

Undergraduate students' use of social media during the Covid-19 pandemic in the context of online learning at higher education institutions

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Abstract

The objective of this study is to examine the use of social media and video apps for online learning during the Covid-19 pandemic. The article deals with various studies done on social media and online learning focusing on activities done during the pandemic. Model of inquiry constructed by the researcher that deals with cognitive, social and teaching presence take into consideration the context of online learning during the pandemic. The survey method is used to elicit responses from students of Andhra Loyola College, Vijayawada, Andhra Pradesh. The findings show that the effects of social media driven by technological inputs for formal education remain neutral. The results also show that this is a new pedagogical approach by the institution and the faculty to engage students who are away from the institution. The majority of the respondents use “WhatsApp” to get their notes from the lecturers during the off-line classes and the teachers devise different methods to reach out to students by being creative and using technology.

Keywords: Online Learning, Covid-19 pandemic, Model of Communities of Inquiry, Social Media, Survey Questionnaire

1. Introduction

For the past 2 decades, academicians and policymakers have been talking about the online delivery of academic courses and teaching through social media and video apps in educational institutions. Social media are fundamentally about networking and it denotes relationship initiation (Boyd & Ellison, 2007 p.211). In this study, social media mean Facebook, Instagram, WhatsApp, and Twitter and also the video apps such as Zoom, Google Meet etc. These apps are used by faculty to reach students visually and they are facilitated by mobile phones or ICTs (Information and Communication Technologies) to learn and connect with the faculty and fellow students. The advantage of social media and video apps is that they connect students or clients or anyone with the staff or management freely and visually.

However, academic institutions have not done much in the area of online learning in India. Online learning has become a necessity today as we are all in lockdown and have no other means of communicating with the outside world. The existential situation challenges the institutions to reach out to students in a unique way through the internet. What we experience today is what perhaps many researchers had foreseen for the past 2 decades. Covid-19 produced such a need i.e., students and faculty genuinely needed ICT and to some extent, effective access to the Internet made this experience something memorable. The research at hand focuses on the need for students' support for such learning.

Neil Selwyn talks about adult learning in the digital age and suggested that learning in the digital age needs readjustment of expectations, there has to be a genuine need for ICT, needs to make sure that technology is available and one has to encourage students to use technology and education (Selwyn et al., 2006).

Andhra Pradesh State Council of Higher Education (APSCHE), a govt agency, has been active throughout this period putting out the number of sessions taken by each college every day and monitoring the same. Andhra Loyola College, Vijayawada is a NAAC accredited college with 3.66 out of 4.00, ranked 36th by NIRF. It runs 33 programs in all and over 4500 students took up online classes with faculty from March 16-May 16, 2021 during the Covid-19 lockdown. Andhra Loyola College is one of the top three colleges which has been offering online learning to students during this time. The questions raised are: How do the students access their class notes during the lockdown? What is the role of social media apps in student's life in online learning? How do teachers reach out to students? Have the lecturers been successful in reaching out to the students? Have the students been enthusiastic to learn from their lecturers? What is the impression of students about regular sessions conducted by the lecturers? Do the students put into practice what they have learned online? How do students come across teachers online and how do they rate their teachers after their online learning experience? Do the lecturers teach them to be critical and creative? This article will give certain answers to the questions raised here.

2. Literature review

Gee argues that digital media and learning should go together and that such a discipline should be called Digital Media Studies (Gee, 2018). Garrison et al state that educators are particularly challenged when technologies such as e-learning are inserted into the equation. He opines that e-learning has the potential to change the nature and learning transaction (Garrison et al., 2004).

This paper found social media use among adults as a depressant to loneliness during the Covid-19 pandemic. The findings show that the adults felt more lonely during the pandemic than the older adults (Lisitsa et al., 2020); (Geirdal et al., 2021). Another study uses behaviourism and cognitive theory to find out how social media could be a tool to get rid of the stress of studying from home during the pandemic (Batubara et al., 2021).

Belle assesses the effect of mobile learning as a learning tool in the context of higher education institutions in Mauritius and Nigeria and the constraints for the learners in such a context (Jinot, 2019); (Crompton & Burke, 2018). Researchers espouse the social capital theory to discover that there is no relationship between social networking sites and learning (Koranteng et al., 2019).

One more study used the survey method and found that the success of online learning during the covid-19 pandemic depended on students, lecturers, learning resources and technology (Budi Hermanto & Srimulyani, 2021). Mustad aims to study the implementation of blended learning of social media in the context of English learning during the Covid-19 pandemic (Mustadi et al., 2021). Another study showed that Covid-19 did not impede learning activities and in fact, social technologies only augmented learning and that too Arabic learning (Abdillah et al., 2021). Distance learning during the pandemic (Nadeak, 2020); (Zarzycka et al., 2021). Social media is applied in higher education (Gruzd et al., 2018).

The purpose of this article is to learn about the social ramifications of Covid-19 among the general population, with a focus on higher education institutions. The results revealed a considerable disparity between two categories of Twitter users: college students and the broader public (Duong et al., 2020). The purpose of this research is to look at how university students used digital technologies and social networks during the COVID-19 epidemic. According to the data, social media users employ virtual tools to foster collaboration (Rodríguez-Moreno et al., 2021).

A study of how ICT was utilised in learning at Higher Education institutions in India during Covid-19, and the report investigates the types of social media used to provide learning resources to students (Dutta, 2020). This study looked at 252 instructors from both public and private schools and discovered that physical separation during the epidemic has changed teachers' opinions toward using social media in online learning (Jogezai et al., 2021). According to Ghounane's research, pupils prefer face-to-face interaction in the classroom to virtual learning (Ghounane, 2020).

According to the report, preventive steps should be made to reduce the adverse impact of social media use in school (Gómez-Galán et al., 2020). Another research revealed that social media use remains the learners' preferred means of communication during Covid-19 in the Gaza Strip, and this habit causes worry among the pupils (Radwan et al., 2020). During the COVID-19 pandemic, a student at a Bangladeshi college compared problematic smartphone use (PSPU) and problematic social media use (PSMU) and discovered that PSPU and PSMU were linked to poor psychological well-being (i.e., anxiety and depression) and other factors (especially lower age, poor sleep) (Islam et al., 2021).

The purpose of this paper is to examine the use of social networking sites (SNSs) in the context of the Covid-19 epidemic and to propose SNS-supported solutions for long-term education (Cavus et al., 2021). The paper offers a comparative assessment of three coronavirus-affected nations (Spain, Italy, and Ecuador) based on teacher and student perspectives on a convenience sample of 573 people (Tejedor et al., 2021). Hattie proposes 6 signposts in Visual Learning toward excellence in education (Hattie, 2012 pp. 18-19). Selwyn also finds a significant gap between school culture and techno-culture. There are generational and technical "disconnects" between how individuals utilize technology in their "daily life" and how technologies are employed in schools (Selwyn, 2011). (Selwyn, 2011b) comments on teacher inefficiencies, stating that perspectives such as teacher inadequacies regarding technology adoption cause them to be antagonistic to students, and the (non) use of digital technology in the classroom is centred on concerns about the technological devaluing or even outright replacement of the teacher's role in the classroom and the school context.

(Dron & Anderson, 2014 p.4) reveal two reasons: The first reason to learn online with others is an opportunity and the second is that learning happens in many interactions, direct or indirect, with every connection. The author's further state that large-scale courses and tutorials, often clustered together under the label of MOOCs (massive open online courses) are gathering millions of learners, eager and willing to learn.

On the benefit of online learning, (Anderson, 2008 p.17) states that teaching can be done anytime, anywhere and online materials can be updated and learners can access such materials immediately. (Stevens et al., 2017 p.952) state that adolescents use very popular social media sites. Sites including Facebook and Twitter provide individuals with the opportunity to display personal information, expand and maintain social networks, and communicate with others.

(Ismail & Arshah, 2016) studied the impacts of social networking sites in higher education and concluded their studies by saying that the effectiveness of online learning via Facebook is subjective depending on the purpose of its usage. If students intend to use Facebook for academic purposes, then they will improve their learning experiences or else, it will produce no negative impact on their academic achievement.

(Weigel et al., 2009) claimed that the contours of learning — what is thought essential to learn, as well as where, when, and how — shift, albeit slowly at times. The authors have emphasized new digital media as a strong component of these developments; these media contain affordances that might spark even more alterations, notably in the area of learning.

Students enter classes with new competencies, learning preferences, and expectations, according to the authors, which calls the established curriculum into question. There is sufficient data to suggest that youth's learning preferences and styles are influenced by their use of technology.

Another study examined the “impact of mobile applications or apps on students’ learning.” The data suggest that the use of mobile devices, in general, and mobile apps, specifically, in the classroom is enjoyable and enhances student learning (Diliberto-Macaluso & Hughes, 2016). Sheehan proposed a four-stage model to evaluate knowledge and learning technologies: “a. Understanding organizational Intent and Investment b. Clarifying the drivers of knowledge technology solutions c. Blending the appropriate components of knowledge technology solution d. Aligning Organizational drivers and knowledge technology solutions; Finally, the author summarized the secret to effective design of virtual learning as Intent + Investment + Information + Insight + Interaction = Impact” (Sheehan, 2011).

(Davidson & Goldberg, 2012) studied the implications for learning and its (online) institutions. When the students have mobiles and laptops, the educators could use these tools to impart learning. Institutions can be mobilized to change with formal higher education when they are collaborative, participatory, and carry out networked interactions with students online.

Researchers looked at the school and classroom as part of a cultural media ecosystem, with a focus on the increasing pervasiveness of mobile phones and argue that cell phones and other mobile devices serve as resources for learning in both formal and informal situations and that media used in daily life may lead to a new definition of expertise that is unrelated to academic success. The writers also feel that a student might utilize his or her mobile device not just for tasks, but also for talks for learning and personal growth (Cook et al., 2011).

Teachers have a great influence on students in formal education as they deliver the course to students. Teachers act as creative heads and they teach the students to be critical. Teachers have the responsibility of shaping a student in schools and colleges. A student needs to understand what s/he studies and apply it to real-life situations. This seems to be an assumption of the industry but students do fail to understand the connection between what they learn and what they are expected to do in the industry.

Online learning is seen as an unknown quantity by Neil Selwyn and he considers online as an idea that will have unintended consequences. Further, technologies play a major role in online learning. The assumption is that all will learn online but it's not true that all teachers and students adopt technologies fast. So online delivery of programs is an ongoing process. Online learning depends on the purpose of usage and the way it is delivered to the end-user. However, online learning has become a necessity in the context of lockdown and the demand for online learning will grow in the coming months the nature of the delivery of programs may change too with the new generation looking for new thinking and new methods to learn.

3. Theoretical Framework

In the context of the review, the model of Communities of Inquiry developed by (Dron & Anderson, 2014) in their work on “teaching crowds,” acts as the theoretical framework for the paper. The model talks about three kinds of presence within a social learning transaction:

- Cognitive presence: The extent to which participants can construct meaning through reflection and discourse,

- Social presence: The extent of identification with a community and trusting interpersonal engagement, and
- Teaching presence: The design, facilitation, and direction of social and cognitive processes (Garrison et al., 2004).

The model makes us understand how learning occurs within a group setting, where a group of intentional learners and one or more teachers build knowledge together (J. Dron, & T. Anderson, (2014) p.46).

3.1 Community of Inquiry and Cognitive Presence

Dron and Anderson (2014 pp.109-110) say that the foundation of this model has roots in Dewey's (1933) pragmatic model of practical inquiry and Lipman's (1991) reflective learning in formal education. Lipman stated that education is the outcome of participation in a teacher-guided community of inquiry. He further said that the educational process is not acquiring information but a grasp of relationships among disciplines (Lipman, 1991 pp.18-19). Four phases of Cognitive presence are triggering event, exploration, integration and resolution. Cognitive presence is measured through surveys of participant's analysis method. The authors conclude by stating that critical thinking occurs rarely in closed and often artificial groups or classes that define most forms of higher education.

3.2 Community of Inquiry and Social Presence

The second critical component of the Community of Inquiry is social presence, defined as "the ability of participants in a community of inquiry to project themselves socially and emotionally, as 'real' people (i.e., their full personality), through the medium of communication being used" (Garrison, 2007). This definition was later expanded to include a sense of other group members as well as self and common commitment to a task. The authors identified three broad categories of social presence indicators: affective, open communication, and cohesive communicative responses.

3.3 Community of Inquiry and Teaching Presence

The final component of an effective group-based Community of Inquiry informal education is Teaching Presence. Teaching presence begins with the instructional design and organization of tasks that are necessary to construct a context in which social and especially cognitive presence arises. Better teachers find opportunities to raise the question, go deeper and challenge learners to thoroughly explore, integrate, and apply the knowledge generated by the group. They also nurture the development of social presence by ensuring appropriate levels of contribution by group members and help establish a climate of trust and acceptance within the group.

It is worth taking into consideration the recommendations of (Garrison et al., 2004) in this context. Garrison suggests that teacher needs to create a climate for the community of inquiry: establish critical reflection and discourse that will support systematic inquiry; sustain community through the expression of group cohesion; encourage and support the progression of inquiry through to resolution; foster the evolution of collaborative relationships where students are supported in assuming increasing responsibility for their learning and ensure that there is resolution and metacognitive development. The recommendations of Garrison demonstrate that the community of inquiry model has strong implications for process, and emphasizes the deeply technical nature of traditional groups in formal-informal learning.

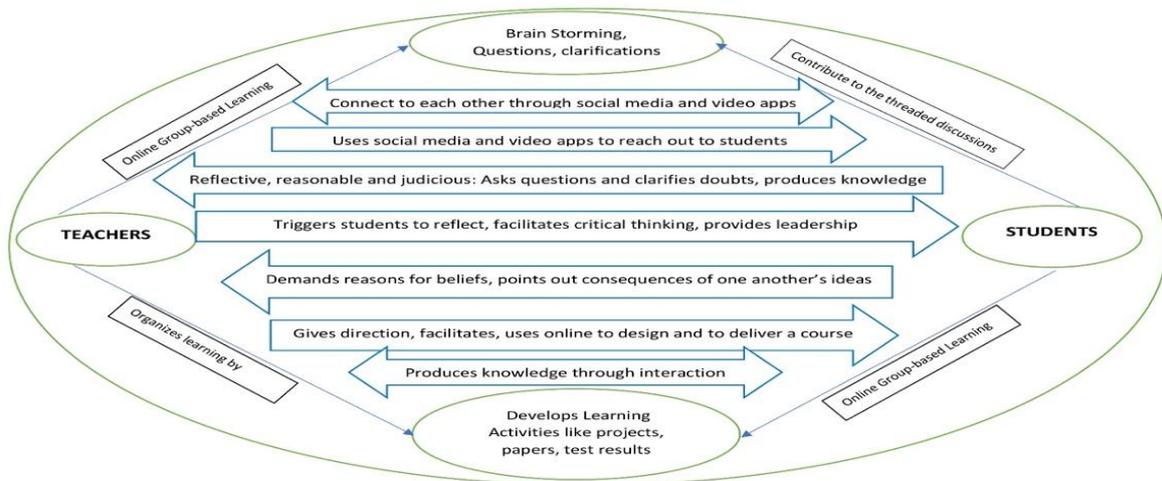
4. Aim of the study

The study aims to examine the effects of social media on online learning by undergraduate students during the Covid-19 pandemic at Andhra Loyola College, Vijayawada.

5. Research Methodology

The model of communities of inquiry that we discussed earlier guided the researcher to devise a survey questionnaire for the research. The researcher came up with the conceptual model that explains the process of learning according to communities of inquiry. The figure below represents the model.

Conceptual Framework of communities of Inquiry



The explanation for the above model

The conceptual framework of Communities of Inquiry worked out by the researcher has an oval-shaped model where all the interactions take place between teacher and student. Teachers trigger students to reflect, facilitate critical thinking and provide leadership. Students, on their part, are reflective, reasonable, and judicious. They ask questions, clarify doubts and thus produce knowledge. The teachers give direction, facilitate and use online to design and deliver lectures online. The teacher organizes learning by developing learning activities like projects, research papers and test results. The students on their part use online group-based learning to contribute to the threaded discussions. A teacher uses online group learning to brainstorm, question and clarify with students. Students too on their part develop critical thinking by participating in the online group-learning activities. Both the teacher and student connect through online social media apps or video apps and both produce knowledge through interaction

6. Results and Discussions

Google forms were sent to students across streams of undergraduate programs at Andhra Loyola College, Vijayawada from May 17-19 immediately after the students completed online sessions by the faculty. 221 forms were received by the researcher and since some were double entries, they were removed to make the total 188. 110 (58.5%) were males and 78 (41.5%) were females and they were between the age group of 17-21. 106 (56.4%) were from BSc, 40 (21.3%) from Visual Communication or Journalism or Mass Communication background, 24 from BA (12.8%) and the rest 18 (9.5%) were from other professional

programs. Of the 188 students who responded, first years were 75 (39.9%), second years were 75 (39.9%) and 38 (20.8%) were third years.

6.1 Income of the respondents’ parents

Table – 1 showed that 50.5% (n=95) of the total number of parents earn only Rs. 60000/- per year and around 25.5% (n=48) come from families with a yearly income between Rs. 60001-100000. While 17 (9%) parents have income between 100001-200000, seven (3.7%) parents earn between 300001-500000. Nine (4.78%) parents of the sample earn more than 5 lakhs.

Table – 1 Income of the respondents’ parents

Variable	Frequency (n)	Percent (%)	Cumulative (%)
Less than Rs. 60000	95	50.5	50.5
Rs. 60001-100000	48	25.5	76.1
Rs.100001-200000	17	9.0	85.1
Rs. 300001-500000	7	3.7	95.2
Above Rs.500001	9	4.8	100
Total	188	100	100

6.2 Ownership of ICTs & Accessing Class Notes

Table- 2 shows 90.4% (n =170) possessed smart phones and only 9.57% (n=17) got laptops or desktops or tabs. While 75.5% (n = 142) access their class notes through WhatsApp, 9.1% (n=17) through e-mail, and 6.3% (12) through websites.

Table – 2 Ownership of ICTs and Accessing class notes

Variable	WhatsApp	Email	Blogspot	Websites	Other	Total
Smart Phone	129	16	1	1	11	170
Desktop	1	0	0	1	0	2
Laptop	9	1	0	0	0	10
Other	3	0	0	0	3	6
Total	142	17	1	12	16	188

6.3 Time spent on Social Media apps and Online learning

On the question how much time they spend on browsing social media apps: 24.7% (n = 47) spend less than 59 minutes per week, 38.9% (n = 74) spend between 1-2 hours, 20% (n = 38) between 2-4 hours, 6.8% (n = 13) spend between 4-6 hours and 9.5% (n = 18) above 6 hours per week. On another question about online sessions conducted through Zoom, WhatsApp, Edmodo, Microsoft etc.: 54.7% (n = 104) spend less than 6 hours, 27.9% (n = 52) spend 6-10 hours and around 17% (n = 32) spend more than 10 hours a week on online learning with the faculty.

6.4 Use of Smartphones and Learning

Table – 3 below shows the use of smartphones to access class notes for formal learning. Among the students, 29.2% (n=55) use traditional print materials, 63.2% (n=119) use smartphones to access class notes, 12.7% (n=24) access notes through other software apps like BlogSpot etc., and 43% (n=81) of the total number of students use hand-written notes still. The data proves that students use traditional print materials, smartphones, other software

apps and significantly hand-written notes for formal learning.90.4% (170) of the students use smartphones to access social media apps and video apps for learning.

Table – 3 Use of Smartphones and Learning

Variable	Traditional print materials	Smart Phones	Other software or apps	Handwritten notes	Other Sources
BSc	30	61	11	45	9
BA	6	16	3	15	1
BCom	0	1	1	0	1
VisComm	17	30	6	13	6
Professional Programs	0	1	1	1	2
Other	2	10	2	7	0
Total	55	119	24	81	19

6.5 Use of social media apps by respondents

The students have the following social media accounts namely Facebook (60%), WhatsApp (96.2%), Twitter (26.5%) and Instagram (65.4%). 83.5% of the students note that their lecturers reach them using Zoom or WhatsApp.

6.6 Domain Knowledge grows due to online sessions

Table –4below shows a cross-tab between the hours spent on online sessions and the domain knowledge acquired through online sessions. Hypothesis testing between “several hours spent online sessions “and “growth in knowledge” reveals a **Null Hypothesis:** Knowledge grows is independent of several hours spent online.**Alternate Hypothesis:** Knowledge growth is dependent on the number of hours spent online.

From the Chi-Square test, the significant value (0.083) is greater than the level of significance so we accept the null hypothesis. The conclusion is that domain knowledge grows independent of online sessions held by faculty.

Table –4 Domain knowledge grows due to online sessions

Variable	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree	Total
Less than 59 minutes	5	29	8	3	0	45
1-2 hours	2	52	13	8	0	75
2.1-4 hours	3	22	11	2	0	38
4.1-6 hours	1	4	5	1	1	12
Above6hours	2	5	7	3	1	18
	13	113	44	17	2	188

Level of Significance: 0.05

Chi-Square: 0.083

6.7 Cross-tabulation of the variables “Applying knowledge obtained from online learning to real-life situations” and “students coming from urban or rural or cities”

Table – 5 below shows a cross-tab between the variables “the students coming from urban areas of Vijayawada, outskirts of Vijayawada, other districts of Andhra Pradesh and outside Andhra Pradesh state” and “applying knowledge obtained from online learning to real-life situations.” Hypothesis testing between the number of hours spent online sessions and growth in knowledge reveals: **Null Hypothesis:** Applying online learning to real-life situations is independent of the places from where students hail. **Alternate Hypothesis:** Applying online learning to real-life situations is dependent on the places from where students hail.

From the Chi-Square test, the significant value (0.019) is less than the level of significance so we reject the null hypothesis. The conclusion is that applying learning to real-life situations is dependent on the respondents who hail from villages or towns or cities.

Table – 5 Applying knowledge obtained from online learning to real-life situations

Variable	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree	Total
Urban areas of Vijayawada	9	31	25	12	0	77
Out skirts of Vijayawada	4	26	8	2	1	41
Other districts in Andhra Pradesh	3	42	13	4	1	63
Outside Andhra Pradesh State	1	1	5	0	0	7
Total	17	100	51	18	2	188

Level of Significance: 0.05

Chi-Square: 0.019

6.8 Rating of statements by respondents

The respondents rated statements concerning online learning with social media and video apps provided by the researcher. While 68.6% rate the Zoom app, which was used for online learning by the lecturers, as a good one, 53.7% feel that they are empowered as citizens when they use social media apps. Only 48% state that they understand concepts better when they learn online. 69.1% of respondents rate their teachers’ lectures as interesting and a significant 86.2% feel that their teachers possess knowledge. While 61.1% of respondents feel that their teachers make them think critically, 72.3% of them look at their teachers as creative persons. 68.1% of respondents state that the teachers allow the students to raise questions during the sessions online and only 42% feel that the teachers challenge the students during online sessions. For a question on which is the best social media app for learning: 48.9% of respondents rate YouTube as the best one, 31.4% rate WhatsApp as the best one, 4.8% of respondents rate Instagram as the best one, and Facebook as an insignificant 2.1% and Twitter has only 1.6% rating.

7. Conclusions and Future Studies

The data analysis shows that students’ attitude towards critical thinking and triggering debates proves that there is cognitive presence. Students are encouraged to question and be

critical too. However, 58% feel that the lecturers do not challenge them enough to learn. 82% approval of students that lecturer possesses knowledge shows that students trust teachers as knowledge-givers.

Though 75% of the students come from very poor families that earn only under Rs. 1,00,000/year, they keep abreast with online learning using smartphones to connect to their lecturers. While many may assume that social media apps play a major role in learning online, the fact is that not all apps are popular with students. The students rate YouTube as the most popular for learning followed by WhatsApp. The interesting fact is that Zoom and WhatsApp are mostly used by students for online learning. The reason could be that Zoom is used by the lecturers mostly for online sessions visually and lecturers use WhatsApp to share class notes with students. The effects of social media-driven by technological inputs for formal education remain a mixed bag. Formal education can be participatory. Education can be learner-centric. Technology can be instrumental can further enhance the quality of education.

It is just a beginning of a newer pedagogical approach to education. Mostly it was a need-based approach because of the troubled times of Covid-19. However, there is a glaring difference between the urban and rural students. Since the paradigm-shifting in pedagogical approaches is taking place from the dimension of using technology for education, assessing future studies is of utmost importance. Studies on the use of social media for formal learning among school and post-graduate students can be carried out. There could be comparative studies on the lines of effects of technology on students among school, graduate and post-graduate students. Further, since the digital divide is quite pervasive in Indian society, a probe on the use of technology for formal education can be undertaken between the students from rural and urban regions.

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