IOSR Journal of Research & Method in Education (IOSR-JRME)
e-ISSN: 2320–7388, p- ISSN: 2320-737x Volume 15, Issue 4 Ser. 1 (Jul. – Aug. 2025), PP 47-52
www.iosrjournals.org

Readiness of Indian Classrooms for Online Structure - A case study

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Abstract
Online education has become a tool for education system which cannot be avoided. Further, with sudden shift away from the classroom owing to pandemic, online classes are being used to facilitate the students to continue their education. Owing to this scenario, dependence on online classes has become a necessity and is not just a fad. This makes it imperative to assess the readiness of our education system for the online structure of education. Since urban areas have strong enough infrastructural facilities, rural India still lack behind when it comes to implementation of online education. Thus, the present research will focus on assessment of the readiness of Indian classrooms for online structure in rural India. The population of the study are the students studying in different private schools in Imphal West district region, India.
Keywords: *Online classes, education system, Pandemic, Rural India, Readiness*

Date of Submission: 07-07-2025 Date of Acceptance: 17-07-2025

I. Introduction

In past two decades the world has moved online. With increase in the use of technology and online networking, the world is practically living online now. This trend can be observed in the all the sectors. With this trend, the education sector is not untouched. The latest use of technology in the field of education is visible in the form of trend of online classes. The trend was further fuelled by the COVID 19 pandemic.

Owing to COVID 19 pandemic worldwide, more than 1.2 billion children in 186 countries were affected by school closures (Li & Lalani, 2020). The extended shutdown transformed the conventional classrooms into online classes due to the transmissible nature of the virus. With this sudden shift away from the classroom, online classes are being used to facilitate the students to continue their education. Owing to this scenario, dependence on online classes has become a necessity and is not just a fad. This makes it imperative to assess the readiness of our education system for the online structure of education.

II. Literature Review

With increase in the use of online classes, researchers globally have started to study this phenomenon very closely. These researches came across many advantages and disadvantages of online classes for both teachers and students. For teachers, online classes permit novel techniques of teaching with admission of unconventional tools and technology involved in it and can provide access to many students simultaneously (Appana, 2008). On the other hand, student can obtain knowledge via diverse online tools and approaches, pay much care to online available recorded/live discussions of world class specialists and experts, listen and watch classes multiple times and work at their own promptness (Arkorful & Abaidoo, 2015). Incapability to have a face-to-face association with students and assist free talks, discussions, and mentoring, absence of online teaching knowledge takes more time and practice, technological problems with high speed internet connection and getting used to learning and being assessed online are recognized as chief constraints (Arasaratnam-Smith & Northcote, 2017; Claywell et al., 2016; Sun & Chen, 2016).

Thus, it can be stated that with all the positives, negatives are also associated with online classes. Further, it has become a tool for education system which cannot be avoided. Simply implementing online structure is not enough, it is important to assess if the readiness of implementation persists.

Since urban areas have strong enough infrastructural facilities, rural India still lack behind when it comes to implementation of online education (Muthuprasad et al., 2021). Thus, the present research will focus on assessment of the readiness of Indian classrooms for online structure in rural India.

III. Research Methodology

In the present research, the population of the study are the students studying in different private schools in Imphal East district region, India. For sampling, probability sampling has been used. Out of the different techniques of probability sampling, Simple Random Sampling method has been adopted.

Primary data has been used in the study wherein survey method has been adopted to collect the data. Herein, quantitative analysis has been conducted using structured quantitative questionnaire (Appendix) as measuring instrument. The administration of the questionnaire was done through administrative department of the schools. After taking permission from the principal of the schools to collect the data, the email ids of the students of classes 9th, 10th, 11th and 12th were retrieved through administrative department. The questionnaires were then emailed through Google forms. A total of 500 students were mailed the questionnaire links. Out of these, 457 students reverted with completely filled questionnaires.

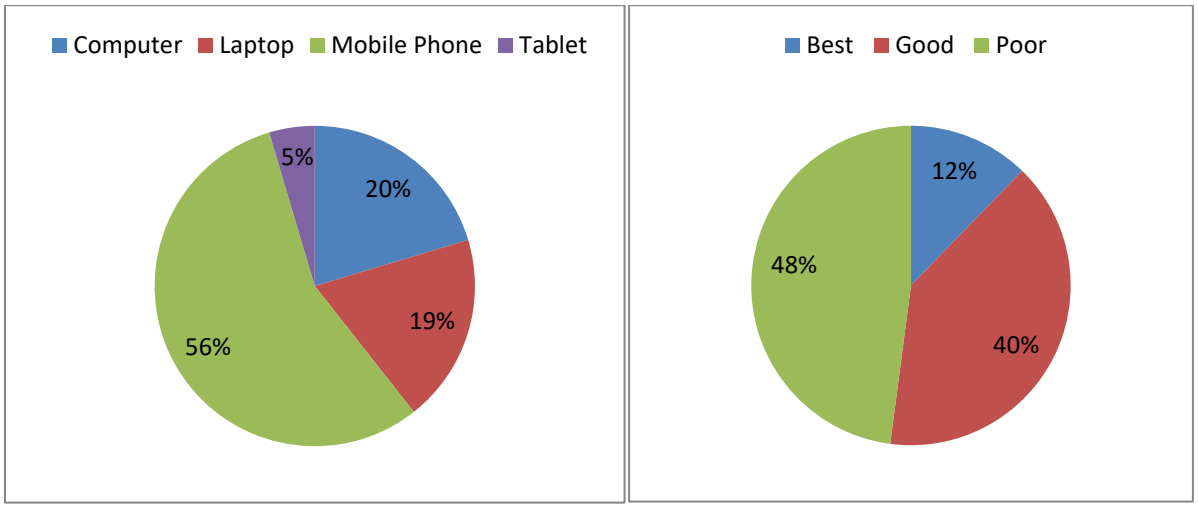
For analysing the data, SPSS 23.0 has been used as the statistical software. For descriptive analysis, frequency analysis and cross tabulation has been conducted. Further for inferential analysis, linear regression has been conducted.

IV. Results and Discussion

Demographic profile of the respondents is as follows-

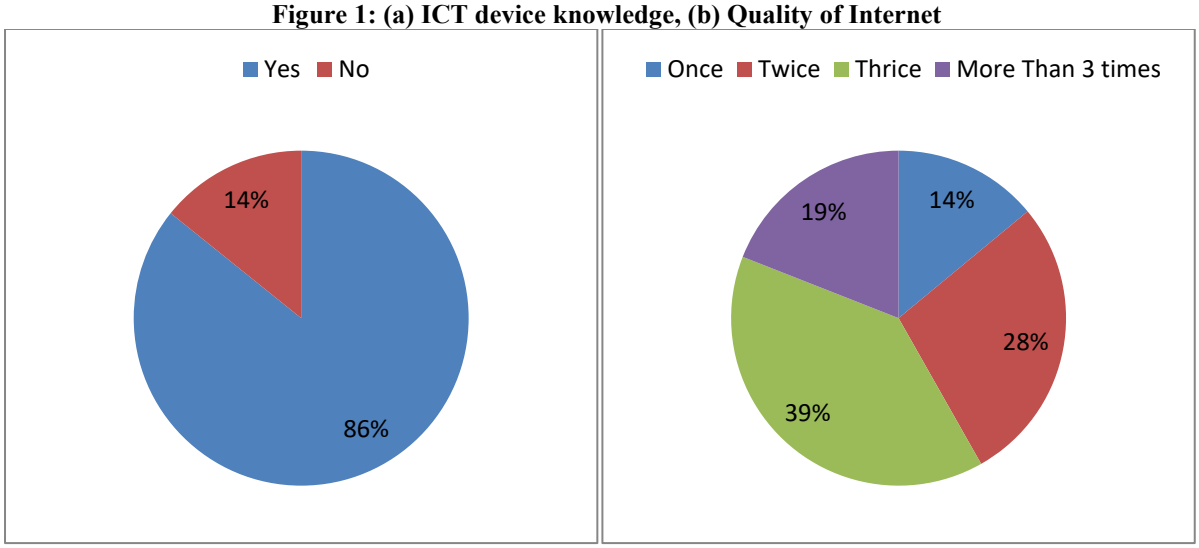
Table 1: Demographic Profile of Respondents

		Frequency	Percentage
Gender	Male	208	45.3
	Female	249	54.2
Class	Grade 9	76	16.6
	Grade 10	104	22.7
	Grade 11	158	34.4
	Grade 12	119	25.9
Mother's Education	No formal education	31	6.8
	10th Pass	184	40.1
	12th Pass	147	32.0
	Graduate	72	15.7
	Post Graduate	19	4.1
	Doctorate	4	.9
Father's Education	No formal education	23	5.0
	10th Pass	74	16.1
	12th Pass	131	28.5
	Graduate	187	40.7
	Post Graduate	31	6.8
	Doctorate	11	2.4



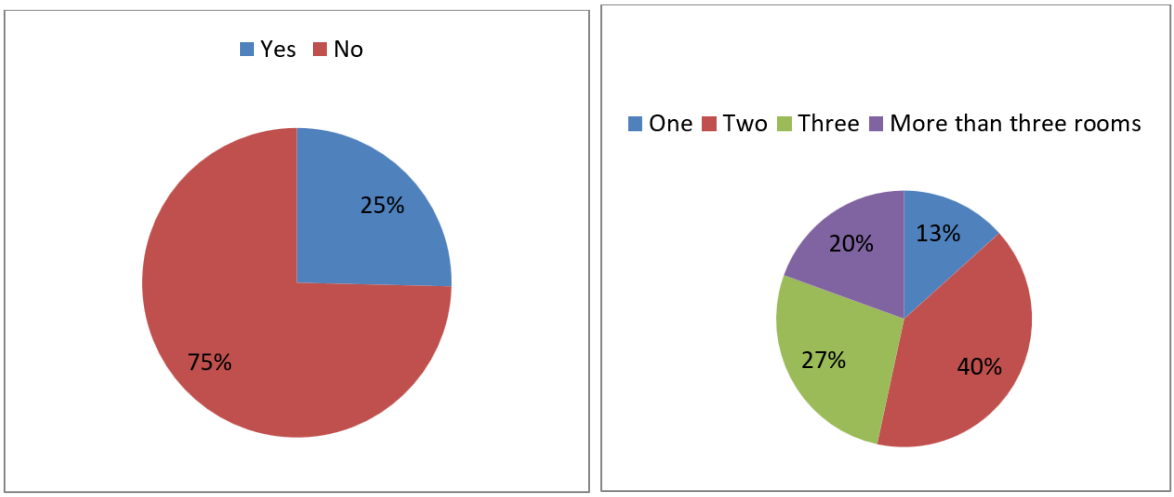
(a) (b)

Figure 1: (a) ICT device knowledge, (b) Quality of Internet



(a) (b)

Figure 2: (a) Prior Knowledge of ICT Device, (b) Connection Disconnected during Online Classes



(a) (b)

Figure 3: (a) 5. Electricity Problem While Taking Online Classes, (b) Number of rooms in the house

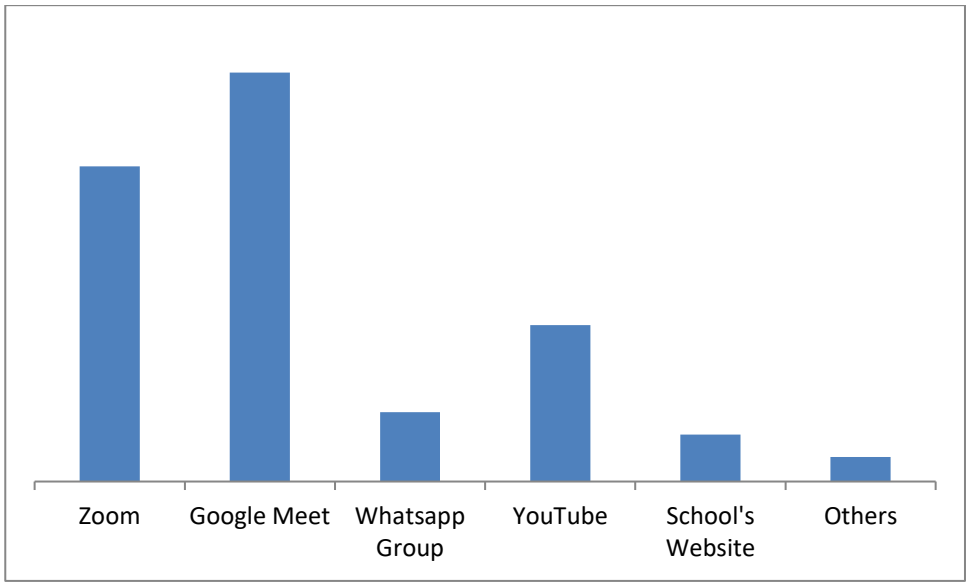


Figure 4: Online Platform Used

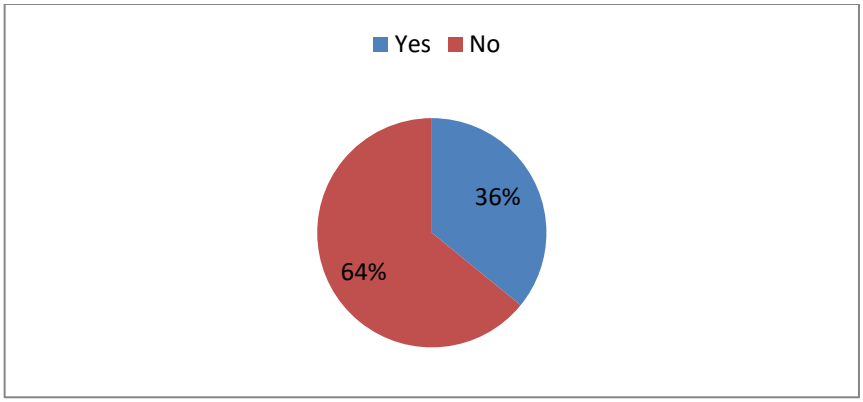


Figure 5: Comfortable in using Online Classes

It can be inferred from Figure 5 that 64% (293 out of 457 respondents) of the respondent students are not comfortable in using online classes. In order to understand the reason for the discomfort in using online classes, cross tabulation of this factor has been conducted with some other factors to bring out the underlying themes.

Table 2: Comfortable in using Online Classes * Quality of Internet Crosstabulation

			Quality of Internet			Total
			Best	Good	Poor	
Comfortable in using Online Classes	Yes	Count	19	61	84	164
		% within Comfortable in using Online Classes	11.6%	37.2%	51.2%	100.0%
	No	Count	37	121	135	293
		% within Comfortable in using Online Classes	12.6%	41.3%	46.1%	100.0%
Total		Count	56	182	219	457
		% within Comfortable in using Online Classes	12.3%	39.8%	47.9%	100.0%

It can be inferred from Table 2 that out of maximum respondents (293 out of 457 respondents) who are not comfortable in using online classes, 46.1% of them had poor internet connection. This could be a reason for their discomfort in using online classes. In a research conducted by Bakhmat et al., (2021), similar findings were discussed. The study found that poor Internet connection is a hurdle to online classes.

Table 3: Comfortable in using Online Classes * Comfortable in using Online Classes * Number of Rooms in the House Crosstabulation

			Number of Rooms in the House				Total
			One	Two	Three	More than three rooms	
Comfortable in using Online Classes	Yes	Count	22	64	46	32	164
		% within Comfortable in using Online Classes	13.4%	39.0%	28.0%	19.5%	100.0%
	No	Count	39	119	78	57	293
		% within Comfortable in using Online Classes	13.3%	40.6%	26.6%	19.5%	100.0%
Total		Count	61	183	124	89	457
		% within Comfortable in using Online Classes	13.3%	40.0%	27.1%	19.5%	100.0%

It can be inferred from Table 3 that out of maximum respondents (293 out of 457 respondents) who are not comfortable in using online classes, 40.6% of them had two rooms at their houses. This could be lead to disturbance while studying online as other members might also be present in the room of study at the time of class making the student uncomfortable.
Further, in order to understand the factors of personal interest of students that are contributing to their willingness to stop using online classes, linear regression has been conducted.

Linear Regression
Herein the independent variable is "personal interest" of students while dependent variable is "willingness to stop using online classes". The hypothesis being tested is as follows-
H_0: There is no significant impact personal interest of students of rural area of Imphal on their willingness to stop using online classes
H_A: There is significant impact personal interest of students of rural area of Imphal on their willingness to stop using online classes

Table 4: Model Summary for Regression analysis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.915[a]	.837	.835	.436

It can be inferred from Table 4 above that value of R-square in .837 owing to which it can be stated that 83.7% changes in dependent variable "willingness to stop using online classes" can be attributed to independent variables "personal interest" of the student.

Table 5: ANOVA table for Regression analysis

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	440.289	6	73.382	385.604	.000[b]
	Residual	85.636	450	.190		
	Total	525.926	456			

Further, it can be inferred from Table 5 that null hypothesis can be rejected thereby accepting the alternate hypothesis since significance level is less than 0.05 (>0.000). Thus, it can be stated that "*There is significant impact personal interest of students of rural area of Imphal on their willingness to stop using online classes*".

Table 6: Coefficient Table for Regression analysis

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.109	.092		-1.180	.239
	Low Motivation for Study in Online Classes	.189	.072	.177	2.612	.009
	Lack of Interaction with Teachers	.308	.050	.288	6.145	.000
	Disinterested to take Online Classes.	.244	.047	.231	5.217	.000
	It is Hard to Stick to Study Schedule of Online Classes.	.375	.047	.355	7.956	.000
	Online Classes are not Comfortable as Offline Classes	-.054	.047	-.050	-1.144	.253
	Not Understand Content Delivered in Online Classes	-.038	.052	-.036	-.735	.463

It can be inferred from Table 6 that except for factors "Online Classes are not Comfortable as Offline Classes" and "Not Understand Content Delivered in Online Classes", all other factors are statistically significant (<0.05). Out of all the personal factors, "It is hard to stick to study schedule of online classes" was found to have the highest value of Unstandardized Coefficients thereby having the maximum impact on willingness to stop using online classes. Similarly, "Lack of Interaction with Teachers" was found to have the second highest value of Unstandardized Coefficients thereby emerging to be a major factor impacting willingness of students to stop using online classes. In a research conducted by Adnan & Anwar, (2021), it was found that "Lack of Interaction with Teachers" is a major concern for students during online classes which then creates a hurdle in their learning process. Thus the findings of this research are in sync with the findings of the present research.

V. Conclusion

The present research has been focused on the assessment of the readiness of Indian classrooms for online structure in rural India. The study found that most of the students in rural areas of Imphal are not comfortable in using online classes. The reason for this was attributed as poor internet connection and presence of two rooms at their houses. Further, the study found that there is significant impact personal interest of students on their willingness to stop using online classes. Herein lack of interaction with teachers and facing difficulty in following study schedule of online classes were found to be the major contributors towards willingness of students of rural area of Imphal to stop using online classes. Thus, it can be stated that Rural India is not completely ready for online classes.

Based on these finding of the research, it is advised to increase one to one teacher student face time during online classes. Further, teachers can record the online classes so that students, who miss the classes owing to infrastructural defects or any other reasons, can get access to the class.

Declaration of any conflicting interests

The Author declares that there is no conflict of interests.

Funding Acknowledgements

This research received no specific grant from any agency in the public, commercial or not-for -profit sections.

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