CHAPTER VI
CONCLUSIONS AND INFERENCES

One of the most influential forces that have shaped the contemporary society all over the globe is the information technology. Although in a poor country like India, a very small proportion of population, mainly in urban centres, has an access to the computer technology, yet its impact can not be underestimated primarily because the size of the population being catered to is large in size. India at present stands at the fifth place in terms of net users in the world, with 39 million users till March 2005 (The Marketing White Book 2005). India has witnessed the commercialization of computer technology in a very big way and the most prominent clientele in this case comes from the young adolescent population. This lust for computer use has been necessitated by diverse factors. Some one may like to access computers for seeking information for academic, research, business or other such purposes, while others may like to use it for playing games. Its use among adolescents, especially in cyber cafés, has increased manifold. How has an increased access to computers in different locales affected the life style of adolescents, is a very pertinent issue which needs to be systematically researched. The present study has focused upon this issue.

It is a natural human desire to want to communicate. But how communication takes place via computers in an anonymous environment; why children prefer to spend long hours with it; how do adolescents use cyber space; do computers constitute a ‘significant other’ for adolescents other than the family and the peer group, are the issues which hardly find an explanation in the existing literature. If we look at the history of cyberspace and internet, it has been noticed that the term "Cyberspace" was coined by William Gibson in his fantasy novel Neuromancer (1984) to describe the "world" of computers, and the society that gathers around them. Gibson’s fantasy of a world of connected computers has moved into the present reality in the form of the Internet. In cyberspace people "exist" in the ether--you meet them electronically, in a disembodied,
The internet is defined as a technology which is made up of millions of computers linked together around the world in such a way that exchange of information takes place within seconds. This is one of the reasons that computers have occupied place in homes, schools, universities, government departments, or small and large businesses. Internet—The ‘Network of Networks’ provide a wide range of services to communicate and share information with millions of people, both young and old and from diverse cultures around the world. For instance: one could keep in touch and send things to colleagues and friends using chatting and e-mail; one can also tap thousands of books and libraries around the world to gather information on any topic of interest for work or recreation. The information can be in the form of text and pictures. One can stay up to date with news, sports, weather, current affairs or listen to music, watch movies, play games, etc.

The growing surge of the internet across the globe has raised important questions for sociologists. Indeed it has been argued that in every society in which television has been introduced, there has been a subsequent decline in the time devoted to socializing with friends, sleep, housework, and the use of other media such as going to movies, listening to radio, and reading books, magazines, and newspapers (Condey 1989; Murray & Kippax 1978). Yet, it is true that television has been effective in teaching values, social roles, and behaviors to children. Thus, television has taken its place, along with the family, school, and our religious institutions, as one of the agents of socialization in modern society. Now the question arises as to what place do computers occupy in this situation?

Contemporary society is being increasingly informed by the values, ideas, and information disseminated by the vast communication system. Displacement of other leisure activities by the computer was quite evident with deep cuts in time spent on movie watching, radio listening, and reading as well as significant reductions in play time. Internet is transforming the contours of daily life, blurring the boundaries between the global and local, presenting new channels for communication and interaction, and allowing more and more everyday tasks to
be carried out online. Yet, at the same time it provides exciting new opportunities
to explore the social world, besides threatening existing human relationships.
The literature on the subject stresses upon the isolating tendency of computer,
especially the internet, since it unites the user with some body at the other side of
the globe, but at the cost of isolating the user from his/her immediate
surroundings, including his family and peer group.

Views on the effects of the internet fall into two broad categories. These
competing views have come from within general society and academia. For
some, internet is a useful resource, an efficient way to communicate. Internet is
seen in this sense, as a storehouse of knowledge and information; the online
world as fostering new forms of electronic relationships that either enhance or
supplement existing face-to-face interactions. The internet also allows the
formation of new types of relationships: ‘anonymous’ online users can meet in
chat-rooms and discuss topics of mutual interest. These cyber contacts
sometimes evolve into full fledged electronic friendships or even result in face-to-
face meetings. Many Internet users become part of lively online communities that
are qualitatively different from those they inhabit in the physical world. Scholars
who see the internet as a positive addition to human interaction argue that it
expands and enriches people’s social networks and hence leads to socialization.

On the other side are those who feel that computer networks are
dangerous allowing very easy access to pornography. There is also an
assumption that computer is to be operated by one person alone and there is no
chance for family members to sit together and indulge in family discussions. Thus
the present study was based upon the assumption that an excessive use of
computers may lead to social isolation. Preference for privacy while using
computers is further expected to curtail social life of the users in a significant
manner. As people spend more and more time communicating online and
handling their daily tasks in Cyberspace, they may be spending less time
interacting with one another in the physical world. Some sociologists as well as
psychologists fear that the spread of Internet technology will lead to increased
social isolation. They argue that one effect of increasing internet access in
households is that people are spending less ‘Quality Time’ with their families. Besides social effects, using internet for long hours and kinds of information gathered through internet could have serious effects on the academics and health of children. It is further assumed that with the introduction of computer in the adolescents’ lives, interaction with relatives, friends and interaction within the family would also be adversely affected. It would affect more in the case of the parents who are not computer literate and with whom no discussion related with computers and internet therefore could take place. This study was designed to verify many of such assumptions relating to computer use, particularly among adolescents. The main objective was to debunk many of the myths society holds regarding the computer usage. The present study analysed the effects of computers, particularly through the changing equations between parents, peer group and adolescents.

Since the present study focussed on the social effects of computer use on adolescents, no separate theoretical base could be identified for understanding the effects of computers. Thus, we depended upon the effect models that place primary emphasis on effects of media such as Catharsis Theory, Social Learning Theory, Cultivation Theory, Uses and Gratifications approach. All these theories begin with television content as the stimulus to which children and audience are exposed. Children look at and listen to what television presents and are affected by whatever is most clearly and cogently presented. In the absence of much empirical work on computer use and its effects therefore, this study made a detailed review of the impact of television, of course, with the understanding that television and computer, though similar in many ways than one, are not comparable beyond a certain point. However, before examining the social effects of computer use, it is pertinent first to understand the pattern of computer usage among adolescents. Hence, the study brings out a detailed description of the way adolescents have been using computers.

An important dimension of this study was the cyber cafes. Commercialization of this facility has exposed young minds to a flood of information, without any discrimination as to what is good or bad for them. Thus,
the magic of computers as a vehicle for providing information and entertainment, as well as the degree to which young children engage with this medium, has important implications for how it functions as a teacher and how young adolescents learn from it. The present study was conducted on adolescents as they represent an important population segment and it is assumed that persons younger in age are more easily and heavily influenced by computers and other electronic media.

However the specific objectives of the present study were:

1. What is the association between the socio economic status of the adolescents and the nature of access they have, to computers?
2. What are the purposes for which adolescents use the computers and how these vary between private and commercial locales?
3. Is there any association between the prolonged use of computers; and
   a) physical ailments
   b) academic performance and
   c) social interaction among adolescents?
4. Which of the two roles the computer is performing in case of adolescents-‘isolating’ or ‘socializing’?
5. How do the factors such as gender, age, socio-economic status, schooling etc., intervene in the interplay between computers and adolescents?
6. Finally, how is the computer perceived by the adolescents, their parents and teachers- a boon or a bane, and why?

To meet the above objectives, the study made an attempt to find out the association of socio-economic status of the respondents’ families and places visited by them. The effects were also seen with regard to intra and inter family social interaction as well as on the adolescents who were likely to be the most vulnerable section of the computer users. Attempts were also made to find out
the extent to which computer use had affected the academic performance and physical health of the respondents.

However, the effects of computer use were examined across the different socio-economic groups of adolescents, enrolled in four schools which were purposely selected. The sample for this study comprised of the students studying in these four schools which represented upper, middle and lower socio economic groups respectively. The rationale behind choosing two government and two private schools was twofold: 1) these schools represented children of different socio economic background and ii) all these schools were co-educational institutions, enabled us to examine gender differences.

In the final stage 50 students from each of these schools, who had been regularly accessing computers were selected by using systematic random sampling, leading to a sample of 200 respondents. In addition to students, quite a few cyber users, teachers, parents of adolescents and cyber owners were also interviewed in order to know their reactions towards the impact of computers on adolescents. Besides this, a few case studies too constituted a part of the study.

The first question to be taken up for analysis was as to who our adolescent respondents were, e.g. the families they came from, etc. For this, the researcher studied the socio-economic background of the respondents. Under the socio-economic profile, age of the respondents, structure and size of family, religion, caste, educational qualifications and occupation of parents, income and type of schooling of respondents were studied. These variables were extremely relevant for the present study as these affected the use of, access to and attitudes of respondents towards computers. A detailed introduction to the demographic and family background of the respondents has been presented in Chapter II entitled "Adolescent Computer Users: A Socio-Economic And Demographic Profile".

The data interpretation in Chapter II revealed that the total sample for the present study was 200, who included 111 male and 89 female respondents. Further, the study indicated that 58.5 per cent of the respondents belonged to the age group of 14-16 years. The average age of the adolescents was 16.43 years.
Thus, the study targeted the young adolescents for finding out how the use of computer had affected them socially.

A majority of the respondents belonged to nuclear families with the size of 3-5 persons per family. The average family size was 4.56. This shows that in the present study, the incline was towards a nuclear family with a small size. After discussing the respondents’ family type and size, Chapter II further highlighted the other variables relating to socio-economic background of the respondents.

The study was conducted in the city of Chandigarh, which represents a population comprising of diverse cultures, castes and religions. The study observed five religious communities namely, Hindu, Sikh, Christian, Muslim and Buddhist. Hinduism was found to be the most dominant. Along with the religion, caste of the respondents was also studied. There was a wide range of castes among respondents and after scanning all the castes, the researcher divided them into three categories viz. Upper, Middle and Lower. The study revealed that majority of the respondents belonged to the Upper castes.

The study further examined the educational status of respondents’ parents. For this variable, the education of both father and mother was classified into six categories i.e. (i) Professional/ Graduate+ (ii) Graduate (iii) Matric/ Higher Secondary (iv) Primary/ Middle (v) Illiterate (vi) Any Other. The study observed that a large majority of the respondents had educated parents, with a maximum number of graduates, and also quite a few had professional degrees.

The study also undertook the task of examining the occupational status of the respondents’ parents. For analyzing the occupational status of respondents’ parents, six categories were made. These included (i) Government job (ii) Private job (iii) Business/ Shop Keeping (iv) Absentee Landlord (v) Housewife (vi) Pension Holders and (vii) Any Other. It was revealed that more than one third of the respondents’ fathers were in government jobs and another one third in business. The study also showed the occupational status of mothers and indicated that majority of the respondents’ mothers were housewives and only one fourth of the respondents had working mothers.
Another very important variable in the social background of the respondents was their family income. To analyse this variable three categories were made, i.e. upper, middle and low-income groups. The data revealed that more than half the proportion of the respondents’ family income was between Rs-10,001-20,000 which was considered as the low-income group in the study. The study also attempted to present an association between the income of families and the type of school respondents were studying in. Our respondents comprised of students belonging to both Government and Private schools. Equal proportion of respondents was chosen from these two types of schools. It was observed that as the income level went up, the number of children in the private schools increased and as the income level of the families came down the number of children in the government schools increased. This fact is substantiated by other empirical studies like of Verma and Saraswathi (2002), which mentioned that government schools enroll greater proportion of the students from the low socio-economic backgrounds and the children of higher income groups enroll themselves in the private schools. Thus, the present study too revealed a clear association between the two variables i.e. the income level of the respondents’ family and the type of school they were attending.

It was further noticed that both the Government and Private schools provided computer education to the students though there was a huge difference in the infrastructure of computer laboratories of these schools. Laboratories of Private schools were well equipped whereas in Government schools it was not so. Thus, besides affordability of fee in private schools, the kinds of facilities and infrastructure provided by them also influenced the choice of schools of respondents.

As mentioned earlier, both government and private schools provided computer education but it was noticed in the study that more than half of the respondents studied computers in the school whereas others had learnt computers on their own. Thus, the choice of schools of respondents did not directly relate to the provision of computer education in these schools, as computer was an optional subject in most of the said institutions.
Taking into account the socio-economic variables of the respondents like nuclear family, small size, educated parents, upper castes and a direct association of the type of school and income of the respondents' family were considered as very strong indicators with which it was assumed that parents would be taking great interest in the studies of the children and also in familiarizing them with the latest technology, i.e. computers.

A pertinent question to which the study addressed was, why adolescents used computers; what were the major purposes they accessed them for, viz. educative, informative, entertainment or any other purposes? In order to obtain the answers, relevant questions were asked. Important issues which were posed included: do adolescents constitute a homogeneous group in terms of access to computers, their purpose for using them, sites visited, etc.; Is there any association between the nature of access adolescents have to computers with the socio-economic status they come from and so on. The data revealed that there was a higher probability among adolescents from higher income groups to possess a personal computer at home. However, did that imply that these respondents never visited the cyber cafes? The present study indicated interesting facts regarding this. In response to one of the major objectives, i.e. what is the association between the socio-economic status of adolescents and the nature of access they have to computers, the study has attempted an in-depth analysis of the same which has been presented in Chapter III entitled “Where, How Much and Why are Computers Used?: Adolescents’ Revelations”.

One of the pertinent findings of this chapter related to the places visited by the respondents for accessing computers. The study identified four places used by the respondents for accessing computers, i.e., cyber cafés, friends’ places, home and computer institutes. Another noteworthy finding was that 55.5 per cent of the respondents possessed computers at home as compared to the remaining 44.5 per cent who did not.

The above mentioned findings raised two very important questions: first, was there any association between possessing a personal computer and socio-
economic status? Secondly, whether the adolescents who had computers at home, were visiting cyber cafes too?

In response to the first question, the study attempted to find out an association between the possession of personal computer and the family income of the respondents. It was observed that in all 55.5 per cent of the respondents possessed computers at home. Interestingly, all the respondents belonging to high income group possessed computers at home. The study pointed out that as the income level increased, the number of adolescents possessing computers also increased and as one came down in the income hierarchy, the proportion of respondents without a personal computer also increased. Thus, the study revealed a positive association between the income level and possession of computers by respondents.

With regard to possession of computer and places visited by the respondents, the results of the study indicate that respondents who possessed computers at home, were also accessing them at a couple of other places. It was revealed in the study that possession of a personal computer did not deter the adolescents from accessing the machine at other places. Only a few respondents accessed computers only at one place whereas the percentage of those who used it at more than one place was much higher.

It is very interesting to note that even when a computer was lying at home, adolescents were regularly accessing it at friends’ places or at cyber cafes. For accessing computers at the cyber café one needs to pay. Does this mean that only a particular class would access computers at cyber café? The findings of our study do not support this assumption. Instead, our findings indicated that the income of the family had no relation with the places used by adolescents for accessing computers. Respondents belonging to different income levels were using all the four places for accessing computers i.e., home cyber cafe, friends’ place and computer institute. This indicated that it was not just a computer, but its location was even much more pertinent as far as adolescent users were concerned.
An attempt was also made to examine the reasons for preferring a particular place for accessing computers. The study revealed that cyber cafés were the most popular, preferred and frequently visited locales by the respondents. The study divulged startling revelations about reasons for the popularity of cyber cafes and for their being such a favourite and hot spot for adolescents to access computers. One of the primary reasons noted for the preference of cyber cafes was, ‘privacy available at the cyber cafes’. In order to provide greater privacy, cyber cafes offered separate cabins to its users. This shows that want of greater privacy while operating computers instigated the users to pay for something that was available at home free of cost. Besides the privacy offered in the cyber cafes, location of the cyber cafes visited by the respondents was another significant variable examined by the researcher. It was observed that majority of the respondents did not visit any one particular cyber café for accessing computers. Respondents revealed that they did not necessarily use cyber cafes located near their houses or near their schools but they chose the cyber cafes irrespective of the distance. Further, it was observed that respondents visited the cyber cafes which they liked the most, depending upon the facilities offered by these, like ‘separate cabins’, ‘lower charges’, ‘air conditioned ambience’, ‘no internet connection at home’, ‘inflated telephone bill’, ‘nice change’, etc. Another interesting reason for the same was that respondents wanted to use the internet at cheaper rates so they identified those cyber cafes which provided internet facility at affordable rates.

Thus, the research pointed out that it was not only the computer and the privacy but also the people sitting around, cafeteria services and charges of the cyber cafes, which pulled the adolescents to certain cyber cafés. This is a very pertinent finding, which suggested that the environment provided by certain cyber cafes was so catchy for the respondents that they could not resist themselves against visiting them.

Above-mentioned findings significantly highlight the reasons for preferring cyber cafés for accessing computers. But interestingly, cyber café was not the only place where respondents accessed computers, friends’ place was yet
another favoured choice of the respondents where 48 per cent of the respondents were regularly accessing computers. It was of a great interest to know that in addition to visiting cyber cafés and possessing a computer at home, respondents were still visiting friends’ places for using computers. In order to explore the reasons for the same, exact location at which the computer was placed at these two places i.e., at home and friends’ place, was studied. Results showed that at home more than half of the respondents were using computers in a common space (like drawing room, lobby, master bed room, etc.), whereas fewer respondents had a computer placed in private places, i.e. a personal room. On the other hand, at the friends’ place the results were exactly the opposite. There, more than half of the respondents used private spaces for accessing computers. This clearly indicated that the respondents left their home computers as these were placed at a common space. Thus on the whole, the study concluded that one of the prime reasons for visiting friends’ place and cyber café was the private location of the computer.

In addition to this, the study also found a relation between the duration of time spent on computer use and the possession of computers. It was observed that as the proportion of respondents with a personal computer increased, the time spent with computers increased and vice versa. Thus, it is inferred that those who possessed computers spent more time with it. In addition to this, both male and female respondents used computers more frequently in the evenings when they were relatively free. This however also implied that they were now cutting down on the time they earlier used to spend, especially the evenings, with the family or friends and so on.

As mentioned earlier, cyber café was a much sought after place by respondents for accessing computers. Both male and female respondents were visiting cyber cafés, irrespective of whether they had computers at home or not. The next issue which the researcher analyzed was how frequently respondents visited cyber cafés. Regarding the frequency of respondents’ visits to cyber cafés, the study revealed that more than half of the respondents used to visit cyber cafés daily for accessing computers. Surprisingly, respondents having an
Internet facility at home were also visiting cyber cafes daily, while others who did not possess computers, were visiting cafes on alternate days.

Time spent on computers and the frequent visits of the respondents to the cyber cafes indicate that they must be paying heavy amount to the cyber owners. The study disclosed that respondents’ expenditure of the cyber cafe was not fixed because of two reasons: one is that the cyber cafes in the city did not have the uniformity in the rates, and respondents were visiting different cyber cafes according to their own likings and dislikings. Secondly, cyber owners were very tactful and offered various schemes to the customers where users did not have to pay per day or per month, rather they paid according to hours. Thus, the money spent by the respondents was according to the competition among the cyber cafes.

With the help of the above findings of the study we can now answer one of the objectives and research questions which the present study addressed i.e. to see the association between the socio economic status of the adolescents and the nature of access they have, to computers?

Firstly, the study found a positive association between the possession of personal computer and the family income of the respondents. All the respondents belonging to high income group possessed computers at home. Possession of computer was further associated with the time spent and it was inferred that those who possessed computers at home spent more time with it. Another inference which was related with the possession of computers is that those who possessed computers at home also had an access to them at more than one place and those having an Internet facility at home visited cyber cafes daily, while others who did not possess personal computers, were visiting cafes on alternate days.

Secondly, our findings indicated that the income of the family had no relation with the places used by adolescents for accessing computers. Respondents belonging to different income levels were using all the four places for accessing computers i.e., home cyber cafe, friends’ place and computer
institute. They were also using different cyber cafes located at different locations irrespective of their socio-economic status.

On the whole, it may be concluded that irrespective of which socio-economic category and family background they came from, respondents were using the machine at multiple places. This further indicated that respondents were more concerned with the location of the computer and of the cyber café rather than just with computer as a machine. Thus, on the one hand socio-economic status was related with the possession of computers, time spent on computers and on the other it had no relation with the places visited by the respondents.

Keeping in view another objective of the study, i.e. how the factors such as gender, age, socio-economic status, schooling etc., intervene in the interplay between computers and adolescents, the study noted significant gender differences. Firstly, more male respondents used cyber cafes of different locations as compared to female respondents. The study also indicated gender differences in the time spent on computers. Results showed that more male respondents were relatively heavy users as compared to female respondents. It was further learnt that as far as visiting different places for accessing computers by male and female respondents was concerned, both enjoyed an equal access to computer at all the places. Study also indicated that more female respondents had joined various institutes for learning computers as compared to male respondents. It implies that among those who had been regular users of computers, gender differences were marginal, as far as the patterns of use were concerned.

Besides, gender and socio-economic status, other factors like schooling and age were found to have no association with the computer usage and adolescents. Students of all the schools and of the different age groups were using computers and no significant difference in their behaviour concerning computer usage has been noticed.

As it is well known, our computer driven society demands that youth must develop the ability to operate in a technological environment. In addition, so
much of our planet is rapidly becoming connected via the internet that online activities have become an intrinsic part of our lives. It is more true in case of young adolescents who have adapted themselves according to the demands of the technological society.

Respondents under the present study relied upon the internet for various activities. Chatting, mailing and net browsing were the main activities our respondents indulged into, on computers and internet. Also, the way respondents used these services was very important. Various interesting narratives and incidents of respondents and adolescent cyber users have been reported in the study which further disclosed that internet had opened new vistas of entertainment, besides developing novel kinds of social relationships.

One major activity on the internet was net surfing. It has been learnt that this territory is addictive for the young adolescents as there is so much to see and do. It can become a fantastic ‘time sink’ as Wallace (1999) described it. Hours can slip by, one can come and go, and find oneself locked into the internet. The hyperlinks in the web pages allowed respondents to move from page to page just by clicking on them with the mouse. It was further learnt that a large number of respondents surfed internet without having any specific purpose in mind and kept on shuttling between various sites. Respondents, as reported by them selves, surfed internet as it was very helpful in increasing their knowledge. It was further observed, that girls generally opened sites of cosmetics, fashion styles, horoscopes, weight reduction, matrimony, etc., whereas boys more often named sites such as geriroute.com, lolofry.com, doodhwali.com, naughtymail.com, worldgames.com, raga.com, rediffmail.com, cartoonwork.com, mp3raid.com, etc.

Further, the findings reveal that chatting is another popular activity on the internet. It is very interesting to note that there is a special space on the internet for chatting which is termed as ‘chat rooms’. These chat rooms are always full of people from all around the world. Respondents preferred to chat in these specially earmarked places for chatting as people of all the ages take part in this and moreover one can chat at any time.
Another interesting revelation by the respondents was that while chatting they could discuss a variety of topics, which they otherwise could not. The study divulged that chatting had made a special place in the lives of both boys and girls. It was brought out that chat rooms were extremely beneficial for the girls as the environment provided by the Internet was safe for having affairs, as there were no societal and familial pressures. Secondly, the girls who were not good looking could chat and make friends via internet without bothering about their physical looks or in case looks bothered them, internet helped them by providing pictures of extremely beautiful girls which they pasted in their inbox as their own.

Chatting was on the other hand handy for the boys too, especially for those who did not have the guts to speak to girls in person. Another benefit of chatting, which was irrespective of the gender, was that while chatting, users did not disclose one's true gender identity and could also flirt with a number of persons at the same time. Also, while chatting there was no fear of being caught as internet identity was different from their real names.

As mentioned above while chatting one does not disclose one's true identity. Users change their names and are known by very funny names. It was revealed in the study that respondents preferred funny, exciting and attractive identities on the net. Respondents used “user names” or “nick names” in the chat world. Respondents mentioned some very funky names, viz. crazy girl, crazy fellow, hot babe, cool dude, Punjabi munda, etc. Thus, chatting was a great fun for the respondents because it was basically an anonymous encounter in which they could indulge into the kind of talk/behaviour which they could only fantasize and never realize in reality.

It is noteworthy to mention that most of the communication through internet is in a written form and the language which one uses for writing is English. Hence, it was interesting to explore this area for two reasons. Firstly, it is one of the most popular activities of respondents on internet and secondly, medium of communication on internet is English. Thus, text based communication is considered as a language barrier between those who possess writing skills of English and those who do not.
In response to this dimension the study revealed that respondents had benefited a lot from chatting irrespective of whether they possessed writing skills or not. It was noticed that they had added new words in their English vocabulary such as Gr8 (great), r (are), u (you), ur (your), thanx (thanks), asn (age, sex, location), 2 (to), and so on. On the contrary, these computer users were violating all grammatic norms of correct English language.

Thus, respondents were busy in presenting themselves as ideal whether in looks or in communication. In this manner, they were found to escape from the complexes they were having in real life situations. Respondents preferred anonymous and invisible interactions and were always shy of meeting the chatting friends in person. Quite a few of the respondents lost such friends the moment they met them in real life situations. So, it is inferred that the friendships continue till the time it is cyber/virtual meeting and comes to an end when it turns into a real/face to face encounter.

E-mail is yet another popular activity on the internet indulged in by most of the users. Electronic mail or e-mail is the term used to describe the tool which allows one computer user over a computer network in a digital form. E-mail can be sent to anyone in the world by using the network of networks that makes up the internet. It was pointed out in the study that respondents sent e-mails to friends with whom they had been studying in schools. Checking e-mail accounts was one of the primary reasons by the respondents for visiting cyber cafes daily. Like chatting, respondents also had made e-mail identities popularly known as IDs. It was brought out in the study that respondents had more than one e-mail ID and the reasons for maintaining multiple IDs were multiple. For instance—respondents had one ID for receiving mails from friends, another for families and relatives and still another ID for storing pornographic content.

The next objective, was to find out for what purposes the adolescents used computers and how these varied between private and commercial locales. As discussed above, chatting, e-mail and net browsing were the main activities on the computers and internet by respondents, irrespective of gender. Gender differences were observed in the case of the sites used by them. It is inferred
that for respondents, computer was not only a machine and an end in itself. On the contrary, it was something with which they socialized and performed a wide range of activities in privacy. For this, respondents paid and visited cyber cafes at different locations despite possessing computers at home. Computer has in fact come as a new ‘avatar’ to these kids, who find in it an escape into the world of their dreams, a world which has always been forbidden, where they can enter without the watchful parents. Besides this, wide differences were observed between the views of male and female respondents on the kind of knowledge they had enhanced by using computers. Sex was one of the prominent areas where boys had enhanced their knowledge. Other areas where they had improved their knowledge included e-mail and general knowledge whereas girls enhanced their knowledge in chatting, music/movies and e-mail.

Besides the purposes for which adolescents used computers, the study also made an attempt to find out the effects of computer on the changing relations between family, peer group and adolescents. This area is the core of the present analysis and the findings on this aspect have been presented in Chapter IV entitled “Family, Peer Group and Computer: The Changing Equations”.

An observation that emerged from the entire discussion in this chapter is that this small physical equipment known as a technological tool has made an enormous impact of sociological import both within and outside family.

Based upon the existing literature on this subject, it was assumed that an excessive use of computer may inhibit social contacts of the users both inside and outside the home besides structuring their leisure time. Hence, an attempt was made to find out the extent to which the introduction of computers had affected the adolescent’s interaction with two important primary groups in his/her life, i.e. family and peer group. Existing literature on the family indicates that family, a relatively stable institution had been tremendously transformed by the recent forces especially the electronic media. The studies further revealed that the traditional family was weakening in terms of the hold of parents on their
offspring. Children are less willing to follow parental rules. Hence, parents also have less control over their children as compared to the earlier times.

Substantiating the findings of the earlier studies, the present study too confirmed that electronic media was the most influential source of the leisure activities among the adolescents. The study revealed that both male and female respondents spent most of their leisure time in watching TV and accessing computers.

In addition to computer and TV, company of friends was an important pastime for the respondents as many of their leisure activities like gossiping, loitering around, talking on phone, etc. involved their friends. Most significantly, the role of the family in the leisure activities of adolescents was almost negligible.

One of the pertinent issues to which this study addressed was to know the parental involvement in adolescent's activities relating to computer, both inside and outside home. In order to analyse this, some significant questions were asked like: whether respondents' parents knew of their wards' visits to cyber cafés and friends' places? Have the respondents' parents ever raised objections for their wards’ visiting these places? Our analysis helped us arrive at important generalizations on these aspects.

The results showed that less than only half of the parents were aware of their children's visits to cyber cafés and among them the proportion of male respondents was higher than that of girls. Further, there were one fifth of the parents who had absolutely no idea that their children were accessing computers at cyber café. Interestingly, among them the proportion of girls was higher.

In addition to this, the data further revealed that only a few parents knew about their children's visits to friends' places for using computers. As compared to boys, girls' parents were usually aware of their daughter's visits to friends' places. It is noteworthy to mention that parents were generally more aware of their daughter's visits to friends' place than to the cyber cafés.

Thus, it was found in the study that parents' awareness about their wards accessing the computers at different places was not very high. It seems that
parents became carefree, having bought computers for their children and never expected that this was in sufficient.

In this situation, when parents had no idea about the outside activities of the respondents, parental monitoring was not only difficult but impossible too. Interestingly, respondents never felt the necessity to tell their parents about their visits to multiple places for accessing computers.

As mentioned above, around half of the respondents’ parents had no clues about their children’s visits to cyber cafes. This further raised a question that if the parents were not aware of their children’s visits to cyber cafes then where did the children take money from? Interestingly, the source of this funding, even if without their knowledge, was parents only. It was observed that a majority of the respondents used to get a fixed amount as pocket money from the parents. Others took money from their parents whenever the need arose whereas some of the respondents very tactfully saved the money out of the amount parents gave them for buying something for home.

The study also highlighted the objections raised by parents for accessing of the computers by adolescent children at different places. The data showed that only a few of the parents objected to their children’s accessing computers at all the places, i.e. cyber café, friends’ place and home irrespective of whether their ward was a boy or a girl. The kinds of objections respondents faced included ‘wastage of time’, wastage of money, computer at home, affects eyesight, etc.

Thus, the study concluded that very few parents were able to impose restrictions with regard to their children’s usage of computers. The lack of restrictions was attributed to the fact that most of the parents were not even aware that their child was accessing computer at multiple places, and hence the question of objection did not arise.

Further, the study revealed that despite the objections by some parents against visiting multiple places, respondents kept on accessing computers at different places. Respondents however stopped telling their parents to avoid the cribbing by parents. There were very few respondents who stopped using
As mentioned earlier, a majority of the respondents belonged to nuclear families and had educated parents. Thus, we expected that with this family background parents would be having a greater control, awareness and concern over their children's activities. However, the study found just the opposite. The study indicated that one's class, family background, possession of computer, Internet facility at home, etc. had no relation with the parents' awareness of their child's visits to different places for accessing computers.

Another interesting finding was that there were 63 per cent respondents who never discussed computers with their parents. The study highlighted that it was due to lack of knowledge of parents (especially mother) that their children rarely discussed computers with them, and even if they did, it was related to the benefits of computer, activities possible at internet, e-mail etc. The study disclosed that though most of our respondents' parents were educated, not many of them were computer literate.

Computers, particularly the internet had therefore produced a gulf between the parents and their adolescent children, so that the two were placed at two different poles, hardly sharing the experiences with each other.

Further, 54.5 per cent respondents had never tried to help their parents learn the use of computers. On the contrary, 53 per cent of the respondents desired that their parents should be efficient in using computers. Interestingly, more male respondents did not want their parents to learn to use computers as it would restrict their freedom and parents would come to know the activities which they did on computers. Quite a few of respondents used to have conflict with their sibling on the use of computers.

As revealed in the earlier discussion parents knew nothing about their wards' visits to multiple places for accessing computers, nor could they themselves use computers. Also, computer was never a subject of their discussion, then why did the parents buy computers for their children?
Respondents revealed very interesting reasons for possessing personal computers. Firstly, in most of the cases respondents were successful in persuading their parents by telling the advantages of computers and also because their cousins and friends already had them. Further, in quite a few cases, it was parents, who wanted their child to learn the use of computers. Thus, it was not only adolescents' personal choice to possess computers but the parents were even more keen in buying a computer for their children. Thus, it is quite interesting to mention that parents bought computers for their children mainly with the educational and career enhancement in view. However, in practice it was more impractical for parents to monitor the working of children on computer as compared to the viewing of TV.

After discussing the role of computers in the family life, the study further took up the task of analyzing social interaction of the respondents outside the families, i.e. with their peers.

The study found that respondents preferred the company of their friends more than their family members. One significant reason for adolescent’s preference for friends as compared to family was friends' knowledge of the cyberspace. Also, peer group was important for the adolescents not only in the real world but in the cyber world too. The results showed that 40.5 per cent of respondents, including 39 per cent of boys and 43 per cent of girls were having chatting friends.

Looking at the greater importance of cyber friends, the study captured the views of adolescents about why they preferred online friends/relationships when they were surrounded by so many real life friends. The young respondents disclosed that they preferred interacting with chat friends, as it was highly satisfying both emotionally as well as psychologically.

The above findings answer one of the pertinent questions of the study, i.e. which of the two roles the computer is performing in case of adolescents-isolating or socializing. The study concluded that computers were definitely not bringing the family together and did not provide them any subject matter to discuss. With regard to social interaction among adolescents, it was observed
that respondents preferred the company of friends for leisure activities and parents were the second choice. But interestingly, while using computers, around half of the respondents preferred to be alone. Isn’t it quite surprising then that in adolescents’ lives friends dominated in every sphere, like sports, gossiping, loitering, etc. yet, with the spread of this small and intelligent machine, the definition of friends has changed. This greatly points a shift from peer group to cyber friends. Interestingly, this shift has been made possible by the efforts of real friends as the real friends gave them clues of using computers.

On the other hand the study found that respondents’ main activity on the internet was socializing with friends through chatting and mailing. The study disclosed that the respondents were forming relationships with complete strangers, by mentioning wrong gender identities. It is important to note that computer has introduced a new concept of relations which are neither social nor physical. This indicates that internet has provided a new platform for making new friends who would never meet in real life. Our study revealed that the very definition of friends has changed. Adolescents have started preferring those friends who were available at their disposal whenever they clicked the mouse.

Undoubtedly, internet is broadening our horizons and presents marvelous opportunities for making contact with others. Yet, the pace and form at which it is expanding presents challenges and threats to traditional relations and forms of human interaction. It is inferred that adolescents have started depending upon computer rather than the family, for everything be it emotional or educational.

The above situation arose because the adolescents have started spending a large part of their day on the machine thus cutting down the time they earlier spent on other kinds of social interaction. Did we ever imagine that with the introduction of computers one would loose interest in the family or real relationship. Computer was initially used for educative purposes but today if we say that adolescents use computer largely for educative or informative purposes, it would be an overstatement. Further, the internet has expanded its hands to such an extent that it not only directs our leisure time but also helps in the formation of virtual relations. With such a wide range of activities performed by
internet, there is a need to reach out to the hidden areas, for instance, what do computers mean to the adolescents and for what purposes they are using them. What have they benefited from this technology? How do they compare computers with TV.

With these questions in mind, the study analysed the views of young computer users, their parents, teachers and cyber users on the usability of computers, particularly the Internet. This aspect has been discussed at length in Chapter V entitled “Computers A Necessary Evil: An Ethnographic Account”.

Researchers have underlined both the harmful and positive effects of computers on children. Some of the harmful effects mentioned by the various researches include- harmful effects on health; disruption of the outdoor activities of children; an increased loneliness and aggression, decline in social involvement, etc. Some of the other studies however showed that computer had positive effects on children, like it provided opportunities to explore the world; helped in forming online communities; improved academic performance, etc.

To begin with, computers were associated with the academics of respondents. It was learnt that more than half the respondents reported that there had been no change in their academic performance ever since they had started using computers. Surprisingly, quite a few male respondents mentioned deterioration in their academic performance. On the other hand it was found that all the student respondents opined that by using computers their knowledge had enhanced. The reason that computer had not improved their academic performance was that maximum number of respondents did not use computers for academic purposes. Rather it was observed that respondents used to miss their studies for the sake of using computers.

Now the question arises, what kinds of knowledge and benefit did the respondents gain from computers?

Wide differences were observed in the views of both male and female respondents upon the kinds of knowledge they had enhanced by using computers. Sex was one of the prominent areas where boys had enhanced their knowledge. They named various pornographic sites like desibaba.com,
lolofry.com, tamilsex.com, etc. which were available free of cost on the internet. Respondents felt chatting had improved their vocabulary.

Some of the respondents did not mention any of the web sites. According to them there was no need to remember the names of sites as whatever information they needed, they typed it and received hundreds and thousands of related results. It was further revealed that most of the times respondents surfed the internet without any specific purpose in mind. Thus, the study concluded that the respondents used computers mainly for entertainment purposes and not for their academics. This is why computers had not improved their academic performance.

One fourth of the respondents' outdoor activities had suffered. On the whole the study concluded that respondents were not much interested in the outdoor games as they played all indoor games like pool, billiards, table tennis, computer games, etc.

In addition to this, the study also explored as to how computer use had affected the health of the respondents. It was found that more than one third of the respondents were suffering from one or the other health problem because of using computers. Respondents suffered pain in the arm, back, neck, head and eyes due to the use of computers.

In relation to another objective, i.e. to find out the association between the prolonged use of computers and physical ailments, academic performance and social interaction among adolescents, the study brought out a few inferences. Firstly, respondents rarely made use of computer and Internet for educational purposes. Secondly, respondents used to miss their studies for the sake of using computers and in certain cases the academic performance deteriorated. Thirdly, computers and health are directly related as respondents were facing many kinds of health problems.

The present study also made an endeavour in gauging the perceptions of the respondents about the necessity of computers. More than half of the respondents felt that computer was a necessity as well as a trouble. They stated various reasons for the same. Further, it was observed that adolescents’ were
dependent upon computers to such an extent that they did not want to imagine a
day without computers. Further, they could never think of leaving the computers,
if some guest visited their place. They welcomed the guests with whom they
could discuss computers and cyberspace. Only a few respondents opined that
the day without Internet would be normal for them and many of them would opt
for TV in that case. Thus, in our study TV was the simultaneous choice for the
respondents.

The study further compared the two media- computer and TV. The results
showed that half of the respondents preferred computer to TV. Yet, the
preference for TV was also on a higher side.

Very often, people generally relate the two kinds of media, i.e. computer
and TV. The study revealed that one of the major differences between two media
was an easy access to pornographic content on the internet. Secondly, it has
been discussed in the study that for watching television one does not necessarily
go outside home whereas in the case of the computers, the study found that
respondents were visiting different places irrespective of whether they possessed
computer at home or not. Thirdly, In case of TV, parents knew what programmes
and channels children were watching whereas in case of computers, children
preferred private spaces and multiple places for accessing the computers.
Further, in this situation parents’ lack of knowledge to use this technology
becomes a facilitator for the adolescents to access computers wherever,
whenever and for whatever purpose they want to.

From the above findings and with the help of qualitative data, the study
identified a few areas of the cyber world, which needed a greater discussion.
These were, cyber relationships, cyber marriages, cyber crimes, pornography
and foul play of gender identities.

To start with cyber relationships, the study explored that respondents
main activity on the internet was socializing with friends through chatting and
mailing. The study disclosed that the respondents were forming relationships with
each other, by mentioning wrong gender identities. Many interesting narratives
have been included in the study which depict how adolescents have been using
the internet. They were also visiting various dating and matrimonial sites. It was discovered that respondents had come to know about the concept of cyber marriage and cyber dating through friends. 68.5 per cent of the respondents were aware of the cyber marriages as compared to 31.5 per cent who did not. Interestingly, out of these, 25 per cent approved of these relationships. Further, it was noticed that respondents had learnt the writing skills in English language for maintaining the relationships.

This method of forming relations and entering into a new kind of society does not stop here. It leads to cyber crime. Although computer has been considered as a boon, yet it is also being transformed into a safe place for criminals. In one of the incidents quoted in the newspapers a 21 year old girl, whose boy friend posted a profile of her along with personal details about her, as a misbegotten instrument of revenge to get back at her after she attended their relationship reported, “I used to get phone calls from Dubai and Saudi Arabia from complete strangers, who would call up asking me for sex. It was only until a friend brought into my notice that I realized what was going on. I had to get my number changed” (Deldia 2005:3). Our respondents under study, especially boys frankly admitted that they watched pornographic content on the internet and mentioned number of pornographic sites. Besides pornography, there was a wide range of activities with which adolescents were aware of like misuse of password, hacking of sites, virus, sexual abuse, pornographic content, sending wrong mails, illegal sites, destroying program, locking of sites, etc.

After observing the familiarity of the respondents with the cyber crimes can we say that internet is a safe place for the young children having impressionable minds? Surprisingly, 44 per cent of our respondents felt that a computer should be introduced at the age of 11-13 years. According to them ‘younger the better rules the day’.

Finally, how is computer perceived by the adolescents, their parents and teachers- a boon or a bane, and why? Taking into account this objective the study revealed that computer meant different to different sets of people. Parents perceived computers as more of a blessing than a curse. More of our
respondents’ parents were not computer literate but they were aware of the benefits of this machine. Interestingly, very few of the parents expressed concern over the purposes for which children used computers. This further pointed out the fact that parents had absolutely no knowledge that their children had expanded a social circle on the cyberspace or watched pornographic sites, etc. For most of the parents computers was a necessary tool in providing information, which their children must learn to use.

Cyber cafes were an important aspect of the present study, as majority of the respondents used to visit them regularly. The study revealed that Cyber owners were governed by complete commercial interests and did not allow more than one user on one computer. They changed the interiors of the cyber cafe according to the demands of the users. Thus, cyber owners were found to be only interested in making profits and were hardly bothered about the age of the users.

For teachers, computer was a necessary tool. They were aware of the possible harmful effects of this machine but still were of the view that in order to survive in today’s society, children needed to become competent computer users.

A few case studies also constituted a part of the study. All the cases were from urban areas and belonged to upper and middle classes. A few of the case studies portrayed internet as a positive tool for learning whereas others portrayed computers as negative. It is inferred from the case studies that computers played a positive role and a learning tool where the parents were computer literate and monitored the computer usage by their children. On the other hand, where parents bought computers as a status symbol and provided private spaces to children, computers turned out to be negative. Thus, it was concluded that if the parents give their own company to the children and helped them use a computer for educational purposes, it was a necessity but if they do not monitor their children while using a computer and leave them alone at the mercy of the machine, it is a trouble.
The internet has become one of the most useful and helpful tools available to the people today. But like any other form of communication it has its pros and cons. The main benefit which we draw from the internet is also its main drawback, i.e. information. Our respondents used internet for gaining information on the topics which they did not find in their text books. They spent several hours surfing through the different web sites. Their awareness about the cyber crimes and indulgence in the pornography is one of the main worries. Their over exposure to the new relationships and with emotional icons, forces one to wonder that what kind of relationships they were forming through internet. Adolescents have accepted the cyber relations with great ease. They are not aware that they are under the spell of computers and are extending their cyber-social circle via internet in the form of unknown virtual friends, leaving behind their families and peer group.

The biggest benefit respondents mentioned about the cyber friendships was a lack of inhibition while discussing any topic as there is an invisibility and anonymity in the cyber world. Thus, a preference for cyber friends to the real friends is due to an absence of face to face contacts in the virtual world. In real life situations, on the contrary one has to have face to face and symbolic interaction with the friends. This is a uniquely novel situation in the virtual world where one feels psychologically and emotionally relaxed in the absence of immediate pressures for maintaining relationships.

Theoretical Implications of the Study:

In the absence of sufficient literature, relating directly to computer use and its social effects, this study had been framed on the basis of theoretical perspectives describing social implications of television as another form of electronic media. While theories such as Symbolic Interactionism tend to explain social interaction in terms of direct face to face interface between actors, with the help of shared symbols, computer usage generates relationships where such a direct interaction between the actors is missing. Similarly, many of the theories based on television too can not be applied to computer use, since the user does
not remain passive. The Social Learning theory, Catharsis theory, Cultivation theory, Uses and Gratifications approach etc. conceive of the subject as a passive being receiving the media messages and experiencing their impact. However, our study indicates that since computer is used for a large number of activities and especially the adolescents use it mostly for forming new relationships, entering into the virtual world, it is likely to make an impact upon the social spaces in the real world, often replacing the family and peer associations.

Such an interaction with computers has led to the creation of a new set of language, vocabulary, symbols and images which are shared only by the community which may be called ‘cyber’ community.

Therefore, more empirical studies of this kind are needed in order to conceptualize and theorize the impact of computer use on adolescents. To some extent, the social effects of computers can be explained in terms of the ‘culture industry’ since its use has led to altogether different cultural interface among the youth, cultural preferences, with alternative choices and a whole range of virtual world. It happens to such an extent in case of adolescents that the ‘virtual’ actually becomes the ‘real’. For this vulnerable group, the social reality is continuously being created by this strong medium. Such an activity may be resulting into an evaporation of borders- of language, cultures and nations, but it is creating new boundaries between the users and their immediate social surroundings, which include the families and even the peer groups.

The present study highlights some of these social effects of computer use on adolescents. More studies of this kind are required in different situations, in order to finally arrive at adequate conceptualization of the social effects of computers.