

# Students' attitude towards online education system: A comparative study between Public and Private Universities in Bangladesh

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## Abstract

**Purpose:** This study aimed to inquire about the students' attitude towards the online education system as well as a comparison has been made between public and private university students' attitudes.

**Research methodology:** The descriptive research methodology was used for this study. Data was collected from 240 students where 120 were public university students and 120 were private university students. A structured and close-ended questionnaire with a seven-point scale had been used to collect data. The sampling method was non-probability. Descriptive statistics analysis, reliability analysis, and multiple regression analysis were measured by SPSS 25.0 version.

**Results:** The result shows that the public university students' attitude has a positive relation to interaction, internet self-efficacy, and students' self-determination, but has no relationship with course design and technical support. The private university students' attitude is influenced by all factors except technical support.

**Limitations:** This study focused only on Bangladeshi students.

**Contribution:** This paper will assist the authority to understand the students' attitude towards the online education system and take initiatives to make it more acceptable to the students.

**Keywords:** Attitude, Education system, Internet, Online class, Students

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## 1. Introduction

At the beginning of 2020, the world faced a pandemic situation because of Covid-19 (Maqsood A., 2021). More than 180 countries have been affected by the virus. In 2020, when the virus breakout the world, most of the countries see no way out to prevent it. World Health Organization (WHO) declared the situation as an international concern on 30 January 2020. On 11 March 2020, WHO announced the outbreak as a pandemic. In March 2020, about 75 countries closed their educational institutions because of Covid-19. By the end of April, 186 countries were locked down to minimize the number of transmissions (UNESCO 2020). Due to the overpopulation of Bangladesh, Covid-19 has spread all over the country (Uddin, M. and Uddin, B., 2021). On 17 March 2020, the government of Bangladesh announced the closure of schools, colleges, and universities. But the date of reopening of educational institutions has been postponed and they remain closed till now. In South Asia, Bangladesh is the only one that keeps the educational institution closed for more than one year (UNICEF). After the economy of the country, the sector which has faced a major loss is the education sector.

Distance learning has become mandatory for all kinds of educational institutions because of the Covid-19 pandemic (Hossain and Khan, 2021). During the lockdown, online education becomes the only way of learning in Bangladesh and also become popular because of its major role in education. Though many experts were confused about the effectiveness of online classes, it was the only way to continue the

education of students during the lockdown. The education system went through a huge transformation as well as distance learning methods extended widely ([Kooli, 2021](#)). The public and private universities are completing their semester online so that the students do not fall behind and face the semester delay. To defeat the adverse effect of Covid-19, a new normal situation is being adopted by the people ([Dissanayake, 2021](#)). There are 103 private universities and 49 public universities in Bangladesh (University Grants Commission of Bangladesh). The online education system was a new practice for the students as well as teachers when the pandemic started. But most of the students are introduced to the technology and they at least know how to operate devices. So, participating in an online class through Zoom software or Google classroom was not hard for them. But the challenging fact was the internet connection. Students who live in the rural faced difficulties continuing class because of disruptive internet facilities. However, there was no alternative to online education during this situation.

The students have expressed various attitudes towards online education. There is a difference between the public and private university students' attitudes towards the online education system as the education curriculum is quite different from each other. The private universities started taking online classes from the first week of April 2020, right after the lockdown started. On 7 May 2020, the UGC (University Grants Commission) of Bangladesh allowed private universities to take the online examination. So, the students could finish their whole semester from class to final examination online. On the other hand, the public universities did not start online classes at that time due to a lack of devices and internet facilities. In June, UGC asked the public universities to start online classes from July and grant students loans without interest to assist the students in buying devices to attend an online class. Though the class had started, the examination was not taken online. UGC told the public university authorities that they can take online examinations if they want. But most of the public university authorities did not agree because of lack of facilities and the students of the rural and underprivileged areas would face difficulties in attending the examination.

The main purpose of this study is to pursue the factors that influence the students' attitude towards the online education system of Bangladesh. Another purpose of the study is to contrast the public and private university students' attitudes. It is found that public university students have a positive attitude towards interaction, internet self-efficacy, and students' self-determination as well as has no relationship with course design and technical support. On the other hand, private university students' attitude is influenced by all factors except technical support.

## **2. Literature review and hypothesis development**

### ***Students' attitude toward the online education system***

Education develops and maintains the attitudes as well as behaviors that make the person better and socially perfect ([Kooli, Zidi, and Jamrah, 2019](#)). Online education is an effective mode of education as it assists the students to monitor and assess their learning process without being in the class ([Butler-Pascoe, 1997](#); [Olson and Wisner, 2002](#); [Richardson and Swan, 2003](#)). Online learning is widely accepted for higher education ([Larreamendy, Joerns, and Leinhardt, 2006](#); [Moore and Kearsley, 2005](#)). Some researchers have called it "disruptive innovation" ([Christensen, Johnson, and Horn, 2008](#)). Disruptive innovation means that in the initial stage those innovations do not get any good outcome because of the poor quality and with the time demand as well as the quality is improved ([Rogers, 2003](#); [Christensen et al., 2008](#)). However, the most essential part of an online class is the students ([Benneth, Maton, and Kervin, 2008](#); [Lint, 2013](#)). Students' attitude is one of the predictors to measure the readiness for an online class ([McVay, 2000, 2001](#)).

Attitude is considered as peoples' behavior towards a particular object which can be pleasant or unpleasant ([Schiffman and Kanuk, 2008](#)). In the online education system, students' attitudes toward online classes influence the outcome of online courses so that the students have to be more active in their education ([Neely and Tucker, 2010](#)).

### ***Interaction***

Interaction means significant contact which objects to students' minds, form the knowledge achievement in significant modes, and transforms students by shifting them to reach their destination ([York and Richardson, 2012](#)). Interaction is considered as one of the key factors which influence the online class system's adoption by students ([Abbad and Morris, 2009](#)). The important factor that comes to mind when hearing the learner's perception of learning is teacher-student interaction ([Marks, Sibley, and Arbaugh, 2005](#)). Psychological and communication gaps are created between teacher and student in distance learning which should be conquered by proper teaching methods ([Moore, 1991](#)). The interaction and engagement of the course instructor have an impact on the student's satisfaction ([Woods, 2002](#)). Though there are so many arguments, online classroom learning can be as fruitful as a traditional classroom ([Parker and Germino, 2001](#)). Well, experts ([Palloff & Pratt, 1999](#)) have viewed that interaction of online classroom is the main factor for the success of learning. So, the interaction of students and course instructors is analyzed whenever online education is discussed ([Anderson, 2002](#)). There is a chance of being isolated in the online class if there is less interaction among the course instructor and students ([Dennen, Darabi, & Smith, 2006](#)). The instructor's response via e-mails and providing feedback influence the learners' perception of presence ([Russo and Compbell, 2004](#)). To increase the engagement of students in discussion, the quality and quantity of students' participation guidelines have to be provided ([Kuboni and Martin, 2004](#); [Matusov, Hayes and Pluta, 2005](#)). Students also expect both qualitative and quantitative feedback of their performance after the participation ([Dennen, 2005](#)). Regular interaction is evidence of attentive teachers and also students respond positively ([Russo and Compbell, 2004](#)). The fundamental concern of the online education system is the interaction of course instructors and students ([Volery and Lord, 2000](#); [Woods, 2002](#)).

**H1:** There is a positive relationship between teacher-student interaction and students' attitude towards the online education system.

### ***Internet self-efficacy***

Self-efficacy regulates and controls the human mind as well as the way of their action and behavior ([Alqurashi, 2016](#)). It is also considered fundamental to people's performance ([Peterson & Arn, 2005](#)). Many experts have discussed the impact of students' self-efficacy on the online education system and found a connection between self-efficacy and the potentiality of technology usage ([Sun and Chen, 2016](#); [Corry and Stellas, 2012](#)). Personal factors also have an impact on students' self-efficacy which also influences the students' decision to take part in the online education system ([Puzziferro, 2008](#)). In online learning, computer self-efficacy has a strong influence on the success of online classes ([Joo, Bong, and Choi, 2000](#)). Internet self-efficacy means a learner's belief in his performance ([Hsu, Chang, and Chen, 2020](#)). Internet self-efficacy influences the learners to solve the task by using the internet and reach the desired goal ([Teo et al, 2019](#)). Previous experience and usage of the internet have a positive relationship with internet self-efficacy ([Eastin and LaRose, 2000](#)). People who have a positive thought about technologies have more internet self-efficacy than people who have a negative thought about technologies ([Kuo, Walker, Schroder, and Belland, 2014](#)). The academic performance of course instructor and students are influenced by their self-efficacy belief ([Honicke & Broadbent, 2016](#)). Students who have high self-efficacy are good at self-regulation and face obstacles confidently ([Bandura, A., 2001](#)).

**H2:** Internet self-efficacy and students' attitudes have a positive relationship.

### ***Students' self-determination***

Self-determination is considered as human motivation that explains the needs, motivation, as well as well-being of humans according to social context ([Deci and Ryan, 1985, 2002](#)). According to [Ryan and Deci \(2009\)](#), when students get the opportunity to fulfill their initial psychological needs that create optimal motivation. SDT framework defines that human motivation can be intrinsic (when the task is enjoyable and pleasant to humans), extrinsic (when the outcome of a task is inseparable) or amotivation (when the human has a lack of intention to perform the task) ([Ryan and Deci, 2000](#)). Students' motivation is considered a prime factor to determine the quality of online education ([Rienties, Tempelaar, Bossche, Gijssels, and Segars, 2009](#)). However, some experts have not found any

difference in extrinsic motivation and amotivation between online education and on-campus education ([Rovai, Ponton, Wighting, and Baker, 2007](#)). Student engagement in the class is influenced by motivation as motivation is considered the energy source that made the students engage in learning tasks ([Reeve, 2013](#)). Course instructors' support is one of the key factors as they have a significant role to motivate the students ([Allen et al., 2013](#)).

**H3:** Students' self-determination is positively related to students' attitudes toward online education.

### *Course design*

The students seek course information about the course details even before starting the course ([Conrad, 2002](#)). It is not easy to measure the quality of the course as well as design the online course effectively as online education courses mainly focus on a theoretical study ([Benson, 2003](#)). Interaction of online course content and course instructor influence the success of the online education system ([Swan, 2002](#)). The instructors should give attention to developing the student's interactions with course design ([Swan, 2002](#)). A curriculum can be defined as a tool that transforms social values into reality as well as gains the aimed learning outcome ([Sama, Adegbutyi, and Ani, 2021](#)). Easy course contents make online education more successful ([Nwankwo, 2015](#)). When online content is designed clearly, the students can easily interact with the content ([Reisetter, M., LaPointe, L., & Korouska, J., 2007](#)). While designing the course curriculum, the examined curriculum has a major role ([Sama, Adegbutyi, and Ani, 2021](#)). The effectiveness of online classes can be as effective as on-campus classes when the course design will be appropriate ([Nguyen, 2015](#)). To ensure student success, the course structure has to be consistent and distinct as well as a clear instruction needs to be provided ([Grandzol and Grandzol, 2006](#)). Students also applaud the course instructor who gives an effort to design the course structure and organize it carefully ([Young, 2006](#)).

**H4:** Positive relationship exists between course design and students' attitudes.

### *Technical support*

Technical support has a great influence on the success of online education ([Gray, Ryan, and Coulon, 2004](#)). Technical support assists the students to acquire knowledge which is essential to finish the course curriculum ([Valdez, Fulton, Glenn, Whimmer and Blomeyer, 2004](#)). It is also proved that adequate technical support and guideline has made the online education program efficient ([Qureshi, Ahmad, Najibullah, Nawaz and Shah, 2009](#); [Nawaz and Qureshi, 2010](#)). The creation of an environment where students get assistance in using technology is crucial even before starting the education program ([Sirkemma, 2001](#)). Technical support covers the management of technical infrastructure with suitable administrators which is not being possible in the universities as the digital environment is new ([Qureshi, Ahmad, Najibullah, Nawaz and Shah, 2009](#)). Time can be wasted and the effectiveness of an institution's technology can be questioned if technical problems arise (Biscontinini, 2008). Technical support is also influenced by the teacher's attitude toward the technology ([Zaidel and Zhu, 2007](#)). Several studies have found that online education programs failed to achieve their goal due to a lack of technical support and advice ([Alexander and McKenzie, 1998](#); [Soong, Chan, Chua and Loh, 2001](#)).

**H5:** Students' attitude toward the online education system is positively related to technical support.

## Conceptual framework

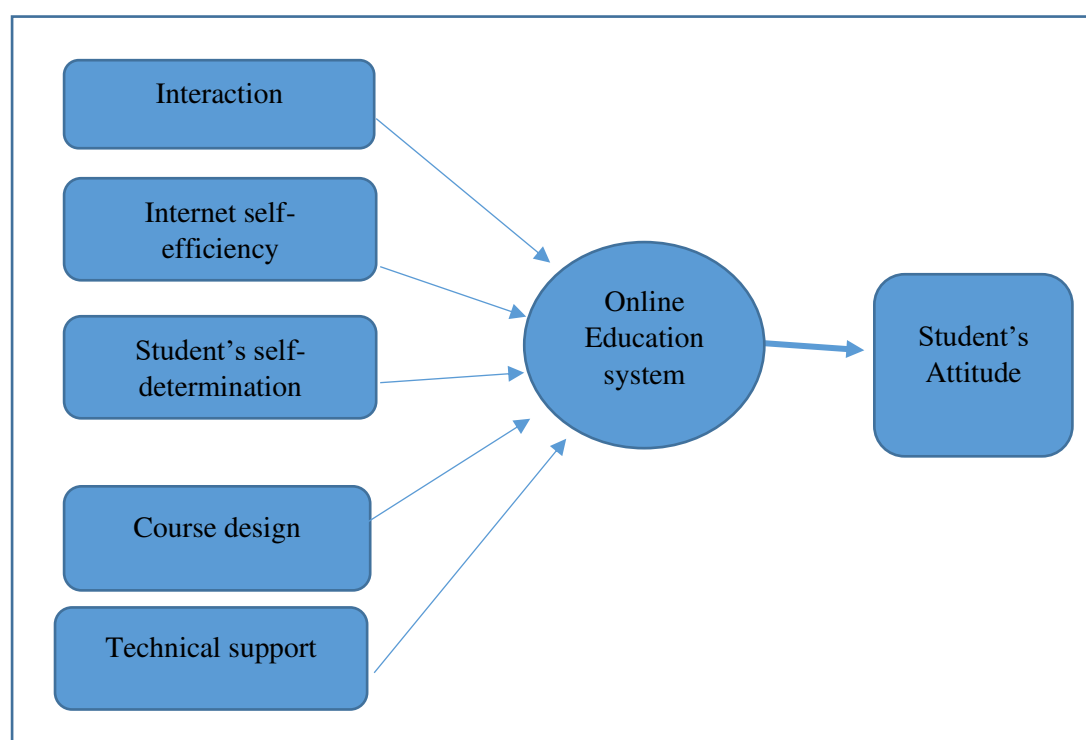


Figure 1. Research model on students' attitude toward the online education system

### Research questions

RQ 1: Does teacher-student interaction have any effect on public and private universities students' attitudes towards the online education system?

RQ 2: Is there any impact of internet self-efficacy on students' attitudes towards the online education system?

RQ 3: Does students' self-determination have any influence on public and private universities students' attitudes towards the online education system?

RQ 4: Does course design have any effect on students' attitudes towards online education?

RQ 5: Are public and private universities students' attitudes influenced by technical support?

## 3. Research methodology

### Research design

In this research, several factors have been identified which influence the students' attitude towards online classes. The research was survey-based. To understand the influential factors descriptive research design was applied first. Then quantitative research was used to analyze these factors' impact on students' attitudes.

### Data collection technique

Both primary and secondary sources were used to collect data. Primary data was collected from public and private university students through a questionnaire. The questionnaire was sent via e-mail, messenger and the data was recorded in the Google form.

The secondary data was collected from journals, articles, several books on the internet.

### Scaling technique

A seven-point scale has been used for this research. The respondents mark the point which matches their judgment. The seven-point includes strongly disagree, disagree, slightly disagree, neutral, slightly agree, agree, and strongly agree.

### ***Questionnaire development***

The questionnaire of this study includes two sections. The first section includes demographic information like age, gender, university name, and education. The second part contains a statement that is related to the variables to find out students' attitudes towards online classes. Reliability test was done to ensure the validity and reliability of the questionnaire.

### ***Sample technique and size***

For this study, a non-probability sample has been applied. Because of the low cost and availability, convenience and judgemental sample technique were used.

The sample size of this study is 240, among which 120 are private university students and 120 are public university students.

### ***Data collection and analysis***

Data are collected from Bangladeshi students to measure their attitude towards the online education system through Google form. Then descriptive statistics analysis, reliability analysis and multiple regression analysis had been measured by SPSS 25.0 version.

## **4. Results and discussions**

### ***Demographic profile of respondents (Public University)***

Table 1 illustrates the demographic profile of the respondents (public university). Here, 77.5% of respondents are male and female respondents are 22.5%. The age of most of the respondents is 21-15 (93.3%) and 6.7% of respondents' age is 26-30. As from 21-15 age people complete their graduation that's why 80.8% of respondents educational qualification is graduate, 3.35% respondents are post graduated.

Table 1. Demographic profile of respondents

<b>Factors</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Gender:</b>		
Female	27	22.5
Male	93	77.5
<b>Age:</b>		
Under 20		
21-25	112	93.3
26-30	8	6.7
30+		
<b>Education:</b>		
Graduation	97	80.8
Post-graduation	4	3.3
Other	19	15.8

Source: Primary data

### ***Factors affecting the students' attitude***

Table 2 describes the factors which influence the students' attitude toward the online education system. Students' self-determination (Mean 5.27; SD 1.28) is the most essential factor of public university students' attitudes. The second influential factor is interaction (Mean 4.87; SD .75). Internet self-



efficacy (Mean 4.59; SD 1.43 is the third significant factor and the fourth is course design (Mean 4.78; SD 1.05). The least essential factor is technical support (Mean 3.86; SD 1.04).

Table 2. Descriptive statistics

Variables	N	Mean	Std. Deviation
Interaction	120	4.8655	.74710
Internet self-efficacy	120	4.5875	1.42997
Students' self-determination	120	5.2688	1.28181
Course design	120	4.7783	1.04994
Technical support	120	3.8583	1.04042

Source: Primary data

### Reliability test

Table 3 presents the reliability of the factors to measure the consistency of the factors. When the value of Cronbach's Alpha is more than .70 that indicates higher internal consistency and less than .35 indicates that there is lower internal consistency and the factor should be excluded. Here the Cronbach's Alpha value of interaction, internet self-efficacy, and students' self-determination are more than .70 as well as the Cronbach's Alpha value of course design and technical support are near the value of .70. So the questionnaire used in this study has good reliability and can be used for further study.

Table 3. Reliability statistics

Variables	Cronbach's Alpha
Interaction	.719
Internet self-efficacy	.724
Student's self-determination	.706
Course design	.679
Technical support	.678

Source: Primary data

### Regression analysis

The relationship between independent and dependent variables is measured by regression analysis. Here, independent variables are interaction, students' self-determination, internet self-efficacy, course design as well as technical support, and the dependent variable is attitude.

In Table 4 correlation coefficient,  $R = .721$  (72.1%) indicates that interaction, students' self-determination, internet self-efficacy, course design as well as technical support have a very strong positive relationship with students' attitude toward the online education system. 54.1% ( $R^2 = .541$ ) variation in students' attitude (dependent variable) occurs due to interaction, students' self-determination, internet self-efficacy, course design and technical support (independent variable). The adjusted  $R^2$  is .508 which defines that these five factors can occur 50.8% variance in the students' attitude toward the online education system. It indicates that there is an impact of these five factors on students' attitudes.

Table 4. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.721	.541	.508	.37945

Source: Primary data

## ANOVA

In table-5 ANOVA is conducted to measure the link of interaction, students' self-determination, internet self-efficacy, course design and technical support with students' attitude. The value of F is 27.258 with a significant value of .000 as well as 5 and 119 degrees of freedom. It ensures the fitness of regression analysis.

Table 5. ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	50.486	5	10.097	27.258	.000
	Residual	158.587	114	1.391		
	Total	209.073	119			

Source: Primary data

## Coefficient

In table-6 and figure -2, it is shown that three out of five factors are significantly related to the student's attitude towards the online education system. The factor interaction has a positive and significant influence on students' attitude toward the online education system ( $\beta_1 = .243$ ; t-value= 2.65 and  $p < .05$ ). So, H1 is accepted. The second factor is internet self-efficacy which also has a positive influence on students' attitude towards the online education system ( $\beta_2 = .373$ ; t-value= 3.658 and  $p < .05$ ). As a result, H2 is also accepted. The next one is students' self-determination. It has significant influence on students' attitude ( $\beta_3 = .113$ ; t-value= 2.048 and  $p < .05$ ) and H3 is accepted. The forth variable is course design which does not influence the students attitude positively ( $\beta_4 = .110$ ; t-value= .978 and  $p > .05$ ). So, H4 is rejected. The last variable is technical support. Technical support does not have positive influence on students' attitude ( $\beta_5 = .313$ ; t-value= 1.013 and  $p < .05$ ). As a result, H5 is rejected.

Table 6. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.	Decision
		B	Std. Error	Beta	t		
1	(Constant)	.952	.762		1.250	.214	
	Interaction	.431	.162	.243	2.653	.009	Accepted
	Internet self-efficacy	.346	.094	.373	3.658	.000	Accepted
	Student's self-determination	.115	.110	.112	2.048	.007	Accepted
	Course design	.139	.142	.110	.978	.330	Rejected
	Technical support	.398	.132	.313	1.013	.003	Rejected

Source: Primary data



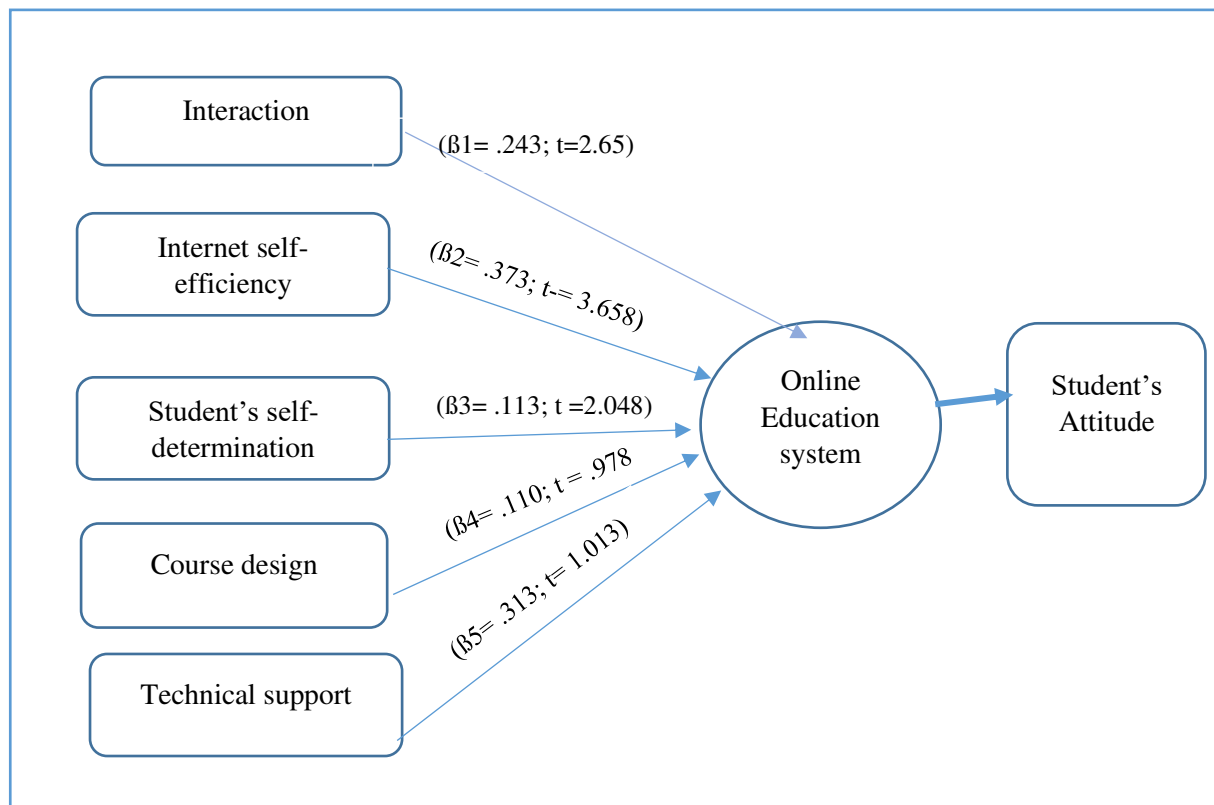


Figure 2. The result of the full model of students' attitude towards online education system (Public University)

#### ***Demographic profile of respondents (Private University)***

Table 7 illustrates the demographic profile of the respondents (private university). Here, 40% of respondents are male and female respondents are 60%. The age of most of the respondents is 21-15 (93.3%) and 6.7% of respondents' age is 26-30. As from 21-15 age people complete their graduation that's why 90% respondents educational qualification is graduate, 10% respondents are post graduated.

Table 7. Demographic profile of respondents

Variables	Frequency	Percentage
<b>Gender:</b>		
Female	72	60
Male	48	40
<b>Age:</b>		
Under 20		
21-25	112	93.3
26-30	8	6.7
30+		

<b>Education:</b>		
Graduation	108	90
Post-graduation	12	10
Other		

Source: Primary data

### ***Factors affecting the students' attitude***

Table 8 describes the factors which influence the students' attitude toward the online education system. Students' self-determination (Mean 5.85; SD .49) is the most essential factor of private university students' attitudes. The second influential factor is interaction (Mean 5.52; SD .47). Course design (Mean 5.42; SD .67) is the third significant factor and the fourth is internet self-efficacy (Mean 5.35; SD .90). The least essential factor is technical support (Mean 4.73; SD .68).

Table 8. Descriptive statistics

<b>Variables</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Interaction	120	5.5286	.46728
Internet self-efficacy	120	5.3500	.89958
Students' self-determination	120	5.8500	.49195
Course design	120	5.4200	.66277
Technical support	120	4.7333	.68272

Source: Primary data

### ***Reliability test***

Table 9 presents the reliability of the factors to measure the consistency of the factors. When the value of Cronbach's Alpha is more than .70 that indicates higher internal consistency and less than .35 indicates that there is lower internal consistency and the factor should be excluded. Here the Cronbach's Alpha value of interaction, students' self-determination, internet self-efficacy, course design, and technical support are more than .70. So the questionnaire used in this study has strong reliability and can be used for further study.

Table 9. Reliability statistics

<b>Variables</b>	<b>Cronbach's Alpha</b>
Interaction	.700
Internet self-efficacy	.728
Students' self-determination	.769
Course design	.705
Technical support	.744

Source: Primary data

### ***Regression analysis***

The relationship between independent and dependent variables is measured by regression analysis. Here, independent variables are interaction, students' self-determination, internet self-efficacy, course design as well as technical support, and the dependent variable is attitude.

In Table 10, the correlation coefficient,  $R = .862$  (86.2%) indicates that interaction, students' self-determination, internet self-efficacy, course design as well as technical support have a very strong positive relationship with students' attitude toward the online education system.

74.4% (R-square=.744) variation in students' attitude (dependent variable) occurs due to interaction, students' self-determination, internet self-efficacy, course design, and technical support (independent variable). The adjusted R-square is .742 which defines that these five factors can occur 74.2% variance in the students' attitude toward the online education system. It indicates that there is an impact of these five factors on students' attitudes.

Table 10. Model summary

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.862	.744	.742	.115

Source: Primary data

### ANOVA

In Table 11 ANOVA is conducted to measure the link of interaction, students' self-determination, internet self-efficacy, course design and technical support with students, attitude. The value of F is 78.058 with a significant value of .000 as well as 5 and 99 degrees of freedom. It ensures the fitness of regression analysis.

Table 11. ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	25.558	5	5.112	78.058	.000
	Residual	1.517	94	.013		
	Total	27.075	99			

Source: Primary data

### Coefficient

In table-12 and figure-3, it is shown that four out of five factors are significantly related to the student's attitude towards the online education system. The factor interaction have a positive and significant influence on students' attitude toward online education system ( $\beta_1 = .119$ ; t-value= 2.6 and  $p < .05$ ). So, H1 is accepted. The second factor is internet self-efficacy which also has a positive influence on students' attitude towards the online education system ( $\beta_2 = .332$ ; t-value= 4.05 and  $p < .05$ ). As a result, H2 is also accepted. The next one is students' self-determination. It has a significant influence on students' attitude ( $\beta_3 = .170$ ; t-value= 1.724 and  $p < .05$ ) and H3 is accepted. The forth variable is course design which influence the students attitude positively ( $\beta_4 = .393$ ; t-value= 3.541 and  $p < .05$ ). So, H4 is accepted. The last variable is technical support. Technical support does not influence students' attitude positively ( $\beta_5 = .250$ ; t-value= 1.792 and  $p > .05$ ). As a result, H5 is rejected.

Table 12. Table-coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Decision
		B	Std. Error	Beta			
1	(Constant)	1.889	.180		10.466	.000	
	Interaction	.019	.032	.119	2.599	.037	Accepted
	Internet self-efficacy	.441	.018	.332	4.053	.000	Accepted
	Students' self-determination	.068	.039	.170	1.724	.047	Accepted
	Course design	.283	.030	.393	3.541	.000	Accepted
	Technical support	.035	.019	.250	1.792	.076	Rejected

Source: Primary data

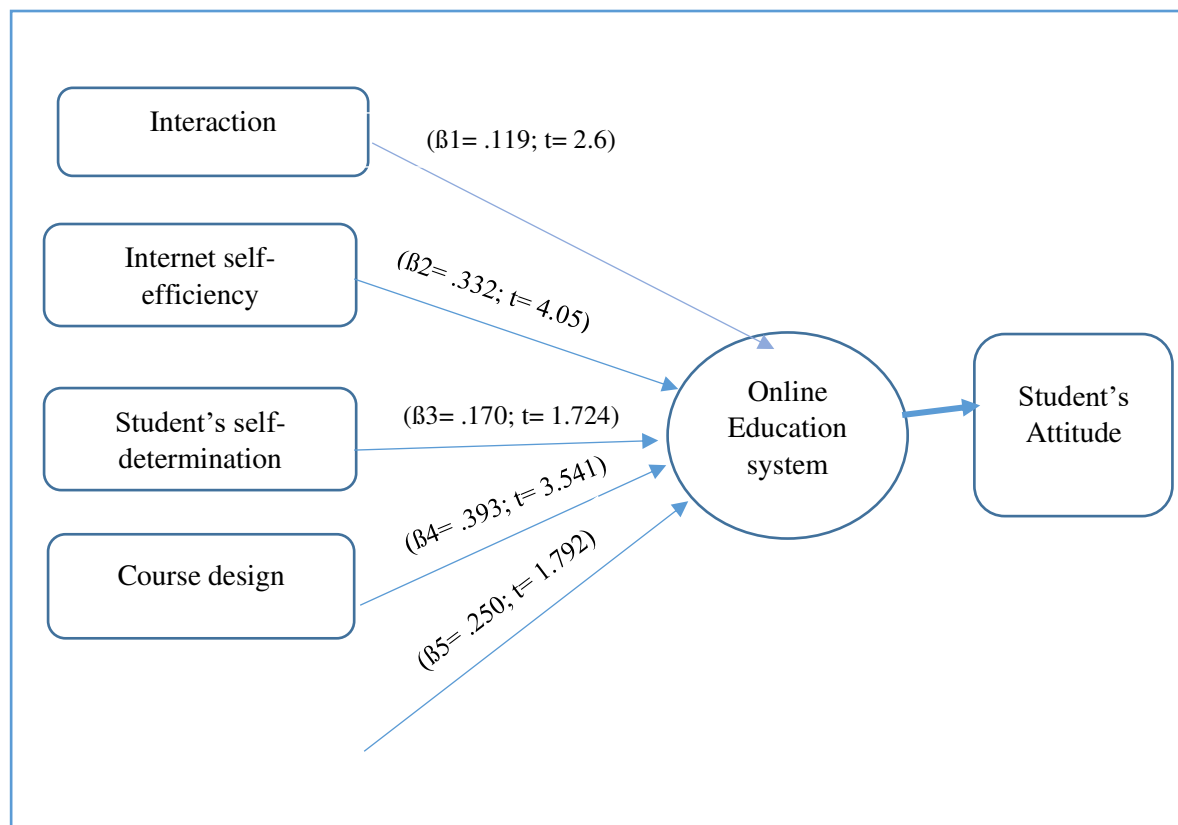


Figure 3. The result of the full model of students' attitude towards online education system (Private University)

### Discussion of findings

The research findings clarify the research questions which have been developed. From above, we notice that reliability analysis shows both public and private universities have good internal consistency which proves that the questionnaire developed for this study is reliable.

The correlation coefficient of public university is .721 (72.1%) and private university is .862 (86.2%) indicating that interaction, internet self-efficacy, student's self-determination, course design, and technical support have a good relationship with students' attitudes towards online education system. For public universities, the value of F is 27.258 with a significant value of .000 as well as 5 and 119 degrees of freedom. For private universities, the value of F is 78.058 with a significant value of .000 as well as 5 and 99 degrees of freedom. It ensures the fitness of regression analysis.

Finally, the coefficient shows that interaction, internet self-efficacy, and students' self-determination are significantly related to public university students' attitudes. Course design and technical support do not have any impact on public university students' attitudes towards the online education system. On the other hand, private university students' attitude is positively influenced by interaction, internet self-efficacy, students' self-determination, and course design. Technical support does not have a positive relation with private university students' attitudes towards the online education system.

### Comparison between public university and private university students' attitude toward online education system

There is a visible difference between the public university and private university students' attitudes as well as there are also some similarities between the two.

The similarity between the public and private university students' attitudes is that the students of both institutions think that students' self-determination is the most influential factor of the online education system. That means their self-motivation and desire to attend class have the most important impact on their attitude towards the online education system. Technical support has been chosen as the least influential factor by both public and private university students. So, it has no or smallest impact on the students' attitude towards the online education system.

The first difference between the public university and private university students' attitudes is that they showed a different result of reliability. In public universities, three out of five variables showed higher internal consistency with the dependent variable. Whereas, the analysis on private university students showed that all the five variables have strong internal consistency with the dependent variable.

The second dissimilarity is that the correlation coefficient of the public university is .721% whereas private university is 86.2%. This means that the relationship of private university students' attitude with interaction, internet self-efficacy, students' self-determination, course design, and technical support is stronger than public university students' attitude.

The value of F statistics of the public university is 27.258 with significant value .000 as well as 5 and 119 degree of freedom private university is 78.058 with significant value .000 as well as 5 and 99 degrees of freedom. It shows that the private university has more fitness for regression analysis than the public university.

Finally, it has been found that interaction, internet self-efficacy, and students' self-determination are accepted which have an impact on public university students and course design along with technical support have been rejected. On the contrary, all the variables expect technical support has been accepted as the influential variables on the private university students' attitude toward the online education system.

## **5. Conclusion**

The online education system has made it possible for students to continue their studies during the pandemic. Though online education is a new concept for the students and teachers of Bangladesh, most of them have adapted to this. To make the online education system more acceptable, the teacher-students interaction should get more attention, students should have the determination to attend and learn in the online class, as well as the course curriculum, should be designed suitably so that the teachers can deliver the lesson easily online. Although the students of the public and private universities have shown different attitudes towards the online education system, the online platform has indeed saved them from session jolt and assisted them to complete the semester timely.

## **Implications**

Both the researchers and policymakers of education can be benefited from this paper. The researchers can get the guideline about the influencing factors of students' attitude towards the online education system. Furthermore, the policymakers can use this paper to get an insight into the students' attitudes. As the online education system is recently introduced in our country, the policymakers or the university authority need to get feedback from students as well as take appropriate steps to make the online class suitable for the pupils.

## **Limitations and study forward**

The main limitation of this study is the sample size. Data from the students of all the universities of Bangladesh could not be collected. So it does not represent the overall scenario of Bangladesh. Besides the findings of this paper can change with time and situation. Further study can be conducted by increasing the sample size. Future researchers can include the students of school and college to measure their attitude toward online education. There are some factors left that can also be included for further study.

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