

## Evaluating the Impact of IT on University Students of Bahawalpur with Special Reference to Free laptop Distribution by Govt. of Punjab

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**DOI Link:** <http://dx.doi.org/10.6007/IJARBSS/v4-i6/916>

**Published Date:** 13 June 2014

### Abstract

The aim of this research paper is to evaluate the impact of IT and laptop distribution scheme of Punjab Government in order to encourage the students to perform better in their higher education studies. The major objective of this study is to physical health, performance in class, and routine life. This study conducted with the sample size of 70 students from The Islamia University of Bahawalpur. Data analyzed through SPSS and frequency distribution table. The results indicate Impact of IT has been evaluated many times and lots of literature is available on this topic but this study is unique in a way that it is specially focusing on free laptop distribution recently initiated by govt. of Punjab to encourage and help students in their higher education. Following are the key points of this study: The study investigated three different dimensions of impact of IT which are physical health, performance in class and routine life. Three hypotheses about these variables were studied and study circulates around those hypotheses. IT has a negative impact on physical health of students and the impact s more significantly observed after laptop distribution maybe due to excessive usage. IT has very positive impact on performance of class of students and after having laptops this impact was more significantly observed. IT really impacts routine life of students but no significant change was observed after receiving laptops.

## Introduction

In the past few decades, there has been observed a well-connected world and this all is gift of some excellent invention of technology. Technology is actually amalgam of some very Devine inventions of 20th century in electronics and communication. Computers and internet are one of the finest products of technological advancement.

The dawn of 20<sup>th</sup> century raised with a boom of technology and with the advent of computers, a wave of technological advancement rose in 20th century. Abacus was the very first step towards technological advancement. Many experts consider it the first most computers it was used for computation with the help of its sliding beads. Later many scientists added their work toward first commercial computers. IBM is the first company introduced computers for commercial purposes. Later on American military introduced a network of five computers to facilitate communication in 1952 and this networking gain popularity in early nineties of the same century. This was mainly because cost of networking gradually decreased and became in range of different universities and businesses (Osunade, 2003).

Today our lives are flooded with computers and internet from businesses to schools and colleges, from departmental store to households. Businesses are globalized due to this new way of communication. Industries try to find new markets and also try to reach at low cost factors of production, especially labor. Moreover, arrangements are made to take advantage of time differences and so production process carries almost round the clock.

(Osunade, 2003) said that School and college students are the largest user of internet and computers. Students use internet on an average of 2-3days in a week, which is quiet high average. Many of them use it for education and research purposes and others would be using it for entertainment we can say technology is engulfing our simple lives very fast and making our lives easy yet more complex. It is very important for us to evaluate the results of these technological advancements as quickly as they are occurring. This will help us to beware of bad impacts of technology and make plans for better and better advancements with least disadvantages.

Talking about Pakistan, in the past few years technology has reached from business class to common people even in high schools such as Danish Schools in Pakistan. Where lectures are delivered through interactive boards and exams are conducted through laptops.(Viccaji, 2013) Moreover, university students are of Pakistan, more specifically students in Punjab and KPK, are granted with free laptops. These laptops were given to them by their chief ministers. (KPK to Give Away 25,000 Dell Laptops to Students, 2013),(Shahbaz Sharif 2nd Phase Laptop Scheme Schedule Distribution, 2012). Similarly, many developing countries are bringing technology in the field of education at government level. But the evaluation of these projects are not yet initiated may be due to negligence but whatever is the cause the evaluation is really very important as it gives inside of how well the project has performed and what are the lacking areas where focus is required in future.

The following research is going to be the first stone in evaluating the diffusion of IT among university students of Pakistan caused due to free laptop distribution by govt. of Punjab. This study will focus on computer/laptop and internet so in the following study wherever the word "IT" is used it will be in the meaning of computer/laptop and internet. The study will empirically search the impacts of IT on students. The data will be collected from university students through questionnaire and analysis will be made using relevant statistical tools. As this is going to be the first research on the project of laptop distribution, this will open new horizons for future researches and gives useful recommendation for future plans regarding technological advancement in education sector of Pakistan.

### **Literature Review**

Since, the advent of globalized internet lots and lots of work has been done on evaluating its impacts. Different scholars and experts studied impact of IT in different dimensions like (Chen & Persson, 2010) studied the usage of internet on the basis of age. And, classified the people in two age group one called “young adults” who are of 17-30 years age and others are “older adults” with the age above 50 years. He found that young adults are more passionate to learn and use internet, as compare to older adults. He also found that those who are interested to learn about internet are more passionate for a purpose full life and personal growth. The most interesting result that they found in their study was that older adults (above 50 years) were showing more positive impact of use of IT. This may be interpreted as they use internet in a more meaningful way or we can call them sensible users of internet. And young adults (from 17-30 years) were showing slight negative impacts. These young adults, studying in universities, are mainly focused in this study.

As computers moves in our lives we are becoming more and more dependent to it. Pastly a person at its work place performed filing, reading collect and maintain database at different locations and in different postures. But with the blessing of computers a person now perform all these tasks on its desk without bothering to move here and there. This facility no doubt improved the efficiency of a person but at the risk of physical health of user.

Physical health of frequent computer users is also at high risk. All technological devices are hazardous to human health. All electronic devices emit radiation in the form of electromagnetic field (EMF). These radiations are actually energy and this energy has negative impacts on human’s health. So using computers laptops or even sitting in computerized workplace a person can become victim of harmful effects of EMF (Ellahi, Khalilb, & Akrama, 2011). They also found that users who spend more than four hours in direct exposure to electronic devices like computer are more likely subject to the four most common syndromes. These syndromes are:

- Carpel tunnel syndrome (CTS)
- Computer vision syndrome (CVS)
- Musculoskeletal syndrome (MSS)
- Computer stress syndrome (CSS)

They found carpel tunnel syndrome (CTS) is caused due to frequent use of keyboard and mouse. Carpel tunnel syndrome is a disorder of wrist and hand caused due to repetitive stressful movements. It has been found for long time but in today’s world it is prevailing more frequently. Computer users and programmers’ wrists are at high risk to become victim of carpel tunnel syndrome. Today not only the employees are victims of CTS but students are also complaining of it since they are also increasingly becoming the frequent users. (American Physical Therapy Association). CTS is characterized as tingling, numbness and burning pain in fingers and in severe cases a person cannot perform his routine tasks due to weak grip and even goes for surgery ergonomic instruction can help avoid this problem. ( Fagarasanu & Kumar, 2003) has deeply studied the impact of keyboarding and pointing devices on hands They said that most of the time users do not follow the instruction for ergonomic keyboarding that is why they face CTS. Users argue that the particular posture they choose seems to be most comfortable for them and that is why many times they even overlook the ergonomic instructions. Moreover they found that most of the times ergonomic devices are not adopted since they reduce the efficiency of users.

(Meikle, 2004) reported that watching computer screen for nine or more hours daily eventually leads to blindness with no treatment yet. And interestingly, he linked tight knot tie

with CVS. He said that many a times tight knot tie positively adds to CVS. (Wimalasundera, 2006) Characterized the CVS as red eyes, irritation tiredness and dryness of eyes temporary blurred vision and sensitivity to light is also observed in some cases all this is collectively called CVS. This is basically caused due to bad display quality, improper positioning of monitors and their radiations. Interestingly, she found that women are more frequent victim of such ocular fatigue than men.

Computers are supposed to make our lives easier but it has been observed that people are facing more problems and lives are becoming hectic as computers need continuous maintenance. (Qualtrics) has told in its report that an online study is conducted which showed that 64% of the people face long down time of their computer which causes frustration and anxiety. This is becoming a syndrome called "computer stress syndrome" which starts from minor frustration and leads to virtual computer hell like feelings. CSS is prevalent in people who experience slow processing, long boot-up time and attack of viruses and spywares. To third of the people have t contact their technical staff to resolve problem. And a variety of negative impacts are observed due to unresolved issues of computers such as anxiety, anger, and mood swings etc.

Compiling this all together, bad postures are enemies for computer users. It not only causes CTS CVS but also leads to musculoskeletal syndrome which is characterized by pain in neck, shoulders and beck. Most of the users don't sit in a proper posture while using computer even now, while you are reading this paper most probably you are not sitting in an ergonomic posture. Sitting in a bad posture for more than two hours a day may leads to moderately-severe musculoskeletal syndrome. (Hakala, Saarni, & Pun, 2012). They studied MSS on adolescents and found that everyday lives of these young people are affected by this problem. And situation gets worst for the adolescents who use computers for more than two hours. All these physical risks can be minimized by ergonomic computing devices and following the ergonomic instructions. All those authors who talks about physical hazards of computers gives different suggestions to avoid such problems. (Wimalasundera, 2006) said that monitors should be placed 10-20 degree below eyes level and monitor should be placed 35-40 inches far from eyes in order to avoid direction impact of radiations.

The following topic basically captured my attention when I was going through an article related to internet usage and its positive and negative impacts. The writer (Anderson, 2010) told a case study based on true story of a young adult. That boy performed very well in the initial three semesters of his course later he stared facing some not understandable symptoms such as slightly depressed moods, conflict with parents and around them and frequent absence from lectures. On counseling with the boy, Scott, he was unable to discuss the cause of problem. But soon he realized that this problem started just when he joined a multiuser dimension 'MUD'. We can say a social networking and gaming site. He told that he had spent 2000 hours on MUD in last semester and he is facing difficulty in withdrawing himself from it. He also told that he has made some unsuccessful efforts to decrease his usage of internet. This was stunning that Scott realized that he would be dropped out form course still he will keep using MUD. Moreover he told that internet was source of first interpersonal communication with unknown. He went out of city to meet a friend he made via internet. This was surprising that he was not familiar with his neighbors but was comfortable to go out of city to meet someone he has never seen before.

(Bulck, n.d)Specifically focused on the sleeping habits of students disturbed due to easy access to computers and internet in bedrooms. He found that easy access to computers and internet significantly disturbs the sleeping habits of students. Those who spend a lot of time

on computer games sleep significantly late during the whole week. They wake up late on weekends but wake up early in week days to go to their schools and colleges but as they spend fewer time on bed so they show a higher level of tiredness.

(Chou & Hsiao, 2000) worked on internet addiction. They explained the cycle of internet addiction. Students start using internet to satisfy their academic social and other such needs and their exposure made them realize that internet is an interesting thing to explore. They found that students who are addicted to internet find internet entertaining and interesting. They revealed that internet addicts find it enjoyable to hide their identities behind internet they consider internet a way to escape from their real life responsibilities. Interestingly, the researchers found that internet addicts are mostly aware of their addictions and most of them have made some unsuccessful attempts to decrease their hours on internet. These finding were similar to that of (Anderson, 2010). He also found that college students generally lack information about the pattern of internet usage suitable for them. It is necessary to educate them and make them aware about worst effects of cyber addictions.

Education is one of the sectors most affected by IT. Young people are always first to adopt emerging new technology. And those in universities are least resistant to adopt new ways of working. It has been observed that technology has a positive impact on students' performance. If we talk about performance, three different dimensions are there to measure performance of students e.g. learning, grades and participation in class and co-curricular activities.

(Nwezeh, 2010) said that university education is unique because students are not only engaged in taking lectures regularly but they are also doing research work all the time. And for research internet is the best source of information as it contains the latest firsthand information and it also provides detailed knowledge about a topic from its historical background to its future horizons. Research is considered to be the best way of learning in university education. But for this students must be self-motivated to work at their own. (Jelfs & Colbourn, 2006) found that students who are self-motivated to learn deeply are more in favor of use of internet because internet is all about exploring at your own choice. They classified students into two groups "the deep learners" and "surface learners". They found that deep learners are self motivated to learn and explore and they consider technology positively impacting their performance. On the other hand surface learners consider technology a difficult thing to work with. They believe that if they work by their own, without unnecessary dependence on IT, they can do well.

(Jelfs & Colbourn, 2006) also found that surface learners are also not motivated to participate co-curricular activities supported by technology. They do not feel important to participate and actively attend virtual seminars. On some detail investigation they found that such students believe that virtual seminars are not that much interactive as face to face seminars of real life. But, if we talk about effect of IT on class participation of students. There is clear improvement and positive impact on this aspect. (Eastman, Iyer, & Eastman, 2011) concluded in his research that students found their lectures more interesting and understandable if they are equipped with IT and interactive technology. They found that students pay more attention to such lectures and, overall, perform well in class. But delivery of lectures is one use of IT in education, students themselves also use IT for many purposes and they basically use internet and computers to prepare their assignments and presentation. Easiest way of collecting data on any topic is internet, these days so everyone including students uses it very frequently and approximately 60% assignments of students are based on knowledge obtained from internet. (Norzaidi & Salwani, 2009).

Many researchers found that technology impacts positively on students' academic performance (Osunade, 2003; Norzaidi & Salwani, 2009; Nwezeh, 2010; Eastman et al, 2011). They found that by adopting technology, students not only participate well in classes but their grades also improve. They participate more, they learn more and consequently they perform more and if performance is measured through grades in examination there has been an improvement came due to IT usage. Now let's talk about situation of IT in Pakistan.(Saeed, Asghar, Anwar, & Ramzan, 1999). Today Pakistani universities are facilitated with internet and computers and provide access to journals and books online. HEC paid special attention to university libraries and introduced "national digital library" and this step acted as milestone in the way of technology adoption in Pakistani Universities (Ramzan & Singh, 2008).

It was Shahbaz Sharif, the chief minister of Punjab Pakistan, who initiated the project of free laptops for the students of universities on purely merit basis. More than 250,000 under graduates are benefited from this project. Later the same norm is followed by another province of Pakistan e.g. KPK where 25000 brilliant students of bachelors are benefited with free laptops offered by government of KPK. It is said that KPK government has followed the Punjab government in this project even if KPK govt. has followed Punjab govt. it is really a good step to follow on by other provinces of country as well. (KPK to Give Away 25,000 Dell Laptops to Students, 2013).

But Pakistan is not the only country in the last few years many countries has started the similar projects either by government or by universities itself. In neighboring country India Tamilnadu govt. has also distributed 900,000 laptops in year 2011. This distribution was purely on political basis since chief minister J. Jayalithaa said that if his party came into power it will distribute laptops among student. (Tamil Nadu govt's free laptop scheme to be implemented this week, 2011) This is not the only case, in India laptop distribution seems a political tactic as chief minister of UP Akhilesh Yadav also distributed 10,000 laptops among students who are going to cast vote for the first time, e.g. who has just passed their intermediate exams. (The Times of India, 2013).

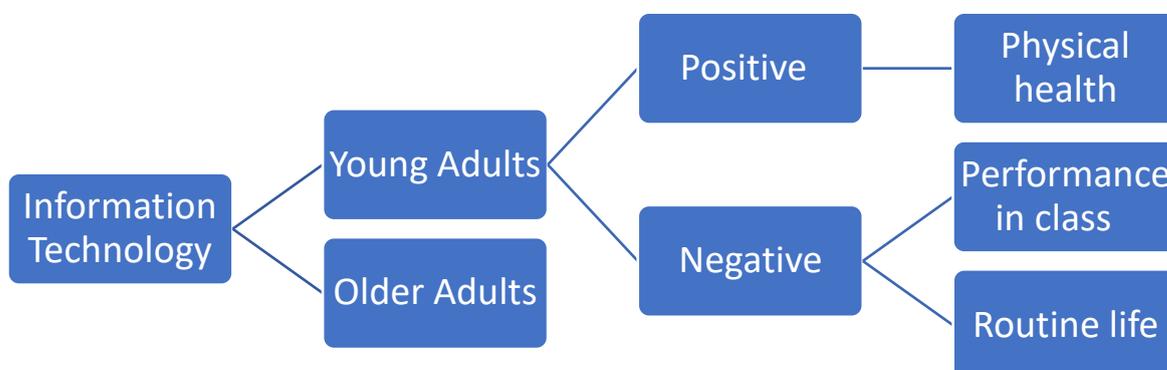
Similarly, In Ghana, a small country of Africa, a similar project was initiated in 2012. Students were given laptops. These laptops where assembled in Ghana as well. This laptop distribution is a feature of Ghana government who aims for a better Ghana through science, technology and innovation. (Ghana Govt giving free laptops to students, 2012)

We can't say that such work is only done in under developed countries, In the developed countries like Australia and UK free laptops are also given to students but unlike the developing countries, discussed above, Australian and UK government is not directly involved in these projects. Instead, these projects are initiated by universities on purely educational basis. Universities offer laptops for students under some pre-defined criteria. For example Deakin University is offering free laptops and internet bundles for its students. (Deakin University Australia).

But there is not much work on evaluating the results of distributing technology in such a sudden way. One evidence just found is in Nigeria. Nigerian govt. has also distributed laptops among high school students. But soon after the distribution Nigerian govt. regretted on their decision. The Governor of Ekiti state openly regretted that he has come to know many incidents of misuse of laptops given to students for their studies' assistance. A very unique thing of Nigerian free laptops is that they were solar powered laptops. (in London). So the objective of this research is to evaluate the impact of IT on students with special focus on free laptop distribution by govt. of Punjab. The impact will be evaluated on the basis of three

variables e.g. physical health, performance in class and routine life. These variables are detailed below.

**Figure 1 Impact of IT on Students- Broad Variables**



### **Framework of study**

The frame work of study is detailed below:

#### *Objectives*

As variables are defined previously, there are three basic objectives of this study related to defined variables, e.g.

- To find out if technology has impact on physical health of students
- To find out if technology improves Performance of students in university
- To find out if technology has impacts on routine life of students

#### *Hypothesis*

In this study there is one independent Variable “Information Technology” and three major dependent variables named “physical health” “performance” and “routine life” Each variable has some of its sub variable which will help to measure the impact of IT on major variables. These sub variables are detailed in figures above.

- **H<sub>1</sub>** is IT has a negative impact on students’ physical health.
- **H<sub>2</sub>** IT has positive impact on students’ performance in university.
- **H<sub>3</sub>** is IT has a negative impact on students’ routine life.

#### **Research Design and methodology**

The study is empirical in nature and adopted field survey approach as primary data source for investigating the research objectives. The main focus of the study is the beneficiaries of laptop distribution by govt. of Punjab. These students received laptops in March 2012 and from that time till now they have completed two semesters approximately. This is a good enough time to make some evaluations. As beneficiaries are very large in number and easily accessible so the best choice for collecting data is questionnaire.

As previously told, no such research is yet conducted on this topic so it is necessary to develop a new instrument according to the needs of study. The instrument was developed by me as a researcher, and approved by the supervisor. The questionnaire is given just at the end. It will be clear from the instrument that every variable is studied through its sub variables given in meta analysis and these sub variables are derived from previous literature.

So our sample size is 74 students which we selected through convenience sampling and collected data from students of different departments of this University. The data was analyzed through SPSS and Microsoft Excel. We categorized the departments into three types namely

1. Technology and science related departments
2. Social science related departments
3. Humanities and arts related departments

Since IT is mostly related to first category of departments and least related to third while second category is mid-way between the other two, so we selected two major departments from first and second category of departments and one from the third category. The names of these selected departments are as follows:

- Engineering department
- CS & IT department
- Economics department
- Management science department
- English department

**Findings**

The data is collected from a sum of 74 students out of which 49 were males and 25 were females. So a very mix of both genders is represented in the sample. These students were belonging to five different departments named above. Department wise frequency with respect to genders of these students is given in Table 1.

**Table 1. Gender \* DEPT. Crosstabulation**

		dept.					Total
		enr.	DMS	IT	economics	eng	
gender 1	Count	2	3	6	16	11	38
	% within gender	5.3%	7.9%	15.8%	42.1%	28.9%	100.0%
2	Count	11	9	10	6	0	36
	% within gender	30.6%	25.0%	27.8%	16.7%	.0%	100.0%
Total	Count	13	12	16	22	11	74
	% within gender	17.6%	16.2%	21.6%	29.7%	14.9%	100.0%

**Physical health**

Students were asked eight indirect questions about physical impact of IT such as about watering of eyes, pain in neck and wrist etc. they were asked that if they ever experienced pain in wrist before receiving laptop and/or after receiving laptop. They were asked to respond in either yes or no responses for each question are given in Table2. These responses are in the form of percentages. An a comparison is given about the views for each of the question. The comparison is to show the change in views before and after having laptops. Here, for the simplicity we use just the average %age for each response and draw a conclusion

using that. Before receiving laptops many of the students were in having the view that IT negatively impacts their physical health. If we look at the

**Table 2. Impact of IT on physical health of students-a comparison of views**

Questions	Before(%)		After(%)	
	Yes	No	yes	No
Did you, yourself experience any impact of IT on physical Health?	58.1	41.9	67.6	32.4
Have you ever experienced pain in wrist due to use of mouse/keyboard?	54.1	45.9	39.2	60.8
Have you ever felt sore in eyes while working with IT?	59.5	40/5	73	27
Have you ever experienced darkness in front of eyes while working with IT?	58.6	38.4	58.1	41.9
Have you ever experienced watering of eyes while working with IT?	44.6	55.4	62.2	37.8
Have you ever experienced pain in back while working with IT?	54.1	45.9	58.1	41.9
Have you ever experienced pain in neck while working with IT?	62.2	37.8	64.9	35.1
Do you think technology sometimes become very frustrating and stressful to use?	63.4	36.6	71.6	28.4
<b>Average</b>	<b>56.825</b>	<b>43.175</b>	<b>61.8375</b>	<b>38.1625</b>

table 2 above it shows that about 57% of students agree that IT has negative impact on physical health and the most negative impact observed is 'stress and frustration'. IT demands continuous and updating which sometimes become a very hectic task and cause stress and frustration. 63% of students face this kind of stress and frustration. And after receiving laptop this problem was observed even more and 71% students said that they experience this kind of stress. but this is not the biggest problem now. After receiving laptops 73% of the students said that they experience sore in eyes due to use of IT. Chart 1 is depicting the views of students after receiving laptops in graphical form. If we look at average percentage it is also increased, indicating that overall negative impact of IT on physical health is increased. Talking statistically, before receiving laptops 57% of students believe that IT has negative impact on health and after having laptops this percentage moved to 62% which is a significant change. The reason of this significant negative impact maybe due to change in per day usage of IT. When students were asked about their average hours (in a day) spend on IT the results were as follows:

**Table 3. usage/day of IT- a comparison between before and after receiving laptop**

Usage/day	Before %age	After %age
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an hour a day	24.3	5.4
2-3 hours a day	48.6	20.3
4-5 hours a day	20.2	37.8
more than 5 hours a day	6.7	36.5
Total	100	100

As, table 3 is showing students used to spend less time with IT when they were granted laptops. Most of the population lay in first two categories e.g. spend time for not more than 3 hours on an average. But when after having free laptops concentration of population shifted to last two categories and started spending 4-5 hours a day or more than 5 hours which is considered to be excessive usage of IT. 73.3% of the population was now laying in excessive user's category. This fast growing usage may become the cause of increased negative impact of IT on health as although usage was increased fast about knowledge about ergonomic usage of IT was not increased with the same proportion. When it comes to investigate the ergonomic usage of IT the results were as follows:

**Table 4. Responses of students about Ergonomic usage of IT**

Responses	%age frequency before	%age frequency after
Yes	41.9	50.0
No	58.1	50.0
Total	100	100

As it is shown in the table very small percentage was aware about ergonomics before receiving laptop e.g. 41.9% only. And even after receiving laptop this percentage increased by just 9% and only 50% of students were aware about ergonomic usage of IT. Which is not a sufficient proportion? Although, overall usage was significantly increased as shown in the table 5. But awareness about ergonomic usage was not increased in the same proportion's we can say this may be a reason of higher negative impact of IT on physical health after a year of using personal laptop provided by government Of Punjab.

Summing up, IT has negative impact on physical health of students and one of the many causes is that although usage of IT is increased after having laptop but awareness about ergonomic usage is not increased accordingly.

#### ***Performance in Class***

This is the most important dimension to be studied as Govt. of Punjab distributed laptops among students strictly on merit to encourage brilliant students, motivate them and to help them in their higher education as today's higher education is almost impossible without IT. So, it is very necessary to study whether govt. of Punjab achieved its aim or not.

In this regard we asked ten questions on dichotomous scale. These were about class performance e.g. attention, class participation, learning, assignments etc. and a comparison was made before and after receiving laptops and the responses are as follows:

**Table 5. Impact of IT on performance n class- a comparison of views**

Questions	Before(%)		After(%)	
	yes	No	Yes	No
Do you think IT helps to learn more deeply?	55.4	44.6	77	23
Do you think learning becomes interesting due to IT?	63.5	36.5	81.1	18.9
Do you think that class participation improves as students prepare their self for every lecture in advance?	51.4	48.6	71.6	28.4
Do you think class attention to lectures also improves due to same reasons?	60.8	39.2	71.6	28.4
Do you think attendance in class also Improves due to same reason?	47.3	51.7	60.8	39.2
Do you use IT for assignment and presentation preparation?	79.7	20.3	89.2	10.8
Do you think you have started submitting assignments more regularly after receiving laptop?	54.1	45.9	75.4	24.3
Have you ever attended virtual seminar /conference using IT?	41.9	58.1	55.4	44.6
Do you think Grades (GPA) improves due to use of technology.	67.6	32.4	77	23
Have you yourself experienced any change in your GPA?	62.2	38.8	82.4	17.6
Average	58.39	41.61	74.15	25.85

As the table 5 is showing approximately 58% of students found IT very helpful in deep learning and class performance. And remaining small percentage believes that IT does not positively impacts on their class performance. But after a year of using laptops granted by govt. of Punjab, views are significantly changed. Now instead of 58% a total of 74% of students started considering IT very helpful in their education. This is a very significant change in views of students.

Not only this but if we investigate change in class performance through objective approach (through change in GPA) the change is again significantly positive as shown in table 6 below:

**Table 6. Change in GPA- a comparison between before and after receiving laptops**

GPA	Percent before	Percent after
below 2	0	1.4
2-2.5	5.4	5.4
2.5-3.0	35.1	10.8
3.0-3.5	47.3	51.4
more than 3.5	12.2	31.1
Total	100	100

This table is about the GPAs of students for the semester when they received laptop and after one or two semesters of using laptops. Before having laptops most of the population was having GPA between 2.5-3.5 e.g. 82.4% of population was laying between these. But the result was improved just after a year of having laptops. Now most of the population (82.5%) was lying between 3.0-4.0 GPA. This improvement in GPA is also a sign of positive impact of IT on class performance of students.

If we look more deeply wether males or females have more significant improvement in GPA let's see the cross tabulation of gender and GPA as given in table 6 below:

**Table 7 gender \* GPA Crosstabulation**

		your GPA					Total
		below 2	2-2.5	2.5-3.0	3.0-3.5	more than 3.5	
gender 1	Count	0	4	6	24	15	49
	% within gender	.0%	8.2%	12.2%	49.0%	30.6%	100.0%
2	Count	1	0	2	14	8	25
	% within gender	4.0%	.0%	8.0%	56.0%	32.0%	100.0%
Total	Count	1	4	8	38	23	74
	% within gender	1.4%	5.4%	10.8%	51.4%	31.1%	100.0%

It can be observed that most of the percentages for both genders, lye above 3 GPA which is a good sig. for males it is abut 79% while for females it is about 83% which is really a large majority. But as the percentages shows that female students are having more improved GPAs

as compare to males. So we can't say females are more significantly affected by laptop distribution and this affect is positive in nature.

So concluding from all these observations we can say that students found it helpful in their education and learning and it has a very positive impact on their overall performance in class. And it has also been found that females are more positively affected than male students.

### Routine life

Our daily lives are significantly affected with the use of new technologies. Sometime it eases our daily live activities and many times it makes us frustrated. Here when we are studying the impact of IT on student's routine life we studied three things e.g. sleeping habits, interaction with real life people and our moods which seems to be affected by social networking, blogs, news websites etc. when we went to our population to investigate these things. The results were not unexpected. Students were asked six indirect questions for which they were asked to respond in either yes or no.

**Table 8. Impact of IT on routine life of students- a comparison before and after having laptop**

Questions	Yes	No	Yes	No
Do you enjoy late night net surfing and ?	48.6	51.4	63.5	36.5
Do you use IT till late night?		48.6	66.2	33.8
Do you think IT has changed your sleeping habits?	55.4	44.6	64.9	35.1
Have you ever experienced dizziness in class due to excessive (Till late night) use of IT?	54.1	45.9	58.1	41.9
Have you ever experienced depressed moods due to IT (Social work, depressing blogs/Movies/ news)?	54.1	45.9	64.6	35.1
Have you ever experienced conflict with real life people friend etc. due to IT.? (Social networks, depressing blogs /Movies/News)?	66.2	33.8	74.4	25.6
Average		62.83	54.2	45.7
	37.16			

Now if we look at the comparison above in Table 8 there are approximately 37% of students who think that IT has impact on their routine life before they have their own laptop. And after receiving laptop about 54% were having such views. So a very clear change occurred in the views of students. This is not surprising because when usage of IT increases (as shown in table 3) it will more significantly impact on our routine lives.

Due to depressing blogs, news and social networking relations many of the students experience conflict with real life people very frequently. This result is similar to (Anderson, 2010) who explained in his case study that a student was facing different routine life problems and one of which was conflict with real life people.

So summing up, IT has a negative impact on student's routine life and this impact was significantly increased after receiving laptops.

### Conclusion and Recommendations

In the past few decades there has been observed a well-connected world and this all is gift of some excellent invention of technology. Technology is actually amalgam of some very Devine inventions of 20th century in electronics and communication. Computers and internet are one of the finest products of technological advancement. This study conducted to investigate the impact of IT on students with special reference to laptop distribution by govt. of Punjab. The impact was studied in three different dimension e.g. physical health, performance in class and routine life. For each dimension there was a hypothesis and study was made to find out whether hypothesis is right or wrong.

Physical health is one of the most studied dimensions of its impact. IT related devices emit radiations which are energy rich and harmful for human body. Therefore, many diseases are spreading now a day due to these radiations. So for physical health it was hypothesized that "IT has a negative impact on physical health of students" it was named as **H<sub>1</sub>**. By making indirect questions (detailed in questionnaire given at the end of this paper) it was found that most of the students found that IT is negatively impacting their physical health. They said that yes they experience carpel tunnel syndrome, computer vision syndrome, computer stress syndrome and muscle skeletal syndrome. It has also been found that students were claiming that they experienced more negative impact of IT after having their own laptops granted by govt. of Punjab. It was found that this more negative impact is due to increase in per day usage of IT. After having laptops a large number of populations started using IT for more than 4 hours a day which is considered to be excessive usage. But this excessive usage is not supported by precautionary measures necessary to be made for safe working with technology. Students are not much aware of ergonomic usage of IT they do not know ergonomic postures, ergonomic keyboarding and positioning. And this lack of awareness is maybe the main cause of more negative impact of IT. And this result of more negative impact leads towards acceptance of **H<sub>1</sub>** hypothesis.

A large number of population consider IT very helpful in performing their education related tasks such as assignments, presentations, self learning, class participation and report writing etc. not only this but after having one's own laptop it was found that approximately all (74%) students were agreed on the point that IT has positive impact on their class performance and that was our second hypothesis named **H<sub>2</sub>** which is accepted by the consensus of large majority of simple.

**H<sub>3</sub>** was about IT's impact on routine life of students. It was hypothesized that "IT has a negative impact on routine life of students" this impact was studied through habits of net surfing, sleeping habits, change in interaction with real life people (moods and conflicts) and change in moods due to depressing blogs news or due to conflicts with virtual friends on social networking sites. (Question related to routine life is detailed in questionnaire given at the end of paper). Most of the students found that IT is affecting their routine lives and interactions they are not able to have sound sleep and their relations with real life people are also destroying. And this impact was significantly improved after having laptop. Compiling it all together,

**H<sub>1</sub>** is accepted, IT has a negative impact on students and after having laptops from govt. of Punjab this impact was observed more significantly.

**H<sub>2</sub>** is also accepted, IT positively impact on class performance of students and this impact were more significantly observed after receiving laptop from govt. of Punjab.

H<sub>3</sub> is accepted, IT negatively impacts on routine lives of students and this negative impact was increased after receiving laptop from govt. of Punjab.

### Recommendations

This study is made under certain constraints which may affect the results of this study and eliminating these constraints may leads to more reliable results.

- The first constraint was time. This data was collected randomly from those who received laptops in phase I or II. Those who received in phase II have spent less than one year with their laptops and less than one year is not a sufficient time for changing views. So in later studies the population must be specified more clearly
- Moreover, it is a very basic descriptive type of study about free laptop distribution which merely talks about the views of students and not study cause and effect relationships but for future studies it may gives strong footing to study the cause and effect relationships.
- This study gives a holistic view about three different dimensions. If future studies are made on each dimension separately then a more focused and deep insight will be available about this topic.

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