

A Study on the Impact of Information and Communication Technology on the Secondary and Higher Secondary Students' Education: On the Basis of Bangladeshi Students' Opinion

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ABSTRACT

The uses of ICT are growing rapidly among the young generation all over the world. Following the trend of the world, school and college students of Bangladesh widely engage themselves in using the ICT components like computer, mobile phone, Internet and Social Media. These components affect students' personal life, academic results, family life and professional life. That is why; this study is designed to find out the positive and negative effects of ICT on the academic performances of students. The study was conducted to find out the impacts of ICT on the education of secondary and higher secondary level students, to assess the role of ICT in order to change the education system and education quality of Bangladesh and to identify the causes of barriers in utilizing ICT in the education sector of secondary and higher secondary level students in Bangladesh. Here the research design of the present study is a survey-type. Data were collected from nine stake holders/groups of school and college related person. Only students were selected by purposive random sampling within urban and rural area of Dhaka and Barisal district in Bangladesh. Forty Schools & Colleges were selected from the study area and 413 Students were selected from the. So, the total 413 respondents were selected. Data were collected from primary and secondary sources. Collected data were analyzed by using computer program Statistical Package for the Social Sciences (SPSS). From the result, it was found that about one-fourth of the students use computers in the institutions but four-fifths of the students use computers, mobile phones, internet etc. personally at their houses up to 6 hours. Some of the students utilize ICT for education purposes. They use ICT for composing, making slides, understanding subject related topics easily, finding information using internet. But it is a matter of concern that most of the students don't utilize ICT for education purposes. They waste their time everyday in playing games as well as for using Facebook, Viber, Whatsapp, and other websites for enjoying songs, movies etc. 55.7% students use Android mobile phone. 14.7% students spend 4-6 hours in smart phone which is a matter of concern. According to 40.4% students' opinion, using ICT for a longer period of time hampers their study. The results also show that in many schools and colleges in urban area, ICT is being used to take few classes in the classrooms. Some famous schools and colleges use ICT to take more classes. But in rural area ICT is used to take very few classes in the classrooms. As ICT is not using properly in institutions and houses, the positive impacts of ICT is not reflecting on the education of secondary and higher secondary students in Bangladesh. At present students can get pictures, videos and information by using ICT. Teachers are conducting classes by utilizing ICT components like Multimedia Projector, Over Head Projector to ensure quality learning. All the schools and colleges are taking steps for establishing ICT labs for a quality education and changing the education system. Teachers are being trained in computer and they are learning to make slides and teaching techniques. Many schools and colleges have compulsory rules for

using ICT while taking classes by teachers. But the results of secondary and higher secondary students in ICT subject are not satisfactory because in the text book of ICT, topics are not explained elaborately. Besides, there is lack of practical learning opportunity. Students' learning in the most of the Institutions is not properly ensured due to the lack of electricity, teachers' effort, well furnished ICT lab, etc.

The Government of Bangladesh should ensure internet connection and uninterrupted electricity supply in all the secondary and higher secondary educational institutions during class times. Institutions should appoint adequate number of skilled and trained ICT teachers and technicians. All the institutions should provide well-equipped ICT lab and infrastructure as well job opportunity. Teachers should take more classes by using ICT. Institution authority should ensure this. Students should not be given android phone before their passing of HSC. The guardians should observe and monitor their children at the time of their using ICT.

Keywords: *Information and Communication Technology, Impact, Education, Student, Class, Social Media, Smart Phone, Computer*

INTRODUCTION

Information and Communication Technology is playing an essential role in the modern world. With the passage of time, technology has improved and invented many ways of communication. Internet is the last addition of this race of invention. It is a global system of interconnected computer networks. With the recent expansion of Internet, social media and communication, which has reached a point where pretty much anything is nowadays accessible with the simple touch of a button. The technological deterministic view presents the internet as an innovative force that has profound influence on family. Technology generates new patterns of expression, communication, and motivation. Internet is having a significant impact on society as a whole. The impact of such technology on social settings within society, such as the family, is having a major influence on social interaction between individuals. It is evident from the existing literature that new Information and Communication Technologies impact the social interaction within family in many different ways.

ICT especially internet can help in increasing interaction amongst families by bringing generations and family members together. Due to the diverse nature of the Internet and the advantages it offers, its use is becoming far more widespread. In urban area, the percentage of homes with computers connected to the internet is increasing day by day. The internet provides a hiding place for all the perverts and weirdoes to meet online and to talk about completely irresponsible and antisocial subjects in a way that they could never commit these without online. The internet usage also brings some trouble and problems to the family relationship and communication. Technology can be a double edged sword. The use or misuse of internet determines it. The Internet has also introduced a myriad of challenges to the family. Mobile phone is a common and comparatively easy available device among the all ICT devices. The development of mobile media has provided endless opportunities for the use of media at any place or at any time, making it that much easier than all other ICT devices. The total number of Mobile Internet subscriber in our country was 62.968 million in September 2016. However, for those who are over-dependent on the Internet and even over-use of it, problems may occur to them when they are no longer capable of controlling their own online activity. Scholars regard this abnormal and pathological behaviour as Internet Addiction (IA). New media technologies within a household can guide to a growing privacy within family life, with individuals growing using technology independently rather than collectively. The technological deterministic view presents the internet as an ingenious force that has profound influence on children and youth. This technology generates new patterns of explanation, communication, and information. In this view, various terms have been used to specify this generation of youth, including "Net-generation," the "millennium generation," and "digital natives."

The use of social media is being rapidly rising during last few years. It is not only being used by the working people but also there is heavy increase in the use of social media by the students or education society (Raut and Patil, 2016). With such broad acceptance, there is no surprise that social media have affected the way people live and socialize. Social Networking Site such as Facebook is one of the latest examples of communication technologies that have

been widely-adopted by students and, subsequently, have the potential to become a valuable resource to support their educational communications and collaborations with faculty. Social media are mostly used by the students to communicate and exchange ideas with lecturers specifically in western contexts (Sudha and Kavitha, 2016). Hasnain, Nasreen and Ijaz (2015) stated that the development of technology and increase in internet usage, social media has become a part of our daily lives.

If ICT especially social media is used in a positive way, it can help students and youth to get knowledge that can be used to improve their academic performances. Furthermore, Neal (2012) stated that the term social media relates to the many easy-to use services that anybody can use to interact with other people online such as Facebook, YouTube, Blog, Twitter and so on and so forth. Therefore, using social media easy and simple services enable us to create online presence very easily as signing up for Facebook and Twitter account, subsequently create our own content on the web within minutes. Besides that, academic achievement is the ability of student to study and remember facts and be able to communicate his/her knowledge orally or in written form even in an examination condition (Kpolovie, Joe and Okoto, 2014).

In an academic environment, beside traditional resources, students also need a new information technology such as social media. As said by Sudha and Kavitha (2016), social network sites have attracted considerable attention among the scholars and educators due to the increasing popularity among the students and the potential effect on academic performance.

JUSTIFICATION OF THE STUDY

The new ICT has transferred communication in many different ways. Computer mediated communication channels such as instant messaging; video chatting or social networks have become very popular especially among young people. People, today use network with each other using technology as much as, if not more than, face-to-faces communication (Heiberger & Harper, 2008). People are now like to communicate with others by using internet, which is easy, cheap in cost and easily accessible. The current tools of people specially young generation communication go by a peculiar set of names. Wall Posts, Status Updates, Activity Feeds, Thumbs Ups, and Profiles are some of the ways that youth today communicate with one another. These tools are features of social network sites (SNS), such as Facebook and MySpace. SNS are part of a suite of Web applications, which are also called social media.

The significance or justification of the study is to reveal the effect of excessive use of components of ICT like internet in education, examination results, family and find out the consequences of family relationship, familial interaction, and lifestyle of urban rich people. It is because technological determinism is generally found in the urban area. Family is the core and one of the most ancient units of all societies around the world. To keep family fully functional is essential for human being. Face to face interaction in a family is very important, but the use of internet is changing this traditional way of communication. In some cases some students are spending more times in social medias like facebook, Youtube, whatsapp, messenger etc. For this reason, they are doing bad results in their examination. Some students are being attracted or addicted to different kinds of crime by seeing different obscene videos in social media. For this reason, the parents of these students are deeply concerned in utilizing the tools of ICT. So, this type of research is necessary.

OBJECTIVES OF THE STUDY

The objectives of the study are as follows:

1. To identify the Impacts of Information and Communication Technology among the students of Secondary and Higher Secondary level of education in of Bangladeshi.
2. To find out the internet and Smartphone usages of Secondary and Higher Secondary level students of Bangladesh.

METHODOLOGY OF THE STUDY

Research Design

The study was a survey-type. Descriptive and analytical research designs have also been chosen. Because descriptive research design helps to describe the current practices and events while analytical research design enables to establish relationship between variables (Aminuzzaman 1991).

Study Area

The study was conducted at urban and rural area of Dhaka district and Barisal district in Bangladesh. In Bangladesh, there are eight divisions. The selected study areas weighted for selection due to researcher working place in Dhaka as well as by birth in Barisal. So it was easy to access to the field, participate, observe and interview the sample. However, in the field of urban and rural, the study has tried to understand the depth of the problem regarding ICT and compare between them.

Variables

A variable is a property or characteristic whose degree or form varies across a set of objects in a given situation, such as examination result, level of education, gender, income, age, etc. In research, variability of an event depends on theoretical framework. Same event might be variable in one study but constant in another. Variables are of two types. a) Independent variable and b) Dependent variable.

a) Independent variable: Independent variables are those variables which don't depend upon any other variable. In this research, Information and Communication Technology (ICT) is an independent variable.

b) Dependent variables: Dependent variables are those variables which depend upon any other variable. In this research all categories of students are the dependent Variables on ICT.

Sampling Method

Basically, random purposive sampling method was used in the study so as to get the best information to achieve the objectives of the study. This method gave flexibility to the researcher to pick up only people who are likely to have the required information and be willing to share it. Moreover, the sampling method helped to ensure representation of different variation of service providers as well as service seekers. In other words, heterogeneity in the composition of sample of service seekers and providers (age, sex, senior-junior officials, education, and profession) was attempted to maintain as possible. Therefore, in this study a combination of quantitative and qualitative methods were used. The question might arise why combination of these methods were used. Because as Creswell (1994:177) suggests, that it is advantageous to a researcher to combine methods for a better understanding of the concept being tested or explored. Each approach has its strengths and its weaknesses, and reliance on anyone method is not appropriate. Therefore, in this research quantitative and qualitative research were used for a better understanding as well as in depth to know the domain of the study.

Sampling Technique

Purposive sampling is a sampling technique in which the study relies on judgment while choosing members of population to participate in the study. Purposive sampling is a non-probability sampling method and it occurs when "elements selected for the sample are chosen by the judgment of the researcher. Researchers often believe that they can obtain a representative sample by using a sound judgment, which will result in saving time and money". In this research purposive sampling method was used.

Sample Size

413 students were selected from the study areas. Break-up of sampling technique and sampling distribution have been given in table 1. The study area and sample of stakeholders are proportionately distributed accept students. (Table 1)

Table 1: Selection of the areas

Division	Number of Schools & Colleges		Total Schools & Colleges
	Urban	Rural	
Dhaka & Barisal	200	213	413

Sources of Data

Generally, there are two different sources of collecting data, viz., primary sources and secondary sources. The present study is based on both primary and secondary sources of data. Primary data were collected from the respondents of the study area directly using different data collection techniques. On the other hand, the study has used different relevant publications, dissertations, books, journal articles, reports, and websites etc. as sources of secondary data. The data were collected from secondary sources must be useful to cross validate the primary data and also to analyze the relationship among variables. Primary data were collected from the particular areas in urban and rural areas in Bangladesh.

Data Collection Method

The study conducted based on both primary and secondary data. Primary data were collected through interviews and Questionnaire survey. Structured questionnaires containing both open and close ended were used. A survey through a standardized questionnaire was conducted to collect both quantitative and qualitative information form. Three questionnaires were used for collecting primary data such as students, teachers and students for interviewed through this survey. The semi-structured interviews were used for conducting with the policy makers, administrators, education experts and founders. These provided inputs to see the impact of the policies related to schools and colleges and the quality of education. Secondary data and information were collected. Besides, the primary sources along with secondary data were gathered from journal articles, published books, government documents, education commissions' report, policies, reports of various committees related to higher education etc. At the same time the present study has collected qualitative data through face to face interview by using a check list, Case study and Key Information Interview (KII).

Questionnaire Survey

For unique and exploratory research new information must be required. Questionnaire survey is the easiest and most widely used instrument for data collection in this regard. This method allows the researcher to come in direct contact with the respondents, to observe their attitude during answering time and to analyze the issue under study in ordinary setting. The questionnaire is precise enough to meet the objectives of the study research questions. Besides, comments and advice from the participants defense on the study great support to frame up the questionnaire and other. The purpose of the study was explained to the respondents as simply as possible allocating sufficient time so that they could swallow up the idea and could come back with spontaneous thoughts. Thus questionnaires were duly filled up to avoid unwanted bias.

Validation of Data

Validity is the degree to which the allotted instruments convincingly measure, explore or describe the phenomenon in hand (Judd, Smith and Kidder, 1991). In this study data were collected by questionnaire survey and interview method was also followed. The combinations of both the methods give the reliable and valid data. In this study, qualitative and quantitative collecting data were triangulated due to 1998:247). Validity refers to trustworthiness which is done through cross checking the data collected from one source to that of others. If themes are established based on converging several sources of data or perspectives from participants, then this process can be claimed as adding to the validity of the study (Creswell 2009, p.191). In this study data were triangulated during survey and interview and latter justified with secondary data.

Data Processing and Analysis

In qualitative study the researcher has the freedom to marshal the gathered data to meet the desired objectives of the study (Creswell 2009). Partial data of questionnaire survey were processed using simple statistics. The rest of the data were explained carefully to meet the aim of the study and research question and also attempted to establish relation among the variables. Some important and strong statements were referred in the analysis part to add value to the findings. Endeavor was made firstly to unleash the potential of the schools and colleges of ICT on the dependence in educational development and to rationalize its institutionalization; secondly to detect the challenges,

prospects and finally to put some light on to overcome the barriers. Computer Program Microsoft Excel was used for data analysis. Data were analyzed according to the objectives of the study. Tables, graphs and statistical analysis were done by Computer Program Microsoft Excel.

RESULTS AND DISCUSSION

Table 2: Type of mobile phone used by the students

Type of mobile phone	Frequency	Percent
Normal Mobile	183	44.3
Android	230	55.7
Total	413	100.0

Source: Field Survey, 2018

Type of mobile phone has been shown in the above table. From the result it was found that 44.3% students use normal mobile and 55.7% students use Android mobile. Many students have modern android phone. They have facilities to use internet and other apps. They can get easily educational information and learn properly. But most of the students use their android mobile for enjoying face book and adult sites. They are wasting their important times of their life unnecessarily. According to Uses and Gratification Theory, Mobile phone which is a comparatively new technology, has many uses and gratifications attached to students. Due to the students' nature of mobility, constant access, and options to both add and access content, this field is expanding with new research on the motivations behind the use of mobile phones. In general, students are using mobile phones for the uses and gratifications. The uses and gratifications are affection/sociability, entertainment, instrumentality, fashion/status, mobility and immediate access. Uses and gratifications differ from students to students. Students are using smart mobile phones on buses, cars, roads and trains are related to the UG of mobility and immediate access. For these reasons, some students are facing accidents.

The results also displayed gender differences (in an undergraduate population): women scored the UG of accessibility/mobility, relaxation and escape, and coordination higher than the men did. These results may imply social and societal expectations for females around independence but connected to family and friends and/or a tendency for women to rely more on detailed conversation in text messaging than men.

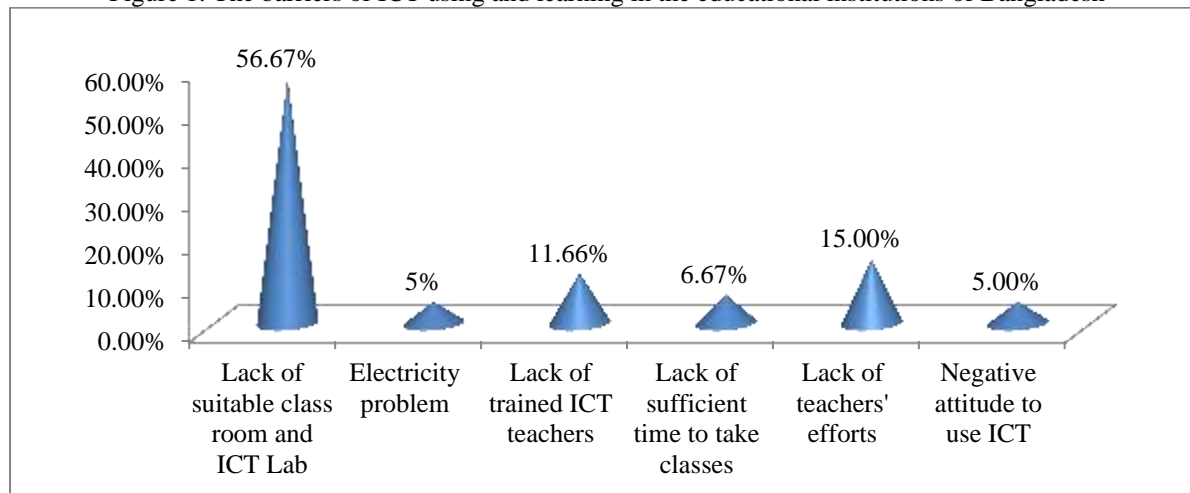
Table 3: Students' problem to use ICT when it is used for their study

Students' opinion	Frequency	Percent
Lack of detailed descriptions of contents in the text book	19	4.6
Lack of own knowledge	25	6.1
Lack of practical classes	88	21.3
Lack of proper training	46	11.1
No problem	197	47.7
Text book contents is not enough for learning	38	9.2
Total	413	100.0

Source: Field Survey, 2018

The result shows that when ICT is used for study students feel many types of problems. 4.6% students feel problems for lacking of detail descriptions of contents in the text book, 6.1% students replied that they faced problems for lacking of own knowledge, 21.3% students replied for the lack of practical classes they faced problems, 11.1% students faced problems for lack of training, 47.7% students replied that had no problem in ICT uses and 9.2% students replied that text book contents were not enough for learning and they created problems for study. Many students are learning ICT in their institutions and houses. So they have not any problem to use ICT for their study. But most of the students of Bangladesh are not able to use ICT for their study for the lack of practical classes, proper training and enough descriptive contents in their text book.

Figure 1: The barriers of ICT using and learning in the educational institutions of Bangladesh



Source: Field Survey, 2018

The barriers of ICT using in the institutions have been shown in the above graph. From the result, it is found that 56.67% students replied that Classrooms and ICT Lab environment were not suitable to use ICT, 5% students replied that they had electricity problem in institution, 11.66% students felt that the lack of trained ICT students were the barrier of ICT using in the institution. 6.67% students said that insufficient time to take classes is a problem of ICT using. 15% respondents replied that lack of teachers' efforts was a barrier to use ICT and 5% students replied that negative attitude was also a barrier of ICT use. There are many barriers of ICT use and learning in Bangladesh. The main barrier is the lack of suitable class rooms and quality ICT labs. Secondly the lack of trained ICT teacher is a big problem for the students' ICT learning and use. In many schools and colleges, other subject teachers take short training on ICT and take ICT classes. But they are not able to teach students properly. They are not able to take practical classes fruitfully.

Table 4: Students' opinion about their time spent in Internet by mobile phone (in hours)

Time spent in Internet by mobile phone (in hours)	Students	
	Frequency	Percent
0	29	7.1
1-3	323	78.2
4-6	61	14.7
Total	413	100.0

Source: Field Survey, 2018

The use of mobile with internet has been shown in the above table. From the result it was found that 7.1% students did not use mobile internet. On the other hand 78.2% students use mobile internet for 1-3 hours daily for various purposes by their mobile and 14.7% students use mobile internet for 4-6 hours daily. Most of the students use internet for many purposes for 1-3 hours. They waste their study time. Many students use ICT at night. They don't sleep at night. For this reason, they lose their energy and sound health, and even they can't work and study properly next day.

Table 5: Types of work of students by Using ICT

Types of work of students by Using ICT	Frequency	Percent
Do not do anything using ICT	28	6.8
Social media	38	9.2
YouTube	71	17.2
You tube, Face book	177	42.9
You tube and Social media used for educational purposes	99	24.0
Total	413	100.0

Source: Field Survey, 2018

Type of Works done by Using ICT has been shown in the above table. From the result it is found that 6.8% students do not do anything by using ICT, 9.2% students do social media activities by using ICT, 17.2% students use Youtube, 42.9% students use YouTube and Face book, only 24% students use YouTube and Social media for Educational purposes. Some students of the secondary and higher secondary use ICT for their educational purposes. But most of the students don't use ICT for educational purposes. They use ICT for other purposes, which don't help their study. According to the media system dependency theory, a person becomes increasingly dependent on media to satisfy their needs, that media become more important in a person's life and thereby increase the influence and effects on that person. Media system dependency theory acknowledges and builds upon uses and gratification theory because it is based on the assumptions that people have different uses of media that arise from their needs. Social cognitive theory explains behavior in terms of the reciprocal causation between individuals, environments, and behaviors. This allows for a more personal application of uses and gratification theory instead of a large, blanketing assumption about a large audience of mass media.

Table 6: ICT hampers study (Students' opinion)

Students' opinion	Frequency	Percent
Yes	167	40.4
No	246	59.6
Total	413	100.0

Source: Field Survey, 2018

ICT hampers study and it has been shown in the above table. From the result it was found that 40.4% students replied that ICT hampered their study and 59.6% students replied that ICT did not hamper their study. Many students don't use ICT for education purposes. They spend their times to use face book, YouTube, social media and other apps. So, it hampers their study.

According to the Uses and Gratification Theory, although emotional, cognitive, social, and habitual uses are motivational to use social media, all uses are not consistently gratified. In research examining Facebook groups' users' gratifications in relation to their civic participation offline, 1,715 college students were asked to rate their level of agreement with specific reasons for using Facebook groups, including information acquisition about campus/community, entertainment/recreation, social interaction with friends and family, and peer pressure/self satisfaction. The study ultimately yielded results through principal components factor analysis with varimax rotation. The results showed that there were four needs for using Facebook groups, socializing, entertainment, self-status seeking, and information.

- Socializing: Students were interested in talking and meeting with others to achieve a sense of community and peer support on the particular topic of the group.
- Entertainment: Students engaged with the groups to amuse themselves.
- Self-Seeking: Students sought out or maintained their personal status, as well as those of their friends, through the online group participation.
- Information: Students used the group to receive information about the related events going on and off campus.

Table 7: Using ICT (digital board, computer, laptop, and internet) in Class Rooms (Students' opinion)

Opinion	Students	
	Frequency	Percent
Yes	197	47.7
No	213	51.6
No comment	3	0.7
Total	413	100.0

Source: Field Survey, 2018

The use of ICT in Class Rooms has been shown in the above table. From the result, it was found that 47.7% students replied that Teachers used ICT in Class Rooms and 51.6% students replied that Teachers do not use ICT in Class Rooms and 0.7% students gave no reply. On the other hand, 95.0% Lecturer, Assistant Teacher, Senior Teacher replied that they used digital board, computer, laptop, and internet and 5.0% Lecturer, Assistant Teacher, Senior

Teacher replied that they did not use digital board, computer, laptop, and internet. According to the students' opinion, ICT teachers (digital board, computer, laptop, and internet) don't use in many classes. But according to the teachers' opinion about all the teachers use ICT in the class rooms. So it is clear that ICT is not being used in the classrooms properly.

Table 8: Completed Computer Course by Students

Students' opinion	Frequency	Percent
Yes	31	7.5
No	382	92.5
Total	413	100.0

Source: Field Survey, 2018

The Completed Computer Course done by the students has been shown in the above table. From the result it was found that 7.5% students replied that they completed computer course and 92.5% students replied that they did not complete any computer course. Most of the students don't complete any computer course. So they can't be expert about using ICT. They can do only easy works by using ICT.

Table 9: How does Computer help in study (Students' opinion)

Students' opinion	Frequency	Percent
By Educational channels	51	12.3
Google search	145	35.1
Google search and watching educational channels	80	19.4
Have no computer	38	9.2
Techniques of remembering	42	10.2
Watching educational and scientific videos	57	13.8
Total	413	100.0

Source: Field Survey, 2018

How does computer help in study has been shown in the above table. From the result it was found that 12.3% students replied that computer helped in study by educational channels, 35.1% students replied that Computer helped for Google search, 19.4% students replied that computer helped for Google search and watching educational channels, 9.2% students replied that they had no computer, 10.2% students replied that computer helped them learn the Techniques of remembering and 13.8% students replied that computer helped watch educational and scientific videos.

Table 10: Prescribed ICT Books help the students learn Computer easily.

Students' opinion	Frequency	Percent
Yes	323	78.2
No	90	21.8
Total	413	100.0

Source: Field Survey, 2018

Prescribed ICT Books help the students learn Computer easily and it has been shown in the above table. From the result it was found that 78.2% students replied that Prescribed ICT Books helped to learn Computer easily and 21.8% students replied that Prescribed ICT Books did not help to learn Computer easily. Some students thought that the present prescribed books were not enough to learn Computer easily. According to their opinion, the books should be easier and more explanations are needed. Even, the books should be practical oriented, not theoretical.

SUMMARY AND RECOMMENDATION

Bangladesh has passed a transitional way to socio economic condition with the intervention of ICT based education which will make a technology based society as called "Digital Bangladesh". At present ICT is very important for gathering information, communication and well connection with the national and International avenues. In this context, Bangladesh has developed and introduced ICT based education system for all levels of secondary and higher secondary since 2012. As a result, the education system has been transformed into more scientific than

general education. At the same time, Knowledge, Attitude and Practice (KAP) about the socio-economic and socio-cultural change has impact on the forces of the processes undergone in way of life. However, the present study has made a review about the ICT impact on aforesaid education system and it is as follows:

About one-fourth of the students use computers in the institutions but four-fifth of the students uses computers, mobile phones, internet etc. personally at their houses up to 6 hours.

- Some of the students utilize ICT for education purposes. They use ICT for composing, making slides, to understand subject related topics easily, finding information using internet.
- Most of the students don't utilize ICT for education purposes. They waste their time everyday playing games as well as using face book, Viber, Whatsapp, and other internet related sites for enjoying songs, movies etc. According to 40.4% students' opinion, using ICT for a longer period of time hampers their study.
- In many schools and colleges in urban area, ICT is being used to take few classes in the classrooms. Some famous schools and colleges use ICT to take more classes. On the other hand, in rural area ICT is used to take very few classes.
- For not using ICT properly in institutions and houses, the positive impact of ICT is not enough on the education of secondary and higher secondary students.
- The education system and education quality of Bangladesh is changing day by day for the role of ICT. Now students can get pictures, videos and information by using ICT. Teachers are taking classes by using ICT for a quality teaching.
- All schools and colleges are taking steps for ICT labs for a quality education and changing the education system.
- Now in Bangladesh teachers are being trained in computer for learning how to make slides and teaching techniques.
- In many schools and colleges have compulsory rule for the teachers for using ICT while taking classes
- Secondary and higher secondary students' ICT subject result is not satisfactory because in the text book, the ICT topics are not explained elaborately. Besides, there is a lack of practical learning opportunity.
- Students' learning in the most of the Institutions is not properly ensured due to the lack of electricity, teachers' effort, well furnished ICT lab, etc.

RECOMMENDATIONS

The recommendations of the study are as follows:

- i) Government should ensure internet connection and uninterrupted electricity supply in all secondary and higher secondary educational institutions during class times.
- ii) Institutions should appoint adequate number of skilled and trained ICT teachers and technicians.
- iii) Text books should be well explained and practical oriented.
- iv) All institutions should provide well equipped ICT lab and infrastructure as well job opportunity.
- v) The government should launch an educational website from where students will get information, slides and necessary solution to the problems.
- vi) The government can open radio/television educational channels where education, information and research programs will be shown for the students and teachers.
- vii) Teachers should take more classes by using ICT, and the institution authority should ensure this.
- viii) Students should not be given android smart phone before their passing of HSC.
- ix) Guardians should observe and monitor their children at the time of their using ICT.

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