

THE CULTURAL LAG & DIGITAL DIVIDE OF ONLINE LEARNING: AN INDIAN PERI-URBAN REGION EXPERIENCE

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ABSTRACT

There are few references to the theory of cultural lag and the concept of digital divide altogether in an Indian peri-urban context in the existing works of literature. The cultural lag is based on the gap between material and non-material culture; whether the digital divide is based on the difference between haves and have-nots; and skills disparity. Our research aims to investigate the connection between cultural lag and the digital divide as well as the challenges faced by students at a higher education institution in a peri-urban area of India when engaging in online learning. The study was conducted in the midst of a pandemic and is cross-sectional in nature. It used a simple random sampling technique to choose 312 post-graduate respondents from 1652 total students at a peri-urban higher education institution in West Bengal, India, using the "Raosoft" scale. Due to social distance norms, 235 samples of respondents from 312 pupils were taken into account by telephone interviews. SPSS 22 has been used to analyse the data. The study findings reveal that students were neither interested nor motivated in pursuing online classes. It affects mental health and teacher-student interaction was not at a satisfactory level. Technological knowledge plays a vital role; online assignment submission was not given satisfaction; technological and infrastructural problems were there; and so on. The study offers a way forward to evolve with more inclusive digital learning while mitigating the issues of cultural lag and digital divide among the students in peri-urban Indian regions.

Keywords: Cultural lag, Digital divide, Higher education institution, Online education, Peri-urban institution, Covid-19.

1. INTRODUCTION

An immediate problem for the twenty-first century is the integration of technology into online learning approaches to support current pedagogies and teaching practises. Learning environments in higher education currently rely on their transformation into a digital world, so they must maximise learning tools (Cook and Thompson, 2014; Garrison and Kanuka, 2004). This trend has gradually altered the format of academic courses (Bernard et al., 2014), prior to the rapid global shift into online learning environments across all academic areas that was hastened by the COVID-19 pandemic's outbreak in 2020 (Rana, 2021). According to Lin et al. (2017), e-learning was first suggested by Jay Cross in 1999. New definitions and terminology, such as "Internet-based training," "web-based training," or "online learning," network learning, and distance learning, have evolved as technology tools developed and advanced. E-learning was a good idea for academic activities because it substituted a virtual format for traditional academic procedures. Face-to-face training has been replaced with this new format with a virtual learning environment where users can communicate with both students and teachers on a device's screen (The World Bank, 2020).

This current study was completed during the pandemic times. It aimed to inform the cultural lag and digital divide through an in-depth analysis of the benefits of pursuing online education among the post-graduate students of a peri-urban-based higher education institution. "Cultural lag" indicates the difference between

material and non-material culture. It refers to the notion that culture takes time to catch up with technological innovations and the resulting social problems caused by this lag (Gisbert, 2015). And the term "digital divide" refers to the distinction between haves and have-nots, as well as inequality in digital skills among stakeholders (Centeio, 2017). Material culture includes digital device innovation, development, and application, while non-material culture includes skill and efficiency in application. As the difference in skill efficiency among the stakeholders of digital devices is categorised as a second-order digital divide, Here, a nexus has been made between the "cultural lag" and the "digital divide". A solid empirical investigation is required to understand the need for and policy making for the progress of students by figuring out the cultural lag and digital divide of those based on a peri-urban higher education institution during the pandemic. As a result, it brings the following research questions:

- i. What are the issues related to the cultural lag and digital divide faced by the students at peri-urban-based higher education institutions in India during online learning?
- ii. What are the strategies to make online learning more interesting and motivating for students?

2. LITERATURE REVIEW & THEORETICAL PERSPECTIVE

According to Pradas et al. (2021), there was an improvement in both student participation and academic performance in the online modality. According to Lone (2021), both teachers and students showed a modest level of motivation for online learning. According to Aderbigbe's research from 2021, deep learning can be facilitated by online education under the condition that teachers give their pupils appropriate instructions and adequate opportunities for social interaction. In addition to social consequences like loneliness and social alienation, the online style of learning also encounters technological problems, including internet outages and voice cuts. The majority of students (70 percent) were prepared to choose online courses (Pradas et al. 2021). Urban students showed greater interest in online learning than rural students (Jan and Mattoo 2018).

The effectiveness of online teaching and learning in India was examined by Naik et al. in 2021. According to the study, in-person instruction is always preferable to online instruction. This is because attending online sessions is severely hindered by a lack of facilities, infrastructure, technical tools, and working internet connections. According to the report, more than 60 percent of students are not prepared to enrol in online courses because of these problems, which also cause them to lose interest in and motivation for the online learning environment. In remote locations like Kashmir, where a large percentage of pupils are unable to access the internet due to technical and economic constraints, online learning cannot yield meaningful outcomes (Khan et al. 2021). Jan (2020) identified problems with administration and management awareness, technical and linguistic concerns, and resource availability; influence how e-learning is implemented in Kashmir's higher education institutions.

Both advantages and disadvantages might be associated with taking lessons online. Some advantages include self-paced learning, flexibility with regard to space and time, time savings (there is no need to drive between home and the school), and the fact that distant learning courses are typically less expensive. Constraints include the absence of face-to-face interaction; the challenge of receiving immediate feedback, the need for constant and dependable access to technology, and occasionally some issues with certification (De Paepe et al. 2018; Lei and Gupta 2010; Venter 2003; Zuhairi et al. 2006).

2.1 The theory of cultural lag

The hypothesis of the "cultural lag" was first introduced by W.F.Ogburn in his work, and he says:

".....various parts of modern culture are not changing at the same rate, some parts are changing more rapidly than others; and since there is a correlation and interdependence of parts, a rapid change in one part of our culture requires readjustments through other changes in the various correlated parts of culture. For instance, industry and education are correlated; hence, a change in industry makes an adjustment necessary through changes in the education system" (Ogburn, 1922 cited by Gisbert, 2015, p. 269).

2.2 The concept of the Digital Divide

The term "digital divide" refers to the difference between those who have suitable access to information and communication technologies and those who do not have or only have limited access (Centeio, 2017). The first

order of the digital divide focuses on variations in access to computers and the Internet. The second order of the digital divide has focused on social and cultural variables, particularly skill discrepancies.

The goal of the current study is to identify the many disadvantages of online learning for students at a peri-urban higher education institution in West Bengal, India, with a focus on cultural lag and digital divides. In western environments, we found some research on the aforementioned contexts, but relatively few in Indian contexts, especially in peri-urban Indian contexts. As a consequence, it promotes the goals of our study.

3. THE STUDY'S OBJECTIVES

- i. To investigate the relationship between cultural lag and the digital divide and the issues encountered by students at a higher education institution in a peri-urban region of India during online learning.
- ii. To suggest strategies those make changes in online learning to cope up with cultural lag and digital divide.

4. METHODS OF THE STUDY

The aims of the study were captured using cross-sectional methods. A higher education institution in the Paschim Medinipur district of West Bengal, India, was chosen for the peri-urban area. The peri-urban area was chosen for the study because it qualifies as an area with a combination of rural and urban characteristics and serves as a transitional location between a huge city and its rural surrounds (Dutta, 2012; Fazal et al., 2015). Additionally, post-graduate students were selected for this study. Using the "Raosoft" scale, 312 respondents were chosen for the study survey from a pool of 1652 post-graduate students at the higher education institution (95 percent significant value with 5 percent error). From May 2020 to January 2021, 235 samples from 312 total populations were interviewed throughout the pandemic because of social distance standards, time restraints, a lack of interest in delivering replies, etc. A pertinent semi-structured questionnaire was created for the purpose of conducting interviews with participant samples and gathering data. The Likert scale method was used to collect the majority of the replies. In order to do descriptive statistics on the interview data, SPSS 22 (Windows 10 O.S.) version software was used. Along with the nature of the interviews, qualitative replies were also recorded, and their case studies were used to comprehend the patterns. The respondents' case studies are referred to as "R," followed by numeric identities.

5. FINDINGS AND INTERPRETATION

The study's findings and interpretation have accumulated the verified questions on cultural lag and digital divides among post-graduate students, such as interest and motivation towards online classes, effect on mental health, and student-teacher interaction, which were considered the parts of cultural lag as non-material culture, which are intangible and abstract objects like attitude, beliefs, manners, etc. featured here. The ownership of digital devices, the role of digital knowledge for understanding the online classes, whether online content is easy to understand or not, following the online class schedule, technological and infrastructural issues are the parts of material culture which are concrete, visible, and based on skills.

According to Table 1, a total of 235 post-graduate students from a peri-urban region institution participated in the study; 55.3 percent of students were males, while 44.7 percent of students were females. The arts and commerce stream had the highest percentage of respondents (55.3 percent), followed by science (44.7 percent). Furthermore, 61.7 percent of students had no prior online class experience, while 38.3 percent had prior online class experience. The reason might be that online or digital education was not in vogue and could not take rapid speed before the pandemic, and as a consequence, a significant number of respondents had no prior experience of online classes.

Table 1: Demographic information of the student respondents

Demographic Information		Frequency (N=235)	Percentage (%)
Sex type	Male	130	55.3
	Female	105	44.7
Stream of Education	Science	105	44.7

	Arts & Commerce	130	55.3
Prior online class experience	Yes	90	38.3
	No	145	61.7

Source: Field survey from May 2020 to January 2021

Table 2 explores the practical scenario of the theory of "cultural lag" among the students. A sizable proportion of respondents (57.4% and 48.9%, respectively) say they are never interested in or motivated by online classes. 72.3 percent say online classes have a negative impact on their mental health. According to 48.8 percent of respondents, student-teacher technology interaction is never satisfactory. 72.3 percent of respondents said they were never satisfied with submitting online assignments. All these disagreement responses support the theory of "cultural lag," which shows how material and non-material cultures vary. It refers to the idea that culture must catch up to technological advancements over time and the societal issues that emerge from this failure to do so.

Table 2: Questions related to the basic enquiry regarding "cultural lag"

Questions	Student responses (N=235)		
	Always	Never	Sometimes
Are you interested in participating online classes	25 (10.6%)	135 (57.4%)	75 (31.9%)
Are you motivated towards online classes	25 (10.6%)	115 (48.9%)	95 (40.4%)
Does online class effect on mental health	170 (72.3%)	0	65 (27.7%)
Satisfied with student-teacher interaction with technology	50 (21.3%)	110 (48.8%)	75 (31.9%)
Satisfied in submitting the assignment in online	20 (8.5%)	170 (72.3%)	45 (19.1%)

Source: Field survey from May 2020 to January 2021

Table 3 investigates the students' realistic experiences with the concept of "digital divide." A significant number of respondents responded that technological knowledge always (63.8 percent) plays a role in participating in online classes, followed by 36.2 percent who answered it plays a role sometimes. 46.8 percent answered that online delivered content is easy to understand, followed by 34 percent who said it is never easy and 19.1 percent who said it is always easy to understand. Only 51.1 percent of those polled believe that keeping up with the schedule of online classes is simple. The reason might be to save time on travelling and easily access digital devices from their comfort zone, and its authenticity is given with a qualitative response in the following case studies. All the respondents owned smart phones as digital devices, and 30.2 percent of the respondents had both a smart phone and a desktop/laptop.

Digitally proficient students have the necessary skills and technological knowledge to participate in online classes and the online-delivered content is simple for them to understand. Here, digital skill efficiency matters, which supports the concept of a second-order digital divide based on skill disparities. Technical and infrastructural issues in the online mode are the cause of digital divides among the students. All the student respondents owned smart phones. But in the case of owning advanced-level digital devices such as desktops and laptops, only a small percentage of the students had ownership of them. Hence, it creates a first-order digital divide based on the difference between the haves' and have-nots' regarding owning an advanced-level digital device.

Table 3: Questions related to the basic enquiry regarding "digital divide"

Questions	Student responses (N=235)		
	Always	Never	Sometimes
Does technological knowledge play role participating online classes	150 (63.8%)	0	85 (36.2%)
Content easy to understand which is being delivered in online mode	45 (19.1%)	80 (34%)	110 (46.8%)
Is it easy for you to follow the schedule of online classes	120 (51.1%)	25 (10.6%)	90 (38.3%)

Is there technical and infrastructural issues in online mode	35 (14.9%)	30 (12.8%)	170 (72.3%)
Do you posses own digital device	235 (100%)	0	0
	Desktop/Laptop	Smart phone/Tablet	Both
What kind of device	71 (30.2%)	235 (100%)	71 (30.2%)

Source: Field survey from May 2020 to January 2021

5.1 Case Studies

R145 (Male, 22 years, Science department):

"Lack of concentration and poor internet issues are there in online classes."

R 188 (Female, 23 years, Science department):

"The classroom environment is missing in online classes, which de-motivates me."

R 28 (Male, 23 years, Science department):

"I feel that teachers should put emphasis on the improvement of their digital teaching skills to gather students' attention in online classes."

R 10 (Male, 23 years, Science department):

"Practical classes are hampered badly in online classes."

R 6 (Female, 23 years, Arts & Commerce department):

"Inefficiency in the English language and digital applications creates barriers to attending online classes."

R15 (Female, 23 years, Arts & Commerce department):

"Online education allows you to take lessons from home, which saves time and money on travel."

R 180 (Male, 22 years, Science department):

"A stable internet connection, a proper digital device, and adequate digital skills are needed to attend online classes, which saves time, energy, and money on travel to and from the institution."

The case studies revealed various impediments that were faced by the students while participating in online classes. Lack of concentration, poor internet connection, missing classroom environment, teachers' inefficiency, practical class issues, language barriers, and skills problems are major factors that produce "digital divides" and "cultural lag" among the respondents. These impediments to academic digital inclusion in peri-urban institutions should be removed. It is also evident from the responses of the students that online learning saves time, money, and energy on travel to and from institution.

6. CONCLUDING REMARKS

The study revealed that a significant number of students (61.7 percent) don't have online class experience. The majority of the students are not interested and motivated in taking online classes. 72.3 percent of the respondents answered that online classes always affect their mental health. 48.8 percent of students were never satisfied with student-teacher interaction via technology, while 31.9 percent were occasionally satisfied. 51.1 percent of students replied that it was always easy to follow the online class schedule. The reasons might be savings in travel time and effort to the institution. A significant number of respondents (63.8 percent) replied that

technology skills played an important role in attending online classes. 46.8 percent of respondents answered that online-delivered content is easy to understand "sometimes," followed by 34 percent who answered "never." 72.3 percent of students were dissatisfied with the online assignment submission process. Only 12.8 percent of students replied that they never faced any technical and infrastructural issues, followed by 14.9 percent who said they faced them sometimes. Every student owns a smart phone, and 30.2 percent own both smart phones and desktop/laptop computers.

This article makes an important recommendation for student responses, particularly for digitally disadvantaged students from any curriculum. The majority of students expressed no interest in taking classes online. Therefore, a mixed strategy must be taken into account. Due to lack of concentration, a poor learning environment, and other distractions like ads and technical difficulties, students may not be as motivated to learn online. Thus, the majority of students want to continue learning in person. The majority of students who take classes online report that it has an impact on their mental health. The increase in screen time and prolonged sitting in one location may contribute to mental disease by causing unpleasant thoughts that disrupt one's mood. The majority of students feel that the interaction with teachers is subpar when learning online, which has a significant impact on student-teacher interaction. Practical education was the most significant aspect of learning that was significantly impacted because it could not be completed through online learning. Students felt that the practical component of online learning was unjustified. The majority of students believe that having strong technology skills is important for online learning. Online learning is made possible when both professors and students are technologically savvy.

As we discovered, the students are self-learners. Several websites, including YouTube lessons, might offer a crash course in a variety of digital fields. The interactive nature of online learning is appealing to students, who struggle with technology, and they may gain from audio and digital visualisation tools, graphical presentations, and multimedia in virtual teaching and learning, which will benefit all students by making online lectures easier to understand than lectures delivered in more conventional presentation formats. The institution will need a standard operating system (SOP) if the blended learning pattern is to be permanently included in the educational system. A few tactics are suggested by the government and academic organisations to help students be more productive online while completing their academic course work. This means that encouraging the use of software, addressing self-censorship and making digitally disadvantaged students aware of their natural ability, making educators role models and responsive to digitally disadvantaged students from any stream, and creating digitally efficient peer groups can all help shy students. Therefore, the government can start the peer-to-peer teaching initiative. It emphasises the need for time, appropriate training, and family support in achieving the objectives.

7. LIMITATIONS OF THE STUDY AND RECOMMENDATIONS FOR FUTURE RESEARCH

The study was planned in a peri-urban area with only institutions participating. A study can be planned to collect data that will yield a larger, more varied sample and include more higher education institutions. The interviews were conducted during the pandemic, thus many of the planned respondents were unable to respond and a select number were left out. Due to the lock-down and social distance norms, a telephone/online interview was conducted where the respondents' body language was not apparent and there was not enough time for them to ask each other cross-check questions on the interview issues. By offering different solutions to more students from different diasporas, future research could try to get beyond all of these restrictions and expand our understanding of how to bridge the "cultural lag" and "digital divides" as well as improve the digital skills of tech-challenged students.

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