CHAPTER 6
SUMMARY AND DISCUSSIONS

Keeping in view the problems of this study, the theoretical framework and the related literature that is mentioned in chapters one and two, the main purpose of this study is twofold. The first is to examine the relationship between the amount and the manner of the use of ICT and the social capital, and the second, to study the effect of the social capital on educational achievement. The research was conducted with Iranian and Indian secondary school students in two cities of Tehran and Chandigarh. As subjects and the objectives of the study were to explain the role of social capital as an intervening variable between ICT and Educational Achievement, as drawn in the following diagram.

![Diagram](ict-social-capital-achievement)

The subsequent points show the lists of the research objectives:

- To describe the amount and the quality of Internet use, the main types of Internet use, and the differential use in the context of India and Iran.
- To explain how the accessibility and the use of ICT affect the Social Capital.
- To describe the working of Social Capital, its main types and differential aspects in the context of India and Iran.
- To find out how far the Educational Achievements of young learners in the above two countries is affected by the Social Capital of students and their families.
- To state the roles of Parents and Teachers Expectation, Goal Attainment, Self Efficacy, Successful Participation and Facilitate of Particular Actions as intervening variables between ICT and social capital.

First of all, in this chapter a descriptive look at the profile of the thesis will be illustrated. Afterward due to bulkiness of results and in order to offer a higher resolution of findings, the conclusions will be arranged according to the objectives.
Therefore the explanations of the relationships between variables and related discussions will be explained under the titles of objectives in sequence.
Discussions Related to the Profile

Where was the research conducted? Who were the respondents?

1. Studied countries

The descriptive image presented in profile depends upon the subject of study and includes concentration on variables pertinent to that specific research. For instance, in addition to such variables as age, gender, income, social prestige, etc. this research is conducted on students and their educational performance is studied as dependent variable. Since the research is comparative, this thesis takes into account the two countries (India and Iran) and the cities in which research has been carried out are Chandigarh and Tehran respectively. The education system of the two countries will throw light on the secondary schools has as appropriate ground for this research for studying the impact of social capital.

1.1. Chandigarh\(^1\) and Tehran\(^2\): At a glance

Chandigarh is one of the union territories of India. It serves as the capital of two states, Punjab and Haryana. The name Chandigarh translates as "The Fort of Chandi". The name was coined from an ancient temple called Chandi Mandir, devoted to the Hindu Goddess Chandi, present in the city's vicinity.

Demographics: As of 2001 India census, Chandigarh had a population of 900,635. The Males constitute 56% of the population and females 44%. Chandigarh has an average literacy rate of 81.9%, higher than the national average of 64.8%; with male literacy of 86.1% and female literacy of 76.5%. The main religions in Chandigarh are Hinduism (78.60%), Sikhism (16.1%), Islam (3.9%), and Christianity (0.8%). Hindi and Punjabi are the main languages spoken in Chandigarh, although English is also quite popular.

Tehran has been the capital of Iran for more than 220 years. With a population of 8,429,807; it is also Iran's largest urban area and the city, one of the largest cities in Western Asia, is the 21st largest city in the world.

\(^1\) - [http://en.wikipedia.org](http://en.wikipedia.org)
Demographics: The city of Tehran had a population of approximately 8 million in 2006. With its cosmopolitan air, Tehran houses diverse ethnic and linguistic groups from all over the country and represents the ethnic/linguistic composition of Iran (though with a different percentage).

1.2. Education system of India

Education in India is provided mainly by public sector, with control and funding coming from three levels: federal, state, and local. The national education budget for the year 2010 was allocated at ₹31,036 crore (US$6.86 billion) (2009-10). The National Council of Educational Research and Training (NCERT) is the apex body for curriculum related matters for school education in India.

In India, the various curriculum bodies governing school education system are:

- The state government boards, in which the majority of Indian children are enrolled.
- The Central Board of Secondary Education (CBSE) board. There are approximately 8300 schools affiliated with CBSE as on date which include KVs, Government, Independent and JNV schools located in India and 20 other countries of the world.
- The National Institute of Open Schooling (NIOS) board.
- International schools affiliated to the International Baccalaureate Programme and/or the Cambridge International Examinations.
- Islamic Madrasah schools, whose boards are controlled by local state governments, or autonomous, or affiliated with Darul Uloom Deoband.
- Autonomous schools like Woodstock School, Auroville, Patha Bhavan and Ananda Marga Gurukula.

In addition, NUEPA (National University of Educational Planning and Administration) and NCTE (National Council for Teacher Education) are responsible for the management of the education system and teacher accreditation.
**Secondary Education in India:** Secondary education covers children 14-18 which covers 88.5 million children according to the Census, 2001. The duration of secondary education is 5 Years.

The Indian government is spending 4.1% of GDP on education every year. Out of which 38.4% is spent on primary education and 40.1% is spent on secondary education. There are 1250775 schools in India, out of which 80 percent of them are government run schools. But even after that, 27 percent of all the students are privately educated, because of the much better level of education provided by private schools as compared to the government run schools. The total number of students studying at the secondary level is 81,050,129 i.e. 77.291 per 1000 people. The percentage of girls studying at the primary level of education is 46.82% and 42.56% at the secondary level. But there are still 179,801,200 15+ women who are illiterate. i.e. 168.923 per 1000 people.

**1.3. Education System of Iran**

The structure of the education system in Iran is divided into five cycles namely, preschool, primary, middle (or guidance), secondary and post-secondary. Two outstanding characteristics of the Iranian education system must be mentioned at this point. First, elementary education is mandatory under the Iranian constitution. Secondly, in general, education (in primary, secondary, and post-secondary levels) is free of charge though private schools and universities authorized by law are allowed to charge tuition fees.

The system of pre higher education in Iran is under the jurisdiction of the Ministry of Education. In addition to schools, this Ministry also has the responsibility for some teacher training and some technical institutes. The Ministry of Education employs the highest number of civil servants -42 per cent of the total- and receives 21 per cent of the national budget.

**Secondary Education in Iran:** This is a four-year stage which covers grade 9 to Grade 12, for the age group of 14 to 17. The secondary education is divided into two main branches namely, academic/general and technical/vocational. The choice of either branch is up to the pupils themselves. The academic branch, also known as the
"theoretical branch" is divided into three mainstreams, namely, humanities, physics-mathematics, and finally experimental sciences. The technical/vocational branch is designed particularly to train technicians for labor market. This branch covers three mainstreams, namely, technical, business/vocational, and agriculture. There are specific subject and performance requirements for admission to some secondary programs. National examinations are conducted at the end of each grade during the secondary cycle.

2. Respondents' profile

The girl students from the high schools of Chandigarh in India and Tehran in Iran are subjects of this study. The total number of the respondents was nearly 600 but some questionnaires were omitted for faulty data collection and the figure finally stood at 584 students. The respondents were selected from 20 high schools in the two cities.

As the summary of the respondents' profile describe that on three main factors of social-economic status of cases, i.e. family income, parents' education level and occupation prestige of guardians were quite different in the two cities of Chandigarh and Tehran. Results show that incomes for Iranian families in the sample were higher than in India. It follows that purchasing power and economic welfare were also higher in Iran. Most of the samples in India were seen to have lower income than in Iran, but their homogeneity among them was more than in Iran. To put it simply the income disparity which is an indicator of class inequality is at a higher level in Iran than in India.

Findings related to parent education as the second factor of social-economic status, imply that Indian fathers are higher in education levels than fathers of Iranian students in the sample. It is also the case with mothers in Chandigarh as compared to Iranian mothers, as most mothers in Chandigarh are university graduates or post-graduates, but most Iranian mothers have only diploma of graduation from 12th grade. What we noticed in terms of income disparity in Iran and the income homogeneity in India is conversely true for education levels in the two samples. In other words, notwithstanding the lower level of education in Iran, particularly among women, there's a wider educational homogeneity there than in India. Despite higher levels of education in Indian subjects, particularly women, disparity in education level is much
more amongst them. This fact is visibly true, what with large numbers of illiterate mothers alongside a high percentage of educated mothers in this country.

Moreover a comparison of the education levels between fathers and mothers in the two samples from these countries revealed that the Indian men are more inclined than the Iranian men to marry women who have achieved higher levels of education. To put it another way, Iranian men in the sample select their wives mostly from women with equal or lower levels of education than them, and not higher. In contrast, men in India are more interested in living with women with higher education than themselves.

An examination of the occupation prestige as the third factor of social-economic status showed that the occupation prestige levels of fathers in the two countries were very much similar. In other words, between the samples selected in Chandigarh and Teheran, except for a few instances of difference, occupation prestige of most of the fathers in these two countries has a similar structure.

Combining the data related to the three factors of income, education and occupation prestige in the two countries, a new synthetic variable, i.e. social-economic status is discovered. Findings on the basis of this variable indicate that given the different levels of education and similar prestige levels in Iran and India, socio-economic status is different to some extent in these countries. Overall, socio-economic status has a more normal distribution in Iran. To put it in other words, findings from the data at hand show that socio-economic status of respondents is higher in Iran than in India, and also generally speaking, status disparity is almost less in Iran than in India.
Discussions Related to the first Objective

Description the amount and quality of ICT use, its main types and differential use in the context of India and Iran.

1. Description of ICT

Information and Communication Technology (ICT) is taken as an independent variable in this study. ICT is a collection of technologies and tools that can develop human relations. Using ICT, man can indeed promote the frequency and quality of social relations and exchange knowledge, information, beliefs, emotions and sentiments with one another. These tools and technologies include a wide spectrum from telegraph in the distant past to the modern-day television, computer, mobile phones, Internet and the like at the present time (See Kennewell, 2004). From wide varieties of ICT, this research has chiefly focused on two main ICT tools, i.e. the television and the Internet. The accurate description of frequency and manner of ICT use as independent variable can help to get clear information about the distribution and the quality of use of the variable in studied societies. Therefore, this part of the conclusion covers the first objective of the study and describes the amount and quality of ICT use in the two countries India and Iran.

1.1. Amount of ICT Use

The amount of ICT use has been measured by posing questions on Internet access, Internet use or TV watching per day and per month. The findings illustrate that the amount of Internet use by students is higher in Iran in comparison with these in India. The higher amount of Internet use in Iran seems to come from two facts: Access to Internet in Iran is higher than in India; Internet is taken as a communication tool with more freedom of action. Moreover, during the recent years Persian-language websites have been increased substantially. This has turned Internet into an unrivaled information tool in all aspects of social life.

The computer is considered as a type of ICT tool (Kennewell, 2004: 4); access to computer is the first step for connecting to Internet. Therefore, access to a computer set is an indicator for the amount of Internet access as well. The degree of computer access at school and at home is almost the same for Indian students, while there is a
big difference between the degree of computer access at school (56%) and at home (95%) in the case of Iranian students. Although Iranian students have more access to computer both at school and at home, the low difference between computer access at school and at home (in comparison with high difference in Iran), shows more efforts of Indian schools for providing computer access for their students. In other words, the Indian educational system officials and programmers have been more successful in increasing the access rate of computers in their schools than their Iranian counterparts.

1.1.2. Amount of Internet Access

Besides the computer access, which is the most required condition for working with Internet, this work has directly studied access to Internet in Iran and in India. As the studied facts and evidences show, the frequencies of access or no access to Internet in schools are almost the same for Iranian and Indian students. Given the fact that the degree of computer access at schools is higher in Iran than in India, it is concluded that despite adequate tools for Internet connections in Iranian schools, the students do not have required incentive for Internet use in schools. In other words, Internet connection has not been created equal to the number of computer sets available in Iranian schools. A comparison of the frequency of computer access (See Chapter 4, Chart 4.20) with the frequency of Internet connection in schools (See Chapter 4, Chart 4.22) will give the results in the following table:

<table>
<thead>
<tr>
<th>Comparative Table of Computer and Internet Access in Schools</th>
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<tbody>
<tr>
<td>Type of Access</td>
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<tr>
<td>---------------------</td>
</tr>
<tr>
<td>Computer</td>
</tr>
<tr>
<td>Internet</td>
</tr>
</tbody>
</table>

As may be seen in the above table although 56% of Iranian students have computers in their schools, the Internet access rate is only 24%. In other words, 32% of Iranian students with computer sets available in their schools have no access to the Internet. In the case of India, the computer access and Internet access rates are more close to each other than in Iran. This means only 14 percent of Indian students with computer
sets available in their schools have no access to Internet. This fact shows that Indian officials give more incentives and make greater efforts to provide Internet access to their students in schools. The correlation coefficients, however, between the amount of computer and Internet access in school illustrated in the table 4.11 of Chapter, have more to say. The correlation coefficient between the computer and the Internet access hours in Iranian schools is close to 0.89, while the Pearson correlation coefficient for the two variables in India stands at 0.57. The higher correlation coefficient between the computer and Internet access hours in Iranian schools, in comparison with Indian schools, shows that despite a higher number of computer sets in schools, the availability rate for students is not high. As it was studied earlier, the high number of computer sets in Iranian schools does not necessarily mean high degree of computer and Internet access. However, the 0.89 correlation coefficient between the computer and the Internet access in Iranian schools shows that with the real access of Iranian students to computer sets in their schools, the degree of Internet access will be increased substantially. This is because some computer sets might be useless or unusable for some time. Thus the computer sets may remain often useless and the computers at school without the Internet access do not increase the use of ICT necessarily.

A comparison of Internet access at home between the respondent students in Iran and India shows that Iranian parents have provided more communication facilities to their children than the Indian counterparts.

<table>
<thead>
<tr>
<th>Type of Access</th>
<th>India</th>
<th>Iran</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer</td>
<td>61%</td>
<td>95%</td>
</tr>
<tr>
<td>Internet</td>
<td>43%</td>
<td>89%</td>
</tr>
</tbody>
</table>

The above table depicts the degree of computer and Internet access at home for Iranian and Indian students. It may be seen in the table, that the difference between computer and Internet access at home for Iranian students is six percent, while the figure stands at 18 percent for Indian students. This indicates that unlike the school
officials, the Iranian parents have provided more Internet access tools for their children at home. The opposite is true in the case of Indian students, i.e., Indian schools have provided more Internet access tools for their students in comparison with their parents.

One of the important variables concerns the relation between Internet use by fathers and mothers. The correlation coefficient of 0.48 in India and 0.38 in Iran shows that there is a relation between the fathers and the mothers Internet use as much as the said coefficients. In other words, the results show that with the increase in Internet use by either of the parents, the Internet use by other parent grows by 0.48 percent in Iran and 0.38 percent in India.

At first glance, the correlation might seem to be unreal and it might be considered the impact of a third variable such as economic wellbeing of the family on the two variables. In other words, it may convey the hypothesis that Internet use by either of the parents has no influence on the other parent and both work with Internet when the family income is high. Such notion can be summarized in a triangulate causal model that explains the effect of top variable on both vertical angles located variables concurrently:

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Family income
   /\                      /\  \\
 Internet use by father  Internet use by mother
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To test the hypothesis, the researcher computed the partial correlation between the two variables of Internet use by the mothers and that use by the fathers while controlling the income variable. The result illustrate, that the correlation coefficient between the two variables has decreased from 0.48 to 0.40 and from 0.38 to 0.32 in India and Iran respectively. In other words, the impact of Family income on the amount of Internet use by fathers and mothers is not more than .8 for India and .6 for Iran. Therefore, despite controlling the income variable, the correlation between the fathers and the mothers Internet use is notable. In other words, it became clear that the
impact of family income on Internet use by the two variables is not high; therefore, the triangulate model of relations hypothesis is not correct. The fall in correlation coefficient, however minimal, was different in Iran and India. In other words, it became clear that the family income was influential more in India than Iran to the degree shown by the partial correlation.

A similar hypothesis was proposed for the role of education in Internet use by the fathers and the mothers, and partial correlation coefficient was computed between the amount of Internet use by fathers and mothers, while controlling their educational level. The results of partial correlations (see Chapter 4, Table 4.15) show, the education level is not that much influential in the amount of Internet use by parents either. More precisely it became clear that in the case of controlling education level of the parents, the correlation coefficient between Internet use by the fathers and the mothers will fall from 0.48 to 0.47 in India and from 0.38 to 0.32 in Iran. Namely the role of parents' educational levels on the correlation between the use of internet by the fathers and mothers are only 1 hundredth for India and 6 hundredth for Iran.

Therefore, educational level of the parents is not a decisive factor in explaining the relation between the amount of Internet use by the fathers and the mothers. It only can be influential to a limited degree, and in the case of India it became clear that the amount of Internet use by parents is more affected by family income than their educational level. This is because in the case of Indian parents, as we observed, the higher educational level had no sensible impact on the correlation coefficient between the Internet use by the fathers and the mothers. Now, the question is what factor is influential in the amount of Internet use by parents if the family income and their educational level have little to do in this connection? In response, the researcher can declare that close social relations between the couples in the family bring about the exchange of behavioral patterns and preferences such as Internet use, and transmission of this culture to other members of the family. Usually the congenial relations result in certain lifestyles that generate cultural capital for families. Indeed the continual face to face interaction among family members, particularly in oriental families cause the transmission of lifestyles' elements together and this process leads them to become more assimilated over time.
However, the calculated path analysis (Chapter 4, Diagram 1) shows that family income in Iran has nothing to do with the amount of mother’s Internet use, but the educational level of the parents is influential in Internet use by mothers. It should be noted that the influence of father’s educational level on amount of mother’s Internet use is higher than the influence on the amount of father’s Internet use. On the other side of the diagram, father’s Internet use in India is the highest variable affecting mother’s Internet use. Mother’s income and father’s income come next with similar positive impact, while father’s educational level has no decisive impact on mother’s Internet use. Briefly, the diagram number 1 explains that the amount of Internet use by fathers affects the amount of use of Internet by mothers. After that variable, the economic status in India and educational levels of parents in Iran are effective variables for the use of Internet by mothers as a dependent variable. Therefore, from this viewpoint, India and Iran have not the same situation.

A comparison of path coefficients of the two countries shows that unlike Iran, the mother’s income in India has the highest influence on the dependent variable. Also, the impact of mother’s educational level in Iran is higher than that of the mother’s educational level in India to the amount of father’s Internet use. Unlike father’s income that has nothing to do with Internet use in either country, mother’s Internet use is influential (especially in Iran) in father’s Internet use in both countries. The coefficients in Path Analysis Diagram 2 (see Chapter 4, Diagram 2) prove economic status of mothers in India is more influential in the amount of Internet use of their husbands, while in Iran non-material factors such as educational level and the amount of mother’s Internet use are influential in the amount of their husbands Internet use. A comparison of two aforementioned Path analysis models will make it clear that Indian mothers’ income has positive impact on their and their own husbands Internet use, while Iranian mothers’ income has no impact on their and their husbands Internet use. Also the educational level of fathers and mothers have positive influence on their Internet use in Iran, while in India father’s educational level has no impact on mother’s Internet use. In Iran, father’s income has no influence on Internet use by himself or his wife, while in India, father’s income has no influence on his Internet use, but is influential in the Internet use of his wife. But there is a sustainable relation
in both countries and for both couples in the amount of parents’ use of the Internet. That is to say, in Iran and India the Internet use by either member of the couples is influential in the spouse’s Internet use with a difference in path coefficient. The difference lies in the fact that in Iran the influence of mothers on fathers is bigger than the influence of fathers on mothers, as for as the internet use while it is concerned the opposite in India. This means in India the father’s Internet use has more influence than that of mother’s on their spouse’s Internet use. Also in India, the parents’ income is more influential on the amount of their work with Internet than in Iran. More precisely, Iranian fathers’ income has no impact on their Internet use, but their educational level is highly influential in their use of Internet. On the other side, mother’s educational level in India is effective in the amount of father’s Internet use; while father’s educational level has no impact on mother’s Internet use.

To wrap up the discussion on Internet use of the students in India and Iran this researcher can say that Iranian students have more access to computer and Internet. A glance at the access rates to computer and Internet at school and home showed that Indian officials work more for providing computer and Internet access for their students, while in Iran parents have provided more computer and Internet accesses to their children. A second glance at amounts of internet applying (see Chapter 4, Charts 4.17, 4.18 and 4.19) shows that the rate of Internet use among Iranian students is higher, but the difference in Internet use is not as high as the difference in access rate. In other words, Indian students compensate for the lack of internet use at home by having internet access in schools or in cyber cafes. Also in comparison with Indian parents, greater numbers of Iranian parents use Internet, although the difference is not outstanding. Moreover, the amount of Internet by either of the parents in both countries is affected by his or her spouse’s Internet use in different proportion.

1.1.3. Amount of TV Watching

As far as TV watching is concerned, Iranian parents in comparison with Indian parents allocate more time to TV watching. This means Indian parents have low TV watching rate. Iran and India have two completely distinct situations. As it was mentioned earlier, Iranian students watch TV more than Indian students but the difference in TV watching between Iranian and Indian students is not the same as the
difference in TV watching for their parents. Perhaps, this is because the students have
to allocate more time to reading their lessons, while their parents do not have such
obligations. Also, allocating more time on TV watching by Iranian parents, in
comparison with Indian parents, may be due to various reasons. For instance, it may
be because of more free time for Iranian parents or because of the limitation of Iranian
parents’ leisure time to TV watching only. On the other side, Indian parents have
diversified options for their leisure time.

Apart from differences in TV watching, there are some similarities between Iranian
and Indian parents. The correlation coefficient computed for the two variables shows
a positive relation between the amount of TV watching by their fathers and mothers.
The calculated correlation coefficient for Iranian parents is 0.20 and for Indian parents
it stands at 0.24 with meaningful level of “high” (see Chapter 4: 136 ). As shown in
the table, the Iranian and the Indian fathers and mothers closely and interchangeably,
affect one another. In other words, the amount of TV watching by Iranian parents
(0.20) and Indian parents (0.24) affect each other. Such a mutual effect relation was
also true in the case of Internet use that we covered earlier.

To sum on the amount of TV watching, we can say the Iranian students watch more
TV, while their parents have higher amount of TV watching in comparison with
Indian parents. What is notable in this connection is the sharp difference between
Iranian and Indian parents in the amount of TV watching. In other words, Iranian
parents watch TV much more than the Indian parents while such a big difference is
not seen in the case of their children. Findings, show that Iranian students and parents
have higher degrees of ICT use in both aspects of Internet and TV watching in
comparison with Indian students and parents, but the amount of Internet use in Indian
schools is higher. In other words, Iranian students prefer to use Internet at home,
while Indian students work with Internet outside their home.

1.2. Manner of ICT Use

In addition to the amount of ICT use, this study has paid attention to the manner of
using Information and Communication Technology. By manner of ICT use the
researcher means the way of using ICT, explaining the way of working with ICT tools
and its aspects such as Internet and TV programs.
The means in Table 4.16 of chapter 4 show the average use of Internet tools by respondent students. The means on Indian students show a great deal of Internet use for chatting and very little use of Internet for weblog writing. Iranian students, too, have very little use of Internet tools for weblog writing, but they have registered a great deal of Internet use for web surfing. E-mailing and chatting are interactive in nature but web surfing and weblog reading show passive use of Internet. Therefore, Iranian students tend more to passive use of Internet facilities.

The results of using various Internet sites by students in the two countries showed that the Indian students have used Internet for playing games and passing leisure time, while Iranian students have focused on art and science websites. The very little visited websites by the students of both countries related to political websites.

Table 4.18 (see Chapter 4) contains brief information on the data related to parents’ use of Internet for various purposes. The results show that Indian parents have more visits to the Internet sites than Iranian parents. Indian parents marked maximum use of Internet for e-mailing and minimum use of Internet for chatting. Iranian parents spend more time on Internet for web surfing and like Indians minimum time for chatting.

A comparison of the means in Table 4.16 (for students) and Table 4.18 (for their parents) shows similarities and dissimilarities (see Chapter 4: 147-149). It shows Indian students use of Internet for e-mailing is similar to their parents’ use of Internet. Such a similarity can be seen in web surfing and weblog reading for Indian students and their parents. The only difference is in the higher amount of chatting by Indian students. But comparison the Iranian students and their parents’ use of Internet show that unlike their children, Iranian parents use very little Internet tools. The only similarity is the web surfing by both students and their parents, although the related mean of 1.25 is placed somewhere between “little” and “so so” in five-level items of answers. The mean web surfing for Iranian students alone is 2.56 that is close to “quite a lot”. In brief, we can say that Indian parents have more similarities with their children in using Internet tools than Iranian parents. If the difference between preferences and behavioral patterns of the two generations prove to be high, a sort of inter-generation gap will be created. The experiences and observations of the
researcher obtained from living in both the countries tell that such a gap is wider in Iran.

Television is the second aspect of ICT in this study. Results as demonstrated in chapter 4 show, that the Indian students prefer music with 57 percent against the minimum interest of 12 percent in scientific programs. On the other side, Iranian students have marked a high interest in movies with 80 percent against minimum interest in scientific programs. Apart from apparent difference, it shows that the students in both the countries prefer to use TV for their leisure time. This is because music and films are classified in the leisure time programs. At the same time, students in both the countries show a difference in their interest (music and movies). It also shows that Indian students with 13 percent of interest in news, show double inclination to news programs. Indian students have also expressed more interest in scientific programs of TV in comparison with those Iranian students. In the discussion on Internet use, we saw that that Iranian students work with scientific websites more than the Indian students. Therefore, we can claim that the Iranian students accept Internet as a tool for scientific use, while the Indian students take it as a tool for leisure time. Perhaps the Iranian TV does not have scientific programs appropriate for high school students, or the programs may not be interesting for the Iranian students, while it is vice versa in India.

Similar questions were posed to Indian and Iranian parents and the results illustrate that Iranian and Indian parents have common interests in watching news programs. However, they do not have any common interest in watching the most attractive TV programs. Another point is this that Iranian parents have shown interest – like their children – in watching movies by 19 percent, while only six percent of Indian parents watch movies. In general, a parents-children comparison of TV watching in the two countries shows that the parents tend to see more documentary programs and prefer information dissemination aspect of the television, while their children watch TV mostly for leisure time.
2. Impact of the amount of ICT use on Social Capital

Analytical findings concerning the relationship of ICT with social capital are explained to verify the applied assumptions. As was mentioned in objectives and seen in analytical/causal model at the end of the second chapter, one of the main assumptions of the research is that ICT influences social capital of individuals in a direct way and through intervening variables. In the description that was given of ICT, these variables were conceptualized as the “amount” and the “manner” of working with internet and watching TV. But the social capital as a dependent variable is a complicated construct and thus has various aspects.

As already discussed mentioned the social capital is divided into three aspects: General, Educational and Family Social Capital. And the findings considered for discussion on the relationship between ICT and social capital in the beginning of this paper, have to do with the influence of the amount of ICT use on three main indicators of social capital. These indicators, which General and Educational social capital in this research have been studied with respect to them, are as following:
- Scope of relations network,
- Level of trust in the network,
- Level of reciprocity in the network.

2.1.1. Relationship between Amounts of ICT Use with scope of social relations

When the influence of the amount of ICT use on the scope of network relations was statistically calculated in a general way and without breaking it into its constituent parts, ICT was seen to have positive but not strong effect on the scope of relations in India. Unlike India where this positive effect is not much significant, the amount of ICT use by Iranian parents has a positive and highly significant influence on the scope of relations, while ICT use by Iranian students has no effect on the scope of relations. In general, the relationships shown in diagram 3 would provide an overall picture of the extent to which the amount ICT use influences network relations of individuals in the two countries. But because the ICT use is not disaggregated into its various types, relationships shown in diagram 3 don’t have a high resolution. In other words, a more accurate examination of the several types of ICT use in detail could lead us to more useful findings that can promote our analysis. For instance, the amount of ICT use by Iranian students as shown in diagram 3 has no effect on the scope of their social relations. But by disaggregating ICT use variable into amount of working with Internet and amount of watching TV among Iranian students, we find that the relationship is negative for one and positive for another. Otherwise their combined influences would cancel the effects of each other as checks and balances system, and can show an overall non-relationship. Thus to give a more clear picture of the influence of disaggregated ICT variables, it is necessary to look at the path analysis diagram number 4 in chapter 4.

Diagram 4 briefly explains that ICT has a more significant impact on the network relations of individuals in Iran, rather than in India. From among 4 defined variables for the amount of using ICT, two of them i.e., the amount of working with internet by students and the amount of watching TV by parents, don’t imply having any influence on the scope of network relations in India. The two other variables, i.e. the amount of watching TV by Indian students and the amount of working with internet by their
parents, influence the scope of network relations by a small amount, but with no meaningful significance. On the contrary in Iran, the variables of the amount of working with internet by students and the amount of watching TV by parents show a positive and acceptable influence with a high significance. Also watching more TV by students causes a reduction in the scope of their network relations. And the variable of the amount of working with internet by parents in Iran has no influence on the network relations. Thus ICT has a noticeable impact on social relations networks in Iran, but the sorts of impact internet and TV have among Iranian students are different. The Internet has a positive and the TV a negative impact on the network relations. This pattern of relationships shows a better consistency with theoretical discussions, because as was seen in the second chapter, some theoreticians believe in the negative impact of TV on social capital, but the internet, due to its interactive and two-sided nature, can cause an increase in social capital.

2.1.2. Relationship between Amounts of ICT Use with Level of Trust in Network

Path analysis 5 and 6 of chapter 4 test the assumption that predicts a relationship between ICT and various aspects of social capital such as trust. Diagram 5 indicates that the amount to which the parents and their children work with ICT in India, has a positive effect on the level of trust in the social relations network, but with low intensity and acceptable significance. Whereas in Iran, the amount of ICT use by students, in general, doesn’t have any effect on the trust level. In contrast, the amount of their parents’ use of ICT has a remarkable negative effect with very high significance on the level of social trust of the people who interact within the networks of respondents. That the parent’s use of ICT should decrease trust in the social relations network, though not being among the interests of this research, has to do with content of information received and the parent’s manner of interaction with others through using ICT. Diagram 6 also indicates that some of ICT aspects in India have positive but low impact on trust level of individuals. In contrast, most types of ICT uses have negative impact on trust level of social network members in Iran. Although the amount of negative impact that ICT has on trust is not so high in Iran, the relationship are often significant rather the coefficients shown in diagram 6 are considerable. As mentioned earlier, a separate research is needed to explore the negative impact of ICT on trust levels in Iran, but it may have to do with concepts and
views people get and absorb through ICT in Iran. It is noteworthy that in Iran particularly in the city of Tehran where this survey was conducted, people watch two sorts of TV programs. The first sort is broadcast by national TV channels all of them being state-run and the second sort is aired by Persian TV stations abroad that could be watched using satellite dish receivers. Determining what proportion of Tehran population prefers national TV channels and what proportion follows satellite TV programs is not an easy job, and there’s no reliable statistics available. Therefore a separate study is needed to identify the contribution and member of influence of each of these two types of TV channels.

2.1.3. Relationship between the Amounts of ICT Use with the level of Reciprocity

The impact of the amount of ICT use on the third aspect of social capital, i.e. reciprocity among social network members has been processed in this section. To sum up the discussion on the relationship between ICT use with level of reciprocity, we should say that this relationship is weak in India, but positive in Iran. In more accurate terms, the amount of watching TV by students in India causes a slight decrease in the level of reciprocity in the network, and the same effect is seen with lower intensity and significance for the amount of internet use by Indian parents. Given the low significance of the impact of the amount of parents’ use of internet has on reciprocity levels, only the amount of watching TV could be said to have a notable influence. In Iran only one variable, i.e. the amount of internet use by parents has a positive influence of 23 percent on the level of reciprocity as well.

2.2. How does the manner of using ICT affect social capital?

In this research, “manner of using ICT” means the various applications that ICT has for respondents. For instance, different aspects of internet such as chatting, email, or using internet for various purposes like visiting news, political, scientific, religious etc websites have been included under the internet uses. Similarly, different programs that are aired through TV channels, and preferences and interests of the respondents for particular programs determine the manner of using TV. These variables have been sometimes called qualitative variables of internet use as opposed to quantitative variables.
Path analysis diagram 9 of chapter five demonstrates the impact of 7 independent variables relating to the manner of using internet by students on the dependent variable which is taken to be the scope of social relations. The findings, in short, show that 5 of these 7 independent variables have significant impact on the scope of social relations in India, while the number of significant independent variables is limited to 2 in Iran. Chatting, from among the independent variables in India, has the highest positive impact on the variable “the scope of social networks” of students. Variables indicating the amount of visits to scientific and religious websites and also the estimate of other friends’ visits of pornographic websites rank next among variables with positive impact on the dependent variable. Moreover, the variable relating to the amount of visits of political websites has a notable negative impact on the scope of social networks and the two variables indicating weblog reading and web-surfing have no notable influence on the dependent variable.

Also the above mentioned diagram shows that in Iran from among 7 independent variables, only 2 variables have a positive influence on the social networks scope, and other variables show no great influence. Two influential independent variables in Iran, in order of intensity, are the amount of weblog reading and the estimate of students of the amount of their friends’ visits of pornographic websites.

According to results the pattern of relationships between independent variables and the dependent variable in India is more consistent with theoretical elaborations and logical reasoning. Interactive capabilities of internet such as chatting cause a growth of social networks of students in India. This influence is consistent with the theoretical framework we have laid out, because interactive internet capabilities result in the growth of students’ social relations through an increase of two-way and mutual relations. Also the findings regarding social capital show a tendency to visit religious and scientific websites expand relations with others. Given that transparency and trust, two important factors influencing the scope of the individual’s relations with others, are seen less so far as political action is concerned, visiting political websites with high intensities among the Indians would lead to a reduction in the scope of their social networks. In Iran, on the other hand, those who read weblogs more, have wider social relations, something that probably has to do with the contents of personal weblogs in Iran which generally concern social and humanistic issues, and also are in
great varieties that appeal to greater number of visitors. What has not found an explanation in both countries is the estimate of students of the amount of their friends’ visits of pornographic websites. We know that in eastern countries and generally in traditional and old cultures, it’s not appropriate and normal to talk about your interest in sexual relations. That’s the reason why instead of putting a direct question to respondents, they were asked to estimate the amount of their friends’ visits to those websites. This technique is more efficient than direct questioning in Iran and India. Thus the researcher believes that more accurate information could be received about the amount of students’ visits of pornographic website, by using this method. But the positive impact of this variable on the scope of social relations is something the researcher has not found an acceptable explanation for.

What came above was a statement of the relationship of different variables related to the different internet uses with the scope of social network, but given the numerous independent variables, and despite the explanations of details, diagram 9 seems to be rather vague and not conducive to a consistent message to the reader. Therefore combining independent variables into two categories of positive and negative impact, the path analysis diagram number 10 was calculated. The conclusion drawn from path analysis diagram 10 indicates that in India, variables related to the manner of internet use could be divided into two groups. The first group includes the amount of visits to scientific and religious websites and weblogs, and also chatting which has a notable positive impact with very high significance on the scope of social network. The second group includes the amount of visits to political websites and the amount of web-surfing, which contrary to the first group, have negative influence on the scope of social network. The same pattern is seen for Iran, but with lower intensity, that is the more the manner of internet use is inclined towards the first group of internet capabilities, the more the scope of social relations network expands. In contrast, interest in the second group of the above-mentioned internet capabilities cause a decrease in the scope of social network. It is noteworthy that in Iran, the negative impact of the second group of internet uses on the social network scope is very small, and could be ignored.

At the end of this section, it could be claimed that the internet use can have different impact on the most important aspect of social capital, i.e., the scope of social relations
network, depending on its type. Some internet capabilities, such as interactive capabilities or visits to scientific, religious, etc websites have positive impact, and others like visits to political websites and web-surfing in a superficial fashion, would cause a drop in the extent of social relations.

Findings reported in path analysis diagram 11 illustrate that from among variables related to the manner of internet use in India, frequenting religious websites makes a notable contribution to the increase in trust, and the same impact is seen for chatting, but with a lower intensity. Frequenting political websites influences the dependent variable in a negative but small way, and two other variables related to writing and reading weblogs do not make any effect on trust levels in India. In contrast, both of these variables do affect social trust in Iran. Weblog writers show a high level of trust, and weblog readers a low one. Visiting political websites in both countries lead to a drop in trust level, with Iran showing a more intense one. What differs between these two countries is chatting and visits to religious websites. In India, chatting results in trust building in social relations network, while in Iran, no such thing is reported. The contents of conversations and discussions during chatting seem to create more trust in India, which appear not to be the case in Iran. But the other remarkable difference concerns the impact of visiting religious websites on trust in India vs. Iran. Frequenting religious websites gives rise to an increase in respondents’ trust levels in India with a coefficient of 21 and a very high significance, while in Iran, the opposite is true. This difference is of particular importance and requires a separate research, because in the earlier theoretical discussions we saw that religiosity, in general, enhances social capital and trust in social relations, but the fact that this relationship is negative in Iran, though with a low intensity, needs a particularly suitable explanation. For instance, whether different religions have different impact on trust in various social contexts is a question that has to be addressed by conducting a particular study.

The third aspect of social capital, the amount of reciprocity, though not being as important as the two other aspects, is considered a part of social capital. Diagram 12 of chapter 4 indicates that out of four independent variables included in path analysis model for India, three variables have a negative influence on reciprocity, although significance rate for two of these is not acceptable. The only variable with an acceptable positive influence on the dependent variable is visiting art websites, with a
0.20 intensity of an impact leading to the increase in reciprocity in the social networks of Indian respondents. In contrast, the same variable leads to decrease in reciprocity, and the three other independent variables, i.e., visiting entertainment websites, visiting scientific websites, and the amount of using email show a significant impact on the amount of reciprocity amid respondents, but with low coefficient. In a general view, the independent variables related to the manner of internet use show mainly a negative influence in India, and mainly a positive influence in Iran on reciprocity, but given their low path coefficients, their positive or negative impact are not appreciable.

Calculations made on the possible relationships between ICT and other aspects of social capital such as “organizational relation level”, or “educational aspects of social capital” which largely focus on respondents’ relations in educational environments, are not of much value. But the particular type of social capital, known as “family social capital” assessed mainly on the basis of Coleman’s conceptualizations, shows remarkable relationship with different aspects of ICT. Diagram 13 in chapter 4 that includes aforementioned relationships reports a rather strong and significant relationship between the amount of internet use and family social capital in both Iran and India. In other words, any increase in the amount of internet use by students will result in an addition to their social capital with a coefficient of about 0.30. Watching TV, though it affects the level of family social capital in both countries, yet the type of effect is different for each country, with Iran witnessing its positive and India its negative impact. In other words, any more time Iranian students spend watching TV, there would be a proportionate 0.54 increase in their family social capital. In contrast, if Indian students watch more TV, their family social capital will drop by a proportionate 0.28 units. Moreover, the amount of parents’ use of internet and TV in both countries does not have a high and significant influence on their family social capital. What is interesting in diagram 13 is the almost identical influence of the amount of internet use by students in both countries on family social capital, and particularly the different impact of TV on family social capital. In other words, in Iran, TV can cause a growth in family social capital, and a reduction in the same in India. The researcher’s observations indicate that TV programs emphasize more on issues like family nurturing and support. If we characterize family social capital with the highly reliable relation within the family, then emphasis in Iranian TV programs
on nurturing and strengthening family could become an influencing factor. In other words, the difference in the sort of messages getting conveyed by TV programs in Iran and India can explain positive and negative impact of TV on Family social capital in these two countries respectively.

Path analysis diagram 14 shows how the manner of using internet is related to family social capital. If we don’t consider the weak or insignificant relationships in the above mentioned diagram, it is found that using email service among Indian students leads to a reduction of family social capital, while the same variable results in increase of family social capital in Iran. Moreover, students, who visit scientific websites, enjoy more family social capital in both countries. The positive impact of visiting scientific websites on family social capital in India with a coefficient of 0.33 is twice that of Iran. The reason for the positive impact of visiting scientific websites might be the fact that in general, students interested in scientific websites, have a better educational performance, and these sorts of interests are most welcome by families. That’s why these students are better received by family members and have more fulfilling relations with their families. Thus their high family social capital is justified. But the negative influence of email service in India, and that also with a coefficient of -0.31 and high significance is questionable, because normally interactive capabilities of internet such as email service ordinarily should contribute to improvement in social capital. The negative impact in this case, which is conversely in Iran, could be attributed to email communication between Indian students and some individuals outside their family circle, or those who may he living abroad. Furthermore, Iranian students most probably use internet service as a tool to get in contact with other individuals close to themselves such as family members, who live far away, or their relatives and close friends. In other words, Persian speakers mostly living inside Iran are target group for emails in Iran, but email service is used by Indian students to communicate with non-Indian-speakers and is of a more international nature. The reason is the language used in emails. Iranian students mostly use their mother tongue, because they have less command of English language that their Indian counterparts- a fact that confines them to a national framework. In contrast, the Indian students, having a good command of English, can globally make use of the Internet-
something that is liable to grow international communication and as a corollary, diminish domestic and intrafamily relations.
3. Description of Social Capital

In order to provide a high resolution picture of social capital as a main variable of the study the study dwells on certain aspects of the subject to make the description more purposive with throwing the light on several aspects of the subject the description makes more useful. With the given conceptualization of social capital, in this research, is divided into three separate dimensions: General social capital, Educational social capital and Family Social Capital. Both general and educational aspects have been given operational definitions in two sublevels: Individual relations and Organizational relations. In the individual relations sublevel, three main aspects, i.e. Scope of relation network, Level of trust in the network, and Level of reciprocity in the network are examined as the main factors of social capital, using mostly, Coleman and Putnam theories. These three Indicators have been studied in both general and educational networks. Apart from those Indicators, aspects including respondents’ volunteer work with groups and organizations as Indicators of organizational level of social capital, and also family social capital as Indicators of family level have been examined as well. It may be noted that the family social capital was operationally defined and examined on the basis of Coleman’s conceptualization. This type of social capital, in Coleman’s view, can particularly influence educational performance of students. Now the description of respondents’ social capital starts with two levels of general social capital, i.e., Individual Relations Level and Organizational Relations Level as follows:

3.1.1. General Social Capital: Individual Relations Level

According to theoretical framework, it was made clear that the core concept of both the educational and the General social capital is based on three main dimensions consisted of **Scope of social relation network**, **trust** and **reciprocity**. The gathered data from Iran and India –which the present study is and abstract of – is based upon the
above said conceptual models and focuses on the evaluation of scope of network relations of people. Therefore Scope of social relations network among people is taken into consideration as one of the prime components of the social capital.

The charts 4.34 and 4.35 of chapter 4 are divided on the basis of an overall average of the scope of relations into two groups namely, the above average and the below average. It is distinctively clear that the number of families with below average scope of relations in the studied Indian cases is much less than the abundant number of people whose scope of social relations is higher than average. For Iran an exactly opposite situation can be seen in chart number 4.35. In other words, the numbers of people with lower than average scope of relations is much more than those who have higher than average scope of relations. It is worth mentioning here that based on the position generator technique of the situation, the mentioned variable also evaluates the amount of access of people to the resources in the network other than scope of relations. This means that, if we consider the possibility of social relations having a potential of being an asset, these types of assets are much more for Indians as compared to their Iranian counterparts. But as it was mentioned in the theoretical discussions of the research, the social capital cannot be defined just with the scope of relations only, but various other factors like the level of trust in relation between people is also as equally important in explaining the social capital.

With respect to the “rate of trust in relation network”, the studied cases in India and Iran are on two completely opposite poles, in a way that, now all the surveyed subjects of Iran, are on the negative side of the vertical line A, which shows the mistrust or an extremely low level of trust in the social network. On the other hand, approximately all the Indian surveyed subjects are situated on the positive side of the spectrum, which in turn more often shows a high level of trust in the social network. Recognizing the reasons of why there is low trust among Iranians in comparison with Indians, it needs doing another research project. However, to explain the level of general social capital in surveyed countries based on the stated evidences related to two factors of scope of relations and level of trust, different situations appear in both countries.

The next variable is “rate of reciprocity” in the social relation network, which is considered as the third factor amongst the social capitals in this research. In other
words, despite the high rate of trust and extensive scope of relations in India, the level of reciprocity is low. Hence, through these findings we observe that by evaluating only one of the dimensions of social capital, no one can easily claim that social capitals are measured perfectly in the studied society.

According to the three components of social capital, the brief conclusion of findings can be noted in the following words:

I. The Indian participants have wider scope of social relations network than the Iranians.

II. Findings on the actual trust confirm that social relation network in India is much higher than in Iran. Therefore, on the subject of the rate of trust in relation network, Indians and Iranians are in two different positions. In other words, Iranian cases mostly have mistrust or an extremely low level of trust in the social network. On the contrary, approximately all the Indian surveyed cases have a high level of trust in the social network.

III. Unlike the two above mentioned components, Indian cases have lower level of reciprocity within the social network in comparison with Iranians.

Keeping in mind the description of the three factors of social capitals it can be said that generally, the social capital in India is higher than in Iran. However it seems that if the area of the studied cities (Chandigarh and Tehran) had been at balanced relative to each other, presumably the scope of relations would have been similar to each other; as the smaller area of Chandigarh to some extent can be one of the reasons for the higher social relations.

Besides the level of actual trust that was mentioned earlier, the estimate of general level of trust in society is also one of the indicators that was used by various scholars, for the evaluation of social capitals (See Putman, 2000; Healy, 2003). Charts 4.42 and 4.43 show the trust rate in society estimated by the respondents. This type of trust results from measuring the attitude of respondents about the level of trust in society and it can be different from actual the rate of trust the estimated trust was evaluated by five partial items from the scale of very little to very high. With the comparison of the charts with each other it can be understood that the Indians have assessed the level of trust in their society, much higher than their Iranian counterparts, i.e., the chart
related to India is more inclined towards higher level of trust than the chart related to Iran.

Based on the related literatures (see Sturgis and Smith, 2010); the difference between the trust as estimated by the people and the actual measured trust present among the network of relations was expected. In other words, it was hypothesized in this thesis that the overall evaluated trust -as evaluated by the people in a society- which can be evaluated and measured by the phrases like “most people can be trusted”; can be much different from the level of actual trust among people, who are known to each other. The second type of trust which was named as actual trust in this research was measured by using the revised position generator technique. The results of this research show that there is no such difference between the two mentioned types of trusts.

As a summary of the description on general social capital, evidence demonstrates that Indian students and their families have a wide-range of relations as compared to Iranian students. It seems that the small size of the city and the closeness of residences of people in Chandigarh alongside all other variables are the reasons of the increasing social network relation in Indian cases. But the second aspect which is based on the quality of relations shows the level of actual trust in the relation’s network. From this point of view, the Indians had a much higher level of trust on people whom they knew, while the level of trust of the Iranians was very low for the people whom they knew in relations network. In other words, contrary to the Indian networks, a kind of absence of trust can be seen in the relation’s network of Iranians. Different from the size of relation network and actual trust, the findings related to the third component of general social capital shows that the level of reciprocity among the studied Iranian cases is higher than their Indian counterparts.

Summarizing the findings, on the whole, this discussion indicates that various dimensions of social capitals do not necessarily have a high co variation with each other in various societies. In other words, it is possible that one of the dimensions of social capital could be high in a society and the rest of them may not have developed to that same level. There could be various reasons for this condition, which needs more studies to be discussed in detail. But keeping in mind the higher trust rate and the wide scope of relations network among the Indian cases, it can be claimed that on
the whole the Indian cases have higher level of social capital as compared to the studied Iranian students and their families. Moreover, if we consider the level of scope of relations as a kind of indicator for a weak tie social network and consider the level of trust and reciprocity as an indicator for a strong tie social network; the results explain that social network with both weak and strong ties is higher in India than Iran. On the other hand, just one component of social capital namely, reciprocity is seen in Iran more than in India.

Another issue worth mentioning and which was pointed to in this part of research is the similarity between the level of actual trust and the level of estimated trust. As it was already shown, even with the presence of a higher level of actual trust measured in the social network in India, the Indians do not estimate the level of trust in their social network as much as actual measured level. However, estimated level of trust in Iran is near by the actual level of it. This means that the studied Indian cases estimated the level of trust too lower than the actual amount of trust present in society. This finding shows that similarity between the level of actual trust in social network and the level of trust estimated by the people in Iran is more than in India. Hence, based on the results, the level of trust in a society cannot be exactly paralleled by the people’s attitude towards the level of trust. Therefore, the estimation and evaluation of trust by the people of society cannot be considered as accurate criteria for the evaluating amount of social capital in a society.

3.1.1.1. Amount of Sociability

One of the general social capital aspects at the individual level is the amount of sociability. In this research, the sociability variable has been divided into two parts. The first part concerns the amount of sociability outside school and in a general perspective, and the second part has to do with sociability inside school. Sociability outside the school would include the number of respondent’s friends with distinction between close and ordinary friends, the number of visiting friends, the amount of time spent with friends or relatives, and the number of parties and meetings with friends etc. All these factors combined have made up the variable of the amount of sociability outside school.

To sum up observations made about sociability in these two countries indicate that there is not much of a difference in this regard, even though the amount of sociability
among Iranian students is slightly more than the same among Indian students. But a comparison of charts 4.50 and 4.51 in chapter 4 implies that social network closure among Indian students is higher than Iranian students. Chart 4.50 shows that the slope of the line between 3 and 4 is on the rise, whilst the slope is falling in chart 4.51. Generally speaking, if we have a closer look at these two charts, we are sure to see that the frequency of Indian respondents is concentrated mostly between 2 and 4, while most of the frequencies in the chart for Iran are concentrated between 1 and 3. This means that the social network closure is higher in India rather than in Iran, i.e., friends of Indian respondents know each other more than those of Iranian respondents and have more interaction within a social network.

3.1.2. General Social Capital: Organizational Relations Level

Two levels of relations, i.e. individual and organizational, have been distinguished while conceptualizing general social capital in this research. Although individual relations level has been of important for the purposes of this research, yet the organizational level has also been examined. Moreover, in the operational definition of organizational level and social capital, two sub-sets including relations with general voluntary groups and organizations and relations with educational groups and organizations were determined.

As per the result, the percentage of those who don’t take part in voluntary groups is more in Iran than in India. In other words, organizational participation of Indian students in groups and organizations outside school is higher than that of Iranian students.

<table>
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<tr>
<th>Participation in Voluntary Groups and Organization Frequencies</th>
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<td><strong>INDIA</strong></td>
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Frequency distribution in the above table shows that the mean and the median of participation in voluntary groups and organizations in India is higher than in Iran.
This fact implies that the participation rate measured by the number of relevant groups and organizations and also the number of participations on a yearly basis is higher among Indian students than amid Iranian students.

The lower rate of participation of Iranians in groups and organizations outside school seem to originate mainly from the following reasons:

A) Limited free time that Iranian students have outside the school. Such facts as the big size of the city of Tehran, the long distance of schools from residential places and school-related activities outside the school, may explain why Iranian students have less free time. Iranian students often study in schools farther from their houses than their Indian counterparts, some take even hours to reach their schools or back home.

B) The other reason has to do with the fierce competitive environment in Iranian schools which makes students allocate more of their free time of getting higher scores and particularly passing entry level exams of universities. This competitive environment has, on the one hand, caused greater concern among families, drawn more attentions towards the need for out-of-school coaching classes. On the other hand, private sector has found a huge profitable source of income and with increasing promotional advertisements, tries to fill students’ free time with these classes. The result is an increased feeling of necessity among families for out-of-school classes due to their concern for their children’s entry to universities causing more pressure on them. This has led to growing cuts on students’ free or leisure time out of school.

C) The third reason is the limited number of voluntary groups, organizations and associations for the youth in Iran. Basically the number of voluntary groups and associations who could usefully fill the free time of the youth in Iran is very much limited.

3.2.1. Educational Social Capital: Individual Relations Level

Like general social capital, educational social capital is also divided into three constituent aspects educational scope of relations network, the amount of trust in the educational network, and the amount of reciprocity in the educational network.
Combining these three variables, the variable of educational social capital was defined.

Findings show that the amount of social capital is higher in educational networks in Iran rather than in India. This is due mainly to higher levels of trust and reciprocity in social educational networks in Iran, whilst the early comparison of the first aspect of educational social capital, i.e. the scope of educational relations network showed that both countries have similar conditions in this regard.

What is interesting here is the difference between educational social capital and general social capital. As we saw earlier, general social capital is at a high level in India, and particularly the trust in social relations network is much higher in India than in Iran. But unlike general social capital, educational social capital is at a higher level amongst Iranian students rather than among Indian ones. The level of trust in educational social capital, in particular, is exactly the reverse of the trust level in general social network, and the two countries have entirely different conditions as far as trust is concerned.

3.2.2. Educational Social Capital: Organizational Relations Level

Intra-school organizational relations are part of educational social capital, referred to in this research as “organizational relations level”. This level includes students’ relations with or their membership in official or unofficial groups in school, such as scientific, sport, art, friendship and library etc groups. A comparison of percentages of the Indian and the Iranian students’ participation in intra-school groups indicates that participation level of Iranian students is higher. It can be seen in chart 4.60 that 73% of the Indian students are somehow related to, or are active in groups and associations within the school. Facts reflected in charts 4.60 and 4.61 point out within intra-school groups and associations, that the Iranian students have a higher level of participation. This is exactly opposite of the amount of participation of students in groups and associations out of school in these two countries. The Indian are more involved than the Iranians with voluntary groups and organizations outside school.

3.3. Coleman-Based Family Social Capital

The concept of family social capital is developed by James Coleman as a type of social capital in general. In order to explain differences in student learning across
types of schools, Coleman presented the variation in the connectedness of parents in order to exhibit how social networks generate different amounts of social capital across school communities. Therefore in this research, Family Social Capital was operationally defined as the presence or absence of both parents, the number of siblings at home, parents’ expectations for their children’s attendance in school and their relations with school officials.

The study shows that Indian students in the sample have higher Coleman-based family social capital than their Iranian counterparts. If you recall from the section on “the impact of different uses of ICT on social capital”, TV was found to have caused an increase in family social capital in Iran, and a decrease in the same in India (See Chapter 4, Diagram 13). Despite this, the amount of family social capital formulated on the basis of Coleman’s conceptualization in a descriptive framework is higher in India and lower in Iran. The researcher’s observations for both the countries also indicate that in India, intra-family relations and traditional family-oriented norms are stronger than in Iran. These conditions usually lead to an increase in family social capital. A consideration of conditions in the two countries and their comparison would make us ask the question how come traditional family-oriented norms and subsequently family social capital in India is higher than in Iran, in spite of the fact that India enjoys more relations, including media communications with the advanced western countries. A sufficient response to this question and its verification would require a separate research to be conducted by future researchers.

3.4. Researcher-Based Family Social Capital

This type of family social capital is similar to the previous type, except for some differences in the indicators that measure it. In the construction of research-based social capital, indicators measuring intra-family sociability have also been used, apart from the indicators Coleman has suggested. Intra-family sociability includes the amount of respondents’ relations with family members such as father, mother, sisters, and brothers. This means that within a separate combined variable, intra-family sociability indicators have been incorporated into Coleman-based family social capital indicators. The result of this combination, given its somewhat different constituent parts from what Coleman considered as social capital, is called hereon the researcher-
based family social capital. Findings demonstrate the fact that this type of family social capital is not much different between Iranian and Indian students. In the related results (chapter 5: charts 4.66 and 4.67) the amounts of family social capital of students in the two countries are almost equal.
4.1. Description of Educational Achievement as Dependent Variable

Educational achievement, sometimes also referred to as educational performance in this research, is the dependent variable of the research. Educational achievement variable has been calculated with combining Grade Point Averages (GPAs) during the three last academic years of respondents. In this research, the average of three-year GPAs has been taken into account in order to include the influences of particular factors such as the teacher’s skill in one particular year, and also to obtain a more realistic account of the educational performance of students. In other words, GPAs from the three last final years of students have been calculated and their average, called Total Grade Point Average (T-Average) has been used as the respondent’s educational achievement variable.

The charts 4.68 up to 4.75 of chapter 4 reflected all the much higher educational scores of Iranian students as against those of Indian students. But it could be concluded from these findings that educational performance of Iranian students is also higher than that of Indian students. The truth of the matter is that educational scores [scores students get in their subjects or any derivate thereof] cannot simply be used as a perfect basis for comparing education performance in two different countries, the reason being that it’s possible that you might have different educational methods and particularly different forms of educational assessment in every country. If educational assessment systems in India and Iran are different, then we cannot simply conclude that educational performance of Iranian students is higher than the Indian students.
For instance, if it’s the case that final exams in India are stricter and with teachers normally used to giving lower scores, it is just the opposite in Iran. Consequently, the scores in these two countries cannot be compared. In that event, separate standardized tests will need to be conducted on simultaneous educational performance with the same settings in both countries, so that their results could be usable for accurate comparative purposes.

International Association for the Evaluation of Educational Achievement (IEA) conducts various longitudinal studies on educational achievement. IEA attempts to measure educational performance of students in different countries of the world on the basis of a single standard (http://www.iea.ny). TIMSS, one of these studies, is conducted on a yearly basis in more than 60 countries. TIMSS research has measured mathematic and scientific capabilities with standardized and uniform measurement tools every year since 1995. Findings from this well-known international research indicate that knowledge levels of Iranian students have persistently been lower than the average of the countries under study (http://www.iea.nl/uploads/media/GA50-DisseminationTMss-Iran.ppt). Unfortunately, the India has not taken part in this international research and this makes a comparison in this regard impossible.

It is clear that there was no possibility for research around this issue as a part of this study, and of course there was no need either because comparison of education performances is used only to describe the dependent variable of this research. In other words, what is important here is the relationship between social capital and educational achievement, not the amount of achievement on its own. Fortunately, even though educational achievement variable is not capable of being compared on its own, its relationship with other variables is quite valuable and useful for drawing conclusions.

4.2. Explanation of Relationship of Social Capital and Educational Achievement

Explanations reflected in path analysis diagrams cover relationships between various aspects of social capital and educational achievement. First, the relationship between general social capital and educational achievement is explained.

4.2.1. Impact of General Social Capital on Educational Achievement
Considering the linear relationship between General social capital and the level of Educational achievement which is reflected in result (chapter 5: path analysis diagram 15), one can see that it is negative amongst Indian students, i.e., the more the general social capital of Indian students rises, the less their educational achievement becomes, with a proportional -0.22 coefficient. A closer look at the diagram 16 of Chapter 5 would reveal that the amount of reciprocity as a general social capital indicator has the highest negative (-0.38) influence on the Indian students’ educational performance. Moreover, the scope of relations network also has a negative influence, but the amount of sociability out of school causes an increase in the educational achievement of Indian students with a 0.24 coefficient. But the overall effect of general social capital indicators on the level of achievements of Iranian students is negligible.

The inferences to drawn from the study is only based on the linear calculations to analyses the relationship between General social capital and Educational performance. But for deeper understanding, the nonlinear equations for testing the hypothesis of the relationship between the two variables have been calculated as well. Findings from the analysis of the nonlinear relationships between the above variables indicate that contrary to the results obtained from the linear calculations, the impact of the independent variable upon Educational achievement, especially among the Indian students is not only decreasing (see chapter 5: 212). As the nonlinear equations charts 1, 2 and 3 report, the nonlinear equations between the General social capital and Educational achievement are an inverse U-shaped relationship. These curves show that with an increase in General social capital, there is an increase in the students’ Educational achievement in early stages, but this trend gradually starts to decrease. That is, as the General social capital over-increases, the ascending trend of Educational achievement stops and the descending trend starts so that it will ultimately lead to a decrease in Educational achievement. This type of relationship has a logical justification and sociological explanation because the main indicator of the General social capital in this study is the individuals’ scope of relations network. As was explained before, the scope of relations network shows the size and the range of the relations that a social actor has in society. It stands to reason that the size of the relations will increase the availability of the people who can help and support the
individual. But when these relations go beyond a given level, they will increase the mutual expectation for responding to reciprocal interaction. It follows from such a process that when the relation goes beyond a normal level, the student will be too very busy to deal with that own studies. Therefore, with too much increase in social relations, the students’ time for educational exercises will be limited and consequently, their lower marks and a decline in their educational achievement can be justified.

As you may recall from the section on social capital description, the general social capital has been conceptualized and studied with two individual and organizational levels. What has been said so far about the impact of general social capital on educational achievement is concerned with individual relations level. Statistical calculations did not reveal any possible impact of organizational relations level on the amount of educational achievements of the students in any of the two countries. This fact means that if the general social capital does have an effect on educational performance of students, it has to do with that type of general social capital which arises in their individual relations, and not in organizational relations. In other words, irrespective of how much the students expand their relations with voluntary groups and associations, the resulting social capital will not have any impact on their educational performance. To sum up, findings show that the general social capital has either no impact on educational achievement or just a partial negative impact. In other words, no matter how much the students and their families expand their general social capital that grows in their general territory of relations in society; their educational performance will not be influenced by this type of social capital.

4.2.2. Impact of Educational Social Capital on Educational Achievement

Educational social capital as already mentioned, has been conceptualized in this research in as similar a way as the general social capital. But its difference from the general social capital lie mainly in the sort of social relations network that respondents have. In other words, educational social capital is a sort of social capital formed in the sphere of educational relations which causes students to enjoy access to useful resources in a social network made up of individuals involved with the students’ education.
In an overall evaluation of the relationship between educational social capital and educational achievement (chapter 5: diagram 17), it was found that there exists a relationship between these two variables in both India and Iran, albeit it’s negative for India, and positive for Iran. When path analysis model was calculated to measure the impact of three educational social capital indicators on the amount of educational achievement, the result (Chapter 5: diagram 18) showed that the level of trust within the educational network in both countries has no impact on the dependent variable. Furthermore in India, the scope of educational relations network has also no significant relationship, but the reciprocity within educational network shows a negative influence on the educational performance. If we keep in mind that the level of trust within the network and the scope of relations network are the most important indicators of educational social capital, then we can’t say a notable relationship exists. In other words, amongst Indian students, two of the three main indicators of the educational social capital have no relationship with the educational achievement. Therefore, the relationship of the third indicator, which is not as important as the other two in the definition of social capital, cannot explain the relationship between social capital and educational achievement on its own. To conclude, we may say that educational social capital has not much of an impact on educational achievement among Indian students. The negative relationship reflected in diagram 17 arises only from the influence of the third social capital indicator, i.e. reciprocity which is not of the same importance as the other two indicators for the measurement of social capital. But the positive impact of educational social capital in Iran which has a path coefficient of 0.20 has to do with two of the three educational social capital indicators, and thus has more validity in comparison with against in India. In short, the educational social capital or access to educational resources within the social network has no important influence on the respondents’ educational achievement, but has a positive impact in Iran. This fact can only be explained by the efforts of Iranian students to make use of the individuals involved with the educational network for advancing their educational achievements, whilst their Indian counterparts don’t exploit the resources available within their educational networks.

Findings also indicate that organizational level of the educational social capital has no effect whatsoever on the educational performance of students. In other words, the
students’ relations with educational groups, associations and organizations mainly active within the school, have no important influence on their educational achievements.

4.2.2. Impact of Family Social Capital on Educational Achievement

As mentioned, earlier the family social capital has been considered on the basis of Coleman’s definition. This type of social capital reflects relations that students have with members of their family and also includes the amount of family support they get. Moreover family social capital has been divided into two types to be measured more precisely. The first type of family social capital has been measured, keeping in view exclusively the Coleman’s conceptualization, and is called Coleman-based Family Social Capital. The second type includes, apart from Coleman indicators, intra-family sociability indicators which is called Researcher-Based Family Social Capital.

To summarize the relationship between family social capital and educational achievement, we may say that this type of social capital has a remarkable impact on educational performance as per the results reflected in diagrams 19 and 20 of chapter 4. In other words, family social capital is the most influential type of social capital on educational achievements of students in both Iran and India, so much so that with any increase in the respondents’ family social capital, there would be a proportional rise in their educational achievement to the extent of 0.36 and 0.30 in India and Iran respectively. Also a division of family social capital into its constituent parts reveals that the type of family social capital which was conceptualized on the basis of Coleman views had the highest positive impact in both countries. As you may recall from earlier theoretical discussions, this particular finding is supported by hypotheses too. These findings remind us of the determining influence of family in explaining educational performance of children and underline the importance of this social institution for the educational process of students.

Path diagram 21 of chapter 4 provides an overall representation of the amount of the social capital as defined and divided into various types in this research paper. Path coefficients for India show that two variables, general sociability and Coleman-based family social capital have the highest positive impact on educational achievement with coefficients 0.40 and 0.30 respectively. In contrast, general social capital,
educational social capital, and intra-school sociability have decreasing impact on educational achievement with coefficients -0.21, -0.36 and -0.17 in that order.

Path coefficients for Iran explain that Coleman-based family social capital with a coefficient of 0.45 has the highest significant impact on educational achievement. Other variables have either meager path coefficients or low significance levels. Therefore the fact is that most important type of social capital which has both high significance and positive impact on educational achievement is the family social capital. This kind of social capital is conceptualized and measured namely on the basis of the Coleman theory. The family social capital forms within family relationships and promotes the amount of emotional support and educational achievement motivation of pupils. Thus the process finally improves the academic performance of students that enjoy higher level of family social capital.
Discussions Related to the fifth Objective

To state the roles of Parents and Teacher Expectation, Goal Attainment, Self Efficacy, Successful Participation and Facilitate of Particular Actions as intervening variables between ICT and social capital.

Hypothesis 4

The intervening variables such as Goal Attainment, Parents-Teacher Expectation, Self Efficiency, Successful Participation and Facilitate of Particular Actions may transfer the parts of effect of social capital on educational achievement.

5. The role of Intervening Variable between Social Capital and Educational Achievement

The diagrams 22 to 27 are related to the tests of the first hypothesis related to the role of the five intervening variables the relationships of which have been studied with two kinds of Educational Social Capital. It should be noted that one of the intervening variables specified as Self Esteem in the hypothetical causal model has been excluded from the Path Analysis Calculations due to its lack of significant relationships. Furthermore, from among the different kinds of Social Capital defined in this research work, two of them, Family Social Capital and Educational Social Capital, have been given attention to for their significant relationships with the intervening and dependent variables.

The statistical calculations on the combined samples of Iran and India proved that the Educational Social Capital has stronger relationships with intervening variables and ultimately, the Educational Achievement than Coleman-based Family Social Capital, as reported in diagrams 22 and 23. Diagram 22 shows that it is the Parents and Teachers’ Expectations that transfer the Effect of Coleman-based Family Social Capital to Educational Achievement. The other three intervening variables in the model have little effect, and the independent variable did not show much effect either. Conversely, Diagram 23 explains that Educational Social Capital has a considerable
effect on Educational Achievement through the intervening variables. The above Path Analysis model says that unlike Family Social Capital, the Educational Social Capital has a direct significant effect (0.33) on Educational Achievement. The respondents’ Successful Participations including their prior successful experiences and Facilitator Particular Actions are the two intervening variables in model 23 that transfer the effect of the independent variable on the dependent one. The last variable is the Facilitator Particular Actions which shows the respondents particular actions which contribute to the respondents’ educational process. In this study, these Facilitator Particular Actions make it possible the students to meet the school officials easily, have good relationships with teachers, get information about the teachers, get easy membership in student groups, etc. The third intervening variable in diagram 23 is Goal Attainment (GoalAtta) which shows the amount of the individual’s success in the attainment of his/her goal. This variable is affected by Educational social capital with a path coefficient of 0.50 and affects Educational achievement with a path analysis of 0.13. In other words, an increase in Educational social capital results in the educational achievement of the Indian and the Iranian students both directly and indirectly through the other three intervening variables mentioned before. The last variable in model 23 is the Parent’s and teachers’ expectations which is not affected by the independent variable; therefore, it does not transfer the effect of the Educational social capital onto Educational achievement.

Owing to the comparative nature of the study, the data obtained from both the Indian and the Iranian samples from the two countries should be statistically processed both separately and collectively. Therefore, the path analysis models of 24 to 27 have been calculated separately for Iran and India respectively. Diagram 24 explains the role of the intervening variables in the relationships between the Family social capital and the Educational achievement of the Indian respondents. The diagram specifies that the Family social capital affects the Indian students’ Educational achievement only through the two intervening variables of Facilitator particular actions and Parents and teachers’ expectations. The Indian students’ parents and Teachers’ expectations are affected with a high Path coefficient of 0.76 by the Family social capital and affect their Educational achievement with a high and significant coefficient 0.25. In the above model, the Indian students’ Educational performance is not directly affected by
their Family social capital, and the other two intervening variables do not transfer much of the effect of the independent variable to the dependent variable. The path analysis diagram 25 explains that Educational social capital directly reduces the Educational achievement of the Indian students. By the same token, the Educational social capital reduces the Facilitator particular actions as an intervening variable. It also reduces the Indian students’ Parents and teachers’ expectations. The other two intervening variables, namely the prior Successful participations of the respondents and the amount of Goal attainment do not play any significant role in the Indian students’ educational success. By and large, there are the two types of social capital, Family and Educational, which affect Educational achievement through some intervening variables. However, the effect of the Educational social capital is basically negative and does not lead to the Indian students’ educational improvement. Such a pattern of relationship is contrary to the positive relationship observed among the respondents of the two countries on the role of the intervening variable. To find out reasons of such a difference, further analytical concentration and independent research is required.

The path analysis diagrams of 26 and 27 show the role of the four intervening variables in the explanation of the relationship between Social capital and Educational achievement of the Iranian students. Path analysis 26 shows that Family social capital of the Iranian respondents directly increases their Educational achievement. Likewise, the said variable increases the intervening variable of Goal attainment and the Goal attainment which in turn, improves the educational achievement. The Iranian students’ Parents and teachers’ expectations variable is affected by Family social capital, but as an independent variable, it has little effect on the Iranian respondents’ Educational achievements. The two intervening variables in path analysis model 26 play no part in the transfer of the effect of the independent variable onto the dependent one. Diagram 27 says that most of the intervening variables in the model transfer the positive impact of the independent variable on the dependent variable. The diagram No. 27 indicates that most of them intervening variables in the model transfer the positive effect of the independent variable on the dependent one. The direct relationship between independent and dependent variables of the mentioned path analysis model shows the positive and significant effect of the educational social
capital on the Iranian students’ educational achievement. The Facilitator particular action was positively affected by the Educational social capital and had the positive effect on the Educational achievement of Iranian students in the following phase. The intervening variable of Goal attainment was also affected by the independent variable of the mentioned model and has the positive effect with low intensity on the educational performance of Iranian students. The third effective intervening variable is the Educational expectations of the Iranian parents and teachers which was positively affected by the educational social capital of Iranian respondents and improves their educational performance as well. In the diagram of the path analysis No. 27, the only intervening variable which doesn’t transfer the strong and significant relationship between the Educational social capital and the Educational achievement is the previous Successful participation of one of the respondents.

In view of the above mentioned issues, it is concluded that the two social capitals entered in the path analysis models for Iranian respondents have a significant positive effect on their Educational achievement. In Iran, particularly, the Educational social capital has a strong effect on the Educational performance through the intervening variables; hence, in this regards it is completely different from India. In a general comparison between the indirect impact of the two kinds of social capitals examined in the path analysis, it was observed that the Educational social capital has more indirect impact on the Educational achievement than the Family social capital. Furthermore, the two variables, the Parents and teachers educational expectations about the educational competency and performance of the students and the Facilitator particular action assisting the students in the educational affaires, are the most important among the fourfold intervening variables examined by the path analysis models. In other words, an increase in the social capital generally increases the intervening variables as mentioned in the analysis and consequently, with the application of these variables, it helps to improve educational performance.