

## **The Impact of ICT on Students' Performance: A Case Study of ASA University Bangladesh**

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### **Abstract**

*In modern day education, students are not supposed to be confined only within the learning in a classroom context. They are expected to explore the vast horizon of knowledge made available today through ICT. This paper explores the relationship between ICT and the performance of students at the undergraduate level. The research sample was taken from a group of undergraduate students studying BBA at ASA University Bangladesh (ASAUB). The study found that the impact of ICT on the academic performance of the students was very negligible. The findings also reveal that majority of the students are in the dark about the potential role of ICT in their academic life. Moreover it has been found in the research that the ICT access provided to the students are not utilized to enhance academic performance but it is rather a source of recreation. The paper also suggests steps that if taken would ensure better use of ICT by the students and would in the long run develop a healthy and fruitful relationship between ICT and academic performance.*

**Keywords:** ICT, student performance, ASAUB,

### **Introduction**

ICT has become a topic of discussion in the technological arena and its applications in different sectors and education in particular. Information and Communication Technologies (ICTs) are generally accepted as a modern instrumental tool that enables the educators to modify the teaching methods they use in order to increase the students performance.

Educational institutions around the world adopted ICT as a method of teaching as well as offering ICT related academic programs. In Bangladesh, different educational institutions have adopted ICT as a method of teaching. ASA University Bangladesh is one of the leading universities of Bangladesh offering ICT education through incorporating ICT related courses into the BBA and MBA programs. So it is the high time to assess the students' accessibility to ICT and its impact on the performance of students.

ICT includes technologies such as desktop and laptop computers, software, peripherals and connections to the Internet that are intended to fulfill information processing and communication functions. There is no standard definition for student performance. The standard approach focuses on achievement and curricula, how students understand the courses and obtain their degrees or their marks. For the purpose of our study we refer to their CGPA as the basis of performance; the higher CGPA indicates higher performance and the lower CGPA indicates lower performance.

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### Objectives of the study

The primary Objective of the study is to find out the relationship between accessibility to ICT and performance of the undergraduate students of ASA University Bangladesh. The secondary Objectives are:

1. To explore the reasons for students not having access to ICT facilities.
2. To identify the causes why students cannot use whatever ICT access they have in order to enhance their academic performance.
3. To find out how students view the relationship between the use of ICT and their academic performance.
4. To explore how students spend their time while using ICT.
5. To suggest measures that can be taken to overcome if any deviation is found.

### Methodology of the study

In order to achieve the objectives of this study we have used primary source of information. Primary data have been taken from the respondents through a prepared questionnaire that included both open ended and close ended questions.

The sample size of the study was chosen from the undergraduate students in the Faculty of Business Studies at the ASA University Bangladesh. The sample size consisted of 110 students (those who have completed at least 3 semesters with their results published) and a questionnaire was provided to them in order to fill it in.

The questionnaire was divided into two main areas. The first part of the questionnaire sought demographic characteristics of the respondents in the sample. The second part of the questionnaire focused on the students' knowledge and experience of using ICT. This part attempted to examine whether the respondents have computer and Internet access, whether they use these for their academic purpose or other purposes like watching movies, social networking, listening to music or browsing only for entertainment.

In terms of data analysis, correlation analysis was used, applying SPSS, to identify the impact of ICT on the CGPA (performance) of the students. Correlation conducted between these variables 'CGPA' and 'access to ICT'. For this case different weights have been attached to different elements of ICT (e.g. Desktop computer=3, Laptop computer=3 and Internet=4).

### Literature review

The relationship between the use of ICT and student performance in higher education is not clear, and there are mixed results in the literature. Earlier economic research has failed to provide a clear consensus concerning the effect on students' achievement.

These literatures show mixed results. On the one hand, some research like Anstine and Skidmore (2005), Coates *et al.* (2004), Navarro and Shoemaker (1999), Terry, Lewer and Macy (2003), Brown and Liedholm (2002), Angrist and Lavy, 2002; Banerjee *et al.*, 2004; Goolsbee and Guryan, 2002; Kirkpatrick and Cuban, 1998, and Leuven *et al.* (2004), demonstrate that there is no evidence of a key role for ICT in higher education.

On the other hand, some studies show a real impact of ICT on students' achievement, e.g. Kulik, 1999; Attwell and Battle (1999) , Sosin *et al.*, 2004; Fushs and Wossman, 2004; Talley, 2005; Coates *et al.*, (2004), Li *et al.* (2003)

From the above we can understand that there are mixed bag results regarding the relationship between the use of ICT and the performance of the students. But no study has earlier been conducted at ASA University Bangladesh regarding this topic. What would be the relationship between the accessibility to ICT and the performance of the students of undergraduate students of ASA University Bangladesh? Since, both positive and negative relationship may come out; a study on this topic to identify the exact relationship between these two variables would provide the real scenario.

## Findings

1. Naturally, in this decade student performance in higher education and information and communication technology are highly interrelated. But, surprisingly in this study the value of correlation coefficient ( $r$ ) is 0.012 and the significance level is .904 which means that there is a very weak positive relationship that exists between student performance in higher education and information and communication technology. Like other surveys that have been conducted in the last couple of decades in many educational institutions, here we also see there is no impact of ICT on the performance of the undergraduate students of ASA University Bangladesh.

**Table-1: Correlations analysis**

		technology available	CGPA
technology available	Pearson Correlation	1	.012
	Sig. (2-tailed)	.	.904
	N	110	110
CGPA	Pearson Correlation	.012	1
	Sig. (2-tailed)	.904	.
	N	110	110

What may be the possible causes of this result should be scrutinized. One major cause is that the students do not use ICT for the academic purpose. This fact is also supported by the survey. Table -2 shows the attitude of the students whether they spend most of the time for the purpose of hearing music, watching movies, unnecessary browsing etc. while using computer.

**Table-2: Students' view point**

	Strongly agree	Agree	Disagree	Strongly disagree	Total
No of students	19	47	33	10	109

\* One has missing value

About 61% students of Business faculty of ASA University spend most of the time for hearing music, watching movies, browsing for other forms of entertainment like social networking and so on.

2. Students also agree that majority of the students at the undergraduate level at ASA University Bangladesh do not spend the bulk of their time in using ICT for academic purpose. Table -4 shows whether the students of Business faculty of ASA University spend most of the time for academic purpose while using computer.

**Table-4: Students' view point**

	Strongly agree	Agree	Disagree	Strongly disagree	Total
No of students	2	35	52	21	110

Interestingly, about 66% of the respondents did not support the above statement.

3. Students' attitude towards ICT is not positive. They don't take it as a tool to enhance their academic performance in a digitally enabled world. Table-5 shows the attitude of the students about those having computer and internet as to whether their results are good or not.

**Table-5: Students' view point**

	Strongly agree	Agree	Disagree	Strongly disagree	Total
No of students	1	20	59	29	109

*\* One has missing value*

About 80% students disagreed that computer and internet enhance the academic performance of the students.

## Recommendations

1. It has been found through this study that students, who do use ICT, use it mostly for non academic purposes. In order to ensure that the ICT facilities made are accessed to enhance academic performance this trend has to be minimized.
2. There should be enough logistic support within the academic institutions in order to allow all students to have regular access to ICT facilities.
3. Some students are averse to using ICT. Such notions should be reversed with initiatives taken by the educational institutions themselves if we are to enjoy the fruits of technological progress.
4. Educational institutions need to take an active initiative to introduce the students to ICT by highlighting ways through which it can be of great help in enhancing their academic performance. This would make the use of ICT much more relevant to academic tasks.

## Scope for further research

This study is only a beginning in exploring the impact of ICT on students' performance at the undergraduate level. The findings of the research provide future researchers with ample scope for further in depth study on the subject matter. A very interesting idea would be to compare the impact of ICT on students' performance in private universities with that of students in the public universities of the country.

## Conclusion

In a world where technology is playing an even important role everyday, it is essential to encourage and enhance the use of ICT in the academic arena to stay up-to-date with the rest of the world as well as to avail of the opportunities that the modern world has to offer. In this context, this study reveals that we still have a long way to go as long as our orientation to ICS as an important tool to enhance academic performance is concerned. If proper steps are taken by the academic institutions to promote the use of ICT for academic purposes taking into consideration the findings and recommendations of this study then we can hope to overcome such an unwanted scenario and move forward to having a technology savvy student base.

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**Appendix-1**

Survey Questionnaire
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[This questionnaire has been designed only for the student of Faculty of Business, ASA University Bangladesh]

**Note:** This survey is only for academic purpose. Please give your information without hesitation.

<b>Name of the respondent:</b>			
<b>Batch:</b>	<b>Section:</b>	<b>Sex:</b>	<input type="checkbox"/> Male <input type="checkbox"/> Female
<b>Date of birth:</b>	<b>Mobile no:</b>	<b>Email:</b>	
<b>City:</b>	<b>Marital Status:</b> <input type="checkbox"/> Married <input type="checkbox"/> Single		

1. Which following technology you have access to and you won these:(You can check all, if you have)
  - ☐ Desktop Computer
  - ☐ Laptop computer
  - ☐ Internet
  - ☐ N/A
2. Do you browse the Internet regularly?
  - ☐ Yes    ☐ No
3. How much time do you spend for browsing internet in a day? (On an average)
  - ☐ Zero hour    ☐ One hour    ☐ Two hours    ☐ Three hours    ☐ Four hours and more
  - 0                      1                      2                      3                      4
4. Most of the time you use computer for your academic purpose..
  - ☐ Strongly agree    ☐ Agree    ☐ Disagree    ☐ Strongly disagree
  - 4                      3                      2                      1
5. Most of the time you browse the Internet for your academic purpose..
  - ☐ Strongly agree    ☐ Agree    ☐ Disagree    ☐ Strongly disagree
  - 4                      3                      2                      1
6. Students of Business faculty of ASA University spend most of the time for academic purpose while using computer. What do you think?
  - ☐ Strongly agree    ☐ Agree    ☐ Disagree    ☐ Strongly disagree
  - 4                      3                      2                      1
7. Students of Business faculty of ASA University spend most of the time for other purpose (hearing music, watching movies, unnecessary browsing etc.) while using computer. What do you think?
  - ☐ Strongly agree    ☐ Agree    ☐ Disagree    ☐ Strongly disagree
  - 1                      2                      3                      4
8. CGPA: .....
9. Those who have computer and Internet their exam. result is good. What do you think?
  - ☐ Strongly agree    ☐ Agree    ☐ Disagree    ☐ Strongly disagree
  - 4                      3                      2                      1
10. List three main problems of Faculty of Business of ASA University Bangladesh
  - a)
  - b)
  - c)
11. What are your recommendations/suggestions for the development of Business Faculty of ASA University Bangladesh?
  - a)
  - b)