ANNEXURE

Inadequacies affect teaching-learning because of	Response		TU S	TU I	TU T	TU Total	DU S	DU I	DU T	DU Total	AU S	AU I	AU T	AU Total	GU S	GU I	GU T	GU Total	Total S	Total I	Total T	Total Total
Annexure -1: Impact of Insufficient number of computers, interactive board, Internet speed etc. — Universities																							
Insufficient number of computers	A lot	N	24	2	12	38	32	4	29	65	48	4	18	70	49	4	17	70	153	14	76	243
		%	30	20	34.3	30.4	40	40	82.9	52	59.3	40	51.4	55.6	62.0	40	48.6	56.5	47.8	35	54.3	48.6
	Some extent	N	30	8	13	51	33	6	5	44	12	6	15	33	8	6	16	30	83	26	49	158
		%	37.5	80	37.1	40.8	41.3	60	14.3	35.2	14.8	60	42.9	26.2	10.1	60	45.7	24.2	25.9	65	35.0	31.6
	A little	N	21	0	5	26	16	0	0	16	18	0	1	19	20	0	0	20	74	0	6	80
		%	26.3	0	14.3	20.8	18.8	0	0	12	22.2	0	2.9	15.1	25.3	0	0.0	16.1	23.1	0	4.3	16
	Not at all	N	5	0	5	10	0	0	1	1	3	0	1	4	2	0	2	4	10	0	9	19
		%	6.3	0	14.3	8	0	0	2.9	0.8	3.7	0	2.9	3.2	2.5	0	5.7	3.2	3.1	0	6.4	3.8
Insufficient number of interactive board	A lot	N	20	6	8	34	23	8	27	58	42	7	8	57	42	7	8	57	127	28	51	206
		%	25	60	23	27.2	29	80	33.8	46.4	51.9	70	22.9	45.2	53.2	70	22.9	46.0	39.7	70	36.4	41.2
	Some extent	N	37	0	15	52	31	0	7	38	16	0	13	29	18	0	13	31	102	0	48	150
		%	46.3	0	43	41.6	39	0	8.8	30.4	19.8	0	37.1	23.0	22.8	0	37.1	25.0	31.9	0	34.3	30
	A little	N	20	4	7	31	22	2	1	25	20	2	8	30	17	2	10	29	79	10	26	115
		%	25	40	20	24.8	28	20	1.3	20	24.7	20	22.9	23.8	21.5	20	28.6	23.4	24.7	25	18.6	23
	Not at all	N	3	0	5	8	5	0	0	4	3	1	6	10	2	1	4	7	12	2	15	29
		%	3.8	0	15	6.4	7	0	0.0	3.2	3.7	10	17.1	7.9	2.5	10	11.4	5.6	3.8	5	10.7	5.8
Insufficient Internet-connected computer	A lot	N	26	5	12	43	26	6	32	64	58	4	20	82	50	4	18	72	160	19	82	261
		%	32.5	50	35	34.4	32.5	60	40.0	51.2	71.6	40	57.1	65.1	63.3	40	51.4	58.1	50.0	47.5	58.6	52.2
	Some extent	N	29	3	13	45	29	3	3	35	3	3	11	17	13	3	13	29	74	12	40	126
		%	36.3	30	38	36	36.3	30	3.8	28	3.7	30	31.4	13.5	16.5	30	37.1	23.4	23.1	30	28.6	25.2
	A little	N	17	2	4	23	22	1	0	23	20	3	3	26	14	3	2	19	73	9	9	91
		%	21.2	20	12	18.4	27.5	10	0.0	18.4	24.7	30	8.6	20.6	17.7	30	5.7	15.3	22.8	22.5	6.4	18.2
	Not at all	N	8	0	6	14	3	0	0	3	0	0	1	1	2	0	2	4	13	0	9	22
		%	10	0	18	11.2	3.8	0	0.0	2.4	0.0	0	2.9	0.8	2.5	0	5.7	3.2	4.1	0	6.4	4.4
Insufficient Internet bandwidth or speed	A lot	N	34	8	14	56	38	9	33	80	53	7	17	77	46	7	22	75	171	31	86	288
		%	42.5	80	40	44.8	47.5	90	41.3	64	65.4	70	48.6	61.1	58.2	70	62.9	60.5	53.4	77.5	61.4	57.6
	Some extent	N	18	0	13	31	19	0	1	20	10	0	13	23	17	0	9	26	64	0	36	100
		%	22.5	0	38	24.8	23.8	0	1.3	16	12.3	0	37.1	18.3	21.5	0	25.7	21.0	20.0	0	25.7	20
	A little	N	27	2	3	32	17	1	1	19	12	3	2	17	14	3	2	19	70	9	8	87
		%	33.7	20	9	25.6	21.3	10	1.3	15.2	14.8	30	5.7	13.5	17.7	30	5.7	15.3	21.9	22.5	5.7	17.4
	Not at all	N	1	0	5	6	6	0	0	6	6	0	3	9	2	0	2	4	15	0	10	25
		%	1.2	0	15	4.8	7.5	0	0.0	4.8	7.4	0	8.6	7.1	2.5	0	5.7	3.2	4.7	0	7.1	5

S – Students, I – ICT expert and administrator, T - Teachers

Questionnaire

(For Students and Research Scholars)

Dear Respondent,

This questionnaire is part of a study on 'Information and Communication Technology in Higher Education: A study of ICT utilization in universities of Assam".

It is addressed to students and research scholars seeking information about access to ICT infrastructure, support available, experience in using ICT for the teaching-learning process, ICT based activities and materials used, obstacles encountered in the use of ICT in teaching-learning activities and some personal background information.

The questionnaire is being administered purely for academic purposes; confidentiality regarding the responses shall be maintained.

Thank you very much for your time and effort in responding to this questionnaire.

<u>Researcher:</u> Ratul Chandra Nath,

Department of Mass Communication & Journalism,

Tezpur University,

E-mail id: ratul@tezu.ernet.in,

Phone: 9435181447

Part I : Respondent's Profile:

1.1 Gender:

1.2 Programme of study at present enrolled in:

1.3 Department:

1.4 Faculty / School:

1.5 University:

1.6 Background: Urban / Rural / Semi-urban

Part II: ICT utilization in universities

Please tick the correct ones:

2.1. What is your idea about Information and Communication Technology (ICT)?

    i. Internet connectivity

    ii. A combination of Internet and computerized facilities

    iii. A combination of telecommunications (telephone lines and wireless signals), computer with software, audio-video system which enable users to access, store, transmit and manipulate information.

    iv. Combination of all the above

    v. Any other, please specify …………….…………………………………..

2.2. What are the major ICT facilities required in your course?

    i. Internet,   ii. PowerPoint/Specific Software,   iii. Downloading,

    iv. Scanning,   v. Printing   vi. All of them

Others – please specify ……………………………………..………………………

2.3. Whether any of these devices available for use of students in your institute/Deptt.?
(Please give your answer by ticking each row)

		Yes, and I use it	Yes, but I don't use it	Not available
i.	Desktop/Laptop/Notebook computer without Internet access			
ii.	Desktop/Laptop/Notebook computer with Internet access			
iii.	Digital reader (portable device to read books, newspapers etc. on screen: ipad/tablet etc.)			
iv.	Multimedia Projector			
v.	Video conferencing/Virtual Classroom/ Interactive board			
vi.	Printer			
vii.	Scanner			

Others – please specify …………………………………..………………………………

2.4. To what extent do you agree with the following statements?
(Please give your answer by ticking each row)

		Strongly disagree	Disagree	Agree	Strongly agree
i.	It is very important to work with a computer for my academic work.				
ii.	I think playing or working with a computer is really fun.				
iii.	I use a computer because I am highly interested in it				
iv.	I lose track of time when I am working with the computer				
v.	I use a computer to learn as it will help in the work that I want to do later on				

Others – please specify …………………………..……………………………………

2.5. Do you feel the necessity of training for handling ICT facility at the beginning of your course?

    i. Yes   ii. No

2.6. How would you rate the quality of technological support provided in your institution?

    i. Poor   ii. Average   iii. Good   iv. Very good

2.7. To what extent are you being able to do each of the following tasks on a computer?
(Please give your answer by ticking each row)

		I can do this very well by myself	I can do this with help from someone	I know what this means but I cannot do it	I don't know what this means
i.	Edit digital photographs or other graphic images				
ii.	Create a database (e.g. using <Microsoft Access®>)				
iii.	Use spreadsheet to plot a graph				
iv.	Create a presentation (e.g. using <Microsoft PowerPoint®>)				
v.	Create a multi-media presentation (with sound, pictures, video)				
vi.	Browse the Internet for academic requirement (e.g.				

		Not at all	A little	Some what	A lot
	downloading reference)				
vii.	Use e-mail for communication with friends and family				
viii.	Use e-mail for communication with teachers				
ix.	Use e-mail for submission of assignments				

Others – please specify …………………………………………………………..

2.8. Do you believe that using ICT (Internet, computers, interactive boards etc.) during classes have positive impact on the following?
(Please give your answer by ticking each row)

		Not at all	A little	Some what	A lot
i.	You concentrate more on what you are learning				
ii.	You understand more easily what you're learning				
iii.	You remember more easily what you've learnt				
iv.	ICT enables you to work better with other students on tasks				
v.	ICT improves the atmosphere in class (e.g. students are more engaged, there is less disruption)				

Others – please specify ……………………………………………………………

2.9. Which mode of lecture you prefer most in your class?

   i. Technology aided lecture

  ii. Interactive & inspiring lecture without any ICT facility

 iii. Virtual classroom/online lecture

Why? …………………………………………………………………………..

2.10. Do you think that your relationship with your teacher have improved due to ICT enabled teaching-learning?

   i. To a great extent   ii. To some extent   iii. Not at all

2.11. Do you think that excessive use of technology creates a gap among the people and driving them towards a virtual reality?

   i. To a great extent   ii. To some extent   iii. Not at all

2.12. Do you think that inadequacy in the following areas of ICT affects the overall teaching-learning activity?

(Please give your answer by ticking each row)

		A lot	Some what	A little	Not at all
i.	Insufficient number of computers				
ii.	Insufficient number of Internet- connected computers				
iii.	Insufficient Internet bandwidth or speed				
iv.	Unrestricted use of Internet download				
v.	Unrestricted use of Internet site surfing				
vi.	Insufficient technical support				
vii.	Insufficient number of interactive boards				
viii.	Increase more printing facility				
ix.	Most teachers are not in favour of the use of ICT at institution				
x.	Using ICT in teaching and learning not being a goal in our institution				
xi.	Access to more e-resources / journals				

Others – please specify ………………………………………………………………

2.13. Please give your suggestions to improve the ICT-enabled teaching-learning & evaluation process in your institution.

………………………………………………………..……………………………………………

………………………………………………………..……………………………………………

………………………………………………………..……………………………………………

Any other comments:

………………………………………………………..……………………………………………

………………………………………………………..……………………………………………

………………………………………………………..……………………………………………

Thank you !

* * * *

Questionnaire
(For Teachers)

Dear Respondent,

This questionnaire is part of a study on 'Information and Communication Technology in Higher Education: A study of ICT utilization in universities of Assam".

It is addressed to teachers seeking information about access to ICT infrastructure, support available, experience in using ICT for the teaching-learning process, ICT based activities and materials used, obstacles encountered in the use of ICT in teaching-learning activities with the target class and some personal background information.

The questionnaire is being administered purely for academic purposes; confidentiality regarding the responses shall be maintained.

Thank you very much for your time and effort in responding to this questionnaire.

<u>Researcher:</u> Ratul Chandra Nath,

Department of Mass Communication & Journalism,

Tezpur University,

E-mail id: ratul@tezu.ernet.in,

Phone: 9435181447

Part I : Respondent's Profile:

1.1. Designation:

1.2. Gender:

1.3. Department/Centre:

1.4. University:

Part II: ICT utilization in universities

2.1. Do you have your own computer in your office?

    i. Yes, I have a desktop computer,   ii. Yes, a laptop computer

    iii. Yes, both of them   iv. No

2.2. What kind of technological equipment are available in the classrooms, that you use?
(Please give your answer by ticking each row)

		Yes, and I use it	*Yes, but I don't use it*	*No*
i.	Desktop/Laptop/Notebook computer without Internet access			
ii.	Desktop/Laptop/Notebook computer with Internet access			
iii.	Digital reader (portable device to read books, newspapers etc. on screen: ipad/tablet)			
iv.	Multimedia Projector			
v.	Interactive whiteboard			
vi.	Video conferencing/Virtual Class room			
vii.	Printer			
viii.	Scanner			

    Others – please specify …………………………………………...….…………….

2.3. Do you use any Learning Management System (LMS) / Virtual Learning Environment (VLE) software like - Litmos LMS, WebCT, Moodle etc. for teaching-learning?

    i. Yes   ii. No

   Others – please specify ..……...…………………………………………………...

2.4 How would you rate the quality of technological support provided in your institution?

    i. Poor   ii. Average   iii. Good   iv. Very good

2.5. Does your library have online e-journals and databases for teaching and research?

    i. Yes   ii. No
   Others – please specify ..……...…………………………………….………………

If yes, how often do you access e-journals and databases?

      i. Regularly   ii. Once in a week   iii. Twice in a week

Others – please specify ..……..…………………………………………………

2.6. Among the following statements what best describes your level of ICT-enabled technological expertise in the classroom?

    i. I am not comfortable using technology in my classroom

    ii. I am fairly comfortable using technology in my classroom

    iii. I am very comfortable using technology in my classroom

2.7. To what extent do you think the use of technology described below is important for teaching-learning?

(Please give your answer by ticking each row)

		Not important at all	Important to some extent	Quite important	Very important
A	**Use of technology for communicating and/or networking**				
i	with your students				
ii	with parents of students				
B	**Use of technology for students/ teachers' own development and learning**				
C	**Use of technology as a management tool**				
i	for organising their work and keep records				
ii	for preparing lessons				
iii	for finding out digital learning resources				
iv	for designing and producing their own digital learning resources				
D	**Student / teachers future integration of technology**				
i	to facilitate teaching specific concepts or skills				
ii	to support various student learning styles and to personalize learning				
iii	to facilitate teaching students with disabilities (cognitive, physical, behavioural)				
iv	to support activities that				

		No importance at all	Some amount of importance	High importance	Very high importance
	facilitate higher-order thinking				
v	to support creativity				

Others – please specify …………….....…………………………..……………………

2.8. What importance do you attach to the following suggestions for integration of

ICT-enabled technology for a better teaching-learning process?

(Please give your answer by ticking each row)

		No importance at all	Some amount of importance	High importance	Very high importance
i.	Better access to technological equipment				
ii.	Reliability of equipment				
iii.	Training/courses in pedagogical use of ICT				
iv.	Technological hands-on training/courses				
v.	Policies on using ICT across curriculum				
vi.	Time to prepare, explore and develop academic work				
vii.	Task related incentives (salary, promotion etc.)				

Others – please specify ……………....…………………………………………………

2.9. Do you think that the following inadequacies affect the teaching-learning process?
(Please give your answer by ticking each row)

		A lot	Some extent	A little	Not at all
i.	Insufficient number of computers				
ii.	Insufficient number of Internet- connected computers				
iii.	Insufficient Internet bandwidth or speed				
iv.	Insufficient number of interactive whiteboards				
v.	Insufficient technical support				
vi.	Lack of adequate content/material for teaching				
vii.	Too difficult to integrate ICT use into the curriculum				
viii.	Lack of pedagogical models on how to use ICT				

	for learning				
ix.	Pressure to prepare students for examinations and tests				
x.	Most teachers are not in favour of the use of ICT at class				
xi.	None or unclear benefit to use ICT for teaching				
xii.	Using ICT in teaching and learning not being a goal in our university				

Others – please specify …………………...………………………………………..

2.10. Can you specify the hurdles (if any) in the effective implementation of ICT-enabled teaching-learning process in your institution?

………………………………………………..………………………………………………

………………………………………………..………………………………………………

………………………………………………..………………………………………………

2.11. Please give your suggestions to improve the ICT-enabled teaching-learning & evaluation process in your institution.

………………………………………………..………………………………………………

………………………………………………..………………………………………………

………………………………………………..………………………………………………

2.12. Any other comments:

………………………………………………..………………………………………………

………………………………………………..………………………………………………

………………………………………………..………………………………………………

Thank you !

* * * *

Interview Schedule

(For ICT-Head and Academic Administrator)

Dear Respondent,

This questionnaire is part of a study on 'Information and Communication Technology in Higher Education: A study of ICT utilization in universities of Assam".

It is addressed to ICT-Head and Academic Administrator, seeking information about access to ICT infrastructure, support available, experience in using ICT for the teaching-learning process, ICT based activities and materials used, obstacles encountered in the use of ICT in teaching- learning activities with the target class and some personal background information.

The questionnaire is being administered purely for academic purposes; confidentiality regarding the responses shall be maintained.

Thank you very much for your time and effort in responding to this questionnaire.

Researcher: Ratul Chandra Nath,

Department of Mass Communication & Journalism,

Tezpur University,

E-mail id: ratul@tezu.ernet.in,

Phone: 9435181447

Part I : Respondent's Profile:

1.1 Name:

1.2 Designation:

1.3 Department/Centre:

1.4 University:

Part II: ICT utilization in universities

2.1. How many desktop computers are installed for educational purposes for students to use either alone or with a teacher in the following places?

(Fill in each row only using numbers)
  i. In computer laboratories:…………………………......…
  ii. In Departments:…………………………………………
  iii. In the institute library:…………………………..…….
  iv. In other locations that are accessible to students in the institute:………..………

2.2. How many interactive whiteboards (IWB) are installed in the following places?

(Fill in each row only using numbers)
  i. In computer laboratories:………………………………
  ii. In Departments:…………………………………………..
  iii. In the institute library:……………………………….
  iv. In other locations that are accessible to student in the institute ………..………..

2.3. What is the Internet bandwidth speed of your Institution?

   Please specify : ……………………………..………………………….……...…

2.4. Who maintains the ICT equipments in your institute?

  i. The Institute's own staff

  ii. An external company contracted by the institute

  iii. An external unit arranged by educational authorities

   Others, please specify: ………………………..…………………………………..

2.5. Does your institute have the following facilities?
(Please give your answer by ticking each row)

		Yes	No
i.	Its own homepage or website, publicly accessible		
ii.	Institute email addresses for more than 50% of teachers		
iii.	Institute email addresses for more than 50% of students		
iv.	A LAN (local area network)		
v.	If yes, is this LAN also wireless (wifi)?		
vi.	A virtual learning environment (virtual classroom/video conferencing)		

2.6. Does your institute provide user training for handling ICT facilities?

   i. No   ii. Yes

   If yes, which group?

   i. Student   ii. Teacher   iii. Staff   iv. All the three group

2.7. How many e-journals and databases are available in your library?

   Please specify: …………………………………………...……………..………….

2.8. Does your library use automation software?

   i.   No

   ii.   Yes , please specify ………………………………………….……………….

2.9. Does your library provide the following services?
(Please give your answer by ticking each row)

		Yes, it is fully used	Yes, it is less used	Not available
i.	General Services using OPAC			
ii.	Current awareness services			
iii.	Research Support services			
iv.	Open Courseware			

2.10. Does your institute have any computerized software for the following purposes?

     i.   Student management system for registration, payments etc.

     ii.   Examination system for generating results, certificates/grade card, enrollments etc.

     iii. Employee management system

     iv. Financial management system

     v.   Hostel management system

     vi. All of the above

     If any other – please mention..…………….……………..…………..…………..

2.11. Are you satisfied with the overall ICT facilities provided by your Institution?

     i. Fully satisfied   ii. To a great extent   iii. To some extent   iv. Not at all

    If none of the above, what are the reasons?

i. Poor facilities   ii. Lack of proper maintenance

iii. Improper utilization

iv. others – mention …………………………………………………………...

2.12. What importance do you attach to the following suggestions for integration of ICT-enabled technology in their courses for a better teaching-learning process?
(Please give your answer by ticking each row)

		No importance at all	Some amount of importance	Highly important	Very important
i.	Better access to technological equipment				
ii.	Reliability of equipment				
iii.	Training/courses in pedagogical use of ICT				
iv.	Technological hands-on training/courses				
v.	Technological support				
vi.	Policies on using ICT across curriculum				
vii.	Time to prepare, explore and develop academic work				
viii.	Task related incentives (salary, promotion etc.)				

Others – please specify ……………...…………………………..…………………….……

2.13. Do you think that the following inadequacy affect the teaching-learning process?
(Please give your answer by ticking each row)

		A lot	Some what	A little	Not at all
i.	Insufficient number of computers				
ii.	Insufficient number of Internet- connected computers				
iii.	Insufficient Internet bandwidth or speed				
iv.	Insufficient number of interactive boards				
v.	Insufficient technical support				
vi.	Lack of adequate content/material for teaching				
vii.	Too difficult to integrate ICT use into the curriculum				

viii.	Lack of pedagogical models on how to use ICT for learning				
ix.	Pressure to prepare students for exams and tests				
x.	Most teachers not in favour of the use of ICT at class				

Others – please specify ……………….....………………………………………….

2.14. Can you specify the hurdles (if any) in the effective implementation of ICT-enabled teaching-learning process in your institution?

………………………………………………..…………………………………………

………………………………………………..…………………………………………

………………………………………………..…………………………………………

2.15. Please give your suggestions to improve the ICT-enabled teaching-learning & evaluation process in your institution.

………………………………………………..…………………………………………

………………………………………………..…………………………………………

………………………………………………..…………………………………………

Any other comments:

………………………………………………..…………………………………………

………………………………………………..…………………………………………

………………………………………………..…………………………………………

Thank you !

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