

# The Impact of Socio-Economic Factors in the Virtual Learning Environment on Student Learning

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## Abstract

This study delves into the critical intersection of socio-economic factors and virtual learning environments in Sri Lankan secondary schools, highlighting its paramount importance. It explores the influence of parental income and educational attainment on students' educational experiences within the virtual realm. The methodology utilized in this research employs a quantitative research design, encompassing a sample of 1350 secondary school students. The analysis encompasses both descriptive and inferential statistical techniques, providing comprehensive insights into the topic. The major findings of this study underscore the moderately high level of virtual environmental support for student learning. Notably, there are significant disparities based on parental income and educational levels. Students from higher-income families and those with better-educated parents experience greater virtual support, emphasizing the socio-economic divide in access to virtual learning resources. In light of these findings, future research should focus on devising targeted initiatives to bridge this digital divide. Such initiatives could involve providing essential digital resources to economically disadvantaged students, promoting digital literacy among parents and teachers, and enhancing internet accessibility in underserved communities. These measures can contribute to equitable access to virtual learning environments, addressing the pressing issue of educational inequality in Sri Lanka. This study highlights the pivotal role of socio-economic factors in shaping the virtual learning landscape and emphasizes the urgent need for actionable interventions. By addressing these disparities, Sri Lanka can work towards creating an inclusive and equitable educational ecosystem that benefits all students, regardless of their socio-economic backgrounds.

**Keywords:** Student Learning, Virtual Environment, Students, Parental Income And Patrenal Education.

## Introduction

Throughout students' educational careers, students' experiences of wellbeing are influenced by socioeconomic factors such as, parent education and parent income (Denison et al., 2014).

The microsystems layer in the Ecological theory underlying that the socio-economic status will shape one's life, particularly that of children and adolescents (Bronfenbrenner, 1979). Besides, Psychosocial Wellbeing Framework of Sri Lanka (2009) assert that the quality of societal institutions impacts one's attainment of wellbeing more, specifically the relationships and structure of the family directly influence students' wellbeing. For instance, if a family's poverty has an adverse effect on their children's education, this can be described as a family's negative sense of wellbeing. Parent's educational background, occupation, income and, parental participation positively influenced students' academic performance (Yunus & Hamzah, 2018).

Social context within which individuals interact and experience life significantly impacts their development and potential realization (Bronfenbrenner, 1979). Bronfenbrenner's socio-ecological theory (Bronfenbrenner, 1979) underscores the multifaceted nature of a child's development, highlighting the role of various environmental factors, including home, school, community, media, virtual environments, occupation, government, and culture, in shaping a child's growth. According to Bronfenbrenner (1979), the environment, encompassing the community, society, and virtual realms, plays a crucial role in enhancing children's development and psychological capabilities. This model incorporates the concept of bidirectional influence, acknowledging the mutual impact of individuals on their environment and vice versa, along with the idea of indirect influence (Gurtner et al., 2001).

In the context of virtual learning environments, this ecological perspective becomes particularly relevant. The virtual environment positively influences student learning by offering a platform for studying lessons and engaging with local and global issues ((Köse, 2016). Social networking platforms, for instance, provide opportunities to enhance student discussions, communication with peers, and interactions with teachers (Bouhnik et al., 2014). The use of social media for collaborative purposes leads to increased engagement with teachers and peers, fostering knowledge sharing online, ultimately influencing student participation and academic achievement (Ansari & Khan, 2020). Through social media platforms, students and teachers can share educational content such as images, videos, audios, PDFs, and other documents. Virtual environmental support encompasses various forms of student involvement in learning, including participation in educational social media posts, engagement in academic forums, utilization of the internet for educational information, and the ability to receive prompt feedback from teachers, all of which contribute to enhancing student learning.

In the contemporary educational landscape, the advent of virtual learning environments has transformed the way students access and engage with educational content. However, it is increasingly recognized that a multitude of socio-economic factors play a pivotal role in shaping students' learning experiences and outcomes within these virtual settings. Despite the significant strides in Sri Lanka's educational policies aimed at achieving universal access and fostering educational equality, there has been a notable scarcity of research addressing the intersection of virtual learning environments and socio-economic factors, which is essential for fully realizing the potential of these policies and ensuring equitable educational outcomes for all students in the country. Thus, this article delves into the intricate relationship between socio-economic factors and student learning within virtual environments, aiming to elucidate the extent to which these factors influence academic achievement, engagement, and overall educational equity. By shedding light on this crucial intersection, we hope to inform educators, policymakers, and stakeholders in the education

sector, enabling them to develop strategies that promote equitable virtual learning experiences for all students, regardless of their socio-economic backgrounds.

### **Literature Review**

The world has become a global village because of the rapid development of the World Wide Web. The growth of the use of the Internet and digital devices in education has seen tremendous growth in the recent past; technology has entered the learning environment in a big way to become part of the teaching and learning process. The virtual environment is the sources of spreading the news to a large audience and going beyond the space. In the virtual environment, the Internet performs several educational functions such as increasing interest in learning, communication without boundaries, information storage, global education, innovation in the new world, information catalogues, electronic/online research, and online interactive learning (Park, 2009). Naturally, the virtual environment has offered teachers and students a giant leap forward unequal to any other phenomenon barring the printing press. Nowadays, the virtual environment makes education more child-centred by providing many alternative paths with various resources so that learning can take place based on learner's study performance (Abass & Ayo, 2012).

Most students use the Internet for e-encyclopedias, e-dictionaries, and translation tools to do their homework and projects, download photos or pictures, necessary files, and find sources of information (Dogruer et al., 2011). Undergraduate students in Nigeria believed that internet use helps them do homework, read, learn, improve their self-learning, improve peer learning, and prepare for students' examinations (Apuke & Iyendo, 2018). Students in Tanzania were using the Internet to search for academic information (80.9 percent), to play and download music (82.0 percent), to browse for fun (57.3 percent), to play and download games (61.8 percent), to visit different websites (56.2 percent), and to read online newspapers and magazines (44.9 percent), however, respondents advised to be aware of the importance of using Internet services to search for academic information rather than for entertainment purposes (Tarimo & Kavishe, 2017).

In the new millennium, most of the students use the social media such as Facebook, WhatsApp, Messenger, WeChat, Instagram, TikTok, QQ, Sina Weibo, Twitter, and Viber to enhance their involvement in the learning process. Educational influences of social media on student learning such as enabling them to study their school subjects and lessons, improving their knowledge with new information, allowing them to be more aware of local and global issues, allowing them to perform their works collaboratively through intercrossing relationship, and gaining ability to understand a problem and solving it and increasing their study time (Köse, 2016). Almost all higher education students in Turkey use the internet for their study purposes, and the use of social networking sites for "gaining up-to date information" and "learning new information and knowledge" were the most positive ways to organize their work, study, and social life (Usluel 2016). Nearly 87.4% of Moroccan Higher education students recourse to Facebook social network for educational purposes, and students use Facebook to check class-related information and activities and homework assignments, discuss various topics with a classmate, access relevant learning materials and get assistance on academic-related materials (Faizi & El Fkihi, 2018). Hong Kong school students consumed and shared a variety of social media content outside of school and they realized that the importance of sharing content with peers is the most significant predictor having a positive impact on all social media activities, both in and out of school (Lu et al., 2016). Undergraduate students in Hong Kong use social media for discussion, information sharing,

and searching, however, that students were distracted from learning due to social and entertaining functions (Tang et al., 2015). However, it was confirmed that there is a link between Facebook use and academic performance in students (Ainin et al., 2015).

Another benefit of social networking is that it can be used as collaborative platforms leading to students' interactions with peers and teachers, consequently resulting in students' academic achievement. The use of social media by students for collaborative purposes has resulted in interactions with their teachers, peers and sharing online knowledge behaviour and student involvement was influenced by interactivity with peers, teachers, and online knowledge sharing behaviour, which resulted in academic achievement (Ansari & Khan, 2020). Secondary school students in Hong Kong who participated in more collaborative revisions on the wiki produced more writing output, students are positive in terms of the pedagogical value of the wiki and while wikis encourage collaborative writing, teachers must implement pedagogical strategies that allow students to use wikis (Chu et al., 2017). This way, social media platforms help collaborative learning as students and teachers work together for a common objective. Students use social networking for online educational discussions, knowledge sharing, and file sharing because social networking and student learning have a positive relationship (Eid & Al-Jabri, 2016).

Social network platforms give opportunities to enhance discussion interaction and communication between teacher and student, student and student (Bouhnik et al. 2014). Teachers use social media with students for information sharing both in the classroom and outside the classroom (Matzat & Vrieling, 2016). Social networks tend to become an essential part of students' lives as they spend most of their free time with the social media and students discuss with their peers on issues related to their studies (Talaue et al., 2018). The majority of secondary school students spend their time on computers, and the majority of them use mobile phones to communicate with classmates and teachers outside of the classroom (Kozioł, 2015).

Students prefer to use Facebook for their online class group because it is a user-friendly medium that is quick and convenient, Messenger or Facebook notifications are quick and reach all of their colleagues, increasing their awareness and Facebook is more convenient as it enables them to share a message at once instead of sharing separate messages with individuals' colleagues (Muls et al., 2019).

Currently, it seems that there is a rapid expansion of computer tablet in schools and households. Tablet computers can be used to run educational apps, allowing students to engage in learning. Mobile apps used for tutorial learning among Malaysian secondary school students tend to reduce student anxiety when the topic is related to Islamic funerals, and students tend to use Mobile apps repeatedly until they completely understand the lesson without relying on the teacher (Yahaya et al. 2020). Students' use of math apps tends to increase student engagement in mathematics learning while decreasing achievement disparities between typical and struggling students (Zhang et al. 2015). Teachers may be able to use effective pedagogical strategies in the classroom when they use Show and Tell apps, which lead to students' engagement at a higher level. Specifically, when using Show and Tell apps, students' thoughts become visible to themselves, which leads to strong negotiation and discussion about the mathematical strategies and concepts that students tend to use for problem-solving (Ingram et al. 2016).

On the other hand, considerable empirical studies revealed that social networking and social media negatively affect student learning. Students who use social media perform poorly in their academic subjects (Wakefield & Frawley, 2020). et al. (2015) Facebook negatively

influenced students' performance (Abu-Shanab & Al-Tarawneh, 2015). Mobile social networks affect student performance as students in Nigeria are addicted to mobile social network sites. As a result of this addiction, students' involvement in school and lesson activities was neglected and it was recommended that mobile social networks be used to support students' learning activities by providing appropriate guidance (Almu & Buhari, 2014). Social networks and social media give students and teachers virtual environments where they can discuss, share knowledge, assist each other, and collaborate, which leads to the enhancement of their learning experiences and student wellbeing. Lack of electronic library facilities, inadequate cybercafes, inadequate digital readiness of their institutions and staff, and lack of internet facilities affect the utilization of the internet (Apuke & Iyendo, 2018).

### **Aim of the Study**

This research endeavor sought to ascertain the extent of virtual environmental facilitation for student learning and to discern variances in virtual environmental support contingent upon socio-economic determinants, notably parental income and parental educational attainment, among secondary school adolescents in the Sri Lankan context.

### **Objectives**

The primary objectives of this study are as follows:

01. To investigate and assess the levels of virtual environmental support accessible to secondary school students in Sri Lanka.
02. To analyze disparities in virtual environmental support predicated upon the income levels of parents or guardians.
03. To determine distinctions in virtual environmental support in relation to the educational qualifications and background of parents or guardians.

### **Research Methodology**

This research adopted a quantitative research design and targeted the population of secondary school students in Sri Lanka. Utilizing a stratified random sampling technique, a sample of 1350 secondary school students was selected for inclusion in the study. The questionnaire employed in this study was tailored to align with the specific requirements of the survey. It comprised two distinct sections: the initial section aimed at capturing essential demographic information from the students, while the subsequent section focused on gauging the students' perceptions concerning virtual environmental support. Respondents were presented with a five-point Likert Scale (ranging from 1 to 5), allowing them to indicate their level of agreement, ranging from "Never" (1) to "Always" (5). To ensure the questionnaire's validity and reliability, input from experts in the fields of sociology of education and educational technology was solicited. The internal consistency of the instrument was assessed through the calculation of Cronbach's alpha coefficient, yielding a robust value of 0.981.

### **Data Analysis**

The data analysis in this study involved the utilization of both descriptive and inferential statistics. Specifically, Statistical Package for the Social Sciences (SPSS) Version 23 was employed as the tool for conducting the data analysis. To begin with, descriptive analysis was employed to calculate the mean and standard deviations. This allowed for the assessment of the overall level of virtual environmental support for student learning.



Subsequently, an inferential statistical technique known as Multivariate Analysis of Variance (MANOVA) was applied. The objective here was to investigate if there were any significant differences in virtual environmental support based on two key factors: parental income and parental education. This analysis was carried out within the context of Sri Lankan secondary school children.

## Results

### Demographic characteristics of the participants in the survey

The analysis of respondents' demographic information involved the utilization of frequency and percentage distributions. The demographic variables under investigation encompassed gender, father's education level, mother's education level, and parental income. A comprehensive presentation of the surveyed respondents' demographic profiles is presented in Table 1.

Table 1  
Demographic Profiles of the Students

Profile	Demographic	Frequency	Percentage
Gender	Male	675	50.0
	Female	675	50.0
Parent Income	Less than Rs. 15,000 (Less than RM. 333)	487	36.1
	Rs. 15,001 -46,000 (RM 334 – RM 1,022)	609	45.1
	Rs. 46,001- 150,000 (RM 1023 – RM 3,333)	215	15.9
	More than Rs. 151,001 (More than RM. 3,334)	39	2.9
Father's level of Education	No schooling	56	4.1
	Primary	332	24.6
	G.C.E O/L	565	41.9
	G.C.E A/L	307	22.7
	Tertiary education	90	6.7
Mother's level of Education	No schooling	47	3.5
	Primary	292	21.6
	G.C.E O/L	613	45.4
	G.C.E A/L	320	23.7
	Tertiary education	78	5.8

Table 1 shows that a total of 1350 secondary school children were involved in the equal gender representation, by having 675 male students (50.0%) and 675 female students (50%). As for the respondents' parental income, the majority (609 or 45.1%) revealed that their parents' income was between Sri Lankan Rupees 15,001 to 46,000. 487 or 36.1% of respondents stated that their parents' income was below Rs.15,000. 215 or 15.9% gave their parents' income as falling between Rs.46,001 to 150,000. Only 39 or 2.9% indicated that their parents' income was more than Rs.150,000.

Regarding fathers' level of education, most respondents (565 or 41.9%) informed that their fathers had passed the G.C.E 'O' Level. However, a minority of respondents (56 or 4.1%) stated that their fathers did not have the benefit of any school education at all while a considerable number of respondents (332 or 24.6%) admitted that their fathers had only received primary education. Nonetheless, other respondents informed that their fathers

possessed better qualifications, namely G.C.E 'A' Level (307 or 22.7%) and Tertiary Education (90 or 6.7%). In the case of mothers' level of education, most respondents (613 or 45.4%) claimed that their mothers possessed G.C.E 'O' Level certificates. On the other hand, a minority of respondents (47 or 3.5%) admitted that their mothers did not have any school education at all while a considerable number of respondents (292 or 21.6%) stated that their mothers had only obtained primary education. The rest of the respondents had mothers who possessed better qualifications, namely G.C.E 'A' Level (320 or 23.7%) and Tertiary Education (78 or 5.8%).

### The level of support within the virtual environment for facilitating student learning

The descriptive analysis values, such as mean and standard deviation, are used to determine the level of virtual environmental support for learning as indicated in Table 2.

Table 2

Level of Virtual Environmental Support

No.	Item	Mean	S. D	Interpretation
B1	Social media (WhatsApp / Viber/ Facebook) posts on education help me to engage in my learning	3.652	1.330	Moderately High
B2	Engaging in academic forums on social media increases my understanding of topics discussed in class	3.509	1.299	Moderately High
B3	I get faster feedback and comments from my teachers via social media which enables me to improve my learning	3.509	1.316	Moderately High
B4	I use materials obtained from social networking sites to learn more than what I have been taught in class	3.051	1.331	Moderately High
B5	My internet usage helps me to search for information (pictures / music/ videos / content) which enables me to get involved in lesson activities	3.562	1.336	Moderately High
B6	I use Internet communications technology tools when I want to learn about something new.	3.616	1.326	Moderately High
B7	The usage of social media for my studies has helped to improve my grades.	3.3704	1.335	Moderately High
	<b>Overall</b>	<b>3.4675</b>	<b>1.02276</b>	<b>Moderately High</b>

Table 2 shows the level of items in the virtual environmental support category with the overall mean of 3.467, overall S.D. of 1.022, and the interpretation as moderately high. The highest item in this category is item B1 that is about social media (WhatsApp/ Viber/ Facebook) posts on education that help students to engage in their learning; the mean for this item is 3.652 (S.D. =1.330) and the interpretation for this is moderately high. The second highest item is students' engagement in academic forums on social media, which increases their understanding of topics discussed in class (B2), which has a mean of 3.509 (S.D. =1.299) and

moderately high interpretation. The next item (B3) is about getting faster feedback and comments from their teachers via social media, which enables them to improve their learning; this has a mean of 3.509 (S.D. =1.316). and moderately high interpretation. The lowest item is about students' usage of materials obtained from social networking sites to learn more than what they have been taught in class (B4) with the mean of 3.051 (S.D. =1.331) and moderately high interpretation. The results show that students have a moderately high level of educational support from the virtual environment, thereby enhancing their learning involvement.

### Disparities in virtual environmental support contingent on parental income

Table 3 shows the MANOVA analysis for the difference in mean scores for virtual environmental support based on parental income.

Table 3

MANOVA Difference of Virtual Environmental Support based on Parental Income Level

Variable	Income Level	N	Mean	S. D	Type III Sum of Squares	Df	Total Squares	F	Sig.
Virtual Support	>Rs. 15,000	48	3.27	1.09	42.29	3	14.09	13.8	0.00
		7	5	5	5		8	64	0
	Rs.15,001-46,000	60	3.49	0.97					
	Rs.46,001-150,00	21	3.75	0.90					
	< Rs.151,001	5	6	9					
		39	3.85	0.82					
		7	2						

Significant disparities in virtual environmental support were observed [ $F = 13.864$ ,  $p = 0.000$ ], contingent on parental income levels. Among students whose parental income exceeded 150,000 Sri Lankan Rupees, virtual support exhibited the highest mean value (mean = 3.857, S.D. = 0.822) compared to other income groups. For those with parental income between Rs. 46,001-150,000, virtual support was lower than the highest income group but higher than other income categories.

Furthermore, Table 3 illustrates a notable distinction between parental income levels of Rs. 46,001-150,000 and incomes below Rs. 15,000. This suggests that students from upper-middle-class families receive more substantial virtual support compared to those from lower-income families. Conversely, students with parental income below Rs. 15,000 received lower virtual support (mean = 3.275, S.D. = 1.095) with mean values lower than those in other income brackets.



**Virtual Environmental Support Differences Based on Parent Education**

Table 4 and Table 5 show the MANOVA analysis of the difference in mean scores for virtual environmental support based on parental education level.

Table 4

Two Way MANOVA Difference Aspects of Virtual Environmental Support based on Parental Educational Level

Variable	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Father's Highest Educational Level	Virtual Support	1.491	4	0.373	0.372	0.828
Mother's Highest Educational Level	Virtual Support	24.712	4	6.178	6.173	0.000

Table 5

Mean Scores Difference Aspects of Virtual-Environmental Support based on Parental Educational Level

	Father's Highest Educational Level	Mother's Highest Educational Level	Mean	Std. Deviation	N
Virtual Support	No Schooling	No Schooling	3.44	1.02	21
		Primary	3.26	1.13	19
		G.C.E(O/L)	2.83	1.16	14
		G.C.E(A/L)	5.00	0.00	2
		Total	3.28	1.13	56
	Primary	No Schooling	3.39	0.73	17
		Primary	3.22	1.02	183
		G.C.E(O/L)	3.20	1.16	116
		G.C.E(A/L)	3.38	1.00	15
		Tertiary Education	5.00	0.00	1
	Total	3.24	1.06	332	
	G.C.E(O/L)	No Schooling	3.68	0.46	5
		Primary	3.14	1.05	77
		G.C.E(O/L)	3.47	1.01	357
		G.C.E(A/L)	3.64	1.00	113
		Tertiary Education	3.67	0.90	13
	Total	3.46	1.02	565	
	G.C.E(A/L)	No Schooling	3.71	0.40	2
Primary		2.62	1.33	10	

	G.C.E(O/L)	3.53	0.97	114
	G.C.E(A/L)	3.76	0.88	159
	Tertiary Education	3.65	1.01	22
	Total	3.63	0.96	307
Tertiary Education	No Schooling	3.57	0.00	2
	Primary	2.80	0.32	3
	G.C.E(O/L)	3.76	0.88	12
	G.C.E(A/L)	3.90	0.89	31
	Tertiary Education	3.92	0.64	42
	Total	3.85	0.77	90

Table 4 presents an analysis of socio-environmental support concerning virtual support, stratified by the highest education level attained by both fathers and mothers. The results indicate that there are no significant differences in virtual support based on the father's highest education level [ $F = 0.372$ ,  $sig = 0.828$ ]. However, when considering the mother's highest education level, the table reveals significant variations in virtual support [ $F = 6.173$ ,  $sig = 0.000$ ]. Specifically, students whose mothers hold tertiary education degrees exhibit the highest mean virtual support compared to their peers with different maternal educational backgrounds.

Further examination through post hoc analysis of various aspects of virtual environmental support demonstrates significant differences in socio-educational support, particularly in terms of virtual support. Among students with fathers without formal education and those with fathers holding tertiary education degrees. Among students with fathers having only primary education and those with fathers possessing qualifications such as G.C.E (O/L), G.C.E (A/L), and tertiary education. Among students with fathers with G.C.E (O/L) and students whose fathers have attained tertiary education. Additionally, the post hoc analysis reveals significant differences in socio-educational support concerning virtual support based on the mother's highest educational level. Between students with mothers having only primary education and those with mothers holding qualifications such as G.C.E (O/L), G.C.E (A/L), and tertiary education. Among students with mothers possessing G.C.E (O/L) qualifications and those whose fathers hold G.C.E (A/L) and tertiary education degrees.

### Conclusion and Discussion

The level of virtual support for student engagement falls within the moderate to high range. Undergraduate students in Nigeria often receive support from the virtual environment for their learning endeavor and students in Nigeria believe that internet usage positively impacts their ability to complete homework, engage in reading, enhance self-directed learning, improve overall learning outcomes, and prepare for examinations. However, the extent of this utilization is hindered by several factors, including the lack of electronic library resources, insufficient availability of cybercafes, inadequate digital preparedness of educational institutions and staff, and a scarcity of internet facilities (Apuke and Iyendo, 2018).

Furthermore, the research findings indicate that virtual environmental support for student learning increases significantly as the educational attainment of mothers rises. Parents with higher qualifications are more likely to actively engage in supporting their

children's academic and personal development, including providing necessary tools and resources (Al Darwish, 2016). Parents with higher educational backgrounds tend to supply essential devices and learning materials and take a keen interest in their children's educational progress ((Ibrahim, 2017).

Moreover, the study reveals that virtual environmental support for student learning also correlates with parental income. Parents with higher incomes are better positioned to provide their children with the necessary materials and devices required for academic success, thereby facilitating their children's performance in school (Yunus & Hamzah, 2018). Conversely, parents with limited financial resources often struggle to afford educational materials and devices, which can lead to poorer academic performance among their children (Ahmad and Naima, 2013). The financial and social background of parents plays a crucial role in shaping the opportunities they can offer to positively influence their children's educational development (Sirin, 2005). Notably, students whose parents are categorized as poor or have incomes below the poverty line tend to experience the lowest levels of virtual support across all aspects of their education.

The study conducted in Sri Lanka underscores the significance of demographic factors in determining the level of virtual environmental support received by secondary school children, emphasizing their non-negligible influence. Parental attributes, including income and educational attainment, exert a notable impact on the virtual environmental support provided to secondary school students in Sri Lanka. The findings indicate a positive correlation between the highest educational level of parents and the degree of virtual support, as well as between parental income and the level of support. These results align with the tenets of ecological systems theory (Bronfenbrenner, 1979), where the microsystems layer elucidates how socio-economic status shapes the lives of children and adolescents.

The implications derived from this study have practical relevance for educational policy and practice in Sri Lanka. The Ministry of Education could consider initiatives such as providing tablets and mobile devices to economically disadvantaged students and enhancing internet access for segments of society with limited resources. Encouraging parents to maximize their income to afford essential educational devices that can enhance their children's well-being is another actionable recommendation. Both parents and teachers can play an instrumental role by actively promoting the use of digital devices for educational purposes among students. Moreover, in the context of the COVID-19 pandemic, educators can establish a robust virtual learning environment to facilitate the teaching and learning process. Schools should prioritize the provisioning of essential educational resources, including ICT facilities, digital devices, internet connectivity, and other pertinent materials, to ensure equitable access for all students.

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