CHAPTER III
EMERGENCE OF THE PROBLEM

3.1 NEED OF THE STUDY

The teaching and learning process has been altered by the convergence of a variety of technological, instructional, and pedagogical developments in recent times (Marina, 2001). Technology is challenging the boundaries of the educational structures that have traditionally facilitated learning. Recent advances in computer technology and the diffusion of personal computers, productivity software, multimedia, and network resources over the last decade lead to the development and implementation of new and innovative teaching strategies. Educators who advocate technology integration in the learning process believe it will improve learning and better prepare students to effectively participate in the 21st century workplace (Butzin, 2000; Hopson, Simms, and Knezek, 2002; Reiser, 2001).

As a new medium of learning in the twenty-first century, the Internet has brought unprecedented opportunities to students. To capitalize upon such opportunities, schools and families eagerly facilitate Internet use, where academic achievement remains the top priority at school. The Internet has also become a major concern for parents, because some online activities may seriously distract adolescents from their homework. Various studies have been conducted on how Internet use is linked to academic achievement, a key outcome of school learning (Yen and Chih 2009). Kuh and Hu (2001) and Suhail and Bargee's (2006) conducted studies on the effect of internet use on academic achievement and found positive effects of internet use on learning, intellectual development and vocational preparation in addition to personality development. Certain studies have found a negative link between college students' Internet use and academic performance (Chen and Peng, 2008).

Research related to gender influences on use of computers has generally shown diffused results. Some studies have found that males are more technologically inclined, have more confidence in internet usage and males and females differ in their computer cognitions and attitudes and influence of gender differences on internet usage was also present (Shaw and Gant, 2002; Madell, and Muncer, 2004). Certain studies have found that females experience techno stress in using computers and females are seen to have more limitations compared to men to access to the internet at any time due to family commitments (Munusamy and Ismail, 2009). However contradictory studies have also found which have showed that females tend to favor computer mediated communication more than males (Morahan, Martin and Schumachers, 1997). It was also found that adolescents exhibited positive attitudes towards the Internet regardless of gender (Luan, Fung and Atan, 2008).
Internet service provision for private users has been greatly expanded. As the usage increases, there is also an increasing need to understand the effect of Internet on interpersonal relationships and social connections. The concern is centered on whether the Internet is expanding the relationships or it is alienating people from their richer relations (Boase, Horrigan, Wellman and Rainie 2006). Some critics state that Internet use will decrease people’s social contacts and involvement in communities (Berry 1993 and Fox 1995). They see “on-line” relations as different from “off-line” relations. Other scholars believe that the Internet allows people to contact with many others and facilitate the creation of new connections among people (Wellman 1997, Jones 1998).

Some researchers have suggested that online activity might serve to facilitate an individual’s feeling of perceived social support (Bromberg, 1996; Parks and Floyd, 1996). The direct relationship between computer-related experience and computer anxiety seems clear (Bohlin and Hunt, 1995; Chen, 1986; Hadfield). Much research indicates that as time passes and students become more familiar with computer technology, their anxiety decreases. However, that is not always the case. In some reports anxiety increases with more experiences, and in others it stays the same (Gos, 1996; Rosen, Sears and Weil, 1987). Weil, Rosen and Sears (1987) argued that “during repeated exposure to the computer, the computer-phobic is being reconditioned at increased levels of anxiety which, in turn, increases discomfort and anxiety”.

Students’ self-efficacy towards computers and Internet influence how they use the system (Oliver and Shapiro 1993; Tsai and Tsai, 2003). Students having low Internet self-efficacy lack confidence in their ability to use the system to achieve desired results, instead students with high Internet self-efficacy are more confident in their ability to use the system (Tsai and Tsai, 2003). Hill and Hanafin (1997) found that self-efficacy influences the strategies used in web-based learning. Internet self-efficacy can foster better information searching strategies (Tsai and Tsai 2003). In their study, Liang and Tsai (2008) found that high school students showed stronger preferences for the learning environment where they are easy to use or navigate and where they can meaningfully integrate real life problems.

Various studies have been conducted on Internet usage and it has been found that usage of Internet is growing day by day especially in the age group of adolescents. There are certain researches that found that males spend more time on Internet than females, whereas certain researchers also found the results opposite. It was also found that perceived social support increases with the growing importance of Internet and social networking sites. As time passes and students become more familiar with computer technology, their anxiety decreases but
that is not always the case in some studies anxiety increases with more usage of computers. Though internet is used by adolescents for academic purpose also, studies support it as they have concluded that academic achievement scores have been found to be high but it’s not same with every study. They not only use Internet for academic purpose but also use it for other purposes that are chatting, playing online games etc. that lowered the academic scores of adolescents. Internet self-efficacy fosters better information searching strategies whereas students with low Internet self-efficacy lack confidence in their ability to use the Internet. All variables are showing positive results in one case and negative in other. So exploring the complex relationship has led researcher to examine of Internet use in relation to these variables. Moreover, most researches on the usage and effect of Internet have been conducted in Western countries and very fewer studies have been conducted in Asian context despite the fast growth of Internet. Researcher also found the lack of consistent evidence supporting an association between Internet use in relation to gender, perceived social support, computer anxiety, interpersonal relationships and academic achievement among adolescent with different levels of internet self-efficacy. Taking such a key factor into account, the current study aims to study the internet use in relation to gender, perceived social support, computer anxiety, interpersonal relationships and academic achievement among adolescent with different levels of internet self-efficacy.

3.2 STATEMENT OF THE PROBLEM
INTERNET USE IN RELATION TO GENDER, PERCEIVED SOCIAL SUPPORT, COMPUTER ANXIETY, INTERPERSONAL RELATIONSHIPS AND ACADEMIC ACHIEVEMENT AMONG ADOLESCENTS WITH DIFFERENT LEVELS OF INTERNET SELF-EFFICACY

3.3 OBJECTIVES
The objectives of this study are:
1. To develop and validate scales on Internet use by adolescents, perceived social support and interpersonal relationships.
2. To compare the Internet use by male and female adolescents.
3. To study the Internet use by adolescents:
   • at different levels of internet self-efficacy
   • at different levels of perceived social support
4. To study the interaction effect of:
   • internet self-efficacy and perceived social support
• gender and internet self-efficacy
• gender and perceived social support of adolescents with respect to internet use.

5. To study the interaction effect among gender, Internet self-efficacy and perceived social support among adolescents with respect to Internet use.

6. To study the Internet use by adolescents at different levels of computer anxiety.

7. To study the interaction effect of:
   • internet self-efficacy and computer anxiety
   • gender and computer anxiety of adolescents with respect to Internet use.

8. To study the interaction effect among gender, Internet self-efficacy and computer anxiety among adolescents with respect to Internet use.

9. To study the Internet use by adolescents at different levels of interpersonal relationships.

10. To study the interaction effect of:
    • internet self-efficacy and interpersonal relationships
    • gender and interpersonal relationships of adolescents with respect to Internet use.

11. To study the interaction effect among gender, Internet self-efficacy and interpersonal relationships among adolescents with respect to Internet use.

12. To study the Internet use by adolescents at different levels of academic achievement.

13. To study the interaction effect of:
    • internet self-efficacy and academic achievement
    • gender and academic achievement of adolescents with respect to Internet use.

14. To study the interaction effect among gender, Internet self-efficacy and academic achievement among adolescents with respect to Internet use.

3.4 HYPOTHESES

Hypotheses related to internet use in relation to gender and perceived social support of adolescents at different levels of internet self-efficacy.

Ho1 There is no significant difference between male and female adolescents with respect to Internet use.

Ho2 There is no significant difference among adolescents with low, moderate and high Internet self-efficacy with respect to Internet use.

Ho3 There is no significant difference among adolescents with low, moderate and high-perceived social support with respect to Internet use.

Ho4 There is no significant interaction between Internet self-efficacy and perceived social support of adolescents with respect to Internet use.
Ho5 There is no significant interaction between gender and Internet self-efficacy of adolescents with respect to Internet use.
Ho6 There is no significant interaction between gender and perceived social support of adolescents with respect to Internet use.
Ho7 There is no significant interaction among gender, Internet self-efficacy and perceived social support of adolescents with respect to Internet use.

**Hypotheses related to Internet use in relation to gender and computer anxiety of adolescents at different levels of Internet self-efficacy.**
Ho8 There is no significant difference between male and female adolescents with respect to Internet use.
Ho9 There is no significant difference among adolescents with low, moderate and high Internet self-efficacy with respect to Internet use.
Ho10 There is no significant difference among adolescents with low, moderate and high computer anxiety with respect to Internet use.
Ho11 There is no significant interaction between Internet self-efficacy and computer anxiety of adolescents with respect to internet use.

**Hypotheses related to Internet use in relation to gender and interpersonal relationships of adolescents at different levels of internet self-efficacy.**
Ho12 There is no significant interaction between gender and Internet self-efficacy of adolescents with respect to internet use.
Ho13 There is no significant interaction between gender and computer anxiety of adolescents with respect to Internet use.
Ho14 There is no significant interaction among gender, internet self-efficacy and computer anxiety of adolescents with respect to internet use.

**Hypotheses related to Internet use in relation to gender and interpersonal relationships of adolescents at different levels of internet self-efficacy.**
Ho15 There is no significant difference between male and female adolescents with respect to Internet use.
Ho16 There is no significant difference among adolescents with low, moderate and high Internet self-efficacy with respect to Internet use.
Ho17 There is no significant difference among adolescents with low, moderate and high interpersonal relationships with respect to Internet use.
Ho18 There is no significant interaction between Internet self-efficacy and interpersonal relationships of adolescents with respect to Internet use.
Ho19 There is no significant interaction between gender and Internet self-efficacy of adolescents with respect to Internet use.
Ho20 There is no significant interaction between gender and interpersonal relationships of adolescents with respect to Internet use.
Ho21 There is no significant interaction among gender, Internet self-efficacy and interpersonal relationships of adolescents with respect to Internet use.

**Hypotheses related to internet use in relation to gender and academic achievement of adolescents at different levels of internet self-efficacy.**

Ho22 There is no significant difference between male and female adolescents with respect to Internet use.
Ho23 There is no significant among adolescents with low, moderate and high Internet self-efficacy with respect to Internet use.
Ho24 There is no significant difference among adolescents with low, moderate and high academic achievement with respect to Internet use.
Ho25 There is no significant interaction between Internet self-efficacy and academic achievement of adolescents with respect to internet use.
Ho26 There is no significant interaction between gender and internet self-efficacy of adolescents with respect to internet use.
Ho27 There is no significant interaction between gender and academic achievement of adolescents with respect to Internet use.
Ho28 There is no significant interaction among gender, Internet self-efficacy and academic achievement of adolescents with respect to Internet use.

**3.5 DELIMITATIONS OF THE STUDY**
The study was delimitated to class IX th students of senior secondary schools of Chandigarh.