

Level of Satisfaction and Impact of Digital Media on Academic Performance Among the University Students After COVID-19 Pandemic

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Abstract

The COVID-19 that occurred in 2019 altered the lifestyle of the people in the world. Due to COVID-19, many changes happened in the world, and it took time for everyone to adapt to the new life. It also resulted in the closure of schools and other educational institutions. Accessibility to the internet has drastically improved, such that there has been an increased dependency on the internet for information by students. This study has aimed to understand the level of satisfaction and impact of digital media on academic performance among university students after the COVID-19 pandemic. The results of the study have shown a significant impact and disturbances in the overall psychological well-being of the students.

Keywords: COVID-19, level of satisfaction, digital media use, pandemic, academic performance

INTRODUCTION

Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-COV-2 virus. The disease has rapidly spread worldwide, resulting in a pandemic. People continue to experience various symptoms and effects. The COVID-19 pandemic has created a significant loss in learning and academic environments of up to 50% [1]. The dropout rate increased from 108% to 5.3% by 2020 [2]. Academic institutions have also faced significant challenges during the pandemic, such as lack of interest, exposure to new software packages to initiate online learning systems, loss of hands-on teaching, and, most importantly, lack of motivation.

The pandemic has also affected the education evaluation system, examination methods, and digital technology as learning resources for students. Several research studies have shown significant changes among students after the closure of educational institutions and have found that there is a high level of stress, anxiety, and depression. Access to digital media and equipment is a prerequisite for implementing distance-based learning. The availability of learning materials, network connectivity, electricity, and environmental support, along with parental support, played a significant role in the learning process during the COVID-19 pandemic [3].

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There was a significant increase in the average time spent on social media in 2020, by 65 minutes daily, compared to 54 and 56 minutes the year before. The amount of time spent on social networking is expected to remain stable in upcoming years. Progressive adaptation to advances in technology and internet use has become an integral part of human life. The availability of modern gadgets and increased access to the internet have made humans more dependent on the internet. The age group between 12 and 34 years dominates internet use, accounting for 65% of total internet usage [4].

Teachers' student interactions, quality of Interactions, student perception on academics, Challenges with online learning are majorly considered in the research work. Many students faced difficulties adopting online learning platforms, network issues, and distractions at home. Some students expressed concerns about online learning compared with traditional in-person classes. Technological barriers affected students who lacked internet connections. Isolation took a toll on students' mental health, affecting their ability to focus on academics and fully engage in learning. Students felt a lack of clear communication from teachers regarding assignments and changes in course structure. Students were concerned about the evaluation methods [5].

MATERIALS AND METHODS

The objective of this study was to understand the interventions adopted to control the use of digital media among university students after the COVID-19 pandemic. A descriptive cross-sectional research design was used, and 219 students were recruited based on convenient sampling techniques and inclusion criteria. A self-administered structured questionnaire was given to the respondents after obtaining prior consent, and the responses were recorded. Ethical clearance was obtained from the Institutional Review Board, and permission and consent were obtained from the concerned authorities.

RESULTS AND DISCUSSION

Socio-demographic Data

In this study, the frequency and percentages of the demographic variables were computed to discuss the characteristics of the respondents attending online classes during the COVID-19 pandemic. Most of the respondents, 166 (76%), were in the age group of 18 to 20 years, followed by 50 (23%) belonging to the age group of 21 to 22 years, and 3 (1.36%) in the age group of 23 to 24 years. Of the 219 respondents, 104 (47.48%) were females and 115 (52.51%) were males. Most of the respondents 177 (53.52%) studied in commerce, 98 (45%) in science, and 4 (2%) in the arts [6]. The results are presented in Table 1.

Use of Technology, Media, and Learning Methods During the COVID-19 Pandemic

The analysis shows that out of 219 respondents, 211 (96.34%) attended online classes during the COVID-19 pandemic, 145 (66.21%) had used mobile phones during the pandemic, 48 (22%) used laptops, and 102 (46.57%) had spent more than three hours attending online sessions per day. The majority 172 (78.53%) had used Zoom Meet during the pandemic to attend online classes, 30 (14%) used Google Duo, 16 (7.30%) used other applications, and 2 (0.91%) used Moodle. Most of the group 94 (43%) utilized social media to connect with classmates for collaborative projects, join online study groups for peer support, and follow educational influences for learning. A total of 143 (65.29%) respondents faced network problems during online classes, 66 (30.16%) experienced insufficient data on the phone, 35 (16%) experienced environmental noise, and 18 (8.21%) faced physical facility during the COVID-19 pandemic. Of the 219 respondents, 76 (35%) used creating a daily schedule method, time management, setting goals, and deadlines for assignments to manage effective learning during digital learning [7]. The results are presented in Table 2.

Level of Satisfaction and Digital Media Impact on Academic Performance

The analysis shows that most of the respondents, 107 (49%) agreed that the COVID-19 pandemic led to an increase in the use of digital media, and 15 (7%) strongly agreed that COVID-19 led to an increase in the use of digital media. Of 219 respondents, 88 (40.1%) strongly agreed that they could quickly adopt the use of technology for educational purposes. The analysis showed that most respondents, 63 (29%), agreed that there was an increase in the use of video conferencing during the COVID-19 pandemic. Of the 219 respondents, 50 (23%) agreed and strongly agreed that their academic performance improved after using digital media, 49 (22.27%) were neutral, 37 (17%) strongly disagreed, and 26 (12%) disagreed that their academic performance did not improve after using digital media. 53 (24.20) respondents strongly agreed that digital media was useful for their academic performance. Of the 219 respondents, 58 (26.48) strongly agreed that more exposure to phone screens developed vision problems after the pandemic.

Table 1. Depicts the frequency and percentage distribution of demographic variables among university students.

S.N.	Demographic variable	F	%
1.	<i>Age in years</i>		
	18 to 20 years	166	76%
	21 to 22 years	50	23%
	23 to 24 years	3	1.36%
	25 to 26 years	0	0%
	>26 years	0	0%
2.	<i>Gender</i>		
	Female	104	47.48%
	Male	115	52.51%
	Others	0	0%
3.	<i>Place of living</i>		
	Urban	197	90%
	Rural	21	10%
	Semi-urban	1	0.45%
4.	<i>Course</i>		
	Science	98	45%
	Arts	4	2%
	Commerce	117	53.52%
5.	<i>Academic year</i>		
	1st year (1st Semester and 2nd Semester)	8	4%
	2nd year (3rd Semester and 4th Semester)	162	74%
	3rd year (5th Semester and 6th Semester)	48	22%
	4th year (7th Semester and 8th Semester)	1	0.45%

Table 2. Depicts the frequency and percentage distribution of use of technology, media, and learning methods during the COVID-19 Pandemic.

S.N.	Questions	Frequency (f)	Percentage (%)
1.	<i>Did you attend any online classes during the pandemic?</i>		
	a. Yes	211	96.34%
	b. No	8	4%
2.	<i>When did you start to attend online classes?</i>		
	a. 2020	151	69%
	b. 2021	59	27%
	c. 2022	9	4.10%
	d. 2023	0	0%
3.	<i>What type of technology you have used during online classes?</i>		
	a. Mobile phone	145	62.21%
	b. Computer/desktop	19	9%
	c. Laptop	48	22%
	d. Computer tablets	7	3.19%
4.	<i>How many hours have you spent attending the online sessions per day?</i>		
	a. 1 hour	33	15.06%
	b. 2 hours	35	16%
	c. 3 hours	49	22.37%
	d. More than 3 hours	102	46.57%

5.	<i>What type of application have you used during a pandemic to attend online classes?</i>		
	a. Zoom Meet	172	78.53%
	b. Moodle	2	0.91%
	c. Google Duo	30	14%
	d. Others	15	7%
6.	<i>How did you utilize social media during the COVID-19 pandemic?</i>		
	a. Connecting with classmates for collaborative projects	41	19%
	b. Joining online groups for peer support	46	21%
	c. Following educational influence on learning	38	17.35%
	d. All of the above	94	43%
7.	<i>Identify below the physical challenges you have faced during online classes during the COVID-19 pandemic.</i>		
	a. Network problem	100	46%
	b. Insufficient data on the phone	66	30.13%
	c. Environmental noise	35	16%
	d. Physical facility	18	8.21%
8.	<i>What would be the sessions of online classes in a day?</i>		
	a. One session (morning/night)	82	37.44%
	b. Two sessions (morning to evening)	137	62.55%
9.	<i>How did you communicate with your teachers for academic support during the pandemic?</i>		
	a. Emails	48	22%
	b. During video conference	57	26.02%
	c. Chats/messages	97	44.29%
	d. Phone calls	17	8%
10.	<i>Which of the following methods have you used to manage effective learning during digital learning?</i>		
	a. Creating a daily schedule	52	24%
	b. Setting goals and deadlines for assignments	30	14%
	c. Time management	61	28%
	d. All of the above	76	35%
11.	<i>How have you adopted study habits to accommodate a remote learning environment?</i>		
	a. Creating dedicated study space at home	45	20.54%
	b. Experimenting with different note-taking methods	41	19%
	c. Reviewing textbooks	56	25.57%
	d. All of the above	75	34.24%
	e. If any other, please mention.	2	1%
12.	<i>Which of the following aspects do you feel was affected by online classes?</i>		
	a. Disruption in learning	48	22%
	b. Loss of social interactions	54	25%
	c. Mental health challenges	52	24%
	d. All of the above	65	30%
	e. If any other, please mention.	0	0%
13.	<i>Which of the following do you feel had a positive impact during the pandemic?</i>		
	a. Adoption of digital learning processes	89	41%
	b. Cultivation of adaptation	27	12.32%
	c. Integration of online and offline activities	54	25%
	d. All of the above	47	21.46%
	e. If any other, please mention.	2	1%

14.	<i>What do you think that the role of social media during the pandemic?</i>		
	a. Social media platforms were shut down to prevent misinformation	34	15.52%
	b. Social media decreased as people prioritized face-to-face interactions	78	36%
	c. Social media platform experienced technical issues/outages throughout the pandemic	36	16.43%
	d. Social media become a crucial tool for communicating information sharing and connection	69	31.50%
	e. If any other, please mention	2	1%
15.	<i>How have you used online and discussion boards for academic purposes during the pandemic?</i>		
	a. Asking questions and seeking clarification on course material	64	29.22%
	b. Engaging in academic debts and discussion	27	12.32%
	c. Sharing resources and study tips with peers	45	0.54%
	d. All of the above	75	34.24%
	e. If any other, please mention	8	4%
16.	<i>Which digital skill has become increasingly important for students during the COVID-19 pandemic?</i>		
	a. Digital interaction	78	36%
	b. Coding and programming	37	17%
	c. Data analysis	31	14.15%
	d. All of the above	71	32.42%
	e. If any other, please mention	2	1%
17.	<i>How have you used online study aids and resources to supplement learning during COVID-19?</i>		
	a. Flashcard apps for memorization and review	35	16%
	b. Online quizzes and practice tests	35	16%
	c. Video tutorials on platforms like YouTube	86	39.26%
	d. All of the above	63	29%
	e. If any other, please mention	0	0%
18.	<i>Which online platform has been used for peer review and collaborative editing of academic papers during COVID-19?</i>		
	a. Google Scholar	90	41.09%
	b. Mendeley	20	9.13%
	c. Overleaf	10	4.56%
	d. None of the above	97	44.29%
	e. If any other, please mention	2	1%
19.	<i>What is the distance from the book or electronic device while reading after the pandemic?</i>		
	a. Less than 10 cm	56	25.57%
	b. Less than 25 cm	58	26.48%
	c. Within 25 to 40 cm	63	29%
	d. At an arm's distance	42	19.17%

The analysis shows that 64 (29.22%) respondents strongly agreed that they used digital media more for entertainment purposes during the pandemic than before COVID-19. Most respondents 56 (25.57%) strongly agreed that their social interactions shifted to online platforms even after the pandemic, and most respondents 69 (31.05%) strongly agreed that they faced difficulties when online classes were going on continuously and suddenly started to have offline classes. 51 (23.28%) respondents strongly agreed that they believed that digital media usage affects academic performance. 62 (28.3%) students' addiction to digital media extended and hampered their ability to complete assignments and homework on time, respectively. Most respondents, 59 (27%) strongly agreed that they believed digital media distractions contributed to their decreased academic productivity during study hours. Of the respondents,

Table 3. Depicts frequency and percentage distribution of level of satisfaction with the offline learning system.

Level of satisfaction	F	%
1. Very satisfied	47	21.46%
2. Satisfied	99	45.20%
3. Not satisfied	42	19.17%
4. Not at all satisfied	31	14.15%

65 (30%) were neutral in that the students who spent more time on digital media platforms tended to achieve lower grades than those who limited their usage. 52 (24%) respondents agreed that they had used technology for extracurricular activities or hobbies during the pandemic. Most respondents, 72 (33%), were neutral in that they were satisfied with the tools or apps used to monitor digital media use during the pandemic [8–11]. The majority of the 61 (28%) respondents disagreed that they did not prefer online classes even after the pandemic, and the results are shown in Table 3.

Level of Impact on Academic Performance

Fifty-one percent (51.2%) of the respondents said that there was no impact of increased use of digital media on their academic performance, whereas 49% of respondents said that there was a severe impact on their academics because of the increased use of digital media. The analysis showed that 72.14% of respondents had developed vision problems, most respondents 56.62% developed digital media addiction, 49.76% had a mild impact on academic performance, and 50% had a mild impact on academic productivity. The results are presented in Table 4.

DISCUSSION

The COVID-19 pandemic, caused by the coronavirus SARs-COV-2 began in December 2019 in Wuhan, China. It quickly spread globally, resulting in widespread illness, millions of deaths, and profound impacts on daily life, the economy, and healthcare systems worldwide. Efforts to control the virus include lockdowns, travel restrictions, mask mandates, and rapid development and distribution of vaccines. The pandemic has also highlighted and exacerbated existing social and economic inequalities while accelerating changes in technology, healthcare, and global cooperation.

The main objective of this study was to evaluate the current extent of digital media use among university students post-COVID-19; to examine the effectiveness of these interventions in reducing excessive digital media use; to investigate the impact of digital media intervention on academic performance among students; and to assess the student’s perception of implemented intervention of their acceptance.

Most of the respondents had used mobile phones to attend their online classes and experienced a variety of challenges, such as environmental noise, insufficient data, network challenges, and lack of physical facilities to achieve their learning outcomes. The study shows that there was a significant lack of social group interactions, disruption in the learning environment, and mental health challenges during the pandemic [12].

Table 4. Depicts frequency and percentage distribution of level of impact on academic performance.

S.N.	Item	No impact		Mild impact		Moderate impact		Severe impact	
		F	%	F	%	F	%	F	%
1.	Increase the use of digital media	112	51.2%	0	0	0	0	107	49%
2.	Increase exposure to screening time	34	16%	185	84.47%	0	0	107	49%
3.	Development of vision problem	61	28%	158	72.14%	0	0	0	0
4.	Addiction to digital media	95	43.77%	124	56.62%	0	0	0	0
5.	Academic performance	110	50.21%	109	49.76%	0	0	0	0
6.	Academic productivity	110	50.22%	109	50%	0	0	0	0

No impact: <20%, Mild impact: 21 to 49%, Moderate impact: 50 to 70%, Severe impact: >71%

The adoption of media as a learning resource can also lead to distractions, and lack of motivation, and may also can lead to cyberbullying. There is a high risk of consuming false information and reducing skill development. The students also experienced decreased social support from their friends, indulging in non-academic activities, and dissatisfaction with their overall psychological well-being; hence, the respondents have adopted few interventions, such as creating a schedule, prioritizing face-to-face interactions, assigning deadlines for the completion of activities, and engaging in interaction-based communication and learning to control the use of digital media after the COVID-19 pandemic.

CONCLUSION

Incorporating digital media into an educational system is more interactive and aids in a better learning process. Increased time spent on digital media, either for academic or non-academic purposes, may lead to decreased cognitive ability, social comparison, decreased social functionality, and social isolation. Subjective happiness levels may increase, but emotional well-being may be affected. In addition, it can exacerbate stress and cause ill effects on the mental well-being of students, decrease their thinking ability, increase their dependency on digital aids, and may lead to poor academic performance, overall quality of life, and quality of learning.

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