation, most Chinese student teachers thought that Internet chat rooms are unsafe places to make friends and are unlikely to provide reliable information. Australian student teachers believed that Internet chat rooms are safe places to make friends, but, like the Chinese student teachers, did not rely on the information they obtained on-line. Concerning cyber-bullying, most Chinese student teachers believed that they would not be affected by these activities, while many Australian student teachers admitted that they would be affected by these cyber-bullying behaviours.

Australian and Chinese student teachers were asked whether they would teach netiquette skills associated with three specific on-line activities to their future 11 year-old Primary school students. They responded that they would like to teach relevant issues about playing on-line games, but not about sexually arousing issues. However, Australian and Chinese student teachers hold significantly different opinions about teaching the netiquette of making friends and sexual solicitation practices in Internet chat rooms. Student teachers

from both countries agreed that imparting relevant knowledge about cyber-bullying would help protect young students.

The results obtained from the qualitative data showed that most Australian student teachers consider teaching knowledge of netiquette to Primary school students necessary, although some worried that children would be exposed to bad behaviour through it. All Chinese student teachers agreed that their future students should be taught netiquette. Australian student teachers indicated that they were not confident that legislation could control on-line activities, and were, therefore, unsure whether they would teach their students about legal issues. However, the majority of Chinese participants believed that the law is a good conduit for controlling the Internet and could purify the environment of on-line activities. Thus, they wanted to teach relevant legal knowledge to their future Primary school students. Moreover, student teachers in both Australia and China suggested monitoring should be undertaken by parents, teachers, and educational departments so as to allow students to chat safely.

The next chapter, Chapter Seven, discusses these findings and their implications for educational practice.

Chapter Seven

Discussion and Conclusion

7.1 Introduction

This dissertation has explored three popular activities in Internet chat rooms and the consequences and effects of those activities on a sample of Australian and Chinese Primary school student teachers' intended teaching 11 year-old Primary school students. This study also investigated the views of these student teachers about teaching relevant cyber-ethics and cyber-legal knowledge to 11 year-old Primary school students. In this chapter, the qualitative and quantitative results from Australian and Chinese student teachers are discussed and compared. Cyber Psychological Theory, Moral Development Theory, and Space Transition Theory will be applied to explain the findings. Finally, while accounting for the limitations of this work, implications and recommendations are provided for future study.

7.2 Quantitative Discussion

7.2.1 Age, Gender, and Hours On-line

The questionnaire showed that this sample of Chinese student teachers was younger than the Australian sample. This age difference derives from the Chinese education system's requirement that students graduate from high school between the ages of 16 and 20. When Chinese young people attend "formal" university, the equivalent to Australian

universities, they must study full-time. Because they move directly from high school to university, Chinese students normally commence their studies by age 20 years. In contrast, in Australia, students may study part-time or full-time and may commence their university studies at any age. Once they have completed secondary school around 18 years old or at a mature age, they may start to work or get married. After many years, they may choose to study again. Hence, the average age of the Australian student teachers was older than the average age of Chinese student teachers.

Female student teachers constituted the largest proportion of the sample in both countries. In many countries, female teachers significantly outnumber male teachers in Primary schools (Rayman-Read, 2000). Given the predominance of female Primary school teachers, it is to be expected that a corresponding predominance of female Primary school student teachers exists in this sample of university student teachers.

In the 1980s, boys were using the Internet more than girls; however, this dominance of males on the Internet has been challenged. Now, young women and girls are engaged in a variety of on-line activities (Rayman-Read, 2000). They are free to join discussions, play games, and visit controversial sites (Rayman-Read, 2000). This increase in girls using Internet facilities complements the need for increased education about Internet facilities and netiquette in Primary schools

The results of the questionnaire also showed that the majority of Australian and Chinese student teachers had not spent more than four hours in Internet chat rooms in the week prior to completing the questionnaire. Nie and Erbring (2000) found that users who spend five or more hours per week on-line experience significant changes in their lives.

The Nie and Erbring's study examined time spent on-line. However, this study specifically asked about time spent in chat rooms. It is quite conceivable that the participants of this study may have spent well over five hours on-line if time spent on browsing, research and e-mail was counted. From this piece of information it can be assumed that participants in the present study may not be affected by their limited use of the Internet. However, the results showed that various on-line activities did influence these student teachers even though they reported that they did not stay on-line for many hours.

7.2.2 The Influences of Three On-line Activities: Analysis

This study investigated the influences of three specific on-line activities, namely; playing on-line games; making friends and sexual solicitation; and cyber-bullying. The findings of each are discussed in detail below.

7.2.2.1 The Influences of Playing On-line Games

When student teachers were asked if they were affected by playing on-line games and what effects occurred, Chinese student teachers reported that such activity involved them in more social interaction both on-line and in their daily lives. This apparent conflict in responses, most likely results from the fact that the study explored Internet chat room behaviour only during the week prior to completing the questionnaire, and did not take into consideration any time prior to that week. It can be speculated, then, that the Chinese student teachers are attracted by on-line games and had experienced playing them before the survey was conducted, which is similar to their counterparts in other countries (Krahe & Moller, 2004; Sherry, de Souza, & Greenbery, 2003).

The majority of Australian and Chinese student teachers did not consider playing on-line games a risk factor in developing aggressive thoughts, hostile behaviour, or prosocial behaviour. This finding differed from those reported in Anderson and Bushman's study (2001), which found a relationship between anxiety and playing highly aggressive video games on the Internet. Two potential reasons for this difference in findings exist. First, aggressive thoughts, hostile behaviour, and prosocial behaviour may depend on the level of game violence (Ballard & Wiest, 1996). The student teachers said they were not adversely affected by playing games, perhaps because the ones they chose did not have a high level of aggressive content. Second, university students are sufficiently computer literate to play on-line games for fun and relaxation (Young et al., 2003). Thus, the possibility exists that university students' level of maturity protects them from the negative effects of on-line gaming.

Based on Cyber Psychological Theory, it may be posited that many university students do not have the potential for violence in the real world, so they are not prone to the disinhibition of aggressive impulses via playing on-line games in the virtual world (Suler, 2002). Moreover, university students with high education levels may reach a higher moral developmental stage than children. They could be more self-disciplined due to their exercising of higher moral reasoning.

7.2.2.2 The Influences of Making Friends and Sexual Solicitation

According to Lenhart et al., (2001) young people, especially teenagers, use the Internet to make new friends. Clay's (2000) research in the United States found that the Internet is a safe place to form and maintain relationships. This research matches the

opinion of Australian student teacher. However, it is in conflict with the opinions of the Chinese student teachers. The present research found that while the Australian respondents believed Internet chat rooms were safe places to make friends, Chinese respondents did not.

The Australian and Chinese student teachers, alike, said they did not trust information obtained in Internet chat rooms. This result is consistent with previous research (Reid, 1998) which explored the contention that “American participants feel that they cannot trust anyone, that everything on-line can be a lie, and that no one tells anyone who they really are” (p. 36). This result is also consistent with the Space Transition Theory (Jaishankar, 2008) which separates real life from life on-line. The characteristics of the Internet provide anonymity, and in virtual spaces a participant may masquerade as another person. In other words, offenders have the opportunity to commit cyber-crimes by hiding their true identities. Thus, it is not surprising that computer savvy university student teachers realise that potentially unsafe venues exist on the Internet, and question the truth of on-line information.

Most Australian and Chinese student teachers regarded their on-line sexual relationships as a serious issue. Most of them had not experienced a sexual verbal assault, sexual solicitation, or sexual advances in Internet chat rooms. This lack of sexual overtures differed from the findings of an i-SAFE (2006) survey. In that survey, 65% of American high school students admitted to experiencing unsafe, inappropriate, or illegal approaches on-line. The lack of sexual advances experienced by the Australian and Chinese student teachers can be attributed to the limited amount of time they spent on the Internet and the close relationships they enjoyed with their social environment. The risk of being attacked

on-line can be minimised, which is consistent with Ybarra's findings (2004). Another qualitative study of 15 Czech Internet users, all between the ages of 12 and 22 years, found that five participants reported they communicated about sexual topics and explored their sexuality on the Internet through virtual dating and cyber-sex activities (Smahel, 2003).

Analysis of the data in the present study yielded three inter-related motivations: student teachers were aware of the sexual risks inherent in Internet chat rooms and refused to become involved in conversations where those risks might be encountered; they were not seeking emotional and sexual outlets; and they protected themselves from possible sexual solicitation by refusing to trust the information Internet chat rooms provided. These three motivations can be explained with psychological and moral development theories. Recognizing and refusing sexual lures may result from the greater moral development levels Australian and Chinese university student teachers have reached (Kohlberg, 1969). Consequently, negative forms of interaction such as date rape can be avoided by strengthened cyber legislation as well as teaching netiquette and cyber legal issues (Joinson, 2003).

7.2.2.3 The Influences of Cyber-bullying

A larger number of Australian student teachers than Chinese student teachers indicated they had been victims of cyber-bullying. No literature has been found on the issue of cyber-bullies targeting student teachers. However, there have been some studies of adolescents being targeted.

Why students engage in cyber-bullying behaviour or become the targets of cyber-bullies is a complex question with many partial answers. From the cyber-psychological

perspective, cyber-bullies' behaviours can be explained by the disinhibition effect that may result in the revival of a suppressed conditioned response (Suler, 1996). The disinhibition effect includes benign disinhibition and toxic disinhibition. Cyber-bullies are in the toxic category, performing violent on-line activities that they could not, or are afraid to, do in real life (Suler, 2002). Because the Internet is a virtual world where physical limitations do not prevail, a participant could attack anyone in Internet chat rooms by spreading rumours and having little motivation to take responsibility for those actions.

Kandell's study (1998) found that university students strive to develop their personal identities and to establish meaningful interpersonal relationships or even intimacy in their on-line activities. This phenomenon can be attributed to several factors. For example, students living away from their parents' guidance have more freedom to direct their own use of the Internet. While this freedom can be beneficial for these maturing teenagers, it also leaves university students more vulnerable than other groups to develop problematic Internet practices (Kandell, 1998).

7.2.3 Teaching Issues in Relation to Three On-line Activities: Analysis

Based on the influences of the three on-line activities, this study also sought to determine to what extent Australian and Chinese student teachers would like to teach relevant knowledge about these activities to their future Primary school students.

7.2.3.1 Teaching Issues of Playing On-line Games

Data from this study showed that student teachers in both Australia and China would like to teach relevant knowledge to their students on the impact of exposure to

violence through playing on-line games. Consequently, future teachers would most like to prevent the development of aggressive thoughts, hostile behaviour, destructive social interaction, and prosocial behaviour. However, Chinese student teachers did not want to teach relevant issues about sexual arousal that playing on-line games might initiate, while the Australian participants were willing to consider teaching these topics.

The relationship between playing games and aggressive behaviour has been demonstrated in numerous studies (Anderson & Bushman, 2001). In many on-line games, players are required to buy weapons and develop combat skills to progress through the game levels. As the player moves into higher levels, s/he encounters more aggressive opponents. In this way, aggressive thoughts, hostile behaviour, destructive social interaction, and pro-social behaviour can manifest during play. Primary school children will not necessarily realise the potentially dangerous consequences if they are passionate about playing games. Teachers then need to take responsibility for protecting students from possible negative consequences that playing games may bring by using suitable teaching pedagogies.

7.2.3.2 Teaching Issues of Making Friends and Sexual Solicitation

For the third specific on-line activity, making friends and sexual solicitation, the student teachers in the two countries held significantly different opinions about a series of teaching issues. Although the Chinese respondents believed that certain sexually explicit material is dangerous to children, they were not willing to consider teaching relevant sexual solicitation knowledge. This reluctance may be understood in light of Chinese culture and historical development.

From 1966 to 1979, during the “Cultural Revolution”, sexuality was considered the worst political enemy and discussing sexuality was forbidden in schools and elsewhere (Pan, 2005). Following the economic reformation that began in 1979, sexuality began to appear in lectures and scientific books. Today, rapid economic and social development has brought a heightened sexual awareness to both adults and young people, especially since the age of puberty has dropped (Pan, 2004a). Most Chinese people call this time an era of “sexual revolution” (Pan, 2004a). However, sexuality is still a sensitive issue in China and is rarely spoken about in public. Teachers and parents prefer to ask students to read information rather than teach them through lectures in class or discussion at home (Lu, 2006; Goldman & Zhang, in press). They are afraid that students may be stimulated by sexuality education and engage in sexual experimentation. Parents and teachers have even blamed sexuality educators for accelerating moral degeneration and encouraging criminal behaviour in teenagers (Chen, 2003).

The Australian student teachers, however, supported teaching relevant sexual information to their future students. This willingness to speak about sexuality tends to reflect Australian culture. Sexuality appears to be a more acceptable topic in Australia than in China, and people seem to consider speaking about it as a common matter. According to Ali (2005), people sought on-line relationships because they could not express their interpersonal or sexual needs in real life. This willingness to express sexual needs in on-line forums places children at risk. Therefore, teaching information about sexuality is important so that Primary school students have appropriate and useful sexual knowledge, attitudes, and opinions (Goldman & Goldman, 1982). This is particularly important, especially in the

light of the earlier maturing of both girls and boys. Addressing issues of sexuality with their future students is viewed as a necessary and important task by Australian student teachers.

7.2.3.3 Teaching Issues of Cyber-bullying

This sample of Australian and Chinese student teachers held similar views on providing knowledge about cyber-bullying to their students, including posting pictures, pretending to be another person, and spreading lies and rumours.

This finding demonstrates that those in the sample realise the importance of teaching about cyber-bullying. According to a survey conducted by Hinduja and Patchin (2005) in the U.S., about 80% of participants reported that they had had experiences with cyber-bullying when they were on-line. This finding is consistent with McLean's (2007) suggestion. McLean pointed out that cyber-bullying has become a more serious issue than face-to-face bullying. Schools, educators, parents, and other people who work with young people should take some necessary precautions for children in order to avoid attacks by cyber-bullies (McLean, 2007). Results from these student teachers also mirror those of the National Safe Schools Framework by the Australian Government and State and Territory government and non-government school authorities (McLean, 2007). Similar to Campbell (2005), this finding suggests that appropriate curriculum programs that teach values education should be provided to protect young people on-line and to encourage positive behaviours. Campbell (2005) also suggested that to prevent cyber-bullying, teachers, students, parents, and community members should work together because communal action is likely to be more effective than purely classroom-based approaches.

Taking into consideration the Cyber-Psychological, the Moral Development, and the Space Transition theories, teachers should be aware of the psychological changes children experience and consider what children need at each developmental stage. The resulting teaching strategies should be designed based on the different moral levels exhibited by children. Moreover, some on-line activities are more likely than others to produce potentially dangerous, even illegal, behaviours. By understanding the Space Transition Theory, attitudes and signs of developing problems may be detected by educators and taught to students.

7.2.4 Netiquette

The results from analysis of data on netiquette showed that the Australian student teachers were more likely to share expert knowledge, adhere to the same standards, respect other people's time, make themselves look good, respect others, and forgive others, than were the Chinese student teachers. However, most Australian student teachers also admitted to abusing their power and attacking other participants in Internet chat rooms. In contrast, the Chinese participants of this study mostly followed the rules of Internet chat rooms, and did not often attack other participants on-line. These behaviours may arise from the differences in educational goals between Australia and China. Freedom and creativity are important educational objectives in the Australian educational system, which encourages students to provide their own opinion both on-line and off-line. Young people there can freely behave on-line in ways that can result in abuse or attacks. In the Chinese context, obedience, endurance, forgiveness, courtesy and endeavor are considered the main

tenets of Chinese education, and these goals are rooted in Chinese history and culture.

From a young age, Chinese children are taught to follow different rules in different situations, and to obey older people and authority, and so in the virtual world it is not surprising to find Chinese young people following the rules of Internet chat rooms and rarely attacking others.

Regarding the student teachers' views on teaching Shea's ten core rules (1994) of netiquette to 11 year-old Primary school students, the results showed that Australian and Chinese student teachers hold similar opinions about which issues will be most important to include in their teaching in their future careers. However, Chinese participants placed more emphasis on teaching about respecting other people's time and forgiving others than did the Australian participants. As already discussed, Chinese student teachers still follow the traditional educational spirit, such as teaching forgiveness on-line because forgiveness is viewed as a virtue.

7.2.5 Cyber-Ethics and Cyber-Legal Education About Internet Chat Rooms

All Australian student teachers indicated that in all aspects of ethics and legal education about Internet chat rooms, they neither agreed nor disagreed conclusively. Differing from the Australians, the Chinese student teachers agreed about teaching most aspects of relevant ethics and legal education, such as Internet addiction and moral development. They indicated that they "neither agree nor disagree" with the remaining aspects of ethics and legal education. These findings are related to the consequences of

using the Internet in China. The number of Chinese users has reached to 338 million till June 2009 (CNNIC, 2009). Accompanying this growth in use, Internet addiction has become a serious issue among Chinese youth (Li, 2004). Li proposed that there is a link between Chinese adolescent Internet addiction and academic achievement.

Additionally, many psychologists agree that education plays the most crucial role in the field of moral development (Piaget, 1950; Kohlberg, 1969; Rest, 1986). In China, teaching ethics is not a new phenomenon. From Primary school through to tertiary education, an ethics and moral curriculum is considered an important part of school and university programs. Now that the Internet is becoming popular, the ethics associated with its usage needs to adapt to this changing context. Governments and organizations realize the importance of updating ethical knowledge for young people. For example, the Chinese Youth League (2001) published a National Internet Civilization Convention for Teenagers in order to enhance the self-discipline of youth. It is not surprising then that Chinese student teachers would like to teach about issues concerning Internet addiction and moral development. Considering the influence of the Internet, cyber-ethics and cyber-legal courses should be designed to help students recognise potentially dangerous on-line situations, and provide them with specific skills to function safely in their various on-line activities.

Although the Australian student teachers did not strongly agree with teaching cyber-ethics and cyber-legal issues, the Queensland Studies Authority (QSA) has incorporated the Information and Communication Technology Education Curriculum and a Legal Studies Syllabus into its compulsory education system (QSA, 2007). The importance

of legal education in association with technological development has been acknowledged by the Queensland Department of Education. However, student teachers seem to be unaffected by legal education. This research implies that student teachers, as future educators should be aware of the importance of legal studies related to the Internet. Considering the limitations of legislation managing the Internet, cyber-ethics studies also need to be addressed in Primary, Middle and Secondary schools so that students may form appropriate on-line behaviours. According to Siegel (2004), people who obey the law have significantly higher moral development than criminals. However, Moral Development Theory further divides those who avoid committing crimes, suggesting that people who obey the law simply to avoid punishment, or are mainly characterised by self-interest, are more likely to commit crimes when they feel they will not be caught, while those who consider the law as a code that benefits all of society, tend to exhibit non-criminal behaviour even when they remain anonymous (Siegel, 2004).

7.3 Qualitative Discussion

7.3.1 Teaching Netiquette to Future Primary School Students

Consistent with teaching cyber-ethics, the qualitative data showed that some Australian student teachers did not envisage teaching netiquette to Primary school students over the next decade of their teaching careers because they were not sure what the consequences of teaching it would be. However, all of the Chinese student teachers believed teaching netiquette to be a necessary program for Primary school students. In their opinions, learning netiquette would help Primary school students understand the rules of

on-line behaviour. These student teachers also expressed the hope that when students could recognise some symptoms of bad behaviour, they could then protect themselves and avoid possible negative consequences.

Student teachers from both countries suggested that parents, teachers and education departments should have a greater role to play in supervising children on-line in order to avoid potential dangers. This opinion is in accord with Kerawalla and Crook's (2002) finding that teachers should extend their duty of care with students using computers in order to protect them from dangerous on-line factors. This opinion is also consistent with Ali's (2005) study that found that, in Australia, approximately two thirds of teenagers demonstrated a need for "professional help in dealing with the problems of chat room use" (p. 1).

7.3.2 Teaching Legal Issues About Internet Chat Rooms to Primary School Students

Most Chinese student teachers considered teaching legal knowledge about Internet chat rooms a useful way to protect children on-line. They also mentioned the legal supervision of Internet cafés, and thought that parents should monitor and teach their children as well. Compared to the Chinese responses, some Australian student teachers showed less confidence that laws were sufficient to control on-line activities. Some of the Australian respondents suggested "stronger laws/ regulations" would benefit Internet users because "there are too many predators". However, at the same time, they do want children to be monitored.

In the survey, Chinese participants frequently mentioned Internet cafés, called Wang ba (网吧) in China. A large numbers of such cafés are viewed as morally unsuitable public places, and a source of many juvenile problems in China (Jenkins, 2002). Since June 2007, an amendment to the Chinese law on the protection of minors has been enforced by the Standing Committee of the National People's Congress. Because of the enforcement of this law, Chinese student teachers are confident that they can teach cyber-legal knowledge to their students. Compared to Chinese Internet cafés, Australian Internet cafés are accessible public spaces for people to visit and are not usually associated with crime.

The majority of the Chinese student teachers and some of the Australian student teachers supported teaching legal knowledge about Internet chat rooms to children, which could reflect a psychological perspective. Psychologists have found that people who use computer-mediated communication (CMC) have lower public self-awareness than during communication face-to-face (Matheson & Zanna, 1988). This lower public self-awareness means that on-line behaviours involve less monitoring and more focus on internal needs (Joinson, 2003). Internet chat rooms provide opportunities for people to open up and even commit a crime. Another reason people feel empowered to break the law while on-line is that their identities and the information they present on the Internet cannot be verified (Abelson & Lessig, 1998; Jaishankar, 2008; Suler, 2005). Incorporating an understanding of how and why people behave differently in physical space than in cyberspace, augments the process of teaching cyber-legal knowledge, and can make that knowledge more practical and durable.

When children are too young to recognise the danger of, and do not have the skills

to safely use, on-line facilities, parents and teachers may forbid them to access the Internet. However, this approach would limit the growth of young people in this technological age. Instead, parents and educators must talk to children about on-line dangers and teach them the skills necessary to avoid such dangers in the virtual world. Part of this education about the Internet must also instill the values necessary to make safe choices. Gradually, given more freedom, children can learn appropriate on-line behaviour. When children reach higher levels of moral development, they may develop a strong personal sense of right and wrong rather than relying on parents or teachers for direction. Well-ingrained morals will enable children to recognise potentially unsafe situations and gain practical skills to work through dangers. School students should be taught that inappropriate content may exist within virtual environments, and learn to quickly exit inappropriate sites. Therefore, education and supervision are important in developing appropriate behaviour. Teachers should develop codes of netiquette and impart legal education to build social approval and disapproval of certain virtual behaviours.

7.4 Limitations

This study appears to be one of the first to examine Australian and Chinese Primary School student teachers' on-line activities on the Internet. However, it has limitations. First, the data from this study are based on the activities student teachers undertook on-line during the week directly before the survey was conducted. Thus, the study does not address activities the subjects participated in over a longer term, such as the last year.

Second, the target population was second-year students in the universities' Faculty of Education. Other university students studying other majors in other faculties may disclose different behaviours in Internet chat rooms. Moreover, the sample size (n=96) is not big and it is separated into two groups. The findings here thus cannot be generalized to other faculties or social communities. However, it shows trends and perceptions that may lead to recommendations for future research.

Finally, because quantitative studies are used to analyse the behaviour of large groups and the findings generalised, the results here may be affected by this researcher's subjective understanding of the data. However, qualitative studies are designed to describe the uniqueness of each case and recognise that heterogeneity is inevitable. In addition, only two qualitative questions were included in the questionnaire, a number that may be considered insufficient for exploring participants' deep understanding of the three on-line activities. Further, respondents may have misreported behavioural or demographic information since self-reported measures were used.

7.5 Implications and Recommendations

The benefits that can be gained from the investigation of student teachers' three on-line activities in Internet chat rooms, and the implementation of cyber-ethics and cyber-legal education, are numerous and diverse. On first appearance, the three on-line activities, namely; playing on-line games; making friends and sexual solicitation; and cyber-bullying; present a situation where young people can both relax and where they may also encounter potential dangers. This combination of attraction and danger provides an impetus for

researchers to investigate alternative practices of young people in the on-line environment.

This research focussed on a sample of Australian and Chinese student teachers in their second year of university studies. Its results are important to parents, teachers, and educators as they attempt to protect young people from significant on-line dangers.

Although the present sample of student teachers had not been overly involved in on-line activities, one of the first steps in any prevention program is to ensure that people are aware of the problem. This raising of awareness among teachers needs to be ongoing, and is especially important when introducing teachers into a school. Parents need to be aware of children's behaviours during and after on-line chatting. Education departments also need to include cyber-ethics and cyber-legal studies in the formal curriculum of Primary, Middle and Secondary schools. Policy makers need to make appropriate changes at the curriculum policy level. Teachers need on-going professional education pertaining to on-line activities.

7.6 Conclusion

The rapid diffusion of information represented by the Internet is a contemporary phenomenon. Various on-line activities are attracting more people to participate in them, and children are enjoying the pleasures that the Internet brings, as well as encountering dangers on-line. Internet chat rooms are places which support many on-line activities through a synchronous form of communication. The present study focussed on the following six specific research questions to compare the influences of three on-line activities on Australian and Chinese student teachers, and related cyber-ethics and cyber-legal education;

- (1a) How do Australian and Chinese student teachers perceive they are affected by three specific types of on-line activities, namely; playing on-line games; making friends and sexual solicitation; and cyber-bullying?
- (1b) Which issues associated with these three on-line activities do Australian and Chinese student teachers believe they would teach 11 year-old Primary school students?
- (2a) What etiquette, on the Internet, do Australian and Chinese student teachers follow?
- (2b) What netiquette do Australian and Chinese student teachers believe they would teach 11 year-old Primary school students in their future career?
- (3a) What cyber-ethics and cyber-legal issues do Australian and Chinese student teachers follow on-line?
- (3b) What cyber-ethics and cyber-legal issues do Australian and Chinese student teachers believe they would teach 11 year-old Primary school students?

In pursuing these questions, this study explored three specific on-line activities in Internet chat rooms, namely; playing on-line games; making friends and sexual solicitation; and cyber-bullying. Because Primary school student teachers are being educated to teach children, this study explored not only the influences of those three activities on Australian and Chinese student teachers, but also investigated the willingness of these future teachers to teach relevant cyber-ethics and cyber-legal knowledge to 11 year-old Primary school students. According to the results, student teachers in Australia and in China hold different

views in certain respects. This study then compared the two sets of responses further and analysed possible reasons for these differences based on Cyber Psychological Theory, Moral Development Theory and Space Transition Theory.

In this study, quantitative and qualitative questions were used to collect data. To obtain the data, student teachers at a South-East Queensland university and an Eastern China university completed questionnaires regarding on-line activities in which they had engaged in the week before the survey. According to the data, Australian student teachers had experience with posting personal pictures, spreading lies and rumours, and tricking people. However, most Chinese student teachers believed that they were not affected by these activities. From a Cyber-Psychological perspective, these results may relate to “disinhibition effects” that cause young people to behave in Internet chat rooms in ways which they could not in daily life.

Regarding playing on-line games, most Australian and Chinese student teachers indicated that they did not believe playing on-line games affected their behaviour either in Internet chat rooms or in the real world. Australian student teachers thought that Internet chat rooms were safe places to make friends, but they did not rely on the information they obtained there. However, Chinese student teachers disclosed that they thought Internet chat rooms were neither safe places to make friends, nor would they provide reliable information. The anonymous characteristic of Internet chat rooms provides opportunities for people to pretend to be someone else, causing feelings of mistrust.

Based on the influences of these three on-line activities on Australian and Chinese student teachers, most participants in the two countries showed that they would like to

teach relevant issues about cyber-bullying and playing games. Further, Australian student teachers were willing to consider teaching issues about making friends and sexual solicitation in Internet chat rooms, but Chinese student teachers were not willing to teach these subjects. Chinese culture regards sexuality as an issue that is too sensitive to discuss in public. Some Chinese student teachers would feel embarrassed if they discussed sexuality in an education class. Regarding netiquette, Australian student teachers disclosed that they abused their power and attacked other participants in Internet chat rooms, while Chinese participants followed the rules of Internet chat rooms and did not often attack other participants on-line. This result may relate to cultural and cyber-psychological reasons. Lacking legal enforcement, Internet chat rooms may encourage young people to commit crimes and escape. Chinese young people are educated to obey rules of the Internet, a cultural norm that indicates they would follow the rules in Internet chat rooms. As for teaching netiquette, the majority of Australian and Chinese student teachers agree that teaching netiquette would help children develop appropriate on-line behaviour.

Some Australian student teachers revealed that they were not confident that legislation could control on-line activities. However, the majority of Chinese participants believed that cyber-law is a useful way to limit potentially dangerous behaviour on-line. This difference suggests implementing cyber-ethics and cyber-legal knowledge into the formal educational system. The Cyber Psychological, Moral Development and Space Transition Theories would help frame an appropriate ethics and legal curriculum, one that could anticipate and address technological and educational challenges in the new century. In addition, these student teachers recommended that parents take relevant courses about

the Internet, Internet chat rooms, and on-line activities, and stay informed on how to help their children on-line.

7.7 Future research

Future research should explore on-line activities in other educational contexts, such as secondary schools. Education departments and policy makers should be challenged to design a code of cyber-ethics and cyber-legal curriculum suitable for Primary school students.

Future research also should investigate other groups of young people, aside from Primary school student teachers, and discover what they do in Internet chat rooms. What do Primary, Secondary, and Tertiary students encounter on-line? What other activities on the Internet affect young people? How could cyber-ethics and cyber-legal curricula be designed for different levels of Primary school students or Middle and Secondary school students?

In summary, this study has attempted to provide an insight into three activities and their influences on Australian and Chinese student teachers in Internet chat rooms.

Although Internet chat rooms provide information and create a platform for youth to engage in various on-line activities, young people do encounter potentially dangerous situations there because of a lack of technological, ethical and legal education. This study has investigated just one area of use of Internet chat rooms, and hopefully will lead to greater exploration of both student teachers and school student behaviour as well as the role of family, school, and government in on-line environments. Appropriate cyber-ethics and

cyber-legal education need to guide young people's cyberspace behaviour as they explore different Internet forums.

References

- Abelson, H., & Lessig, L. (1998). *Digital identity in cyberspace. White Paper submitted for 6.805/Law of Cyberspace: Social protocols*. Retrieved January 2, 2007, from http://www.eema.org/downloads/is_industry_papers/digital_id_in_cyberspace.pdf
- Adebayo, D. O., Udegbe, I. B., Sunmola, A. M. (2006). Gender, internet use, and sexual behavior orientation among young Nigerians. *Cyberpsychology & Behavior*, 9(6), 742-752.
- A Dictionary of the Internet. (2001). *Computer-mediated communication*. Darrel Ince. Oxford University Press, 2001. Retrieved January 2, 2007, from [www.oxfordreference.com/views/ENTRY.html?subview= Main&entry=t12.e665](http://www.oxfordreference.com/views/ENTRY.html?subview=Main&entry=t12.e665)
- Aftab, P. (2000). *The parent's guide to protecting your children in cyberspace*. New York: McGraw-Hill.
- Aisbett, K. (2001). *Media and literacy: Learning in an electronic age-Issues, ideas and teaching strategies*. Springfield: C. C. Thomas.
- Akerman, K. (2002). *Online child predator facts*. Retrieved May 12, 2007, from www.collateral-intelligence.net/child-predators.htm
- Akkawi, A., Schaller, S., Wellnitz, O., & Wolf, L. (2004). A mobile gaming platform for the IMS. Retrieved May 12, 2007, from http://conferences.sigcomm.org/sigcomm/2004/workshop_papers/net501-akkawi.pdf
- Alam, K. F. (1999). Ethics and accounting education. *Teaching Business Ethics*, 2, 261-272.
- Allen, I. E., & Seaman, J. (2004). *Seizing the opportunity: The quality and extent of online education in the United States, 2002 and 2003*. Wellesley, MA: The Sloan Consortium.
- Ali, R. M. (2005). *A study of the friendship and social interaction facilities available on the internet and their impact on adolescents*. Retrieved January 24, 2007, from proquest.umi.com/pqdweb?did=420504101&sid=9&Fmt=3&clientId=13713&RQT=309&VName=PQD

- Anderson, C. A., & Bushman, B. J. (2001). Effects of violent video games on aggressive behavior, aggressive cognition, aggressive affect, psychological arousal, and prosocial behavior: a meta-analytic review of the scientific literature. *Psychological Science*, 12, 353-359.
- Araújo, V., Cardoso, G. & Espanha, R. (2008). *Social Structures in the Era of Networked Communication: Youth and the reshaping of mediation*. Retrieved May 8, 2010, from http://www.lini-research.org/np4/?newsId=9&fileName=VARAUJO_ETAL_LINI_WP3.pdf
- Arbak, E. (2005). *Social status and crime*. Retrieved December 15, 2006, from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=906771
- Armentor, J. L. (2005). Simulated social spaces: Exploring interactions in a web chat room (Dissertation, Syracuse University). *ProQuest Dissertations & Theses* (UMI No. 3176981).
- Atkin, C. K., Smith, S. W., Roberto, A. J., Fediuk, T., & Wagner, T. (2002). Correlates of verbally aggressive communication in adolescents. *Journal of Applied Communication Research*, 30, 251-268.
- Australian Broadcasting Authority (ABA). (2001). *Online services content regulation*. Retrieved July 17, 2007, from http://www.aba.gov.au/what/online/community_education.htm
- Australian Bureau of Statistics (ABS). (2006). *Households' use of information technology, Australia*. Retrieved January 20, 2007, from [www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/B1A7C67456AE9A09A25724400780071/\\$File/81460_2005-06.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/B1A7C67456AE9A09A25724400780071/$File/81460_2005-06.pdf)
- Australian Bureau of Statistics (2009). *Household Use of Information Technology, Australia, 2008-09*. Retrieved May 7, 2010, from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/1318.3Feature%20Article14Mar%202010#Types%20of%20Internet%20Activities>
- Australian Bureau of Statistics (2009). *Household Use of Information Technology in Queensland, 2008-09*. Retrieved May 7, 2010, from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/1318.3Feature%20Article14Mar%202010#Types%20of%20Internet%20Activities>
- Australian Bureau of Statistics (2009). *Internet Activity*. Retrieved May 6, 2010, from <http://www.abs.gov.au/ausstats/abs@.nsf/mf/8153.0/>

- Australian Council for Educational Research (ACER). (2006). Australian students among the highest computer users at school and in the home: OECD report. *Media release*. Retrieved January 20, 2007, from http://www.acys.info/youth_facts_and_stats/technology/technology_2007/computers
- Australia Council for the Arts. (2003). *Young people and children*. Retrieved July 12, 2007 from http://www.australiacouncil.gov.au/___data/assets/pdf_file/0018/3564/02_youngpeople.pdf
- Australian Education International. (2006). *Overseas students statistics 2005*. Canberra: Australian Education International.
- Australian Government Department of Education, Science and Training. (2005). *National framework for Values Education in Australian Schools*. Retrieved February 14, 2007, from http://www.valueseducation.edu.au/verve/_resources/Framework_PDF_version_for_the_web.pdf
- Australian Government NetAlert. (2006). *Limited protecting Australian families online*. Retrieved February 2, 2007, from www.netalert.gov.au/programs.html
- Australian Government NetAlert. (n.d.). *What is a Chat Room?* Retrieved February 2, 2007, from http://www.netalert.gov.au/advice/services/chat/what_is_a_chat_room.html
Australian Families Online
- Australia Institute. (2003). *Youth and pornography in Australia: Evidence on the extent of exposure and likely effects*. Retrieved January 20, 2007, from http://www.tai.org.au/WhatsNew_Files/WhatsNew/DP52sum.pdf
- Australian Institute of Criminology (AIC). (2001). *Cybercrime legislation in the Asia-Pacific region*. Retrieved June 2, 2007, from www.security.ia.net.au/downloads/2001-04-cybercrime.pdf
- Australian Institute of Criminology (AIC). (2006). *Cybercrime: Definitions and general information*. Retrieved February 5, 2007 from www.aic.gov.au/topics/cybercrime/definitions.html
- Australian Institute of Criminology (AIC). (2008). *Online child grooming laws*. Retrieved June 2, 2008, from <http://www.aic.gov.au/publications/htcb/htcb017.pdf>
- Baldry, A. C. (2004). The impact of direct and indirect bullying on the mental and physical health of Italian youngsters. *Aggressive Behavior*, 30, 343-355.

- Ballard, M., & Wiest, J. (1996). Mortal Kombat: the effects of violent videogame play on male's hostility and cardiovascular responding. *Journal of Applied Social Psychology*, 26, 717-730.
- Bargh, J. A., McKenna, K. Y. A., & Fitzsimons, G. M. (2002). Can you see the real me? Activation and Expression of the 'true self' on the Internet. *Journal of Social Issues*, 58(1), 33-48.
- Baron, N. S. (2008). *Always on language in an online and mobile world*. USA: Oxford University Press.
- Bartle, R. (1990). *Interactive multi-user computer games*. Multi-User Entertainment Ltd. Retrieved August 15, 2007, from www.mud.co.uk/richard/imucg.htm
- Bass, D. M., McClendon, M. J., Brennan, P. F., & McCarthy, C. (1998). The buffering effect of a computer support network on caregiver strain. *Journal of Aging and Health*, 1, 20-43.
- Baym, N. (2000). *Tune, log on: Soaps, fandom, and online community*. Thousand Oaks, CA: Sage Publications.
- Beard, K. W., & Wolf, E. M. (2001). Modification in the proposed diagnostic criteria for Internet addiction. *Cyberpsychology & Behavior*, 4(3), 377-383.
- Bearman, P. S., Moody, J., & Stovel, K. (2004). Chains of affection: The structure of adolescent romantic and sexual networks. *American Journal of Sociology*, 110, 44-91.
- Belsey, W. (2004). *Cyberbullying*. Retrieved August 15, 2007, from www.cyberbullying.ca/
- Berson, M. J. (2000). *The computer can't see you blush*. Retrieved September 10, 2007 from www.coedu.usf.edu/internetsafety/research.htm
- Blair, J. (2003). New breed of bullies torment their peers on the Internet. *Education Week*. Retrieved September 1, 2008, from <http://www.addictioninfo.org/articles/2983/1/New-Breed-of-Bullies-Torment-Their-Peers-on-the-Internet/Page1.html>
- Boss, P. (1986). Systems for managing child maltreatment in Australia: A study of the six states. *Australian Child and Family Welfare*, 11 (4), 5-20.
- Boulos, M. N. K., & Wheelert, S. (2007). The emerging Web 2.0 social software: an enabling suite of sociable technologies in health and healthcare education. *Health Information and Libraries Journal*, 24(1), 2-23.

- Braithwaite, D., Waldron, V., & Finn, J. (1999). Communication of social support in computer mediated groups for people with disabilities. *Health Communication, 11*, 123-151.
- Bremer, J. & Rauch, P. K. (1998). Children and computers: risks and benefits. *Journal of the American Academy of Child and Adolescent Psychiatry, 37*(5), 559-560.
- Bromberg, H. (1996). Are MUDS Communities? Identity, belonging and consciousness in virtual worlds. In R. M. Shields (Ed.), *Cultures of Internet: Virtual spaces, real histories, living bodies* (pp. 143-152). London: Sage Publications.
- Bromfield, L., & Higgins, D. (2005). National comparison of child protection systems. *Child Abuse Prevention Issues*. Retrieved November 10, 2007, from <http://www.aifs.gov.au/nch/pubs/issues/issues22/issues22.html>
- Brown, A. L. (1992). Design Experiments: Theoretical and methodological challenges in creating complex interventions in classroom settings. *The Journal of the Learning Sciences, 2*(2), 141-178.
- Brown, J. S. (2000, March/April). Growing up digital: How the Web changes work, education and the ways people learn. *Change, 10-12*.
- Bruckman, A. S. (1993). *Gender swapping on the Internet*. Retrieved November 10, 2007, from <http://www.mith2.umd.edu/WomensStudies/Computing/Articles%2BResearchPapers/gender-swapping>
- Bullen, P., & Harre, N. (2000). *The Internet: Its effects on safety and behaviour: Implications for adolescents*. University of Auckland. Retrieved January 10, 2007, from www.netsafe.org.nz/~research~research~safety.aspx
- Business Wire. (2005, January). *New data shatters video game player stereotypes; Gamers regularly involved in community, church, and athletics*. Retrieved July 11, 2007 from <http://www.allbusiness.com/government/elections-politics-campaigns/4980901-1.html>
- Butterfield, L. (2002). *NetSafe: The New Zealand Model for Internet (ICT) Safety Education*. Retrieved July 20, 2007 from http://www.netsafe.org.nz/Doc_Library/NetAlert.pdf
- Calvert, S. L., & Tan, S. L. (1996). Impact of virtual reality on young adults' physiological arousal and aggressive thoughts: Interaction versus observation. In P.M. Greenfield and R.R. Cocking, (Eds.), *Interacting with video*, pp.67-81. Norwood, NJ: Ablex.

- Campbell, M. A (2005). Cyber bullying: An old problem in a new guise? *Australian Journal of Guidance and Counselling*, 15(1), 68-76.
- Carr, J. (1998). It's time to tackle cyberporn. *New Statesman*. Retrieved January 7, 2007, from <http://www.findarticles.com>.
- Carter, D. (1995). Computer crime categories: How techno-criminals operate. *FBI Law Enforcement Bulletin*, 64 (7). Retrieved March 26, 2006, from <http://nsi.org/Library/Compsec/crimecom.html>
- Carver, C. S., & Scheier, M. F. (1981). *Attention and self-regulation: A control-theory approach to human behavior*. New York: Springer-Verlag.
- Casey-Cannon, S., Hayward, C., & Gowan, K. (2001). Middle-School girls' reports of peer victimization: Concerns, consequences, and implications. *Professional School Counselling*, 5(2), 138-148.
- Chen, Y. C., Chen, P. S., Hwang, J. J., Korba, L., Song, R., & Yee, G. (2005). An analysis of online gaming crime characteristics. *Internet Research*, 15, 246-261.
- Chen, Y. Y. (2003). *Schools need better sexuality education*. Retrieved March 16, 2006, from http://www.chinadaily.com.cn/en/doc/2003-07/11/content_244578.htm
- Cheskin Group. (2002). Designing digital experiences for youth. *Market Insight Series*. Retrieved March 11, 2007, http://www.cheskin.com/cms/files/i/articles//19__CheskinYouthPOVII.pdf.
- China Internet Network Information Center (CNNIC) (2007, January 23). *The 19th statistical survey report on Internet development in China*. Retrieved May 15, 2007, from www.cnnic.cn/html/Dir/2007/02/05/4432.htm
- China Internet Network Information Center (CNNIC) (2008, April 29). *CNNIC Released 2007 research report of China Youth Internet behaviours*. Retrieved August 4, 2008, from <http://www.cnnic.cn/html/Dir/2008/04/29/5127.htm?3375609363=2323941675>
- China Internet Network Information Center (CNNIC) (2009). *The Statistical Survey Report of Youth on-line in China*. Retrieved May 5, 2010, from <http://www.cnnic.cn/uploadfiles/pdf/2009/4/13/164657.pdf>
- China to develop technologies fighting Internet addiction (2007). *China Radio International*. Retrieved July 20, 2007, from english.cri.cn/2946/2006/10/27/53@155892.htm

- chinatechnews.com (April 21, 2009). *Plug In, Drop Out: Guidelines In China Issued To Help Prevent Internet Addiction*. Retrieved May 7, 2010, from <http://www.chinatechnews.com/2009/04/21/9600-plug-in-drop-out-guidelines-in-china-issued-to-help-prevent-internet-addiction>
- Chinese Youth League (2001). *National Internet civilization convention for teenagers*. Retrieved May 15, 2007, from tech.sina.com.cn/i/c/2001-11-23/93034.shtml
- Clark, D. J. (2002). Older adults living through and with their computers. *Computers Informatics & Nursing*, 20(3), 117-124.
- Clark, J. (2007). Moral education in Asia: Pressures, contradictions and future directions. *New Zealand Journal of Teachers' Work*, 4(2), 105-110.
- Clay, A. R. (2000). Linking up online. *Monitor on Psychology*, 31(4), 20-23.
- Clouthier, M. (2009). When Rape Fantasies Involve Conservative Women, Feminists Are Silent. *Pajamas Media*. Retrieved May 7, 2010, from <http://pajamasmedia.com/blog/author/melissaclouthier/>
- Coate, J. (1992). *Cyberspace innkeeping*. Retrieved July 1, 2007, from protovision.textfiles.com/computers/CYBERSPACE/inkeeping-cyberspace
- Cohen, R. J., & Moreland, K. L. (1992). Computer-assisted psychological assessment. In Cohen, R. J., Swerdlik, M. E. & Smith, D. K. (Eds.), *Psychological testing and assessment: An introduction to tests and measurement*. (2nd Ed.). California: Mayfield Publishing Co.
- Cole, D. (2004). *DFC Intelligence forecasts significant growth for online games*. Retrieved June 20, 2007, from www.dfcint.com/news/praug32004.html
- Conrad, P., & Schneider, J. (1980). *Deviance and medicalization, from badness to sickness*. St. Louis: Mosby.
- Cooper, G. (2005). *Clinicians digest: Cyberspace bullying*. Retrieved June 14, 2007, from http://www.foresightcounseling.com/print_articles.htm
- Cox Communications Inc. (2007). *Teen Internet survey*. Retrieved June 20, 2007, from http://www.missingkids.com/missingkids/servlet/NewsEventServlet?LanguageCountry=en_US&PageId=3166
- Cross, D. (2007). *Bullies open new front in cyberspace*. Retrieved May 8, 2010, from http://www.waamh.org.au/upload/downloadFiles/Bullies_open_New_Front_in_Cyberspace.pdf

- Crowley, D. (2002). Where are we now? Contours of the Internet in Canada. *Canadian Journal of Communication*, 27 (4). Retrieved February 10, 2007, from www.cjc-online.ca/viewarticle.php?id=746&layout=html
- Cullerton-Sen, C., & Crick, N. R. (2005). Understanding the effects of physical and relational victimization: The utility of multiple perspectives in predicting social emotional adjustment. *School Psychology Review*, 34(2). Retrieved May 15, 2007, from www.blume.stmarytx.edu
- Danda, M., Danda, J., & Purcell, R. (2001). *Protect yourself online*. Retrieved December 11, 2007, from <http://www.netstoreusa.com/cbbooks/073/0735611882.shtml>
- Danowski, J. A., & Sacks, W. (1980). Computer communication and the elderly. *Experimental Aging Research*, 6(2), 125-135.
- Darin, W., Brock, D., & Stuart, T. R. (2006). Faceless-oriented policing: Traditional policing theories are not adequate in a cyber world. *Police Journal*, 79(2), 169-76.
- Darlington, R. (n.d.). *Sex on the Net*. Retrieved May 15, 2007, from <http://www.rogerdarlington.co.uk/sexonnet.html>
- Davis, R., & S. Hutchison. (1997). *Computer crime in Canada*. Toronto: Thomson Canada Limited.
- Deflem, M., & Eagle, S. J. (2006). Law enforcement and computer security threats and measures. In H. Bidgoli (Ed.), *The handbook of information security. Information warfare; social, legal, and international issues; and security foundations*. Hoboken, NJ: John Wiley and Sons.
- Dellasega, C., & Nixon, C. (2003). *Girl wars: 12 strategies that will end female bullying*. New York: Simon and Schuster.
- Demetriou, C., & Silke, A. (2003). A criminological Internet 'sting': Experimental evidence of illegal and deviant visits to a website trap. *British Journal of Criminology*, 43, 213-22.
- Devillette, S. (2005). Reporters without borders: Handbook for bloggers and cyber dissidents. *Reporters without borders International Secretariat Paris, France*. Retrieved December 15, 2006, from www.rsf.org/IMG/pdf/handbook_bloggers_cyberdissidents-GB.pdf
- DFC Intelligence. (2004). *The online game market heats up*. Retrieved May 15, 2007 from www.dfciint.com/game_article/june04article.html

- Donn, J., & Sherman, R. (2002). Attitudes and practices regarding the formation of romantic relationships on the internet. *CyberPsychology & Behaviour*, 5, 107-123.
- Du, X. P. (1999). *Internet adoption and usage in China*. Retrieved May 15, 2007, from www.tprc.org/ABSTRACTS99/DUPAP.PDF
- Durex. (2003). *Zhong guo ren de xing xingwei zui maoxian*[Chinese sexual behaviour is in risk]. Retrieved March 17, 2006, from <http://www.aids120.com>
- Duval, S., & Wicklund, R. A. (1972). *A theory of objective self awareness*. New York: Academic Press.
- Early Childhood Australia. (2003). *The code of ethics*. Retrieved May 5, 2007 from [http://www.earlychildhoodaustralia.org.au/code_of_ethics/early childhood_australias_code_of_ethics.html](http://www.earlychildhoodaustralia.org.au/code_of_ethics/early_childhood_australias_code_of_ethics.html)
- Electronic Frontiers Australia. (2006). *Internet censorship laws in Australia*. Retrieved March 6, 2007, from <http://www.efa.org.au/Issues/Censor/cens1.html#qld>
- Electronic Frontiers Australia. (2008a). *Filtering pilot and ACMA blacklist - Not just illegal material*. Retrieved November 15, 2008, from <http://www.efa.org.au/2008/11/15/filtering-pilot-and-acma-blacklist-not-just-illegal-material/#more-217>
- Electronic Frontiers Australia (2008b). *R18+ for games campaign launched*. Retrieved November 15, 2008, from <http://www.efa.org.au/2008/10/30/r18-for-games-campaign-launched/>
- Emond, B., & West, R. L. (2003). Cyberpsychology: A human-interaction perspective based on cognitive modelling, *Cyberpsychology and Behavior*, vol. 6, pp. 527--536.
- enGuage. (2003). *enGuage 21st century skills for 21st century learners*. Los Angeles: North Central Regional Educational Laboratory and the Metiri Group.
- Entertainment and Leisure Software Publishers Association. (2005). *UK software market tops the charts yet again*. Retrieved July 11, 2007 from <http://www.elspa.com/?i=3436&s=1111&f=49&archive=>
- Facer, K., Sutherland, R., Furlong, R., & Furlong, J. (2001). What's the point of using computers? *New Media & Society*, 3(2), 199-219.
- Fallows, D. (2007). *China's online population explosion: What it may mean for the Internet globally and for U.S. users*. Pew Internet & American Life Project. Retrieved July 11, 2007, from yaleglobal.yale.edu/about/pdfs/chinaInternet2007.pdf

- Farrell, N. (2009). *Australia will try to censor the Internet*. Retrieved May 2, 2010, from http://docs.google.com/View?id=ddqm27m2_367cj6w7zfp
- Figallo, C., & Rhine, N. (2002). *Building the knowledge management network: Best practices, tools, and techniques for putting conversation to work*. New York: John Wiley & Sons, Inc.
- Finkelhor, D., & Jones, M. L. (2004). *Explanations for the decline in child sexual abuse cases*. Retrieved January 20, 2007, from www.unh.edu/ccrc/pdf/CV58.pdf
- Fleming, M., & Rickwood, D. (2004). Teens in cyberspace: Do they encounter friend or foe? *Youth Studies Australia*, 23(3), 46-52.
- Fletcher, O. (2009, July 10). *A Beijing treatment base aims to wean kids off online games*. Retrieved May 12, 2010, from <http://www.mis-asia.com/news/articles/chinese-web-addicts-get-boot-camp,-therapy>
- Fling, S., Smith, L., Rodriguez, T., Thornton, D., Atkins, E., & Nixon, K. (1992). Video games, aggression, and self-esteem: A survey. *Social Behavior and Personality*, 20, 39-46.
- Flood, M., & Hamilton, C. (2003). Youth and pornography in Australia: Evidence on the extent of exposure and likely effects. *The Australia Institute*. Retrieved January 20, 2007, from www.tai.org.au/WhatsNew_Files/WhatsNew/DP52sum.pdf
- Foglia, W. (1997). Perceptual deterrence and the mediating effect of internalized norms among inner-city teenagers. *Journal of Research in Crime and Delinquency*, 34 (4), 414-42.
- Fontana, A., & Frey, J.H. (1994). Interviewing. *Handbook of qualitative research*. Thousand Oaks, Cal.: Sage.
- French, H. (2004, June 26). Despite an act of leniency, China has its eye on the Web. *The New York Times*. Retrieved January 20, 2007, from <http://query.nytimes.com/gst/fullpage.html?res=9A03E5DA1738F934A15755C0A9629C8B63>
- Friedland, L., & Boyte, H. (2000). *The New information commons: community information partnerships and civic change*. Minneapolis, MN: Centre for Democracy and Citizenship.
- Froeschle, J. G., Mayorga, M., Castillo, Y., & Hargrave, T. (2008). Strategies to prevent and heal the mental anguish caused by cyberbullying. *Middle School Journal*, 39(4), p.30.

- Fun, F. R. (1995). Safe trips down the info highway. *PC World*, p. 400.
- Furuholt, B., & Kristiansen, S. (2007). *Internet cafés in Asia and Africa-venues for education and learning?* Retrieved January 7, 2008, from <http://ci-journal.net/index.php/ciej/article/viewPDFInterstitial/314/352>
- Gay, L. R., & Airasian, P. (2000). *Educational research: Competencies for analysis and application* (6th ed). New Jersey: Prentice-Hall.
- Gioia, D. A. (2002). Business education's role in the crisis of corporate confidence. *Academy of Management Executive*, 16(3), 142-145.
- Girl Scout Research Institute. (2002). *National center for Missing & Exploited Children urges parents to engage in their children's online life*. Retrieved October 26, 2006, from websafety4kids.org/Statistics.php
- Glover, D., Gough, G., Johnson, M., & Cartwright, N. (2000). Bullying in 25 secondary schools: Incidence, impact and intervention. *Educational Research*, 42(2), 141-156.
- Goff, H. (2007, April 10). Websites urged to act on bullies. *BBC News*. Retrieved October 26, 2007, from news.bbc.co.uk/1/hi/education/6539989.stm
- Goldman, J. D. G., & Goldman, R. J. (1982). *Children's sexual thinking*. London: Routledge & Kegan Paul.
- Goldman, J. D. G., & Zhang, X. H. (2009). *Current trends in sexuality education for young people in China as reflected in an investigation of two Chinese websites* (in press).
- Grabosky, P. (2001). Virtual criminality: Old wine in new bottles? *Social & Legal Studies*, 10, 243-49.
- Greenfield, P. M. & Subrahmanyam, K. (2003). Online discourse in a teen chatroom: New codes and new modes of coherence in a visual medium. *Applied Developmental Psychology*, 24, 713-738.
- Griffiths, M. (2000). Does Internet and computer 'addiction' exist? Some case study evidence. *Cyberpsychology & Behavior*, 3(2), 211-218.
- Griffiths, M. (2001). Sex on the internet: Observations and implications for internet sex addictions. *The Journal of Sex Research*, 38(4), 333-334.
- Grohol, J. M. (1999). Too much time online: Internet addiction or healthy social interactions? *CyberPsychology & Behaviour*, 2(5), 395-401.

- Gross, E. F. (2004). Adolescent Internet use: What we expect, what teens report. *Applied Developmental Psychology*, 25, 633-649.
- Gross, E. F., Juvonen, J., & Gable, S. L. (2002). Internet use and well-being in adolescence. *Journal of Social Issues*, 58, 75-90.
- Gustafson, D. H., Hawkins, R., Pingree, S., Mctavish, F., Arora, N. K., Mendenhall, J., et al. (2001). Effect of computer support on younger women with breast cancer. *Journal of general internal medicine*, 16(7), 435-445.
- Hambridge, S. (1995). *RFC 1855: Netiquette guidelines*. Retrieved October 26, 2006, from www.stanton.dtcc.edu/stanton/cs/rfc1855.html
- Hanewald, R. (2008). Confronting the pedagogical challenge of cyber safety. *Australian Journal of Teacher Education*, 33(3). Retrieved September 16, 2008, from <http://ajte.education.ecu.edu.au/issues/PDF/333/Hanewald.pdf>
- Hardie, E. (2006). Finding love online: The nature and frequency of Australian adults' Internet relationships. *Australian Journal of Emerging Technologies and Society*, 4(1), 1-14.
- Haseloff, A. H. (2005). Cybercafés and their Potential as Community Development Tools in India. *The Journal of Community Informatics*, Retrieved September 16, 2007, from <http://unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN023010.pdf>
- Hasselbring, T. S., & Williams, G. C. H. (2000). Use of computer technology to help students with special needs. *The Future of Children*, 10 (2), Retrieved September 11, 2007, from http://www.futureofchildren.org/usr_doc/vol10no2Art5.pdf
- Hawker, D. S. J., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: A meta-analytic review of cross-sectional studies. *Journal of Child Psychology and Psychiatry*, 41, 441-455.
- Hayward, B., Alty, C., Pearson, S., & Martin, S. (2002). *Young people and ICT 2002*. NFO System Three Social Research. Retrieved September 16, 2007 from <http://promitheas.iacm.forth.gr/i-curriculum/Assets/Docs/NatReports/UK%20Report.pdf>
- Heaverin, D. D. S. (2005). Legal issues involving students and Internet use: Implications for policy setting. (Dissertation, Spaulding University. Louisville, KY, 2005). (UMI Number 3205406).

- Hermeking, M. (2005). Culture and Internet consumption: Contributions from cross-cultural marketing and advertising research. *Journal of Computer-Mediated Communication*, 11(1), Retrieved May 2, 2010, from <http://jcmc.indiana.edu/vol11/issue1/hermeking.html>
- Herring, S. C. (1999). Interactional coherence in CMC. *Journal of Computer Mediated communication*. Retrieved 16 April, 2007, from <http://jcmc.indiana.edu/vol4/issue4/herring.html>
- Hinduja, S., & Patchin, J. (2005). Cyberbullying: An exploratory analysis of factors related to offending and victimization. *Deviant Behavior*, 29(2), 1-29.
- Hine, C. (2000). *Virtual ethnography*. Thousand Oaks, CA: Sage Publications.
- Holland, N. N. (1996). *The Internet regression*. Retrieved October 21, 2007, from: <http://www1.rider.edu/~suler/psycyber/holland.htd>
- Holtkamp, B. (2006). *Mobile value-added services in China*. Retrieved October 26, 2007, from <http://homepage.mac.com/ekippo/.Public/VAS-CHINA-ProjectSummary.PDF>
- Hudson, J. M. (2006). *The role of chatrooms in facilitating learning behaviors in small group discussions*. Doctor of Philosophy in Computer Science. Georgia Institute of Technology, Atlanta, U.S.A.
- Hudson, R. A. (1980). *Sociolinguistics*. Cambridge: Cambridge University Press.
- Human Rights Watch. (2006). *"Race to the bottom" Corporate complicity in Chinese Internet censorship*. Retrieved October 6, 2007, from <http://www.hrw.org/reports/2006/china0806/china0806web.pdf>
- Interactive Entertainment Association of Australia. (2009). *Buoyant Video and Computer Game Sales Nudge \$2 Billion*. Retrieved May 6, 2010, from <http://www.igea.net/2009/01/buoyantvideo-and-computer-game-sales-nudge-2-billion/>.
- International Game Developers Association (IGDA). (2003). *IGDA Online Games White Paper* (2nd ed.). International Game Developers Association. Retrieved October 6, 2007, from www.igda.org/online/online_whitepaper.php
- Internet Safety Advisor. (2007). *17% of UK teachers cyber bullied*. Retrieved March 26, 2007, from internetsafetyadvisor.info/cyber-bullying/
- Internet Society. (n.d.). *Learning the Internet!* Retrieved March 26, 2007, from <http://daphne.palomar.edu/learnit/definition.htm>

- Internet World Stats. (2009). *Internet usage statistics: The Internet big picture world Internet users and population stats*. Retrieved May 1, 2010, from www.internetworldstats.com/stats.htm
- iResearch Consulting Group. (2006). *China online game research report*. Retrieved May 21, 2007, from <http://www.apira.org/download/iResearch0706282.pdf>
- i-SAFE Inc. (2002). *America's Schoolchildren Learn Internet Protection and Responsibility*. Retrieved on July 3, 2007, from <http://www.isafe.org/NewArticles/GovernmentTech.htm>
- i-SAFE Inc. (2006). *50 percent of students talk with Internet strangers; 20 percent admit face-to-face meetings*. Retrieved March 26, 2007, from www.isafe.org/imgs/pdf/outreach_press/2006_National_Assessments.pdf
- i-SAFE Inc. (2006). *Market wire*. Retrieved March 26, 2007, from www.marketwire.com/mw/r...e_html_b1?release_id=180330
- Jaishankar, K. (2008). Space transition theory of cyber crimes. In F. Schmallager & M. Pittaro (Eds.), *Crimes of the Internet*. Upper Saddle River, NJ: Prentice Hall.
- Jason. (n.d.). *Netiquette: The code of conduct for the Internet*. Retrieved October 11, 2007, from www.yeawedo.com/netiquette.htm
- Jenkins, H. (2002). The Chinese Columbine: How one tragedy ignited the Chinese government's simmering fears of youth culture and the Internet. *Technology Review*. Retrieved May 21, 2007, from www.technologyreview.com/Infotech/12913/?a=f
- Joinson, A. N. (1998). Causes and implications of disinhibited behavior on the Internet. In J. Gackenbach (Ed.), *Psychology and the Internet: Intrapersonal, interpersonal, and transpersonal implications* (pp. 43-60). San Diego: Academic Press.
- Joinson, A. N. (2001a). 'Knowing Me, Knowing You': Reciprocal Self-Disclosure and Internet-Based Surveys. *Cyberpsychology and Behavior*, 4(5), 587-591.
- Joinson, A. N. (2001b). Self-disclosure in computer-mediated communication: The Role of self-awareness and visual anonymity. *European Journal of Social Psychology*, 31(2), 177-192.
- Joinson, A. N. (2003). *Understanding the psychology of Internet behavior*. Basingstoke, UK: Palgrave Macmillan.

- Jones, V. (2005). *Protecting children from online sexual exploitation*. Retrieved April 11, 2006, from http://www.redbarnet.dk/DWSDownload.asp?File=Files%2FFiler%2Fsexuelt_misbrug%2FProctectingChildren_OnlineSexualExploitation.pdf
- Juul, J. (1999). *A clash between game and narrative*. Unpublished Master's dissertation, Institute of Nordic Language and Literature, University of Copenhagen, Denmark. Retrieved May 21, 2007, from www.jesperjuul.dk/dissertation
- Kahtri, P., Kupersmidt, J. B., & Patterson, C. (2000). Aggression and peer victimization as predictors of self-reported behavioral and emotional adjustment. *Aggressive Behavior*, 26, 245-358.
- Kaltiala-Heino, R., Rimpela, M., Marttunen, M., Rimpela, A., & Rantanen, P. (1999). Bullying, depression, and suicidal ideation in Finnish adolescents: school survey. *British Medical Journal*, 319, 348-351.
- Kandell, J. (1998). Internet addiction on campus-the vulnerability of college students. *Cyber Psychology and Behavior*, 1, 46-59.
- Kanuga, M. (2004). Adolescent sexuality and the internet: The good, the bad, and the URL. *Journal of Pediatric and Adolescent Gynecology*, 17(2), 117-24.
- Kelly, B. J. (2001). Supervising the cybercriminal. *Federal Probation. Special issue on Technology and Corrections*, 65(2), 8-10.
- Kerawalla, L., & Crook, C. (2002). Children's computer use at home and school: Context and continuity. *British Educational Research Journal*, 22, 751-771.
- Kessler, J. (2006). *Taking on The Internet porn industry fighting on the side of families with children*. Retrieved February 12, 2007, from http://www.thirdway.org/data/product/file/22/taking_on_internet_porn.pdf.
- Kim, K. H., & Shim, K. Y. (2002). E-lifestyle and motives to use online games. *Irish Marketing Review*, 15(2), 71-77.
- Knickerbocker, R. L. (2003). *Prosocial Behavior*. Retrieved February 12, 2007 from <http://www.learningtogive.org/papers/paper52.html>
- Kohlberg, L. (1969). Moral stages and moralization: The cognitive-developmental approach to socialization. In D. Goskin (Ed.), *Handbook of Socialization Theory and Research*. Chicago: Rand McNally.
- Kohlberg, L. (1981). *The philosophy of moral development: Moral stages and the ideas of justice*. San Francisco: Harper & Row Publishers.

- Kompas Cyber Media. (2003). *Survei: Kebanyakan Pemain Game di Asia Pasifik Pelajar Laki-laki*. Retrieved February 12, 2007 from www.kompas.co.id/teknologi/news/0310/16/193057.htm
- Koo, Shang. (2005). *Sneak preview of Pacific Epoch's 2006 online game report*. Retrieved February 12, 2007 from <http://www.jlmpacificepoch.com/search/index.php>
- Krahe, B., & Moller, I. (2004). Playing violent electronic games, hostile attributional style, and aggression-related norms in German adolescents. *Journal of Adolescence*, 27, 53-69.
- Kraut, R., Kiesler, S., Boneva, B., Cummings, J., Helgeson, V., & Crawford, A. (2002). The Internet paradox revisited. *Journal of Social Issues*, 58, 49-74.
- Kraut, R., Patterson, M., Landmark, V., Kiesler, S., Mukophadhyay, T., & Scherlis, W. (1998). Internet paradox: a social technology that reduces social involvement and psychological well being. *American Psychologist*, 53, 1017-1031.
- Kristiansen, S., Furuholt, B., & Wahid, F. (2003). Internet café entrepreneurs: Pioneers in information dissemination in Indonesia. *International Journal of Entrepreneurship and Innovation*, 4(4), 251-263.
- Krone, T. (2005). Queensland police stings in online chat rooms. *Trends & issues in crime and criminal justice* (No.301). Retrieved February 12, 2007, from <http://www.aic.gov.au/publications/tandi2/tandi301.html>
- Lagemann, E. C., & Shulman, L. S. (Eds.). (1999). *Issues in education research: Problems and possibilities*. San Francisco: Jossey-Bass.
- LaRose, R., Eastin, M. S., & Gregg, J. (2001). Reformulating the internet paradox: social cognitive explanations of Internet use and depression. *Journal of Online Behaviour*. Retrieved February 12, 2007, from www.sciencedirect.com/science?_ob=RedirectURL&_method=externObjLink&_locator=url&_cdi=5979&_plusSign=%2B&_targetURL=http%253A%252F%252Fwww.behavior.net%252FJOB%252Fv1n2%252Fparadox.html
- Lastowka, F. G., & Hunter, D. (2004). Virtual crimes. *New York Law School Law Review*, 49, 293-316.
- Lawrence, W. N., (2006). *Social research methods: Qualitative and quantitative approaches* (6th ed.). U.S.: Pearson Higher Education.

- Lazar, J., & Preece, J. (2002). Online communities: Usability, sociability and users' requirements. In H. van Oostendorp, *Cognition in the Digital World* (pp.127-151). Mahwah, NJ: Lawrence Erlbaum Associates Inc. Publishers.
- Lenhart, A., Purcell, K., Smith, A., & Zickuhr, K. (2010). Social Media and Young Adults. Retrieved from <http://www.pewinternet.org/Reports/2010/Social-Media-and-Young-Adults.aspx>
- Lenhart, A., Rainie, L., & Lewis, O. (2001). Teenage life online: The rise of the instant message generation and the Internet's impact on friendships and family relationships. *Pew Internet & American Life Project*. Retrieved January 12, 2006, from www.pewinternet.org/report_display.asp?r=36
- Leung, L. (2002), Loneliness, self-disclosure, and ICQ ("I Seek You") Use. *CyberPsychology & Behaviour*, 5(3), 241-251.
- Li, P. (2004). *Qingshaonian wangluo chengyin de yuanyin* [the reasons of internet addiction among Chinese young people]. Retrieved October 18, 2007, from scholar.ilib.cn/Abstract.aspx?A=zxxxljky200408008
- Lieberman, M.A., Golant, M., Giese-Davis, J., Winzlenberg, A., Benjamin, H., Humphreys, K., et al. (2003). Electronic support-groups for breast carcinoma – A clinical trial of effectiveness. *Cancer* 97, 920–925.
- Lin, J. (2006, June 29). Net addiction a factor in teen runaways: poll. *Taipei Times*. Retrieved July 31, 2007, from www.taipeitimes.com/News/taiwan/archives/2006/06/29/2003316260
- Lipman, S. (2003). *Worrying from afar; Following suicide bombings, area Turkish Jews express their fears for friends and family in homeland*. Retrieved February 12, 2007, from findarticles.com/p/articles/mi_hb5092/is_200311/ai_n18522644
- Littlewood, A. (2003). Cyberporn and moral panic: an evaluation of press reactions to pornography on the internet. *Library and Information Research*, 27(86), 8–18.
- Liu, Li. (2006, August 25). Minors face ban from Internet cafes. *China Daily*. Retrieved July 11, 2007, from http://www.chinadaily.com.cn/china/2006-08/25/content_673829.htm
- Livingstone, S., & Bober, M. (2004). *UK children go online. Surveying the experiences of young people and their parents*. London: London School of Economic and Political Science.

- Lo, S. K., Wang, C. C., & Fang, W. C. (2005). Physical interpersonal relationships and social anxiety among online game players. *CyberPsychology & Behavior*, 8, 15-20.
- Lowes, S. (2008). *Online teaching and classroom change: The trans-classroom teacher in the age of the internet*. Retrieved May 2, 2010, from <http://www.innovateonline.info>
- Lu, L. (2006). Xing jiaoyu: 'zuinande' yimen kecheng. [Sexuality education: the most difficult issue]. *Beijing Review*. July 11, 2007, from <http://www.beijingreview.com.cn/06-CN/06-08/fm-1.htm>
- Madden, M. (2009). *The Audience for Online Video-Sharing Sites Shoots Up*. Retrieved May 2, 2010, from <http://www.pewinternet.org/Reports/2009/13--The-Audience-for-Online-Video-Sharing-Sites-Shoots-Up.aspx>
- Mantovani, G. (2001). The psychological construction of the Internet: From information foraging to social gathering to cultural mediation. *Cyberpsychology & Behavior*, 4(1), 47-56.
- Markow, D. (2008). Today's youth: Understanding their importance and influences. *Trends & tudes*, 7 (1). Retrieved June 30, 2008, from www.harrisinteractive.com/news/newsletters/k12news/HI_TrendsTudes_2008_v07_i01.pdf
- Marriott, M. (2002). Video game formula adds sex to the mix. *The New York Times*. Retrieved June 26, 2007, from www.nytimes.com/2002/11/07/technology/circuits/07/sexx.html?tnemail1
- Matheson, K., & Zanna, M. P. (1988). The impact of computer-mediated communication on self-awareness. *Computers in Human Behavior*, 4, 221-233.
- Matt, S. M. (2004). *Cybercrime: A comparative law analysis*. Retrieved June 30, 2008, from <http://etd.unisa.ac.za/ETD-db/theses/available/etd-08172005-103637/unrestricted/00front.pdf>
- McCabe, D. L., Dukerich, J. M., & Dutton, J. E. (1991). Context, values and moral dilemmas: Comparing the choices of business and law school students. *Journal of Business Ethics*, 10, 951-960.
- McKenna, K. Y. A., & Bargh, J. A. (2000). Plan 9 from cyberspace: The implications of the Internet for personality and social psychology. *Personality and Social Psychology Review*, 4, 57-75.
- McKenzie, S. (2000). *Child safety on the Internet: An analysis of Victorian schools and households using the routine activity approach*. A dissertation submitted to the University of Melbourne, February 2000. Retrieved May 5, 2007, from www.criminology.unimelb.edu.au/research/internet/childsafety/index.htm

- McLean, S. (2007). *The cyber world-use and abuse*. Retrieved January 4, 2008, from <http://www.ahisa.com.au/Documents/ViewDocument.aspx?club=AHISA&DocumentID=1e7ebaa4-dcb3-4ebc-aa8a-38258d4d050f>
- McLoughlin, C., Burgess, J., & Meyricke, R. (2009). Bullies in cyberspace: How rural and regional Australian youth perceive the problem of cyberbullying and its impact. In T. Lyons, C. JY & G. McPhan (Eds.), *ISFIRE 2009: International symposium for innovation in rural education*. Armidale, NSW: University of New England.
- McNeely, E. (1991). Computer-assisted instruction and the older adult learner. *Educational Gerontology*, 1(17), 229-237.
- Media Awareness Network. (2001). *Statistics on Canadian youth and instant messaging*. Retrieved June 26, 2007, from www.media-awareness.ca/english/resources/special_initiatives/wa_resources/wa_shared/backgrounders/statistics_youth_im.cfm
- Media Awareness Network. (2004). *Chat rooms*. Retrieved June 26, 2007, from www.mediaawareness.ca/english/parents/internet/safe_passage_parents/chatrooms_safety_p.cfm.
- Media Awareness Network. (2005). *Young Canadians in a wired world: Phase II for Media Awareness Network by ERIN Research, 2005*. Retrieved June 26, 2007, from www.media-awareness.ca/english/research/YCWW/phaseII/
- Menesini, E., Melan, E., & Pignatti, B. (2000). Interactional styles of bullies and victims observed in a competitive and a cooperative setting. *Journal of Genetic Psychology*, 161(3).
- Michaels, D. (1995). *Cyber-Rape: How Virtual Is It?* Retrieved May 7, 2010, from <http://www.terry.uga.edu/~dawndba/4500CyberRape.html> - 24k.
- Microsoft Network (MSN). (2006). MSN cyberbullying report: Blogging, instant messaging and email bullying amongst today's teens, Microsoft [viewed 25/01/2007]. *The Australian*, p.38.
- Miller, S.A. (2002). Death of a game addict, Ill Hudson man took own life after long hours on web. *Online Milwaukee Journal Sentinel*. Retrieved June 26, 2007 from www.jsonline.com/news/state/mar02/31536.asp
- Mishra, R. (2006, November 30). *Internet date led to rape: N.H. police say woman, R.I. man met through popular website*. Retrieved June 26, 2007, from www.boston.com/news/local/articles/2006/11/30/internet_date_led_to_rape_nh_police_say/

- Mitchell, E. (1985). The dynamics of family interaction around home video games. Special issue: Personal computers and the family. *Marriage and Family Review*, 8, 121-35.
- Mitrano, T. (2006). *A wider world. Youth, privacy, and social networking*. Retrieved July 7 2007, from Technologies <http://net.educause.edu/ir/library/pdf/ERM0660.pdf>
- Moody, E. (2001). Internet use and its relationship to loneliness. *CyberPsychology & Behaviour*, 4, 393-401.
- Morahan-Martina, J., & Schumacher, P. (2003). Loneliness and social uses of the Internet. *Computers in Human Behaviour*, 19(6), 659-671.
- Morgan, C., & Cotton, S. R. (2003). The relationship between Internet activities and depressive symptoms in a sample of college freshmen. *Cyberpsychology & Behaviour*, 6, 133-142.
- Morris, C. (2002a). *Bikes, sex and volleyball; Holiday video games may be a lot more 'adult' than you think*. CNNMoney. Retrieved June 26, 2007, from money.cnn.com/2002/09/16/commentary/game_over/column_gaming/index.htm.
- Morris, C. (2002b). *Sex, bikes and video games; topless bikers, strippers and barely-there bikinis in video games? The readers speak up!* CNNMoney. Retrieved June 26, 2007, from money.cnn.com/2002/09/16/commentary/game_over/column_gaming/index.htm
- Mwesige, P. G. (2004). Cyber elites: A survey of Internet café users in Uganda. *Telematics and Informatics*, 21(1), 83-101.
- National Children's Home Charity and Tesco Mobile. (2005). *Putting U in the picture. Mobile bullying survey 2005*. Retrieved February 2, 2007, from www.nch.org.uk/uploads/documents/Mobile_bullying_%20report.pdf
- National School Boards Foundation. (2000). *Safe & smart: Research and guidelines for children's use of the Internet*. Retrieved March 4, 2008, from <http://www.nsb.org/safe-smart/>
- Netcom On-Line Communication Services. (1996). *Netiquette*. Retrieved February 2, 2007, from <http://www.emeraldinsight.com/Insight/ViewContentServlet?Filename=Published/EmeraldFullTextArticle/Articles/1720070404.html>
- Nie, N. (2001). Stability, interpersonal relationships and the Internet: reconciling conflicting findings. *American Behavioural Scientist*, 45, 420-435.

- Nie, N., & Erbring, L. (2000). Internet and society: a preliminary report. *Stanford Institute for the Quantitative Study of Science*. Retrieved February 2, 2007, from www.sciencedirect.com/science?_ob=RedirectURL&_method=externObjLink&_locator=url&_cdi=5979&_plusSign=%2B&_targetURL=http%25
- Nielsen NetRatings (2006). *Who Benefits Most From Search?* Retrieved May 8, 2010, from http://www.nielsen-online.com/pr/PR_033006_UK.pdf
- Olweus, D. (1978). *Aggression in schools: Bullies and whipping boys*. New York: Halstead.
- Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Cambridge, MA: Blackwell Publishers.
- Oikarinen, J. (1998). Internet relay chat. In A. Metz (2000), *Armed conflict in the 21st century: The information revolution and post-modern warfare*. Retrieved July 31, 2007, from www.mirc.co.uk/help/jarkko.txt
- Opinion Research Corporation. (2006). *Fight crime: Invest in kids*. Retrieved 28 July, 2007, from <http://www.fightcrime.org/releases.php?id=232>.
- Pan, S. W. (2004a). *Dangqian xing geming gaishu* [contemporary Chinese sexual revolution]. Retrieved November 3, 2006, from <http://www.sexstudy.org/article.php?id=1949>
- Pan, S. W. (2004b). Xing fa yu: shui shuo nianqing shi wo men bu dong? Dangdai zhongguo ren de xing xingwei yu xing guanxi.[Sex crime: do you think young people know nothing?]. Retrieved June 13, 2006, from <http://www.sexstudy.org>
- Pan, S. W. (2005). *Pan Suiming zhi yi zheng gui xing jiao yu* [Pan Suiming challenges formal sexuality education]. Retrieved August 8, 2006, from <http://www.feminism.cn/ReadNews.asp?NewsID=1064>
- Pankoke-Babatz, U., & Jeffrey, P. (2002). Documented norms and conventions on the Internet. *International Journal of Human-Computer Interaction*, 14(2), 219-235.
- Paolillo, J. (1999). The virtual speech community: Social network and language variation on IRC. *Journal of Computer-Mediated Communication*, 4(4). Retrieved August 6, 2007, from <http://jcmc.indiana.edu/vol4/issue4/paolillo.html>
- Parker, L. (2009). *Game addiction: The real story*. Retrieved April 25, 2010, from <http://au.gamespot.com/features/6207309/>.
- Patchin, J. W., & Hinduja, S. (2006). Bullies move beyond the schoolyard: A preliminary look at cyberbullying. *Youth Violence and Juvenile Justice*, 4, 148-169.

- Pearl Research. (2007). *The Phoenix generation: Insights into China's youth*. Retrieved October 26, 2007, from www.giichinese.com.cn/chinese/prl56800-chinas-youth.html
- Pease, K. (2001). Crime futures and foresight: Challenging criminal behaviour in the information age. In D. Wall (Ed.), *Crime and the Internet*. London: Routledge.
- People's Daily (April 25, 2010). *Australian Senator to raise inquiry onto iPhone gambling applications*. Retrieved May 3, 2010, from <http://english.peopledaily.com.cn/90001/90777/90851/6962281.html>
- Person, E. S. (1995). *By force of fantasy: How we make our lives*. New York: Basic Books.
- Peter, L. (2003). *Net history*. Retrieved October 16, 2008, from <http://www.nethistory.info/History%20of%20the%20Internet/beginnings.html>
- Pew Internet & American Life Project. (2000). *Pew Internet & American Life Project surveys teens online*. Retrieved October 16, 2008, from www.pewinternet.org/
- Pew Internet & American Life Project. (2004). *The Internet and daily life*. Retrieved October 16, 2008, from http://www.pewinternet.org/pdfs/pip_internet_and_daily_life.pdf
- Pew Research Foundation. (2002). *Getting serious online: as Americans gain experience, they use the Web more at work, write emails with more significant content, perform more online transactions, and pursue more serious activities*. Retrieved January 26, 2007, from www.sciencedirect.com/science?_ob=RedirectURL&_method=externObjLink&_locator=url&_cdi=5979&_plusSign=%2B&_targetURL=http%253A%252F%252Fwww.pewinternet.org
- Phillips, A. E. (2004). *Cyberbullying: When bullies follow you home*. Unpublished master's dissertation, University of North Texas, Denton, Texas.
- Phillips, C. (2003). Who's who in the pecking order? *British Journal of Criminology*, 43, 710-728.
- Piaget, J. (1950). *The psychology of intelligence*. London: Routledge & Kegan Paul.
- Postmes, T., & Spears, R. (1998). Deindividuation and antinormative behavior: A meta-analysis. *Psychological Bulletin*, 123(3), 238-259.
- Preece, J. (2000a). *Sociability and usability in online communities: Determining and measuring success*. Retrieved June 11, 2007, from www.ifsm.umbc.edu/~preece/Papers/BIT_Twenty_years02.pdf

- Preece, J. (2000b). *Online communities: Designing usability, supporting sociability*. Retrieved June 11, 2007, from <http://www.shivinfomedia.com/online-community-sites.htm>
- Preece, J., & Maloney-Krichmar, D. (2005). Online communities: Design, theory, and practice. *Journal of Computer-Mediated Communication*, 10(4). Retrieved June 11, 2007, from <http://jcmc.indiana.edu/vol10/issue4/preece.html>
- Prensky, M. (2001). *Digital natives, digital immigrants*. Retrieved 26 June, 2007, from www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf
- Press, L. (2004). *The Internet in developing nations: Grand challenges*. Retrieved April 2, 2008, from www.firstmonday.org/issues/issue9_4/press/
- Pruitt-Mentle, D. (2009). *National C3 Baseline Study: State of Cyberethics, Safety and Security Awareness in US Schools*. Retrieved May 7, 2010, from http://www.iste.org/Content/NavigationMenu/Research/NECC_Research_Paper_Archives/NECC2009/PruittMentle_NECC09.pdf
- Pytel, B. (2007). *Cyber-bullying: Students and teachers are now both becoming targets*. Retrieved December 12, 2007, from <http://educationalissues.suite101.com/article.cfm/cyberbullying>
- Qiao qiao hua shuo chu lai [Speak out your secrets]. (2004, January 9). *Chinese Education Newspaper*. Retrieved March 16, 2006, from <http://www.jyb.com.cn/gb/2004/01/09/zy/jyxl/1.htm>
- Qiu, J. L. (2000). Virtual Censorship in China: Keeping the gate between the cyberspaces. *International Journal of Communications Law and Policy*. Retrieved May 1, 2007, from <http://www.ijclp.org>
- Qiu, J. L., & Zhou, L. (2005). Through the prism of the Internet cafe: Managing access in an ecology of games. *China Information*, 19, 261-297.
- Queensland Studies Authority. (2007). *Legal Studies*. Retrieved May 5, 2008, from <http://www.qsa.qld.edu.au/learning/1535.html>
- Ranon, N. (2006). *Young women's use of the Internet to explore secret identities*. Retrieved May 10, 2007, from http://www.google.com.au/search?sourceid=navclient&ie=UTF-8&rlz=1T4RNWN_enAU288AU291&q=Young+Women%e2%80%99s+Use+of+the+Internet+to+Explore+Secret+Identities%2e

- Rayman-Read, A. (2000). *Lipstick and politics: The web gives new life to youth feminist*. Retrieved November 11, 2007, from <http://www.prospect.org/webfeatures/2000/12/rayman-read-a-12-26.html>
- Reid, E. (1991). *Electropolis: Communication and community on Internet relay chat*. Retrieved November 10, 2007, from <http://www.irchelp.org/irchelp/communication-research/academic/academic-reid-e-electropolis-1991.html>
- Reid, E. (1998). The Self and the Internet: Variations on the Illusion of One Self. In J. Gackenbach (Ed.), *Psychology and the Internet: Intrapersonal, interpersonal and transpersonal implications* (pp. 29-42). San Diego: Academic Press.
- Rest, J. (1986). *Moral development: Advances in research and theory*. New York: Praeger Publishers.
- Rheingold, H. (1991). *Virtual Reality*. New York: Touchstone.
- Rheingold, H. (1994). *Virtual Community: Finding Connection in a Computerized World*. Cambridge, London: Secker & Warburg
- Rheingold, H. (1998). *Rheingold's Rants*. Retrieved April 26, 2010, from <http://www.rheingold.com/rants/9803.html>
- Ridings, M. C., & Gefen, D. (2004). Virtual community attraction: Why people hang out online. *Journal of Computer-Mediated Communication*, 10(1). Retrieved November 11, 2007, from http://jcmc.indiana.edu/vol10/issue1/ridings_gefen.html
- Roberts, D. F., Foehr, U. G., & Rideout, V. (2005). *Generation M: Media in the lives of 8-18 year-olds*. Retrieved November 10, 2007, from <http://www.scribd.com/doc/2607156/Generation-M-Media-in-the-Lives-of-Year-olds>
- Rogers, E. M., & Shukla, P. (2001). The role of telecenters in development communication and the digital divide. *Journal of Development Communication*, 2(12), 26-31.
- Rogers, M. (2000). Psychological theories of crime and hacking. *Telematic Journal of Clinical Criminology*. Retrieved May 5, 2007, from homes.cerias.purdue.edu/~mkr/crime.doc
- Rogers, M. (2001). *A social learning theory and moral disengagement analysis of criminal computer behaviour: An exploratory study*. Unpublished doctoral dissertation, submitted to the University of Manitoba, Winnipeg, Manitoba. Retrieved May 5, 2007, from homes.cerias.purdue.edu/~mkr/cybercrime-dissertation.pdf

- Rollman, J. B., Krug, K., & Parente, F. (2000). The chat room phenomenon: Reciprocal communication in cyberspace. *CyberPsychology & Behavior*, 3(2), 161-166.
- Roschelle, J.M., Pea, R. D., Hoadley, C. M., Gordin, D. N., & Means, B. M. (2000). Changing how and what children learn in school with computer-based technologies. *The Future of Children*, 10 (2). Retrieved May 5, 2007, from http://hal.archives-ouvertes.fr/docs/00/19/06/10/PDF/A103_Roschelle_etal_01_Packard.pdf
- Roy, M. (2001a). *Adults play games on the Internet, too*. Retrieved November 10, 2007, from www.roymorgan.com/news/internet-releases
- Roy, M. (2001b). *Australians choose mowing, pruning, weeding as leisure activities*. Retrieved November 10, 2007, from www.roymorgan.com/news/internet-releases/2001/70
- Safer Internet. (n.d.). *Children's Internet safety*. Retrieved October 10, 2007, from <http://www.safer-internet.net/>
- Said, L. R. & Mizerski, D. (2003). Applying the NBD to predict the online game play of youth and young adults. Poster presentation, *Proceedings of the Marketing and Public Policy Conference*, Washington DC.
- Salbu, S. R. (2001). Law and ethics. *American Business Law Journal*. Retrieved November 6, 2006, from <http://www.allbusiness.com/legal/laws/788502-1.html>
- Sanders, C. E., Field, T. M., Diego, M., & Kaplan, M. (2000). The relationship of Internet use to depression and social isolation among adolescents. *Adolescence*, 35, 237-242.
- Scherer, K. (1997). College life online: Healthy and unhealthy Internet use. *Journal of College Life and Development*, 38, 655-665.
- Scheuermann, L., & Taylor, G. (1997). Netiquette. *Internet Research: Electronic Networking Applications and Policy*, 7(4), 269-273.
- Schwartz, M. F., & Southern, S. (2000). Compulsive cybersex: The new tea room. In A. Cooper (Ed.), *Cybersex: The dark side of the force* (pp. 127-144). Philadelphia: Brunner Routledge.
- Setzer, J. C., Lewis, L., & Greene, B. (2005). *Distance Education Courses for Public Elementary and Secondary School Students: 2002-03 (NCES 2005-010)*. Department of Education, National Center for Educational Statistics: U.S.

- Sexuality education: Urged to prevent teenage pregnancy. (2003, September, 3). *China Daily*. Retrieved March 16, 2006, from <http://english.people.com.cn/200309/03/eng20030903123634.shtml>
- Shaw, L. H., & Gant, C. S. W. (2002). In defence of the Internet: the relationship between Internet communication and depression, loneliness, self-esteem, and perceived social support. *CyberPsychology & Behaviour*, 5, 157-171.
- Shea, V. (1994). *Netiquette*. San Francisco: Albion Books.
- Shelley, L. I. (2003). Organized crime, terrorism and cybercrime. In A. Bryden and P. Fluri (Eds.), *Security sector reform: Institutions, society and good governance*. Baden-Baden: Nomos Verlagsgesellschaft.
- Sherry, J., de Souza, R., Greenbery, B.S., & Lachlan, K. (2003). *Why do adolescents play video games? Developmental stages predicts video games uses and gratifications, game preference, and amount of time spent in play*. San Diego: the Annual Convention of the International Communication Association.
- Shi, T. (2005, June 17). Search on for 4,000 Web police for Beijing. *South China Morning Post*. Retrieved October 11, 2007, from <http://china.scmp.com/chitoday/ZZZ3LBZEU9E.html>
- Sieber, U. (1998, January). *Legal aspects of computer-related crime in the information Society*. Comcrime Study prepared for the European Commission, Version 1.0. In Australian Institute of Criminology (2001), *Cybercrime Legislation in the Asia-Pacific Region*. Retrieved October 2, 2007, from http://www.aic.gov.au/conferences/other/urbas_gregor/2001-04-cybercrime.pdf
- Siegel, L. J. (2004). *Criminology: theories, patterns & typologies*. Toronto: Thomson Learning, Inc.
- Sims, R. R., & Felton, E. L. (2005). Successfully teaching ethics for effective learning. *College Teaching Methods & Styles Journal*, 1(3). Retrieved October 12, 2007, from <http://www.cluteinstitute-onlinejournals.com/PDFs/2005156.pdf>
- Smahel, D. (2003). *Psychologie an internet: Deti dospelymi, dospeli detmi* [Psychology and Internet: Children being adults, adults being children]. Praha: Triton.
- Spears, R., Lea, M., & Postmes, T. (2001). Social psychological theories of computer-mediated communication: Social pain or social gain? In W. P. Robinson & H. Giles (Eds.), *The new handbook of language and social psychology* (2nd ed.) (pp. 601-624). New York, NY: John Wiley and Sons.

- Spooner, T. (2003). *Internet use by region in the United States: regional variations in Internet use mirror differences in educational and income levels*. Washington (DC): Pew Internet & American Life Project. Retrieved November 10, 2007, from www.pewinternet.org.
- St. Amour, L. (2009). *World Wide Web's 20th Birthday Highlights Value of Open Internet*. Retrieved May 2, 2010, from <http://www.isoc.org/isoc/headlines/20090312.shtml>
- Standler, R. B. (2002). *Computer crime*. Retrieved October 12, 2007, from www.rbs2.com/ccrime.htm
- Stanley, J. (2001). Child abuse and the Internet. *Child Abuse Prevention Issues*. Retrieved November 10, 2007, from <http://www.aifs.gov.au/nch/pubs/issues/issues15/issues15.pdf>
- Stern, S. E. (1999). Addiction to technologies: A social psychological perspective of Internet addiction. *Cyberpsychology & Behavior*, 2(5), 419-424.
- Strom, P. S., & Strom, R. D. (2005). Cyberbullying by adolescents: A preliminary assessment. *The Educational Forum*, 70, 21-32.
- Subrahmanyam, K., Kraut, R. E., Greenfield, P. M., & Gross, E. F. (2000). The impact of home computer use on children's activities and development. *The Future of Children*, 10(2). Retrieved May 5, 2007, from http://www.futureofchildren.org/usr_doc/vol10no2Art6.pdf
- Subrahmanyam, K., Kraut, R., Greenfield, P. M., & Gross, E. F. (2001). New forms of electronic media: The impact of interactive games and the Internet on cognition, socialization, and behavior. In D. L. Singer & J. L. Singer (Eds.), *Handbook of children and the media* (pp. 73-99). Thousand Oaks, CA: Sage.
- Suler, J. (1996). *The Psychology of Cyberspace*. Retrieved May 5, 2007, from <http://www.rider.edu/~suler/psy cyber/psycyber.html>
- Suler, J. (2002). Identity Management in Cyberspace. *Journal of Applied Psychoanalytic Studies*, 4(4), 455-459.
- Suler, J. (2005). *The psychology of cyberspace*. Retrieved May 5, 2007, from www.rider.edu/suler/psycyber/psycyber.html
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33-47). Monterey, CA: Brooks/Cole.

- Tan, Z. X., Mueller, M., & Foster, W. (1997). China's new internet regulations: Two steps forward, one step back. *Communications of the ACM*, 40(12), 11-16.
- Tashakkori, A., & Teddlie, C. (Eds.). (2003). *Handbook of mixed methods in the social and behavioral sciences*. Thousand Oaks, CA.: Sage.
- Taubman, G. (1998). A not-so World Wide Web: the Internet, China, and the challenge to non-democratic rule. *Political Communication*, 15, 255-272.
- Teachers' Law of the People's Republic of China. (1994). Retrieved June 7, 2007, from <http://www.lehmanlaw.com/resource-centre/laws-and-regulations/education/teachers-law-of-the-peoples-republic-of-china-1994.html>
- The Guardian. (2002, July 10). *Mass shutdown of Chinese Internet cafes*. Retrieved June 4, 2007, from <http://www.guardian.co.uk/internetnews/story/0,7369,752802,00.html>
- The Intelligence Group. (2006). *Most teens say they've met strangers online*, MSNBC Interactive, Retrieved 26, June, 2007, from www.msnbc.msn.com/id/12...T/print/1/displaymode/1098
- The State Council. (1997). *Computer information network and Internet security, protection and management regulations*. Retrieved January 2, 2007, from http://newmedia.cityu.edu.hk/cyberlaw/gp3/pdf/law_security.pdf
- The State Education Commission. (1996). Interim measures for the administration of examinations for educational purposes held jointly by Chinese and foreign institutions. *Regulations*. Retrieved January 2, 2007, from <http://www.asianlii.org/cn/legis/cen/laws/imftaoefephjbcafi1258/>
- The United Republic of Tanzania Ministry of Communications and Transport. (2003, March). National information and communications technologies policy. Retrieved 7, June, 2007 from [http://www.ethinktanz.org/secretariat/DocArchive/Tz%20National%20ICT%20Policy%20\(March%202003\).pdf](http://www.ethinktanz.org/secretariat/DocArchive/Tz%20National%20ICT%20Policy%20(March%202003).pdf)
- Thomas, A. (2005). Children online: Learning in a virtual community of practice. *E-Learning*, 2(1), 27-38.
- Thomas, D., & Loader, B. (2000). Introduction-cybercrime: Law enforcement, security and surveillance in the information age. In D. Thomas and B. Loader (Eds.), *Cybercrime: Law enforcement, security and surveillance in the information age*. London: Routledge.

- Thomsen, S. R., Straubhaar, J. D., & Bolyard, D. M. (1998). *Ethnomethodology and the study of online communities: Exploring the cyber streets*. Retrieved November 12, 2007, from <http://informationr.net/ir/4-1/paper50.html>
- Thurairasa, S. & Johnson, R. (n.d.). *Is There A Need For Cyberethics In The Middle School Curriculum*. Retrieved May 2, 2010, Retrieved May 9, 2010, from <http://www.aare.edu.au/03pap/thu03025.pdf>
- Thurlow, C., Lengel, L., & Tomic, A. (2004). *Computer mediated communication: Social interaction and the Internet*. London: Sage.
- Tichon, J. G., & Shapiro, M., (2003). The process of sharing social support in cyberspace. *CyberPsychology & Behavior*, 6, 161–170.
- Totilo, S. (2005, July 10). Where a puff of marijuana is the ultimate power-up. *The New York Times*. Retrieved October 12, 2006, from www.nytimes.com/2005/03/17/technology/circuits/17drug.html?ex=1111726800&en=3595719e5c1f6dfe&ei=5070
- Turiel, E. (1983). *The development of social knowledge: Morality and convention*. New York: Cambridge University Press.
- Turkle, S. (1995). *Life on the Screen: Identity in the Age of the Internet*. New York: Simon & Schuster
- Turner, J. W., Grube, A., & Meyers, J. (2001). Developing an optimal match within online communities: An exploration of CMC support communities and traditional support. *Journal of Communication*, 51, 231-251.
- United Nations Population Fund. (1997). *UNFPA: Supporting adolescents and youth*. Retrieved August, 9, 2006, from <http://www.unfpa.org>
- USA TODAY. (2007). *Report: China won't allow new Net cafes in 2007*. Retrieved October 12, 2007, from www.usatoday.com/tech/news/techpolicy/2007-03-06-china-net-cafes_N.htm
- U.S. Department of Education. (1996). *Getting America's students ready for the 21st century: Meeting the technology literacy challenge. A report to the nation on technology and education*. Retrieved October 12, 2007, from <http://www.ed.gov/about/offices/list/os/technology/plan/national/index.html>
- Veneziano, C., & Veneziano, L. (1992). The relationship between deterrence and moral reasoning. *Criminal Justice Review*, 17, 209-218.

- Wall, D. S. (2001). Cybercrimes and the Internet. In D. Wall (Ed.), *Crime and the Internet*. London: Routledge.
- Walsh, J. (2007). The National Centre for Missing & Exploited Children and Cox Communications announce results of teen internet survey. Retrieved July 20, 2007, from www.missingkids.com/missingkids/servlet/NewsEventServlet?LanguageCountry=en_US&PageId=3166
- Walther, J. B., & Boyd, S. (2002). Attraction to computer-mediated social support. In C. A. Lin, and D. Atkin (Eds.), *Communication technology and society: Audience adoption and uses*. Cresskill, NJ: Hampton Press.
- Walton, G. (2001). *China's golden shield*. Retrieved on January 3, 2007, from http://www.dd-rd.ca/site/_PDF/publications/globalization/CGS_ENG.PDF
- Wan, E., Xu, X., & Zhou, Z. Q. (2006). *Pacific epoch red innovation report series 2006 online game report pre-release*. Retrieved October 2, 2007, from https://www.pacificepoch.com/uploads/docs/20060124_Sample_-_Pacific_Epoch_Online_Game_Report_PreRelease.pdf
- Wang, X. (2004). *Moral education in the globalization era (Quan qiu hua shi dai de zhong guo diode jiao yu)*. Retrieved October 6, 2007, from <http://scholar.ilib.cn/Article.aspx?AIT=QCode&AI=bjsfdxxb-shkx200403003&A=bjsfdxxb-shkx200403003>
- Wang, X. N. (2007). *Internet language and shifts in intergenerational power dynamics*. Conference examines Internet's impact in China. Retrieved October 12, 2007, from international.tamu.edu/ipa/news/Post%20Internet%20Conference%20PR%20FINAL.pdf
- Wartella, E. A., & Jennings, N. (2000). Children and computers: New technology-old concerns. *The Future of Children*, 10 (2). Retrieved May 5, 2007, from http://www.futureofchildren.org/usr_doc/vol10no2Art2.pdf
- Weber, J., & Glyptis, S. M. (2000). Measuring the impact of a business ethics course and community service experience on students' values and opinions. *Teaching Business Ethics*, 4, 341-358.
- Wellman, B. (2001). Physical place and cyberplace: The rise of networked individualism. In L. Keeble and B. Loader (Eds.), *Community informatics: Shaping computer-mediated social relations*. London: Routledge.
- Weimann, G. (2004). *WWW.terror.net: How modern terrorism uses the Internet*. Washington DC: United States Institute of Peace. Retrieved May 5, 2007, from www.usip.org/pubs/specialreports/sr116.pdf

- WestOne. (n.d.). *What is chat?* Retrieved March 5, 2007, from <http://www.westone.wa.gov.au/intotheinternet/chat/03.htm>
- Wilkinson, D., & Birmingham, P. (2003). *Using research instruments: A guide for researchers*. London: Routledge Falmer.
- Willard, N. (1997). *Moral development in the information age*. Retrieved June 1, 2007, from <http://tiger.uic.edu/~lnucci/MoralEd/articles/willard.html>
- Willard, N. E. (2006). *Cyberbullying and cyberthreats: Responding to the challenge of online social cruelty, threats, and distress*. Eugene, Oregon: Centre for Safe and Responsible Internet Use.
- Windows Live Messenger. (2006). MSN cyberbullying report: Blogging, instant messaging and email bullying amongst today's teens. *The Australian Young People and the Arts* (Australia Council, 2003, p. 5). Retrieved June 13, 2007, from www.ozco.gov.au/__data/assets/pdf_file/0016/3562/14_entire_policy.pdf
- Wolak, J., Finkelhor, D., & Mitchell, K. (2004). *Internet-initiated sex crimes against minors: Implications for prevention based on findings from a national study*. Retrieved April 14, 2007, from <http://www.unh.edu/ccrc/pdf/CV71.pdf>
- Wolak, J., Mitchell, K., & Finkelhor, D. (2006). *Online victimization of youth: Five years later*. Retrieved April 14, 2007, from www.unh.edu/ccrc/pdf/CV138.pdf
- Wolke, D., Woods, S., Bloomfield, L., & Karstadt, L. (2000). *The association between direct and relational bullying and behaviour problems among primary school children*. Retrieved October 12, 2007, from journals.cambridge.org/action/displayAbstract?fromPage=online&aid=59321
- Woolgar, S. (2002). *Virtual society? Technology, cyberbole, reality*. Oxford: Oxford University Press.
- Wright, K. (2000). Computer-mediated social support, older adults and coping. *Journal of Communication*, 50, 100–119.
- Xiao, Q. (2004). The words you never see in Chinese cyberspace. *China Digital Times*. Retrieved October 12, 2007, from http://chinadigitaltimes.net/2004/08/the_words_you_n.php
- Yang, S. (2006). An informal discussion on Internet matters: Moral construction for children and young people. *Chinese Education and Society*, 39 (1), 65-83.

- Yar, M. (2005a). The novelty of "cybercrime": An assessment in light of routine activity theory. *European Journal of Criminology*, 2 (4), 407-27.
- Yar, M. (2005b). Computer hacking: Just another case of juvenile delinquency? *Howard Journal*, 44(4), 387-99.
- Ybarra, M. L. (2004). Linkages between depressive symptomatology and Internet harassment among young regular Internet users. *CyberPsychology & Behaviour*, 7(2), 247-257.
- Yin, P. M. (2002). Guanyu kaizhan wangshang jiaoyu de changyi [The recommendation of sexuality education in the website]. Retrieved September 18, 2006, from <http://www.100md.com/Html/Dir0/17/84/60.htm>
- Young, K. (2009). Understanding Online Gaming Addiction and Treatment Issues for Adolescents. *The American Journal of Family Therapy*, 37: 355-372.
- Young, K., Pistner, M., O'Mara, I., & Buchanan, J. (1999). Cyber disorders: The mental health concern for the new millennium. *CyberPsychology & Behaviour*, 2, 475-479.
- Young, K. S. (1998). *Caught in the Net: How to recognize the signs of Internet addiction-and a winning strategy for recovery*. New York: John Wiley & Sons.
- Young, K. S. (1999). *Internet addiction: Symptoms, evaluation, and treatment centre for online and Internet addiction*. Retrieved April 24, 2007, from www.netaddiction.com
- Young, S., Lee, M., & Doyle, K. O. (2003). Lifestyles of online gamers: A psychographic approach. *Journal of Interactive Advertising*, 3(2), 1-13.
- Zemke, R., Raines, C., & Filipeczak, B. (2000). *Generations at Work: Managing the Clash of veterans, boomers, Xers, and Nexters in your workplace*. New York: AMACOM Books.
- Zhang, J. S. (2008). *Ambassador Zhang Junsai's speech at the University of Sydney*. Retrieved October 12, 2008, from <http://au.china-embassy.org/eng/sgjs/sghd/t517271.htm>
- Zillman, D., & Weaver, J. (1999). Effects of prolonged exposure to gratuitous media violence on provoked and unprovoked hostile behavior. *Journal of Applied Social Psychology*, 29, 145-65.
- Zimmerle, M. (2003). *Cyber bullying*. Sewice-Learning Update. Retrieved June 15, 2007, from www.imakenews.com/psla~eearticle000127654.cfm

Appendix A

QUESTIONNAIRE COVERSHEET

Title of Research Project:

An exploration of student teachers' interaction with on-line activities, and their influence on their teaching topics such as netiquette and cyber-bullying: an Australian and Chinese study

Who is conducting the research?

Chief Investigator: Xiaohong Zhang, School of Education and Professional Studies, Faculty of Education, Griffith University, Gold Coast campus, Contact Phone: +61 430168878 ; Contact email: Xiaohong.Zhang@student.griffith.edu.au

Primary Supervisor: Dr Juliette Goldman: School of Education and Professional Studies, Faculty of Education, Griffith University, Gold Coast campus, Contact Phone: +61 7 5552-8742, Contact email: j.goldman@griffith.edu.au

Why is the research being conducted? This research project constitutes the minor thesis of the Ed.D at Griffith University. It compares the on-line activities in chat rooms of Australian and Chinese university student teachers who may teach 11-years-old students in the future, and analyses some reasons for those on-line activities. It also investigates how student teachers view some activities related to the legal and ethical issues in internet chat rooms. The results may assist in establishing a new pedagogy by combining legal and ethics education in order to help *prevent* youth misbehaviour and *protect* youth in on-line activities future.

What you will be asked to do? You are asked to complete this voluntary, anonymous and confidential short questionnaire. It is easy to read and answer, and takes only a short time to complete.

The basis for selecting participants: All second-year student teachers in the B.Ed may participate voluntarily in this Questionnaire. All participants will need to be 18 years old or older; otherwise you can return questionnaire to the investigator. No subjects under the age of 18 years will be accepted. Before the survey is distributed, this will be made clear in the Instructions for the survey. If any person under 18 receives the survey they will be asked to return it not completed.

The expected benefits of the research: This research aims to provide an understanding of student teachers' behaviour in Internet chat rooms, which may assist them to teach the next generation of 11-years-old students. It also helps students understand how to protect themselves and prevent potential problems. Further, it may contribute to academic courses design integrating the cyber-legal issues and cyber-ethical issues that address the requirements of students' social development, and assist the professional development of future cohorts of student teachers.

Potential risks to you: There are no known potential risks. The data received from the participants will be kept locked with the researcher and in a safe environment. Once the researcher has transcribed and analysed the information, it will be destroyed.

Confidentiality of records and reporting: No identifiable data will be collected. No one will be able to be identified from the data. Only aggregated data is produced and reported. Confidentiality, anonymity and privacy are assured because the measures for storage and control of access to the data is strictly under the control of highly experienced principal researchers who will vigilantly ensure it is in a secure locked place that is not accessible to anyone other than the researchers.

Your participation is voluntary: You are assured that your decision to participate in the project is completely voluntary, and in no way impacts on your relationships with the organisation. You are free to withdraw from the study at any time.

Ethical conduct of this research: This research has been submitted to the Griffith University Human Research Ethics Committee, and follows appropriate ethical standards and procedures. Griffith University conducts research in accordance with the *National Statement on Ethical Conduct in Research Involving Humans*. If you have concerns or complaints about the ethical conduct of the research project, contact the Manager, Research Ethics on 3735 5585 or research-ethics@griffith.edu.au.

Privacy Statement: The conduct of this research involves the collection, access and /or use of your identified personal information. The information collected is confidential and will not be disclosed to third parties without your consent, except to meet government, legal or other regulatory authority requirements. A de-identified copy of this data may be used for other research purposes. However, your anonymity will at all times be safeguarded. For further information consult the Griffith University' Privacy Plan at www.gu.edu.au/ua/aa/vc/pp

Mechanism for distribution and return: This short questionnaire is distributed, completed and collected during a single session. It will take about 15 minutes to complete. When you have completed the questionnaire, please check that you have completed every question, and then place it in the box at the front desk.

Expressing consent: If you complete and return the questionnaire, you are deemed to have consented to participation in the research. If you wish, you may detach this sheet and retain it for your later reference. Thank you very much for your participation. It is greatly appreciated, because it helps future student teachers in a number of ways.

Thank you again for participating in an important piece of research.

QUESTIONNAIRE

Please take your time to complete this questionnaire. For most questions there are no right or wrong answers. Your information about activities while using the Internet is very important for this study. Please note that all the questionnaires will remain anonymous, and all data collected will be securely kept by the researchers.

A. Demographic Details Please *circle* the relevant number in brackets following each question.

1. Are you? [1] Male [2] Female
2. How old are you? [1] Under 18 [2] 19-24 [3] 25-29 [4] 30-34 [5] 35 or over
3. Who are you currently living with? [1] Parent/s [2] girlfriend [3] boyfriend [4] friends
[5] Other (please specify) _____

B. On-line activities in chat rooms The following questions relate to YOUR various on-line activities. Please *circle* your appropriate response.

4. Generally, **how many hours** do you spend in Internet chat rooms each week?
[1] None [2] 1-4 hours [3] 5-9 hours [4] 10-14 hours [5] 15 hours and more
5. Generally, where do you most often **access chat rooms** from?
[1] At home [2] Internet Caf   [3] dormitory [4] Other (please specify) _____
6. Generally, what do you **mostly do in chat rooms**?
[1] Look for academic information [2] Watch movies [3] Look for friendship [4] Look for a boyfriend/girlfriend [4] Look for a sexual partner [5] Play on-line games
[6] Other (please specify) _____
7. **How many friends** from your country do you have in Internet chat rooms?
[1] None [2] 1-4 [3] 5-9 [4] 10-14 [5] 15-19 [6] 20 or more
8. **How many international friends** do you have in Internet chat rooms?
9. [1] None [2] 1-4 [3] 5-9 [4] 10-14 [5] 15-19 [6] 20 or more
10. Have you had the opportunity to **get a boyfriend** in Internet chat rooms? [1] Yes [2] No
11. Have you had the opportunity to **get a girlfriend** in Internet chat rooms? [1] Yes [2] No
12. Generally, how many hours do you **play on-line games** in Internet chat rooms each week?
[1] 0-4 hours [2] 5-9 hours [3] 10-14 hours [4] 15-19 [5] 20 or more
13. Generally, how many hours do you **watch movies** in Internet chat rooms each week?
[1] 0-4 hours [2] 5-9 hours [3] 10-14 hours [4] 15-19 [5] 20 or more
14. Generally, how many hours do you **listen to music** in Internet chat rooms each week?
[1] 0-4 hours [2] 5-9 hours [3] 10-14 hours [4] 15-19 [5] 20 or more
15. Generally, how many hours do you **study** in Internet chat rooms each week?
[1] 0-4 hours [2] 5-9 hours [3] 10-14 hours [4] 15-19 [5] 20 or more

C. Influences of three specific on-line activities. Please check ✓ the appropriate box if you think on-line activities have **affected your behaviour outside the Internet chat rooms**. Then, please check, on the far right, if you think 11-year-old children should be taught about these issues?

Three specific on-line activities	Your opinions		Do you think children aged 11-years-old should be taught about this?	
	Yes	No	Yes	No
i. Playing on-line games Do you think playing on-line games				
16. Increases your aggressive thoughts ?				
17. Increases your hostile behaviour ?				
18. Enhances your social interaction ?				
19. Decreases your prosocial (helping) behaviour ?				
20. Increases your physiological sexual arousal ?				
ii. Making friends and Sexual solicitation Do you think Internet chat rooms are;	Yes	No	Yes	No
21. Safe places for you to make friends?				
22. Able to provide reliable information for you to meet net friend face-to-face?				
23. Easy for you to experience sexual verbal assault ?				
24. Able to provide sexual solicitation from other people?				
25. Good places for you to encounter sexual advances ?				
iii. Cyber-bullying In Internet chat rooms have you ever;	Yes	No	Yes	No
26. Posted pictures of another person without their consent?				
27. Pretended you are another person on-line to trick others?				
28. Spread lies and rumors about other people?				
29. Tricked people into revealing personal information?				
30. Sent or forwarded mean text messages to other people?				

D. Your understanding of three types of activities How much do you **understand** about the following **three types of activities** in Internet chat rooms, and should 11-year-old children be taught about this. Please check ✓ the appropriate box.

Issues of cyber crimes	How much do you understand this					Should 11-year-old children be taught about this issue?	
	Not at all	Slightly	Mildly	Moderately	A lot	Yes	No
31. Cyber-bullying							
32. Sexual solicitation							
33. Internet Addiction							

E. Netiquette Tell us about Your Net etiquette and teaching 11 years old students about **Netiquette** in chat rooms. Please indicate **your behaviour** in chat rooms whether it follows Net etiquette rules. Please check ✓ the appropriate box.

Netiquette In Internet chat rooms, do you;	Your opinions					Do you think 11-year-old children should be taught about these issues?	
	Always	Frequently	Sometimes	Rarely	Never	Yes	No
1. Always share expert knowledge with other people in chat rooms?							
2. Adhere to the same standards of behaviour on-line that you follow in real life?							
3. Always follow the rules in different Internet chat rooms?							
4. Always respect other people's time ?							
5. Always try to make yourself look good ?							
6. Say rude words which you never say in real life?							
7. Attack other participants when you have arguments with issues?							
8. Respect other participants' privacy?							
9. If you are wizards in MUDs (multi-user dungeons), experts in every office, or system administrators, do you ever abuse your power ?							
10. Forgive other people's mistakes in chat rooms?							

F. Legal and Ethical Education What **Content on Legal and Ethical Education** would you prefer to be taught in a university course on protection and prevention of on-line activities?

Please circle one reply in each row.

Legal and Ethical education	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. Child and youth physical development	1	2	3	4	5
2. Legal issues of Cyber-bullying	1	2	3	4	5
3. Legal issues of Internet pornography	1	2	3	4	5
4. Legal issues of Sexual Abuse	1	2	3	4	5
5. Legal issues of Cyber-stalking	1	2	3	4	5
6. Internet Addiction	1	2	3	4	5
7. Psychology of Internet behaviour	1	2	3	4	5
8. Moral Development of a person	1	2	3	4	5
9. Netiquette for on-line chat rooms	1	2	3	4	5

G. Reflection on Internet chat rooms

10. Over the next 10 years of your teaching career, how do you think **Netiquette** will affect children's on-line chat rooms activities?

11. Over the next 10 years of your teaching career, how do you think **legal issues** will control 11 years old children's on-line chat rooms activities?

THANK YOU

Appendix B



比较研究中澳大学小学教育专业师范生

在网络聊天室中的三种行为及其危害性结果

主要研究者: 张晓红, 格利菲斯大学黄金海岸校区, 教育学院, 教育及专业研究系

联系电话: +61 430168878 ; Email: Xiaohong.Zhang@student.griffith.edu.au

主要指导教授: Juliette Goldman 博士生导师, 格利菲斯大学黄金海岸校区, 教育学院, 教育及专业研究系, 联系电话: +61 7 5552-8742; Email: j.goldman@griffith.edu.au

进行这项研究的目的? 这个研究项目是格里菲斯大学教育学博士论文的一部分, 通过比较中澳师范生(可能教授 11 岁左右年龄的学生)在网络聊天室中的各种行为和相关原因, 以及师范生们对于法学教育和伦理道德教育在网络中应用的认知, 探索一个融合法学和伦理学的网络教育课程, 以实现双 P 的目的, 即 Prevent (预防) ----预防青少年网上不良甚至犯罪行为的发生; Protect (保护) ---保护青少年在因特网上可能遭遇的潜在危险。

您将会被要求做什么? 您会被邀完成一个自愿、匿名且保密的问卷调查表, 此表很容易阅读和回答, 所以只需要占用您很短的时间。

参与者被选择的条件? 所有本科二年级从事小学教育的师范生都可以自愿参加这次调查, 但是所有的参与者都需要 18 岁以上, 如果您不满 18 周岁, 您可以不用回答问卷, 并且返还给调查者。

这项研究期望的受益? 这项研究通过对于师范生在网络聊天室的行为分析, 将有助于他们教育未来一代学生, 以满足网络社会的需要和协助师范生未来的专业发展。同时, 也希望师范生们通过传授法学和伦理学知识, 帮助他们未来的学生更好的了解如何预防网络聊天室中潜伏的危险和在网络世界中学会保护自己。

潜在的危险? 这项调查不会对您导致任何潜在的危险, 所有接受到的数据将会被研究者用袋子保存在安全地方, 一旦研究者转录和分析完数据, 所有信息将会被销毁。

记录和报告的保密性: 不会有数据会暴露您的身份, 只有综合的数据显示出来, 保密性、匿名性和隐私权将会完全确保, 因为此次研究数据的收集、储存都是由非常有经验的研究者严格管理, 她会确保数据的收集在一个安全的被锁住的地方, 除了研究者外, 没有其他人可以进入。

您的参与性是建立在完全自愿的基础上: 确保您决定参与此项研究是完全自愿的, 而且不会在任何方面影响您和学校间关系。您也可以随时退出此次研究。

此研究的道德规范: 这项研究已经交到格利菲斯大学人文研究道德规范委员会, 而且遵循适当的伦理标准和程序。格利菲斯大学从事学术调查严格遵守‘澳洲人文研究道德规范’的要求。如果有任何关于研究项目道德操守方面的疑问和投诉, 您可以联系格利菲斯大学研究道德委员会负责人(电话: 3735 5585 或电邮: research-ethics@griffith.edu.au)

保密声明: 本研究涉及到收集、接触和/或使用您的个人信息, 所有收集来的信息都是完全保密的, 不经您的允许是不会泄露给除政府、法律和其他监管机构外的任何第三方。无标识的资料副本可能会被用于其它学术目的, 但是, 您的信息的匿名性在任何情况下都将得到保证。如果您还有其他更多地问题, 请咨询大学保密计划处(www.gu.edu.au/ua/aa/vc/pp 或致电 61 7 3735 5585)。

分发和返还程序: 这个简短问卷将会一次分发和收集, 大约花费您 15 分钟时间完成, 当你完成后, 请检查每一个问题, 然后放在前面桌子上的盒子里。

同意表示: 如果您完成并且返还问卷, 您确定完全已经同意参与这次研究, 请分开这张说明以作为以后的证明。非常感谢您的参与和支持, 因为这会在很多方面帮助未来老师的专业发展。

再此感谢您这项重要的研究!

亲爱的安徽大学校长，

我叫张晓红，目前就读澳大利亚格里菲斯大学教育系博士，主要研究方向是通过比较研究中澳大学小学教育专业二年级师范生在网络聊天室中的三种行为及其危害性结果，分析网络活动带给他们的影响，以及师范生们对于法学教育和伦理道德教育在网络中应用的认知，探索一个融合法学和伦理学的网络教育课程，以实现双 P 的目的，即 **Prevent**（预防）---预防青少年网上不良甚至犯罪行为的发生；**Protect**（保护）---保护青少年在因特网上可能遭遇的潜在危险。

为了完成这个研究项目，相关数据和信息的收集需要您的支持，我诚恳地希望您能够允许在您学校中的教育系小学教育专业二年级本科生中，进行一次问卷调查。他们完全自愿匿名参加。同时，我也希望您能够担任此次调查的中国方面伦理道德代表，如果有任何关于伦理方面的投诉，请您及时通知格里菲斯大学伦理研究方面的主管，联系电话：61-7-3735 5585 电邮：research-ethics@griffith.edu.au。

如果您同意协助这项调查研究并在同意书上签字，我将不胜感激。

此致

敬礼

张晓红

同意书

比较研究中澳大学小学教育专业师范生 在网络聊天室中的三种行为及其危害性结果

主要研究者: 张晓红

格利菲斯大学黄金海岸校区, 教育学院, 教育及专业研究系

联系电话: +61 430168878 ; Email: Xiaohong.Zhang@student.griffith.edu.au

主要指导教授: Juliette Goldman 博士生导师

格利菲斯大学黄金海岸校区, 教育学院, 教育及专业研究系

联系电话: +61 7 5552-8742; Email: j.goldman@griffith.edu.au

在下面签名前, 我确信已经阅读并且理解了此项研究的基本情况和以下一些
特别注意事项:

- 我理解我会参与这项研究的相关数据收集, 包括完成问卷调查;
- 如果我有任何问题, 调查者应给出满意答案;
- 我明白可能发生的危险因素;
- 我明白我不会因为参与这次研究有任何直接收益;
- 我明白我是自愿参加这次研究的;
- 我明白如果我有任何问题, 我会和研究小组联系;
- 我明白我可以随时退出问卷调查, 并且不会有任何评论和惩罚;
- 我明白如果我有任何关于这项研究的道德规范方面的问题, 我可以联系您可以联系格利菲斯大学
研究道德委员会负责人 (电话: 3735 5585 或电邮: research-ethics@griffith.edu.au)
- 我同意参与这项研究。

参与者

参与者的签名

日期

Appendix C

by gender

Contents

Contents i

Crosstabs Group 2

NPar Tests 30

Kruskal-Wallis Test 30

.NPar Tests 31

Kruskal-Wallis Test 31

NPar Tests 33

Kruskal-Wallis Test 33

NPar Tests 35

Kruskal-Wallis Test 35

Analyses by gender

Crosstabs Group

Ethnicity * A1 Sex

Crosstab					
		A1 Sex			
			male	female	Total
Group Ethnicity	Chinese	Count	14	42	56
		Std. Residual	-.3	.2	
	Australian	Count	12	28	40
		Std. Residual	.4	-.2	
	Total	Count	26	70	96

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.295 ^a	1	.587		
Continuity Correction ^b	.096	1	.756		
Likelihood Ratio	.294	1	.588		
Fisher's Exact Test				.645	.376
Linear-by-Linear Association	.292	1	.589		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.83.

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.295 ^a	1	.587		
Continuity Correction ^b	.096	1	.756		
Likelihood Ratio	.294	1	.588		
Fisher's Exact Test				.645	.376
Linear-by-Linear Association	.292	1	.589		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.83.

b. Computed only for a 2x2 table

C1 aggressive thoughts * A1 Sex

Crosstab

			A1 Sex		
			male	female	Total
C1 aggressive thoughts	yes	Count	9	28	37
		Std. Residual	-.3	.2	
	no	Count	17	42	59
		Std. Residual	.3	-.2	
	Total	Count	26	70	96

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.232 ^a	1	.630		
Continuity Correction ^b	.060	1	.806		
Likelihood Ratio	.234	1	.628		
Fisher's Exact Test				.814	.406
Linear-by-Linear Association	.230	1	.632		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.02.

b. Computed only for a 2x2 table

C2 hostile behaviour * A1 Sex

Crosstab

			A1 Sex		
			male	female	Total
C2 hostile behaviour	yes	Count	2	17	19
		Std. Residual	-1.4	.8	
	no	Count	24	53	77
		Std. Residual	.7	-.4	
	Total	Count	26	70	96

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.288 ^a	1	.070		
Continuity Correction ^b	2.326	1	.127		
Likelihood Ratio	3.809	1	.051		
Fisher's Exact Test				.087	.057
Linear-by-Linear Association	3.254	1	.071		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.15.

b. Computed only for a 2x2 table

C3 social interaction * A1 Sex

Crosstab

			A1 Sex		
			male	female	Total
C3 social interaction	yes	Count	8	38	46
		Std. Residual	-1.3	.8	
	no	Count	18	32	50
		Std. Residual	1.2	-.7	
	Total	Count	26	70	96

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.201 ^a	1	.040		
Continuity Correction ^b	3.312	1	.069		
Likelihood Ratio	4.295	1	.038		
Fisher's Exact Test				.065	.034
Linear-by-Linear Association	4.157	1	.041		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.46.

b. Computed only for a 2x2 table

C4 prosocial behaviour * A1 Sex

Crosstab

			A1 Sex		
			male	female	Total
C4 prosocial behaviour	yes	Count	7	35	42
		Std. Residual	-1.3	.8	
	no	Count	19	35	54
		Std. Residual	1.1	-.7	
	Total	Count	26	70	96

Analyses by gender

Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided) Exact Sig. (1-sided)
Pearson Chi-Square	4.103 ^a	1	.043	
Continuity Correction ^b	3.218	1	.073	
Likelihood Ratio	4.250	1	.039	
Fisher's Exact Test				.063 .035
Linear-by-Linear Association	4.060	1	.044	
N of Valid Cases	96			

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.38.

b. Computed only for a 2x2 table

C5 sexual arousal * A1 Sex

Crosstab					
			A1 Sex		
			male	female	Total
C5 sexual arousal	yes	Count	5	15	20
		Std. Residual	-.2	.1	
	no	Count	21	55	76
		Std. Residual	.1	.0	
Total	Count		26	70	96

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.056 ^a	1	.814		
Continuity Correction ^b	.000	1	1.000		
Likelihood Ratio	.056	1	.813		
Fisher's Exact Test				1.000	.529
Linear-by-Linear Association	.055	1	.815		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.42.

b. Computed only for a 2x2 table

C6 safe places to make friends * A1 Sex

Crosstab

		A1 Sex			
		male	female	Total	
C6 safe places to make yes friends	Count	10	20	30	
	Std. Residual	.7	-.4		
	no	Count	16	50	66
	Std. Residual	-.4	.3		
Total	Count	26	70	96	

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.863 ^a	1	.353		
Continuity Correction ^b	.464	1	.496		
Likelihood Ratio	.844	1	.358		
Fisher's Exact Test				.458	.246
Linear-by-Linear Association	.854	1	.355		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.13.

b. Computed only for a 2x2 table

C7 reliable information * A1 Sex

Crosstab

		A1 Sex		
		male	female	Total
C7 reliable information	yes	Count	5	14
		Std. Residual	.0	.0
	no	Count	21	56
		Std. Residual	.0	.0
	Total	Count	26	70
			96	

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.007 ^a	1	.933		
Continuity Correction ^b	.000	1	1.000		
Likelihood Ratio	.007	1	.933		
Fisher's Exact Test				1.000	.591
Linear-by-Linear Association	.007	1	.933		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.15.

b. Computed only for a 2x2 table

C8 sexual verbal assault * A1 Sex

Crosstab

			A1 Sex		
			male	female	Total
C8 sexual verbal assault	yes	Count	10	36	46
		Std. Residual	-.7	.4	
	no	Count	16	34	50
		Std. Residual	.7	-.4	
	Total	Count	26	70	96

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.277 ^a	1	.258		
Continuity Correction ^b	.811	1	.368		
Likelihood Ratio	1.288	1	.256		
Fisher's Exact Test				.358	.184
Linear-by-Linear Association	1.264	1	.261		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.46.

b. Computed only for a 2x2 table

C9 sexual solicitation * A1 Sex

Crosstab

			A1 Sex		
			male	female	Total
C9 sexual solicitation	yes	Count	8	33	41
		Std. Residual	-.9	.6	
	no	Count	18	37	55
		Std. Residual	.8	-.5	
	Total	Count	26	70	96

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.077 ^a	1	.150		
Continuity Correction ^b	1.462	1	.227		
Likelihood Ratio	2.127	1	.145		
Fisher's Exact Test				.171	.113
Linear-by-Linear Association	2.056	1	.152		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.10.

b. Computed only for a 2x2 table

C10 encounter sexual advances * A1 Sex

Crosstab

		A1 Sex			
		male	female	Total	
C10 encounter sexual advances	yes	Count	6	19	25
		Std. Residual	-.3	.2	
	no	Count	20	51	71
		Std. Residual	.2	-.1	
Total	Count	26	70	96	

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.163 ^a	1	.687		
Continuity Correction ^b	.020	1	.887		
Likelihood Ratio	.165	1	.684		
Fisher's Exact Test				.797	.451
Linear-by-Linear Association	.161	1	.688		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.77.

b. Computed only for a 2x2 table

C11 posted pictures * A1 Sex

Crosstab

			A1 Sex		
			male	female	Total
C11 posted pictures	yes	Count	6	22	28
		Std. Residual	-.6	.4	
	no	Count	20	48	68
		Std. Residual	.4	-.2	
	Total	Count	26	70	96

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.640 ^a	1	.424		
Continuity Correction ^b	.300	1	.584		
Likelihood Ratio	.660	1	.417		
Fisher's Exact Test				.463	.297
Linear-by-Linear Association	.633	1	.426		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.58.

b. Computed only for a 2x2 table

C12 pretended another person * A1 Sex

Crosstab

		A1 Sex			
		male	female	Total	
C12 pretended another person	yes	Count	10	24	34
		Std. Residual	.3	-.2	
	no	Count	16	46	62
		Std. Residual	-.2	.1	
Total	Count	26	70	96	

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.145 ^a	1	.704		
Continuity Correction ^b	.020	1	.889		
Likelihood Ratio	.143	1	.705		
Fisher's Exact Test				.811	.440
Linear-by-Linear Association	.143	1	.705		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.21.

b. Computed only for a 2x2 table

C13 spread lies and rumors * A1 Sex

Crosstab

		A1 Sex		
		male	female	Total
C13 spread lies and yes rumors	Count	7	15	22
	Std. Residual	.4	-.3	
	Count	19	55	74
	Std. Residual	-.2	.1	
Total	Count	26	70	96

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.324 ^a	1	.569		
Continuity Correction ^b	.088	1	.767		
Likelihood Ratio	.317	1	.574		
Fisher's Exact Test				.592	.376
Linear-by-Linear Association	.321	1	.571		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.96.

b. Computed only for a 2x2 table

C14 tricked people * A1 Sex

Crosstab

			A1 Sex		
			male	female	Total
C14 tricked people	yes	Count	7	14	21
		Std. Residual	.6	-.3	
	no	Count	19	56	75
		Std. Residual	-.3	.2	
	Total	Count	26	70	96

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.532 ^a	1	.466		
Continuity Correction ^b	.204	1	.652		
Likelihood Ratio	.516	1	.473		
Fisher's Exact Test				.579	.319
Linear-by-Linear Association	.526	1	.468		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.69.

b. Computed only for a 2x2 table

C15 mean text messages * A1 Sex

Crosstab

		A1 Sex			
		male	female	Total	
C15 mean text messages	yes	Count	6	18	24
		Std. Residual	-.2	.1	
	no	Count	20	52	72
		Std. Residual	.1	.0	
	Total	Count	26	70	96

Analyses by gender

Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided) Exact Sig. (1-sided)
Pearson Chi-Square	.070 ^a	1	.791	
Continuity Correction ^b	.000	1	1.000	
Likelihood Ratio	.071	1	.790	
Fisher's Exact Test				1.000 .508
Linear-by-Linear Association	.070	1	.792	
N of Valid Cases	96			

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.50.

b. Computed only for a 2x2 table

D1 Teaching about aggressive thoughts * A1 Sex

Crosstab					
		A1 Sex			
		male	female	Total	
D1 Teaching about aggressive thoughts	yes	Count	14	36	50
		Std. Residual	.1	.0	
	no	Count	12	34	46
		Std. Residual	-.1	.1	
Total		Count	26	70	96

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.044 ^a	1	.833		
Continuity Correction ^b	.000	1	1.000		
Likelihood Ratio	.044	1	.833		
Fisher's Exact Test				1.000	.508
Linear-by-Linear Association	.044	1	.834		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.46.

b. Computed only for a 2x2 table

D2 teaching about hostile behaviour * A1 Sex

Crosstab

		A1 Sex			
		male	female	Total	
D2 teaching about hostile yes behaviour	Count	12	37	49	
	Std. Residual	-.3	.2		
	no	Count	14	33	47
	Std. Residual	.4	-.2		
Total	Count	26	70	96	

Analyses by gender

Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided) Exact Sig. (1-sided)
Pearson Chi-Square	.341 ^a	1	.559	
Continuity Correction ^b	.125	1	.723	
Likelihood Ratio	.341	1	.559	
Fisher's Exact Test				.648 .362
Linear-by-Linear Association	.337	1	.561	
N of Valid Cases	96			

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.73.

b. Computed only for a 2x2 table

D3 teaching about social interaction * A1 Sex

Crosstab					
		A1 Sex			
		male	female	Total	
D3 teaching about social interaction	yes	Count	13	38	51
		Std. Residual	-.2	.1	
	no	Count	13	32	45
		Std. Residual	.2	-.1	
Total	Count	26	70	96	

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.140 ^a	1	.708		
Continuity Correction ^b	.021	1	.886		
Likelihood Ratio	.140	1	.709		
Fisher's Exact Test				.819	.442
Linear-by-Linear Association	.138	1	.710		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.19.

b. Computed only for a 2x2 table

D4 teaching about prosocial behaviour * A1 Sex

Crosstab

		A1 Sex			
		male	female	Total	
D4 teaching about prosocial behaviour	yes	Count	10	39	49
		Std. Residual	-.8	.5	
	no	Count	15	31	46
		Std. Residual	.8	-.5	
Total	Count	25	70	95	

Analyses by gender

Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided) Exact Sig. (1-sided)
Pearson Chi-Square	1.821 ^a	1	.177	
Continuity Correction ^b	1.247	1	.264	
Likelihood Ratio	1.828	1	.176	
Fisher's Exact Test				.244 .132
Linear-by-Linear Association	1.802	1	.179	
N of Valid Cases	95			

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.11.

b. Computed only for a 2x2 table

D5 teaching about sexual arousal * A1 Sex

Crosstab					
		A1 Sex			
		male	female	Total	
D5 teaching about sexual arousal	yes	Count	6	26	32
		Std. Residual	-.8	.5	
	no	Count	19	44	63
		Std. Residual	.6	-.4	
Total	Count	25	70	95	

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.424 ^a	1	.233		
Continuity Correction ^b	.897	1	.344		
Likelihood Ratio	1.481	1	.224		
Fisher's Exact Test				.325	.172
Linear-by-Linear Association	1.409	1	.235		
N of Valid Cases	95				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.42.

b. Computed only for a 2x2 table

D6 teaching about whether it is safe * A1 Sex

Crosstab

		A1 Sex			
		male	female	Total	
D6 teaching about whether it is safe	yes	Count	6	18	24
		Std. Residual	-.2	.1	
	no	Count	20	52	72
		Std. Residual	.1	.0	
	Total	Count	26	70	96

Analyses by gender

Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided) Exact Sig. (1-sided)
Pearson Chi-Square	.070 ^a	1	.791	
Continuity Correction ^b	.000	1	1.000	
Likelihood Ratio	.071	1	.790	
Fisher's Exact Test				1.000 .508
Linear-by-Linear Association	.070	1	.792	
N of Valid Cases	96			

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.50.

b. Computed only for a 2x2 table

D7 teaching about reliable information * A1 Sex

Crosstab					
		A1 Sex			
		male	female	Total	
D7 teaching about reliable information	yes	Count	10	27	37
		Std. Residual	.0	.0	
	no	Count	16	43	59
		Std. Residual	.0	.0	
Total		Count	26	70	96

Analyses by gender

Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided) Exact Sig. (1-sided)
Pearson Chi-Square	.000 ^a	1	.992	
Continuity Correction ^b	.000	1	1.000	
Likelihood Ratio	.000	1	.992	
Fisher's Exact Test				1.000 .592
Linear-by-Linear Association	.000	1	.992	
N of Valid Cases	96			

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.02.

b. Computed only for a 2x2 table

D11 teaching about posting picture * A1 Sex

Crosstab					
		A1 Sex			
		male	female	Total	
D11 teaching about yes posting picture	Count	11	34	45	
	Std. Residual	-.3	.2		
	no	Count	15	36	51
	Std. Residual	.3	-.2		
Total	Count	26	70	96	

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.299 ^a	1	.585		
Continuity Correction ^b	.100	1	.752		
Likelihood Ratio	.300	1	.584		
Fisher's Exact Test				.650	.377
Linear-by-Linear Association	.296	1	.587		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.19.

b. Computed only for a 2x2 table

D12 teaching about pretending another person * A1 Sex

Crosstab

		A1 Sex		
		male	female	Total
D12 teaching about yes pretending another person	Count	12	35	47
	Std. Residual	-.2	.1	
	Count	14	35	49
	Std. Residual	.2	-.1	
Total	Count	26	70	96

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.112 ^a	1	.738		
Continuity Correction ^b	.011	1	.916		
Likelihood Ratio	.112	1	.738		
Fisher's Exact Test				.820	.458
Linear-by-Linear Association	.111	1	.739		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.73.

b. Computed only for a 2x2 table

D13 teaching about spreading lies and rumors * A1 Sex

Crosstab

		A1 Sex		
		male	female	Total
D13 teaching about yes spreading lies and rumors	Count	16	40	56
	Std. Residual	.2	-.1	
	Count	10	30	40
	Std. Residual	-.3	.2	
Total	Count	26	70	96

Analyses by gender

Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided) Exact Sig. (1-sided)
Pearson Chi-Square	.151 ^a	1	.698	
Continuity Correction ^b	.024	1	.877	
Likelihood Ratio	.151	1	.697	
Fisher's Exact Test				.817 .441
Linear-by-Linear Association	.149	1	.699	
N of Valid Cases	96			

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.83.

b. Computed only for a 2x2 table

D14 teaching about tricking ppl * A1 Sex

Crosstab					
		A1 Sex			
		male	female	Total	
D14 teaching about yes tricking ppl	Count	10	33	43	
	Std. Residual	-.5	.3		
	no	Count	16	37	53
	Std. Residual	.4	-.3		
Total	Count	26	70	96	

Analyses by gender

Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided) Exact Sig. (1-sided)
Pearson Chi-Square	.578 ^a	1	.447	
Continuity Correction ^b	.280	1	.597	
Likelihood Ratio	.582	1	.445	
Fisher's Exact Test				.495 .300
Linear-by-Linear Association	.572	1	.450	
N of Valid Cases	96			

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.65.

b. Computed only for a 2x2 table

D15 teaching about sending mean text messages * A1 Sex

Crosstab					
		A1 Sex			
		male	female	Total	
D15 teaching about yes sending mean text messages	Count	9	33	42	
	Std. Residual	-.7	.4		
	no	Count	17	37	54
	Std. Residual	.6	-.4		
Total	Count	26	70	96	

Analyses by gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.209 ^a	1	.272		
Continuity Correction ^b	.754	1	.385		
Likelihood Ratio	1.227	1	.268		
Fisher's Exact Test				.356	.193
Linear-by-Linear Association	1.196	1	.274		
N of Valid Cases	96				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.38.

b. Computed only for a 2x2 table

NPar Tests

Kruskal-Wallis Test

Ranks			
	A1 Sex	N	Mean Rank
E1 cyberbullying	male	26	45.40
	female	70	49.65
	Total	96	
E2 sexual solicitation	male	26	46.13
	female	70	49.38
	Total	96	
E3 internet addiction	male	26	44.19

Analyses by gender

	female	70	50.10
	Total	96	
E4 teaching about male cyberbullying		26	51.08
	female	70	47.54
	Total	96	
E5 teaching about sexual solicitation		26	47.96
	female	70	48.70
	Total	96	

Test Statistics^{a,b}

	E1 cyberbullying	E2 sexual solicitation	E3 internet addiction	E4 teaching about cyberbullying	E5 teaching about sexual solicitation
Chi-Square	.469	.277	.910	.698	.019
df	1	1	1	1	1
Asymp. Sig.	.493	.599	.340	.403	.892

a. Kruskal Wallis Test

b. Grouping Variable: A1 Sex

.NPar Tests

Kruskal-Wallis Test

Ranks		
A1 Sex	N	Mean Rank
F1 share expert male	26	50.81

Analyses by gender

	female	70	47.64
	Total	96	
F2 adhere to the same male standards		26	46.50
	female	70	49.24
	Total	96	
F3 follow the rules	male	26	50.21
	female	70	47.86
	Total	96	
F4 respect other people's male time		26	49.75
	female	70	48.04
	Total	96	
F5 make yourself look male good		26	50.98
	female	70	47.58
	Total	96	
F6 rude words	male	26	49.69
	female	69	47.36
	Total	95	
F7 attack other male participants		26	54.08
	female	70	46.43
	Total	96	

Analyses by gender

Test Statistics ^{a,b}							
	F1 share expert knowledge	F2 adhere to the same standards	F3 follow the rules	F4 respect other people's time	F5 make yourself look good	F6 rude words	F7 attack other participants
Chi-Square	.271	.193	.143	.079	.301	.151	1.595
df	1	1	1	1	1	1	1
Asymp. Sig.	.602	.660	.705	.779	.583	.697	.207

a. Kruskal Wallis Test

b. Grouping Variable: A1 Sex

NPar Tests

Kruskal-Wallis Test

Ranks			
	A1 Sex	N	Mean Rank
F8 respect others	male	26	51.69
	female	70	47.31
	Total	96	
F9 abuse your power	male	26	53.12
	female	70	46.79
	Total	96	
F10 forgive others	male	26	48.79
	female	70	48.39
	Total	96	
F11 teaching about male		26	50.12

Analyses by gender

	female	70	47.90
	Total	96	
F12 teaching about male adhering to the same standards	female	26	52.12
	female	70	47.16
	Total	96	
F13 teaching about male following the rules	female	26	47.38
	female	70	48.91
	Total	96	
F14 teaching about male respecting other people's time	female	26	48.92
	female	70	48.34
	Total	96	

Test Statistics^{a,b}

	F8 respect others	F9 abuse your power	F10 forgive others	F11 teaching about sharing expert knowledge	F12 teaching about adhering to the same standards	F13 teaching about following the rules	F14 teaching about respecting other people's time
Chi-Square	.557	1.182	.004	.186	1.014	.131	.014
df	1	1	1	1	1	1	1
Asymp. Sig.	.456	.277	.948	.666	.314	.718	.905

a. Kruskal Wallis Test

b. Grouping Variable: A1 Sex

Analyses by gender

NPar Tests

Kruskal-Wallis Test

Ranks				
		A1 Sex	N	Mean Rank
F15	teaching about male		26	44.92
	making yourself look good	female	70	49.83
	Total		96	
F16	teaching about male		26	48.58
	saying rude words	female	70	48.47
	Total		96	
F17	teaching about male		26	42.54
	attacking issues	female	70	50.71
	Total		96	
F18	teaching about male		26	49.92
	respecting issues	female	70	47.97
	Total		96	
F19	teaching about male		26	48.42
	abusing power	female	70	48.53
	Total		96	
F20	teaching about male		26	52.15
	forgiving	female	70	47.14
	Total		96	

Analyses by gender

Test Statistics^{a,b}

	F15 teaching about making yourself look good	F16 teaching about saying rude words	F17 teaching about attacking issues	F18 teaching about respecting issues	F19 teaching about abusing power	F20 teaching about forgiving
Chi-Square	.869	.001	2.988	.170	.000	.863
df	1	1	1	1	1	1
Asymp. Sig.	.351	.982	.084	.680	.983	.353

a. Kruskal Wallis Test

b. Grouping Variable: A1 Sex