

RESEARCH PAPER

Social-economic and Technological Perception and Impact of Students on ICT System in Education: A Study on Selected Institutions of Uttar Dinajpur District of West Bengal, India

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ABSTRACT

Learning is essential for every student, and utilizing electronic devices and various technologies introduces a new dimension to their educational experience. Students learn through e-learning in addition to traditional face-to-face on-campus classes. They encounter various benefits and challenges when using digital technology for learning. The teaching-learning process becomes more engaging with the incorporation of technology. The paper aims to analyze students' perceptions of ICT System in Education in terms of technology, social factors, and economic conditions, considering their diverse backgrounds and financial situations. This paper focuses on ICT System in Education, particularly its impact and perception among students in Uttar Dinajpur District, West Bengal, India. Primary sources were utilized to gather data for analysis. Convenience sampling technique was employed to select the institutions for data collection. Data was collected from various categories of institutions in Uttar Dinajpur District, West Bengal, India. Post-graduate and undergraduate students from Raiganj University, Raiganj B.Ed College affiliated with Baba Saheb Ambedkar Education University, Raiganj Surendranath Mahavidyalaya affiliated with University of Gour Banga, and Raiganj Government Medical College and Hospital affiliated with The West Bengal University of Health Sciences were selected for data collection. The paper emphasizes the technological, social, and economic perceptions of students regarding ICT System in Education in Uttar Dinajpur District, West Bengal, India.

HIGHLIGHTS

- ❶ E-Learning is now very popular among the students. It provides many benefits to the learners.
- ❷ It is necessary to establish a technology enabled ICT system to implement the e-learning in education system.
- ❸ The study has been conducted on some selected institutions in Uttar Dinajpur District of West Bengal, India.
- ❹ A survey has been conducted to collect the primary data for the analysis. The Convenience Sampling Technique has been followed for the survey.
- ❺ The purpose of the paper is to find the perception and impact of students on ICT System in Education.
- ❻ The main focus of the paper is to know the Technological, Social and Economic perception and impact of students on e-Learning and ICT System in Education.

Keywords: ICT System in Education, e-Learning, Perception study, Online Education, technological support, Social and Economic perception

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Digital education is a framework which includes online education, e-learning, m-learning, blended learning, ICT System in Education and so on. It is the application of different basic and emerging technologies into the field of Education. Digital education is more than a concept that could be defined as a field of practice. It incorporated into Information and Communication Technology (ICT) in education, Information Technology (IT) in education, education technology and other practices for better education management. Digital Education may be online or may be without the use of internet (Chatterjee, Bandyopadhyay *et al.* 2023). Digital Education could be implemented with traditional face to face mode of study (Paul, Chatterjee *et al.* 2022). Digital Education is a field of study (Chatterjee, 2023). Different educational institutions have offered different kind of academic program on Digital Education. Digital Education now expanded its size and the scope (Paul & Aithal, 2018; Paul, Das *et al.* 2022).

Technology based education is one of the new dimension for the education system. It has opened a new window for the traditional classroom based face to face mode of education (Chatterjee, Chowdhury *et al.* 2023). Electronic based online mode learning helps to satisfy the thirst of knowledge to the learner. In e-Learning the content can be accessed with or without the use of internet. In e-learning, learners get the opportunity to learn as much as they want about the desired subject. There is no such limitation in e-learning to know only the topic covered in the syllabus or curriculum. It is a Self-paced learning. It provides the flexibility to the student to learn anything at any time and from anywhere. E-learning has many advantages over the traditional education system. E-Learning got popularity during and after the Covid-19 period (Khan *et al.* 2020; Naeem *et al.* 2022). E-Learning provides the facility to a huge number of learners at a same time (Saha, 2021; Sakkir, 2021). Due to the advancement of technology and the easy and cheap cost of accessing the internet, e-Learning has become more popular among the learners (Sen & Mallick, 2021). It gives the global exposure to the learners. Learning using mobile phone is considered as m-learning. When a learner accesses the e-Learning contents using the mobile phone then it could be considered as m-learning. It gives the portability to

the learners to learn anything at any time and from anywhere. M-Learning helps the learner to learn anything even in dynamic condition or in moving condition.

Some institutions have shown interest in e-Learning parallel to the face to face mode on campus learning (Tagoe, 2012). The institutions try to adopt different kind of technology (Kumar, 2015). The institutions encourage e-Learning to the students parallel with the face to face mode on campus base learning. The institutions provide various kind of technology based facility to the students. Information Technology (IT) and Information and Communication Technology (ICT) make it possible to give the global exposure to the students (Das, Chatterjee and Majumdar, 2023). The institutions have tried to adopt the technology based gadgets like Smart Class Room, Smart Black Board, Projector, Television, free wifi to the students and so on (Paul, Kayyali *et al.* 2023; Sayed *et al.* 2017). Some institutions provide the facility to the students to submit their assignment and give the examination through internet based online mode (Loh *et al.* 2016). The institution offers different kind of online based facility to the students. Some institutions offer various online courses to the students. Apart from that the institutions may provide different technology base facilities to the students, like - Learning Management Systems (LMS), Online study material, Virtual Classrooms, e-Learning, Mobile Learning, Self-paced Learning, Blended Learning and so on. The institutions try to incorporate the Digital Education to the existing infrastructure. The implementation of ICT systems in education has significantly streamlined online learning for students. It provides learners with extensive access to e-learning resources, making education more accessible and flexible. Additionally, ICT in education helps to develop a robust and advanced educational system.

OBJECTIVE OF THE STUDY

The paper entitled 'Social-Economic and Technological perception and impact of students on ICT System in Education: A Study on selected institutions of Uttar Dinajpur District of West Bengal, India' is an empirical work to find current status on ICT System in Education specially on a targeted groups or student circle. The core aim and objective of this work is include as follows—

- ♦ To learn about the e-Learning.
- ♦ To know about the Technological, Social and Economic perception and impact of students on e-Learning and ICT System in Education.
- ♦ To know about the social, economic status of the concerned respondents among the selected educational institutions.
- ♦ To learn about the technological perception of the respondents among the selected educational institutions.

The targeted place is a remote area which is approximate 400 KM from the capital Kolkata, West Bengal, India. So the main aim is to find perspective on ICT System in Education of the students in this area.

METHODOLOGY APPLIED

The work entitled 'Social-Economic and Technological perception and impact of students on ICT System in Education: A Study on selected institutions of Uttar Dinajpur District of West Bengal, India' is a primary data analysis based paper and it is interdisciplinary in nature. This study is focused on the students' perception on ICT System in Education in the context of Technological support provided to the students from the university. Social and Economic perception and impact of students on e-Learning and ICT System in Education have also been considered. Following methods are applied for analyzing the study.

Type of Data Collection

This study is based on primary data collected from the students' of selected institutions of Uttar Dinajpur District, West Bengal, India. The main focus of the survey is to find the Technological support and perception of students on ICT System in Education. A structured questionnaire is prepared on a five-point Likert scale and circulated through google forms to the students of the selected institutions of Uttar Dinajpur District, West Bengal, India to collect the perception of them (Algahtani *et al.* 2020). For this study, the views of the respondents who are regular students of the institution have been considered. To collect and analyze the data the Convenience sampling technique has been chosen. Post Graduate and Under Graduate students from Raiganj University, Raiganj B.Ed College, Raiganj

Surendranath Mahavidyalaya, Raiganj Government Medical College and Hospital have been selected to collect the data.

Sample Size

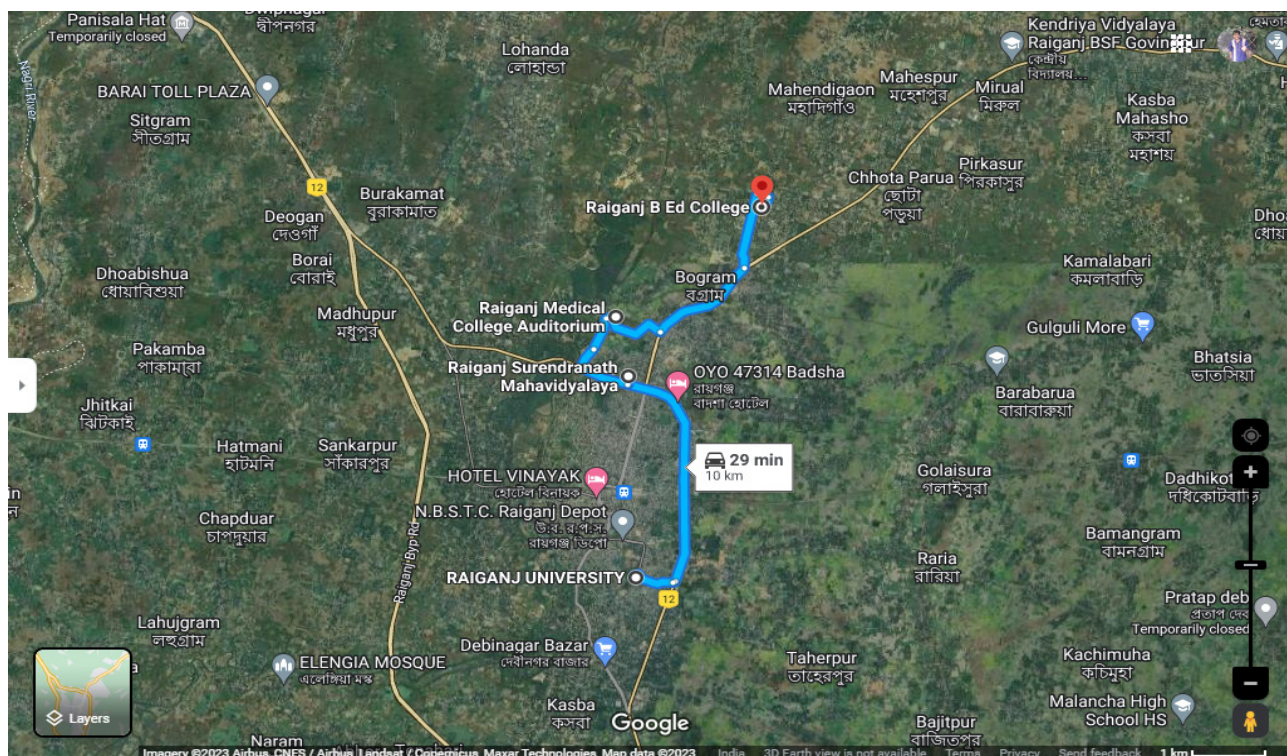
More than 635 respondents have given their opinion regarding the perceptions on ICT System in Education. Out of which, 321 respondents have been chosen by random sampling technique. These 321 responses have been considered for further analysis in this study.

Statistical Tools Used

Various statistical tools such as descriptive statistics, factor analysis and different graphs have been used to make inferences about the relationships among the variables. Descriptive statistics have been used to identify the most important factors influencing students' perspective. SPSS has been used for statistical analysis, and Microsoft Excel has been used for data tabulation and graphical representation.

BACKGROUND

The area selected for this study is Raiganj, West Bengal, India, Pin Code- 733134 and its adjoining place. The study area is approximate 400 K.M from Kolkata, West Bengal, India. The Uttar Dinajpur District is lies between Darjeeling District to the north, Malda and Dakshin Dinajpur District to the south, Katihar District, Bihar, India to the west and Dinajpur District of Bangladesh to the east. Raiganj University [Latitude- 25.606424, Longitude 88.130602] (*A State Government University offers Bachelors, Masters, Doctoral programs in Morning, Day and Evening batches to the needy students of the locality and other aspiring learners*), Raiganj B.Ed College [25.657453, 88.147853] (*An Educational Training College offers Bachelor of Education degree (B.Ed) under Baba Saheb Ambedkar Education University Erstwhile The West Bengal University of Teachers' Training, Education Planning and Administration*), Raiganj Surendranath Mahavidyalaya [25.634469, 88.129551] (*It is an affiliated college under the University of Gourbanga, Malda, West Bengal*), Raiganj Government Medical College and Hospital [25.642721, 88.127236] (*This is an affiliated state government medical college under the West Bengal University of Health Sciences, Kolkata and for the time being offers UG Programs;*



Source: Google Map.

Fig. 1: Selected institution for the study

mainly Medical Degree- MBBS) have been selected for data collection to find out the technological, social and economic perception and impact of students on e-learning and ICT System in Education in Uttar Dinajpur District of West Bengal, India (Paul, (2023).

Three hundred and twenty one (321) responses has selected for analysis including 159 females, 161 males and 1 transgender. Post Graduate and Under Graduate Students of Raiganj University, West Bengal, India has considered as separate category to get the perspective more accurately. The details of respondents along with their gender distribution are depicted in Table 1.

The students of the selected institutions come from different geographic locations. Some of them are

living in urban areas while others are from rural areas. 62.62% respondents are living in rural area while 37.38% respondents are from urban area (Rakshit, 2023). Fig. 2 shows the distribution of respondents living in different areas.

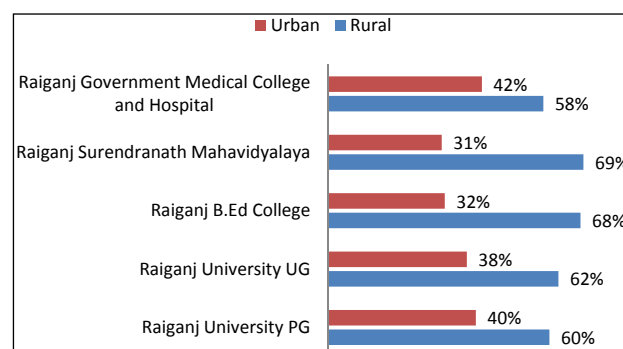


Fig. 2: Percentage of respondents' area of living

Table 1: details of respondents along with their gender distribution

Sl. No.	Name of the Institute	Response	Female	Male	Transgender
1	Raiganj University PG	85	36	48	01
2	Raiganj University UG	173	81	92	00
3	Raiganj B.Ed College	38	29	09	00
4	Raiganj Surendranath Mahavidyalaya	13	09	04	00
5	Raiganj Government Medical College and Hospital	12	04	08	00
Total		321	159	161	01

The respondents belong to different age groups. 66% respondents of Raiganj University Post Graduate course are 21 years to 23 years age group, 61% respondents of Raiganj University under Graduate course are 17 years to 20 years age group, 58% respondents of Raiganj B.Ed College are 24 years to 26 years age group, 54% respondents of Raiganj Surendranath Mahavidyalaya are 17 years to 20 years age group and 67% respondents of Raiganj Government Medical College and Hospital are 21 years to 23 years age group. Fig. 3 shows that majority of the respondents are from 21 years to 23 years age group. Table 2 shows the details of respondents' age group wise in percentage.

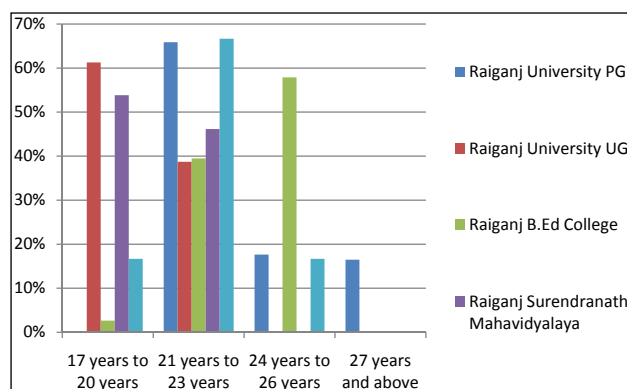


Fig. 3: Age Group of the respondents

Table 2: age group wise details of respondents

Name of the Institute	17 years to 20 years	21 years to 23 years	24 years to 26 years	27 years and above
Raiganj University PG	00%	66%	18%	16%
Raiganj University UG	61%	39%	00%	00%
Raiganj B.Ed College	3%	39%	58%	00%
Raiganj Surendranath Mahavidyalaya	54%	46%	00%	00%
Raiganj Government Medical College and Hospital	17%	67%	17%	00%
Total	36%	47%	12%	04%

Table 3: Guardian's Occupation

Sl. No	Name of the Institute	Agriculture	Business	Daily Labour	Lawyer	Service	Retired & Pension Holder	Unemployed	Others
1	Raiganj University PG	41%	21%	08%	01%	14%	04%	01%	09%
2	Raiganj University UG	37%	37%	07%	00%	08%	01%	03%	07%
3	Raiganj B.Ed College	45%	26%	11%	00%	05%	11%	00%	03%
4	Raiganj Surendranath Mahavidyalaya	46%	31%	00%	00%	15%	00%	00%	08%
5	Raiganj Government Medical College and Hospital	08%	17%	17%	00%	33%	00%	08%	17%
	Total	38%	31%	08%	00%	11%	03%	02%	07%

RESULTS AND DISCUSSION

The collected data has been analyzed to check and evaluate the technological perception on ICT System in Education of the Students of the selected institutions. It also tried to find the Social and Economic perception and impact of students on e-Learning and ICT System in Education (Das, Chatterjee, Bandyopadhyay *et al.* 2023; Vitoria *et al.* 2018; Yaghoubi, J., Malek *et al.* 2008).

Social and Technological Aspects and Perception

The students of the selected institutions come from different social status and different backgrounds. Their parents are associated with different professions. Table 3 shows the Guardian's Occupation of the students of the selected institutions. Overall 38% of the students Guardians' Occupation are agriculture and 31% of the students Guardians' Occupation are Business.

Presently social networking sites are playing a vital role in the student's life. Thus, to consider social aspect of any student, it is necessary to know that how much time the students' have invested in Social Networking sites. By analyzing the result it

shows that most of the students have use the social Networking sites for 1 hour to 2 hours of time. Table 4 shows that how much time does the students employ on social networking sites daily.

There are different cloud based online Meeting applications. The students have used various cloud based online Meeting platforms for their study. Table 5 shows the platform they have usually used for online learning. The result shows that most of the students have preferred the Google Meet for the online learning.

The mode of interaction is an important aspect of the students. The students have preferred choice on mode of study. The students are likely to be familiar with different mode of studies like- Online Internet based Class, Self-study through Internet, Face to face mode Class and Blended mode Class (Mixture of Online & Face to Face mode of Class). Table 6 shows mode of class preferred by most of

the students. It is clear from the table 6 that most of the students are like Face to face mode Class most.

Economical and Financial Aspects and Perception

Economic and financial condition of the students is important aspect on the perception on e-Learning and ICT System in Education (Elango *et al.* 2008; Eldeeb, 2014; Ituma, 2011). The students come from different family. Therefore it is quite natural that the family income of the students should vary. Table 7 shows the approximate family income in a month of a student. The result of the response shows that most of the students have the family income of less than 10,000 Rupees in a month.

The students have participated in different events like- Conference, Seminar, Symposium or workshop and so on. Some of the events are free of cost while others take some amount for the registration

Table 4: How much time do you employ on social networking sites daily?

Sl. No.	Name of the Institute	Less than one hour	1 to 2 hours	2 to 3 hours	More than 3 hours use
1	Raiganj University PG	27%	31%	19%	24%
2	Raiganj University UG	26%	36%	17%	21%
3	Raiganj B.Ed College	18%	42%	16%	24%
4	Raiganj Surendranath Mahavidyalaya	08%	31%	23%	38%
5	Raiganj Government Medical College and Hospital	25%	50%	8%	17%
Total		25%	36%	17%	22%

Table 5: Platform usually used for online learning

Sl. No.	Name of the Institute	Google Meet	Zoom Meet	Webex Meet	Others
1	Raiganj University PG	99%	00%	00%	01%
2	Raiganj University UG	95%	04%	00%	01%
3	Raiganj B.Ed College	100%	00%	00%	00%
4	Raiganj Surendranath Mahavidyalaya	92%	08%	00%	00%
5	Raiganj Government Medical College and Hospital	67%	08%	00%	25%
Total		95%	03%	00%	02%

Table 6: Mode of class preferred by most of the students

Sl. No	Name of the Institute	Online Internet based Class	Self-study through Internet	Face to face mode Class	Blended mode Class (Mixture of Online & Face to Face)
1	Raiganj University PG	08%	02%	53%	36%
2	Raiganj University UG	05%	07%	67%	21%
3	Raiganj B.Ed College	05%	05%	45%	45%
4	Raiganj Surendranath Mahavidyalaya	08%	08%	62%	23%
5	Raiganj Government Medical College and Hospital	08%	08%	33%	50%
Total		06%	06%	59%	29%

Table 7: the approximate family income in a month

Sl. No.	Name of the Institute	Less than 10,000	10,000 to 30,000	30,000 to 50,000	50,000 or more
1	Raiganj University PG	53%	25%	09%	13%
2	Raiganj University UG	67%	23%	06%	04%
3	Raiganj B.Ed College	58%	32%	03%	08%
4	Raiganj Surendranath Mahavidyalaya	77%	15%	08%	00%
5	Raiganj Government Medical College and Hospital	25%	42%	08%	25%
Total		61%	25%	07%	07%

Table 8: Mode of payment use to pay for Conference, Seminar, Symposium or workshop fees

Sl. No.	Name of the Institute	Debit Card / Credit Card	Net Banking	UPI based Payment	I only participate if it is free
1	Raiganj University PG	14%	13%	21%	52%
2	Raiganj University UG	07%	17%	25%	50%
3	Raiganj B.Ed College	08%	16%	16%	61%
4	Raiganj Surendranath Mahavidyalaya	00%	08%	38%	54%
5	Raiganj Government Medical College and Hospital	00%	08%	75%	17%
Total		08%	15%	26%	51%

Table 9: the number of paid conference or online program or course has attended by the students in online mode in last year

Sl. No.	Name of the Institute	Zero	One	Two	Three or more than Three
1	Raiganj University PG	64%	19%	05%	13%
2	Raiganj University UG	75%	10%	08%	06%
3	Raiganj B.Ed College	68%	13%	08%	11%
4	Raiganj Surendranath Mahavidyalaya	77%	15%	00%	08%
5	Raiganj Government Medical College and Hospital	67%	17%	08%	08%
Total		71%	13%	07%	09%

purpose. Table 8 shows the Mode of payment use to pay for Conference, Seminar, Symposium or workshop fees. The result shows that the students are like the most to participate in the events if it is free of cost.

It is also an important aspect to know that the number of paid conference or online program or course has attended by the students in online mode in last year (Baron, 2020). Table 9 shows the number of paid conference or online program or course has attended by the students in online mode in last year. The result shows that most of the students do not participated in any paid conference or online program or course.

Fees for registration and for the contingency may take by the event organizer. For students'

perspective it is addition financial burden for them. 59% of the overall students preferred that the events should be free for the students. Table 10 shows the choice of the students regarding event registration fees.

E-Learning is one of the important part of the modern learning purpose (Buzzetto-More, 2008). Some e-Learning Platforms are chargeable while some are free of cost. Table 11 shows opinion of the students regarding the amount taken by the E-Learning Platforms for enriched content. The result shows that most of the students have preferred E-Learning Platforms should be free to use without any advertisements.

Table 10: The choice of the students regarding event registration fees

Sl. No.	Name of the Institute	Should take Registration fees and some contingency fees	Should take some Registration fees	Should be free	Should charge for better
1	Raiganj University PG	08%	27%	52%	13%
2	Raiganj University UG	05%	25%	63%	07%
3	Raiganj B.Ed College	11%	21%	61%	08%
4	Raiganj Surendranath Mahavidyalaya	00%	54%	46%	00%
5	Raiganj Government Medical College and Hospital	25%	17%	50%	08%
Total		07%	26%	59%	08%

Table 11: Shows opinion of the students regarding the amount taken by the E-Learning Platforms for enriched content.

Sl. No.	Name of the Institute	E-Learning Platforms may take little charges	E-Learning Platforms should be free to use without any advertisements	E-Learning Platforms should be free to use with advertisements	For good content e-Learning platforms should be chargeable
1	Raiganj University PG	19%	34%	35%	12%
2	Raiganj University UG	25%	37%	25%	13%
3	Raiganj B.Ed College	29%	26%	32%	13%
4	Raiganj Surendranath Mahavidyalaya	38%	31%	31%	00%
5	Raiganj Government Medical College and Hospital	25%	25%	17%	33%
Total		25%	34%	28%	13%

Table 12: Generation of mobile internet technology used by the students

Sl. No.	Name of the Institute	3G	4G	5G	No Internet facility
1	Raiganj University PG	00%	89%	09%	01%
2	Raiganj University UG	02%	92%	06%	00%
3	Raiganj B.Ed College	03%	89%	08%	00%
4	Raiganj Surendranath Mahavidyalaya	00%	85%	15%	00%
5	Raiganj Government Medical College and Hospital	00%	58%	42%	00%
Total		01%	89%	09%	00%

Technological Support

Technological awareness is very important for the students. It is necessary to have an internet connection to learn anything in e-Learning mode. Speed is also matter for the data connectivity. The students use different generation of internet technology. It is necessary to have a ICT system to access the online based contents (Thakur, 2014). Table 12 shows the generation of mobile internet technology used by the students.

Internet connectivity is a necessary requirement for the students. Some institutes offer the internet to the students. The speed of the internet and the process of connectivity to the internet matters for the students. Table 13 shows the satisfaction level of the student with the speed of the Internet in the institution's campus. 36% of the students informed that they never accessed internet in campus.

At the time of e-Learning students are preferred to use various types of electronic device. Table 14

Table 13: Satisfaction level of the student with the speed of the Internet in the institutions

Sl. No.	Name of the Institute	I am quite happy with the speed of internet	I never accessed	I used institution's internet but the speed is not satisfactory	Internet connection is not available for student access
1	Raiganj University PG	16%	35%	19%	29%
2	Raiganj University UG	17%	38%	18%	26%
3	Raiganj B.Ed College	16%	32%	26%	26%
4	Raiganj Surendranath Mahavidyalaya	54%	31%	08%	08%
5	Raiganj Government Medical College and Hospital	25%	17%	58%	00%
Total		19%	36%	21%	25%

Table 14: Shows the choice of the students on electronic device use while taking online classes

Sl. No.	Name of the Institute	Mobile	Laptop	Desktop	All of the above
1	Raiganj University PG	85%	05%	00%	11%
2	Raiganj University UG	91%	05%	00%	04%
3	Raiganj B.Ed College	03%	92%	00%	05%
4	Raiganj Surendranath Mahavidyalaya	85%	00%	08%	08%
5	Raiganj Government Medical College and Hospital	83%	17%	00%	00%
Total		79%	15%	00%	06%

Table 15: Problems face by the student during online classes

Sl. No.	Name of the Institute	Audio problem	Network problem	Size of the screen	No problem
1	Raiganj University PG	02%	79%	01%	18%
2	Raiganj University UG	06%	78%	01%	15%
3	Raiganj B.Ed College	11%	79%	03%	08%
4	Raiganj Surendranath Mahavidyalaya	08%	69%	15%	08%
5	Raiganj Government Medical College and Hospital	17%	42%	17%	25%
Total		06%	77%	02%	15%

shows the choice of the students of electronic device use while taking online classes. After analyzing the result it could be seen that students are preferred to use Mobile phone at the time of participating in online class.

Another important aspect is to find the difficulty faced by the students at the time of attending the e-Learning and online class (Sen & Mallick, 2021). Table 15 shows the problems face by the student during online classes. The result shows that 77% of overall students have faced Network problem at the time of Online class.

Technological Impact and Perception

The main aim of this study is to find the Technological, Social and Economic perception and impact of students on e-Learning and ICT System in Education in selected institutions of Uttar Dinajpur District, West Bengal, India (Paul, 2022). To collect and analyze the perception of the students a structured questionnaire is prepared on a five-point Likert scale and circulated through google forms to the students of the selected institutions of Uttar Dinajpur District, West Bengal, India to collect the perception of them. Value 1 is considered

as Strongly Disagree, Value 2 is considered as Disagree, Value 3 is considered as Neutral, Value 4 is considered as Agree and Value 5 is considered as Strongly Agree. Table 16 shows the reliability of the data use in analysis.

Table 16: Reliability Statistics

Reliability Statistics	
Cronbach's Alpha	N of Items
.794	7

Table 17 depicts institution wise mean and standard deviation (SD) on such queries and their results. Fig. 4 shows the histogram of the total responses. The statement for the perception study is – “I believe Education through Online mode should continue now parallel with face to face mode of study”.

Table 17: Institution wise mean and standard deviation (SD)

Name of the Institute	Mean	SD
Raiganj University PG	3.55294	1.0856848
Raiganj University UG	3.3237	1.10987332
Raiganj B.Ed College	3.94737	0.92845028
Raiganj Surendranath Mahavidyalaya	3.61538	0.86971849
Raiganj Government Medical College and Hospital	4.08333	0.79296146
Total	3.49844	1.08433335

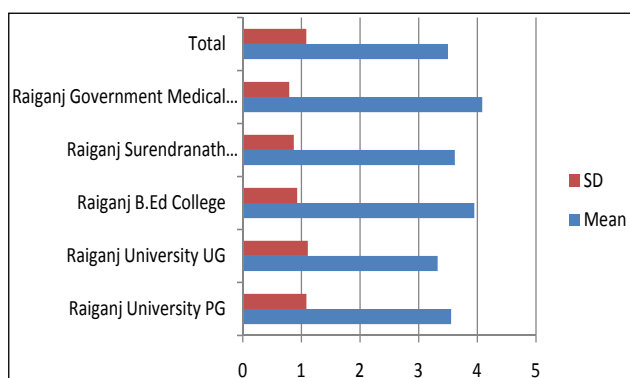


Fig. 4: Mean and Standard Deviation of the responses on- “I believe Education through Online mode should continue now parallel with face to face mode of study”

Table 18 depicts institution wise mean and standard deviation (SD) on such queries and their results. Fig. 5 shows the histogram of the total responses. The statement for the perception study is – “I believe Education through Online mode increase the quality of learning”.

Table 18: Institution wise mean and standard deviation (SD)

Name of the Institute	Mean	SD
Raiganj University PG	2.8	1.08890509
Raiganj University UG	2.75145	1.03517255
Raiganj B.Ed College	3.05263	1.08919431
Raiganj Surendranath Mahavidyalaya	2.84615	0.68873723
Raiganj Government Medical College and Hospital	3.75	0.8660254
Total	2.84112	1.0531162

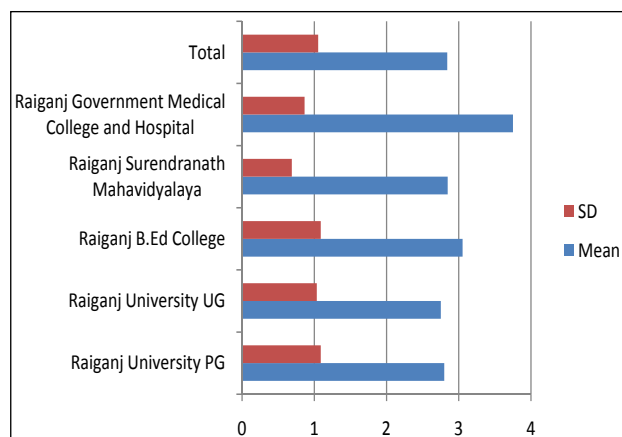


Fig. 5: Mean and Standard Deviation of the responses on - “I believe Education through Online mode increase the quality of learning”

Table 19 depicts institution wise mean and standard deviation (SD) on such queries and their results. Fig. 5 shows the histogram of the total responses. The statement for the perception study is – “Study through e-Learning mode provides the flexibility to the study at anytime and anywhere”

Table 19: Institution wise mean and standard deviation (SD)

Name of the Institute	Mean	SD
Raiganj University PG	3.85882	0.92778463
Raiganj University UG	3.49133	1.00358947
Raiganj B.Ed College	4.05263	0.69544341
Raiganj Surendranath Mahavidyalaya	3.84615	0.80064077
Raiganj Government Medical College and Hospital	4.33333	0.65133895
Total	3.70093	0.96061458

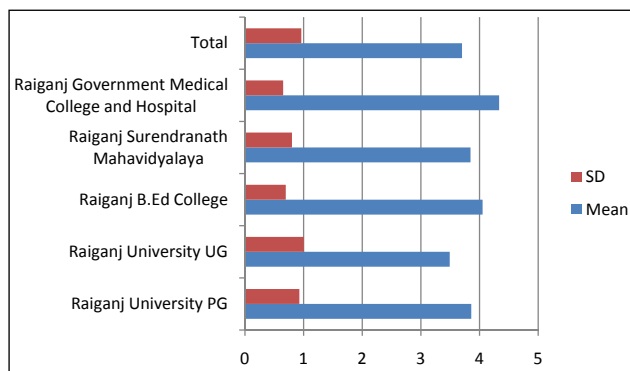


Fig. 6: Mean and Standard Deviation of the responses on - "Study through e-Learning mode provides the flexibility to the study at anytime and anywhere"

Table 20 depicts institution wise mean and standard deviation (SD) on such queries and their results. Fig. 7 shows the histogram of the total responses. The statement for the perception study is - "If I missed any class I can view the lectures in recorded session".

Table 20: Institution wise mean and standard deviation (SD)

Name of the Institute	Mean	SD
Raiganj University PG	3.30588	1.1022005
Raiganj University UG	3.23699	1.07097879
Raiganj B.Ed College	3.89474	0.8314583
Raiganj Surendranath Mahavidyalaya	3.38462	1.12089708
Raiganj Government Medical College and Hospital	4.25	0.62158156
Total	3.37695	1.0714905

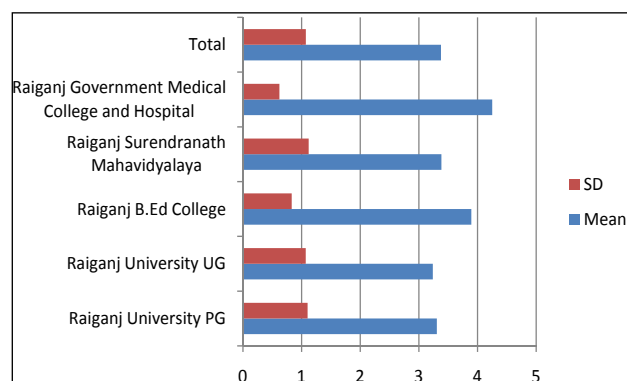


Fig. 7: Mean and Standard Deviation of the responses on - "If I missed any class I can view the lectures in recorded session"

Table 21 depicts institution wise mean and standard deviation (SD) on such queries and their results. Fig. 8 shows the histogram of the total responses. The

statement for the perception study is - "I believe e-Learning platforms are user friendly".

Table 21: Institution wise mean and standard deviation (SD)

Name of the Institute	Mean	SD
Raiganj University PG	3.50588	0.89474031
Raiganj University UG	3.37572	0.89760027
Raiganj B.Ed College	3.89474	0.72743435
Raiganj Surendranath Mahavidyalaya	3.61538	0.76794765
Raiganj Government Medical College and Hospital	4	0.73854895
Total	3.50467	0.88431292

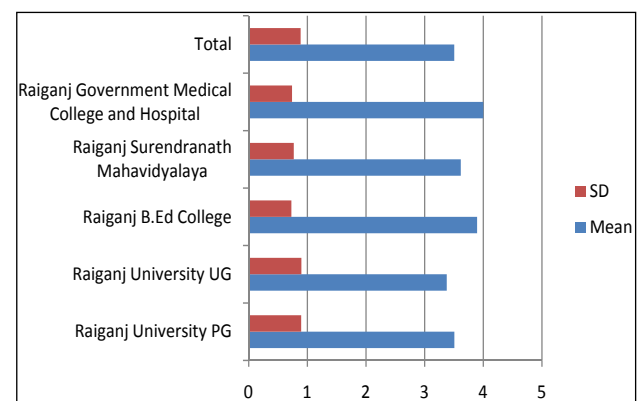


Fig. 8: Mean and Standard Deviation of the responses on - "I believe e-Learning platforms are user friendly"

Table 22 depicts institution wise mean and standard deviation (SD) on such queries and their results. Fig. 9 shows the histogram of the total responses. The statement for the perception study is - "It would be easier for me to find the information I needed when using an e-learning platform".

Table 22: Institution wise mean and standard deviation (SD)

Name of the Institute	Mean	SD
Raiganj University PG	3.52941	0.79564642
Raiganj University UG	3.35838	0.90791208
Raiganj B.Ed College	3.81579	0.89609553
Raiganj Surendranath Mahavidyalaya	3.23077	1.09192843
Raiganj Government Medical College and Hospital	4.16667	0.71774056
Total	3.48287	0.89818526

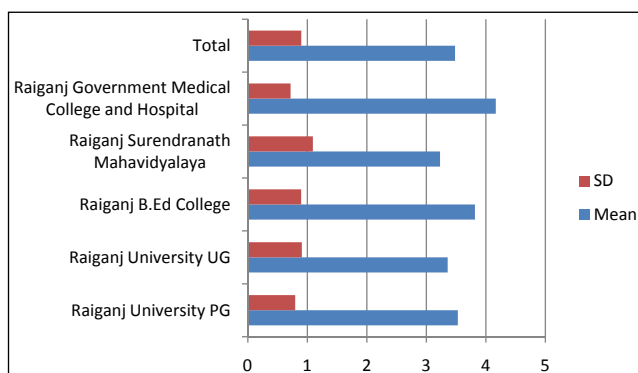


Fig. 9: Mean and Standard Deviation of the responses on - “It would be easier for me to find the information I needed when using an e-learning platform”

Table 23 depicts institution wise mean and standard deviation (SD) on such queries and their results. Fig. 10 shows the histogram of the total responses. The statement for the perception study is – “I believe ICT System in Education helps to simplify the learning process”

Table 23: Institution wise mean and standard deviation (SD)

Name of the Institute	Mean	SD
Raiganj University PG	3.42353	0.87799109
Raiganj University UG	3.30058	0.92249013
Raiganj B.Ed College	3.71053	0.89768154
Raiganj Surendranath Mahavidyalaya	3.07692	1.03774904
Raiganj Government Medical College and Hospital	3.91667	0.66855792
Total	3.39564	0.91643653

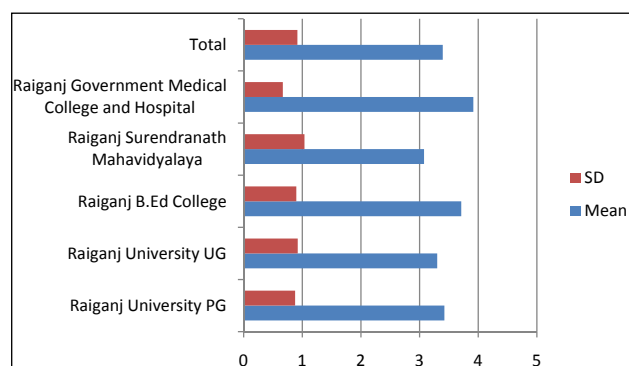


Fig. 10: Mean and Standard Deviation of the responses on - “I believe ICT System in Education helps to simplify the learning process”

Conclusion

E-Learning is going to be an important part of education system. The study is only to find the

perception of the student of Uttar Dinajpur, West Bengal, India. If the selected location has changed then the result may differ. It is only the study to find the Technological, Social and Economic perception and impact of students on e-Learning and ICT System in Education in selected institutions of Uttar Dinajpur District, West Bengal, India. It is a broader perspective survey. Only few variables have considered here. In this study, it has considered e-Learning as well as Online learning, face to face learning, Blended learning and so on. There is a future potentiality in continuation of this work with other nearby institutions with more sample and respondents. It is also possible to extend this study on teachers and staffs on their perception, views and impact on Technological, Social and Economic perception and impact on e-Learning and ICT System in Education and other teaching-learning process.

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