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Rupali ..

Paritosh Mishra

Balvinder Shukla

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Rupali, Mishra & Shukla

Online Learning Experiences and Resilience in Higher Education Students: Evidence from India

Rupali [1,*]
Paritosh Mishra [2]
Balvinder Shukla [3]

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*Corresponding author
[1] Amity Business School, Amity University Uttar Pradesh, Noida, India, Research Scholar, rupali.kumar97@gmail.com
[2] Amity Business School, Amity University Uttar Pradesh, Noida, India, Professor, pmishra@amity.edu
[3] Amity University Uttar Pradesh, Noida, India, Professor, bshukla@amity.edu

ABSTRACT

Due to significant disparities in the digital foundation, the social and economic position of students, the pedagogical framework, and the skill deficiencies of staff and instructors, the COVID-19 pandemic has generated specific issues in the education sector for both developed and developing nations. The capacity of students to succeed in online learning environments is highly influenced by resilience. It aids pupils in overcoming challenges, remaining motivated, managing their time, adapting to changes, and preserving their emotional wellbeing. The authors want to understand the levels of resilience in higher education students in India during the COVID-19 and explore its connection to students' experiences in online learning environments enrolled in graduate and postgraduate degrees, whose ages ranged from 18 to 28, which made up the study sample. To investigate gender variation in resilience levels independent t-test was utilized and to study the link between resilience scores and the online learning experience of students, correlation analysis has been used. According to the results of the current study, there is a significant gender variation in resilience scores and the resilience levels were positively and strongly connected with availability of resources, comfortability, satisfaction and perceived quality. Findings of the present research can help educational institutions focus on enhancing resilience for better learning during troubled times.

Keywords: Resilience, Online learning, Online learning experience, COVID-19, Higher Education, Students, Gender

INTRODUCTION

The world witnessed spread over of novel coronavirus (COVID-19) with the onset of the third decade of the twenty-first century which forced educational organizations to temporarily close their doors and move to online learning mode. More than 1.57 billion pupils were perforce dropped out of school consequent to COVID. "The COVID-19 pandemic has been the worst shock to education systems in a century" (UNESCO, 2020). In March 2020, India had imposed a lockdown for 21 days which was later extended. In April 2021, India saw one of the worst second wave of COVID-19 cases in the world which compelled Centre and State Governments to call for universities and educational institutions to transition to online learning. Online learning occurs over the internet with the use of technological innovations. It is a teaching-learning strategy that relies more on students, resulting in synchronous or asynchronous learning experiences via devices and internet connectivity (Dhawan, 2020). These measures were surely needed for the safety of students, teachers and every individual involved. However, due to the unprecedented nature of the current shift, educational institutes were not adequately prepared with appropriate systems for online learning. This shift from face-to-face learning to on-the-screen learning has generated several problems at university and student level all around the world. The mass transition from conventional means to new age online learning has forced an unmatched effect on students. Since, the start of the outbreak, students of higher education have been under a tremendous amount of stress, be it survival or academic performance succeed (Waxman et al., 2003). Covid-19 has created unique challenges in their education sector for both developed and developing countries due to major gaps in digital foundation, social and economic status of students, pedagogical structure and skill deficiency of staff and teachers.

In India, there is a clear digital discrepancy in the country due to the lack of infrastructure, internet and technology accessibility, internet connectivity issues, and often scarcity of support from parents and educational institutions (Rahana et al., 2021). Various issues such as lack of certainty about the future, fear of exposure to disease, lack of technological skills, internet issues and insufficient training of staff in handling digital tools, have propelled students to face difficulties in online learning. This leads to educational as well has psycho-emotional related effects on student learning (Quintiliani et al., 2022). Under such situations, students' resilience capabilities play an enormous role. Resilience is the process of developing new abilities or capacity to manage major stressors as a result of a challenging, disruptive, stressful, or demanding life experience. Resilient individuals "bounce back" from challenging situations. Resilience does not only mean surviving, but also thriving in adversity as well (Brewer, et al., 2019). A student with high resilience can manage and adapt to his/her situation faster and better than students with low resilience. This personality trait can therefore be extremely helpful in the current turbulent situation and can increase the effectiveness of

academic programs. Several studies over the years have shown strong connection between resilience and academic performance and success (Ahmed & Julius, 2015). Moreover, previous studies have established on the relation between resilience and students' career aspects like decision-making, success and performance (Clohessy et al., 2019). Resilience is linked to long-term viability and can help students of higher education succeed (Waxman et al., 2003). It also has an impact on students' employability and preparation for the workplace (Clohessy et al., 2019). The benefits of resilient techniques can be seen in areas like social science, medicine and personal development. Therefore, the importance of resilience in students during the pandemic is clear.

Some previous studies have analysed resilience levels in a sample population of Spain and studied the factors of resiliency on various socio-demographic variables (Román-Mata, et al., 2020; Sarmiento, Ponce, & Bertolín, 2021). Oducado, Parreño-Lachica, and Rabacal (2021) have explored resilience and its associations with fear, anxiety and stress among students of higher education against the background of the pandemic. Academic resilience has shown to increase academic achievement even amid adversities (Waxman et al., 2003). Biswas (2021) has studied resilience in Indian college students similar to the present study, but the data collection was done during January to April'19 and thus was in pre-COVID times and has found that there is a disparity among the resilience levels of gender. Females have displayed higher level of resilience than men. Conversely, Chow, Tang, Tang, & Leung (2020) have not find any significant difference in resilience among gender. These inconsistent findings might be attributable to the limited and homogeneous sample sizes of the studies. Thus, even though some research has been done on variables such as resilience and gender, none seems to have been carried out in the arena of online study and with sample drawn from India during the pandemic. Whilst the COVID-19 epidemic in India is still ongoing, a study to understand resilience among higher education students in India during online learning is yet to be completed. Through this study the authors aim to understand about the resilience levels in students of higher education in India during the pandemic and examine the relationship between students' resilience and online learning experience. By understanding the resilience in students of higher learning, educational institutions and organizations in India can make better plans and accordingly take decisions in the future.

REVIEW OF LITERATURE

Resilience
Resilience has been studied extensively over the years and several definitions have been given over time. The concept of resilience has been approached from various angles in the past, some define it as an interlinkage of protective factors in face of traumatic circumstances and some as the process of being competent, despite adversity (Luthar et al., 2000). However, there is dearth of commonly recognized definition for resilience. Resilience is also defined as "A dynamic process of positive adaptation in the face of adversity or challenge" (Brewer et al., 2019, p. 10). It is therefore an internal process of pushing oneself and possessing an internal drive to adapt and bounce back when facing challenges in the environment.

It is known that resilience can be encouraged through protective factors such as opportunities for growth, caring environment, supportive adults and peers and self-efficacy. It is influenced by risk factors which might be internal such as individual behaviour and personality or external such as family and environment (Howard et al., 2015). Research by Lee *et al.* (2013) based on meta-analytic methodology stated that improving resilience through strengthening protective characteristics such as self-efficacy, optimism and self-esteem is more successful than reducing risk factors such as depression and anxiety. In all situations, resilience is regarded as a desired quality of adaptability and malleability that impacts an individual's overall health as well as performance.

Resilience in Students
Students who perform exceedingly well even when they are not expected to because of uncertain and difficult situations are considered to be resilient (Chow et al., 2020). Resilience in students has been a topic of interest for researchers for a while. Several reviews of existing literature have pointed out the role of resilience in academics, especially in higher education. It assists students in addressing the obstacles and helps in their education as well as in management of their mental health (Reyes et al., 2015). A recent study has also revealed that resilience among students can be an excellent coping skill while in confinement (Labrague & Ballad, 2021). Resilient youngsters are known to have a high degree of independence, empathy, goal clarity, curiosity, improved peer connections, and problem-solving abilities.

Numerous negative emotions such as fear, anxiety, lack of certainty and stress have increased in students during the lockdown (Oducado et al., 2021). Resilience can help individuals in overcoming challenges and managing stress (Brewer, et al., 2019). It can help manage their mental health better with less likelihood of anxiety and depression (Rahana et al., 2021). In a study by Ye *et al.* (2020), conducted in China with college students during the pandemic, it has been found that resilience is one of the mediating factors between stressful experiences and Acute Stress Disorder and could help alleviate Acute Stress Disorder. Some studies conducted during the pandemic have shown gender related differences in the degree of fear, fatigue (Labrague & Ballad, 2021), anxiety and depression and resilience (Román-Mata et al., 2020).

Online Learning During COVID-19
COVID-19 has been a distressing experience for most individuals which has impacted not only their physical health, but mental health as well. Several studies have been carried out since the onset of the pandemic to evaluate the impact of COVID-19 on online learning in various countries. Students' perception towards preparation for online learning is a critical factor in determining whether online learning can function well during a pandemic (Ramadhanaa, et al., 2021). The negative and positive perceptions towards online learning among students have been established in earlier studies. Some researchers have pointed out that online learning has resulted in high level of satisfaction among students and faculty due to its flexible nature, increased

personal time and the pedagogy used. However, on the contrary some studies have revealed problems faced in adapting to online learning such as lack of interaction, difficulties in maintaining attention, stress of academic performance (Quintiliani et al., 2022; Zhou & Zhang, 2021).

Confinement during the pandemic impacts the academic and psychological performance of students and resilience plays a vital role in the lives of students (Lozano-Díaz et al, 2020). Appolloni *et al.* (2021) avers that resilience is a protective element that fosters in confinement conditions helping the mental conditions of students. Therefore, when it comes to promoting resilience for students, higher education providers have faced problems in creating the online settings and technology infrastructure. Naidu (2021) has pointed out that resilience in students is affected by design and execution of an online learning course. Resource availability such as internet connectivity, technical devices and online resources can severely impact the success of online learning (Kohan, et al., 2017). Availability of such resources to both faculty as well as students are crucial in enhancing online learning has been well studied. According to Alzahrani and O'toole's (2017) research, students who owned internet devices had much more favourable views towards adopting online learning opportunities. Segbenya *et al*. (2022) found that irregular internet access and power supply had an influence on the desire to keep using online learning. By leveraging such resources students can acquire information and support for what they need. Since, students who frequently use technology might not find e-learning platforms a challenge, university provided resources can help in ease of learning in a course and can influence student engagement.

Students often feel comfortable with online learning owing to its flexible nature when compared with traditional learning. Comfortability of students during online learning also impact their overall experience. A study by Safdar, Rauf, Ullah, & Rehman (2020) has found that comfortableness during online learning leads to better understanding and learning. Students' familiarity and ease allows them to be comfortable while learning through various online platforms (Mohd Basar, Mansor, Jamaludin, & Alias, 2021) and thereby increase satisfaction (Rodriguez, Ooms, & Montañez, 2008).

Another study by Maqableh and Alia (2021), having researched university students revealed that students were highly affected by the pandemic and only a few of them were satisfied with online learning despite being more convenient. Dissatisfaction among them was due to numerous problems. However, if students are satisfied it can increase student engagement in online learning (Baloran & Hernan, 2021). Students' gratification is a significant component to consider when assessing the online learning experience (Alqurashi, 2018), and universities and educational institutions are concerned about it. Muthuprasad, Aiswarya, Aditya and Jha (2021) revealed that pupils preferred online learning since it gave them the flexibility to work as per their own needs and were more satisfied by it.

In addition to resource availability, comfortability and satisfaction, perceived quality of online education is also a key determining variable in assessing online learning experience of students. When pupils perceive online learning to be of good quality they are more satisfied. Pham *et al*. (2019) depicted that the quality of e-learning is a highly important tool to consider as it impacts satisfaction and loyalty of students. Also, Kornpitack and Sawmong (2022) conducted a study and discovered that despite the abrupt switch from conventional educational institutions to online learning, students' expectations of the quality of the new system were comparable to the conventional classroom environment and had an impact on their satisfaction. As a result, a big portion of student online experience is determined by how good they think the online learning system is.

Hence, considering the objectives of this study, it has been hypothesised that

H1: There is significant difference in resilience among the students of higher education with regards to gender in online learning amidst the COVID-19 pandemic.

H2: There is an association between resilience and student online learning experience amidst the COVID-19 pandemic.
    H2a: There is an association between resilience and availability of resources amidst the COVID-19 pandemic.
    H2b: There is an association between resilience and comfortability amidst the COVID-19 pandemic.
    H2c: There is an association between resilience and satisfaction amidst the COVID-19 pandemic.
    H2d: There is an association between resilience and perceived quality amidst the COVID-19 pandemic.

METHODOLOGY

Population and Sample

All students who are enrolled in graduate and post-graduate programmes and were receiving online education during Covid-19 were taken as population of the study. Data was collected through random sampling. The study sample was collected during May and June of 2021 when second wave of COVID-19 hit India and lockdown was in place. The questionnaire was in English sent through online survey platform (Google Forms). Finally, the participants were 217 university students consisting of graduate as well as post-graduate programmes with age ranging from 18 to 28 years.

Instruments

The Resilience Assessment Questionnaire (RAQ) is a self-reporting evaluation tool that is open source and is used to quantitatively measure resilience (Mowbray, 2014). The Questionnaire consists of 35 items that range from 1 to 5 on a 5-point Likert scale, with 1 indicating "strongly disagree" and 5 indicating "strongly agree." These are then divided into eight categories:

vision (knowing where you are heading), determination (self-driven), interaction (way you act), relationships (constructing connections), problem solving (capacity to solve problems), organization (highly organized) and self-confidence (being confident in oneself).

To assess the online learning experience of the students six questions on availability of resources, satisfaction, comfortability and perceived quality have been added. These statements have been adapted from validated questionnaires utilised in earlier research (Kohan, et al., 2017; Mohd Basar, Mansor, Jamaludin, & Alias, 2021; Muthuprasad, Aiswarya, Aditya, & Jha, 2021; Pham et al., 2019; Segbenya et al., 2022). These sub-variables have been shown to influence, although not exclusively, the students' resilience levels when experiencing an online learning environment under COVID-19 situation. This scale has also been measured on a 5-point Likert scale. Further the questionnaire was pilot tested with a sample of 30 students of higher education institutions in India before starting data collection via google forms and was found to be valid. Details of the questionnaire is available in Appendix A.

Procedure
The results of the statistical analysis were done with the help of IBM SPSS Version 26. Statistical techniques such as descriptive analysis, parametric test such as independent samples t-test, Pearson's correlation test were applied for interpretation of data. Descriptive statistics assist us in comprehending the variances in the sample mean. The scores of the questionnaire are added together in each of the category, as well as in total, to assess the total resilience score.

Participants

Table 1: Socio-demographics characteristics of participants

Sample Characteristics		*n*	*%*	*M*	*SD*
Gender					
	Female	138	63.6		
	Male	79	36.4		
Age				23.2436	1.9081
Education					
	Under-Graduate	51	23.5		
	Post-Graduate	166	76.5		
Stream					
	Science	32	14.7		
	Commerce	72	33.1		
	Arts	37	17.0		
	Others	76	35.0		

Note: %=Percentage, *M*= Mean, *SD*= Standard Deviation

Source: Authors

The acquired data was subjected to a reliability analysis. Cronbach's alpha was used to test internal consistency by calculating the average correlation across items. The result for Resilience assessment questionnaire with 35 items came out to be 0.89 with alpha of Vision (0.70), Determination (0.58), Interaction (0.47), Relationships (0.27), Problem-Solving (0.66), Organisations (0.59) and Self-Confidence (0.63) with five items in each. The alpha for scale measuring online learning came out to be 0.885 which depicted the scale to be well adjusted.

The sample included a total of 217 higher education students in India. Despite taking care while selection of sample, the final data appeared to be skewed towards female students. When considering the distribution of sample by gender, it was seen that there were 79 Male (36.4%) and 138 Female (63.6%) students. Female students formed the majority of the sample. When examined by the education level, 51 (23.5%) were pursuing undergraduate degree and 166 (76.5 %) were postgraduate students. As seen in Table 1, the students' age ranged from 18 to 28, with an average age of 23.4 years and a standard deviation of 1.9 years. The breakdown of students based on their stream was as follows: Science students made up 14.7% of the total, while 33.1% studied commerce, 17.0% were pursuing Arts and 35% were studying other streams such as Law, Architecture, Information Technology and so on.

RESULTS
Table 2 summarizes the descriptive data for the study's constructs. The range of resilience score of the questionnaire has been 35-175. The resilience score among the students has been then divided into three categories i.e., low, medium and high. A score

between 35 and 105 indicates a low level of resilience and the need to pay closer attention to its development. A score of 141-771 indicates exceptionally high levels of resilience and score ranging from 106 to 140 lies in the medium level category. The mean value of the resilience scores of the respondents is 133.53 with minimum of 96 and maximum score of 170. This depicts that average higher education student falls into the medium resilience category i.e., between 106 and 140. The mean value for student online learning experience during COVID-19 ranged from 3.38 to 3.69.

Table 2: Descriptive statistics of resilience scores and student online learning experience

	M	*SD*	*Skewness*	*Kurtosis*
Resilience Scores	133.53	15.28	0.148	-0.159
Availability of Resources	3.63	0.909	-0.359	-0.384
Comfortability	3.38	1.120	-0.050	-0.926
Satisfaction	3.43	1.048	-0.065	-0.743
Perceived Quality	3.69	0.916	-0.400	-0.299

Note**:** *Min.=*Minimum, *Max.=* Maximum, *M*=mean, *SD*= Standard Deviation
Source: Authors

Table 3: Cross-tabulation of gender and level of resilience among categories

		Low Resilience	Medium Resilience	High Resilience
Overall Resilience Score	Female	5.1% (*n=*7)	68.8% (*n=*95)	26.1% (*n=*36)
	Male	3.8% (*n=*3)	44.3% (*n=*35)	51.9% (*n=*41)
Vision	Female	3.6% (*n=*5)	51.4% (*n=*71)	44.9% (*n=*62)
	Male	6.3% (*n=*5)	44.3% (*n=*35)	49.4% (*n=*39)
Determination	Female	11.6% (*n=*16)	68.8% (*n=*95)	19.6% (*n=*27)
	Male	6.3% (*n=*5)	59.5% (*n=*47)	34.2% (*n=*27)
Interaction	Female	10.1% (*n=*14)	63.0% (*n=*87)	26.8% (*n=*37)
	Male	0.0% (*n=*0)	51.9% (*n=*41)	48.1% (*n=*38)
Relationships	Female	5.8% (*n=*8)	67.4% (*n=*93)	26.8% (*n=*37)
	Male	0.0% (*n=*0)	48.1% (*n=*38)	51.9% (*n=*41)
Problem-Solving	Female	13.0% (*n=*18)	52.9% (*n=*73)	34.1% (*n=*47)
	Male	3.8% (*n=*3)	39.2% (*n=*31)	57.0% (*n=*45)
Organization	Female	43.5% (*n=*60)	46.4% (*n=*64)	10.1% (*n=*14)
	Male	25.3% (*n=*20)	46.8% (*n=*37)	27.8% (*n=*22)
Self-confidence	Female	18.1% (*n=*25)	60.1% (*n=*83)	21.7% (*n=*30)
	Male	10.1% (*n=*8)	59.5% (*n=*47)	30.4% (*n=*24)

Source: Authors

The resilience levels among the eight categories cross-tabulated with gender among the students of higher education during confinement are presented in Table 3. When comparing overall resilience scores of students, female students showed majority in medium resilience whereas, male students made up a majority in high resilience. Taking a glance at the resiliency factors, organization was the only factor in which low resiliency presented a high percentage in both males (23.5%) and females (43.5%). Medium resilience was found to be prevalent in all factors among both genders. Male students, on the other hand, exhibited high resilience in the vision, relationships, and problem-solving categories.

Table 4: Independent T-Test results regarding significant difference in resilience among students and gender

	Gender	*n*	*M*	*SD*	*t*	*df*	*Sig.* *(2-tailed)*
Resilience Scores	Female	138	130.65	14.72			
	Male	79	138.55	15.08	-3.786	215	0.000

Note: *M*= Mean, *SD*= Standard Deviation

Source: Authors

In Table 4, results of independent t-test related to the significant difference between the resilience scores with regards to the respondents' gender is presented. It also depicts the resilience scores of higher education students in terms of their gender. Both genders show good medium level resilience (Female=130.65 and Male=138.55) as the cumulative average resilience score seen earlier was 133.53. On the basis of this table, alternate hypothesis (H1) is accepted as there is significance difference in resilience scores (t[215] = -3.786 , p <0.01) based on gender.

Table 5: Correlation Test Results between resilience scores and student experience of online learning scores

Variables	Availability of Resources	Comfortability	Satisfaction	Perceived Quality
Availability of Resources	1			
Comfortability	.728**	1		
Satisfaction	.547**	.503**	1	
Perceived Quality	.997**	.735**	.546**	1
Resilience Scores	.552**	.398**	.445**	.348**

Note: ** significant values at 95% confidence interval

Source: Authors

Correlation Test Results between resilience scores and student experience of online learning scores are given above in Table 5. Pearson's correlation among the resilience scores and online learning experience scores of students has been applied. The scores of students' resilience and their overall online learning experience were positively correlated during the pandemic. The correlation of resilience scores with availability of resources (r=.552, p<0.01), comfortability (r=.398, p<0.01), satisfaction (r=.445, p<0.01) and perceived quality (r=.348, p<0.01) were all positively and significantly correlated. Therefore, H2 (H2a, H2b, H2c, H2d) are supported.

DISCUSSIONS

Resilience levels of students of higher education experiencing online learning under COVID-19 conditions has been investigated in this study. Firstly, the descriptive analysis has displayed that among the sample almost half of the respondents have reported a medium level of resilience. This finding of the descriptive analysis agrees with other studies that has also reported moderate degree of resilience (Labrague & De los Santos, 2020; Román-Mata et al., 2020). On the other hand, a study by Sarmiento, Ponce, & Bertolín (2021) has found that college students during the pandemic reported high degree of resilience independent of socio-demographic characteristics. It is also discovered that a large majority of students have had a poor level of resilience in the organization factor, which is one of the eight categories of resilience and refers to one's skill to maintain control even in the face of adversity (Mowbray, 2014). The average scores of males were higher than the average female scores and the cumulative average of the scores. Males depicted a greater degree of resilience than female students. The reason for this may be due to cultural factors that lay more responsibility to males which acquits them with skills that assists them in these categories.

The present study has also found that there exists a significant difference between resilience among students of higher education with regard to gender in online learning amidst the COVID-19 pandemic. In vision, relationships, and problem-solving factors of the resiliency scale, male respondents have reported higher levels of resilience than females. Gender differences in degree of resilience have also been depicted in previous studies (Román-Mata, et al., 2020) whereas some studies have revealed opposing results to this (Bozdag, 2020). The resilience scores were reported to be higher in male students as compared to female students which are in line with earlier research (Park, et al., 2015). However, these results were found to be different from a study done in India by Biswas (2021) where it was reported that female students were more resilient than male students. This might be due to various reasons namely demographic, social and cultural factors.

In this study the authors found that there is an association between resilience and student online learning experience in online learning and this relationship between the fours variables which are availability of resources, comfortability, satisfaction and perceived quality. All of them had a positive and significant correlation with resilience scores of students. As studied by various

researchers, resilience increases students' ability to adapt to adversity and is thereby beneficial in times like today in the wake of COVID-19. Since level of resilience in students can influence how they interact with online learning and what kind of experience they have. A good positive experience leads better academic performance and satisfaction of students. A recent study conducted by Ramadhanaa *et al.* (2021) also found a similar correlation between academic resilience and readiness for online learning. This finding also reflects that students' ability to strive in uncertain situations acts as a helpful tool for online learning during the uncertain situations that have been created by the pandemic.

IMPLICATIONS

With an understanding of resilience in higher education students, educational institutions can provide opportunities to develop, harness and enhance resilience among higher education students, as resilience in students helps motivate and support them during online learning and protects them from negative feelings such as anxiety, stress and depression especially during troubling times. While the impact of COVID-19 has been very challenging for students, the degree of resilience reported in this study conveys important insights for adoption and transition to online learning in case of necessities. In addition, for the purpose of enhancing resilience in higher education students, the factors taken to measure online learning experience, such as availability of resources, comfortability, satisfaction and perceived quality, may be helpful for as all of them were positively correlated with resilience scores found in students. Moreover, since, females have been found to be less resilient than males, there should be a focus on gender focused resilience building and enhancing programs.

LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

However, the current study also possesses some limitations. The sample of this study holds clear limits due to it skewness towards female participants. In addition, some factors that can influence students' online learning experience and resilience levels such as the respondents' proximity with someone who might have contacted COVID-19, or whether the respondents have lived alone or with their parents, or their area of residence such as urban or rural, and the like might also influence the results which have not been accounted for in the present study. Resilience is a complex concept, and it is context specific. The questionnaire used has not been validated by other researchers. Hence, future research should be conducted through a cross-sectional sample so that the relationship between resilience levels and online learning experience can be understood at all levels of education and not just at higher education level. Moreover, since students and teachers get more used to online learning this can also affect their resilience which can be further studied. Students who have just enrolled in a course also show different resilience levels as compared to students in later years of their education. This study utilizes correlational analysis and thus causal analysis is not possible. Further studies can be done to remedy this.

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APPENDIX A: Questionnaire for Online Learning Experience of Students

Variable	Item code	Items	Reference
Availability of Resources	AR1	My neighbourhood has reliable, good internet connectivity.	Segbenya et al., (2022)
	AR2	On my device, internet access is less expensive.	
Comfortability	C1	I feel comfortable while attending online classes.	(Mohd Basar et al., 2021)
Satisfaction	S1	Overall, I am satisfied with the quality of online classes.	Alqurashi, (2019)
Perceived quality	PQ1	Online classroom learning in my school is good quality.	Pham et al., (2019)
	PQ2	Online classroom learning is appropriate for my subjects of study.	

Source: Authors