The Pharma Innovation Journal 2022; 11(10): 217-222

www.ThePharmaJournal.com

The Pharma Innovation

ISSN (E): 2277-7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2022; 11(10): 217-222

www.thepharmajournal.com
Received: 22-08-2022
Accepted: 23-09-2022

Prachi Patel
Ph.D. Research scholar, Department of Extension Education & Communication Management, C.S.A University, Kanpur, Uttar Pradesh, India

Dr. Mithilesh Verma
Associate Professor/ Scientist, Directorate of Extension, C.S.A University, Kanpur, Uttar Pradesh, India

Corresponding Author:
Prachi Patel
Ph.D. Research scholar, Department of Extension Education & Communication Management, C.S.A University, Kanpur, Uttar Pradesh, India

Constraints and challenges faced by the students in colleges/ universities in online classes during the COVID-19 outbreak

Prachi Patel and Dr. Mithilesh Verma

Abstract
The present study, "Constraints and challenges faced by the students in colleges/ universities in online classes during the COVID-19 outbreak" was carried out in Kanpur Nagar and Gautam Budh Nagar districts of Uttar Pradesh, in each district two colleges/ universities were randomly selected therefore 75 students from each college/university were randomly selected so 300 students from four colleges/universities of two districts were randomly selected. Out of total students 63.7 per cent of students belonged to 21 to 24 years, 60.3 per cent were found to be male whereas 75.3 per cent of students were undergraduate. It was found that 65.3 per cent of student's belonged to general category with 39.0 per cent of student's family head were graduate and 37.3 percent of students belonged to the category whose head of the family were doing business. Majority of students were using Google meet application and mobile for attending online classes. The study reveals that students faced many challenges during online classes such as difficulty to focus on screen for long time causing headache. Virtual learning causes mental fatigue which leads lack of interest and motivation among students. Students also faced the problem of unstable internet connection and technical issues with electronic gadget causing hindrance in online education.

Keywords: Challenges, COVID-19, online classes, students

Introduction
The COVID-19 had a severe impact on higher education as universities closed their premises and countries shut their borders in response to lockdown measures. The contribution of information technology has gained momentum due to closure of educational institutions that raises challenges for students' learning. During the quarantine time information technology was serving the solution for the ongoing learning process through innovative and learning management systems. It has provided opportunity for educators to implement IT solutions for teaching as well as evaluation for the completion of course work of students. The efforts of stakeholders namely teachers, students and institutional administrators are on for the optimal use of the technology and efficient learning process. The ultimate goal is to minimize the learning gap that arouse due to lockdown. Educational institutions and students across the world have accepted and appreciated the online platform of learning. The reasons of this acceptability are ease of use, learning flexibility and controllable environment. However, despite its multiple advantages there are quite a few limitations of e-learning such as social isolation, face to face interaction between teacher and student, connectivity issues, etc. Online education has never been adopted and accepted as real learning or the formal mode of education before this ongoing pandemic that compelled to resort to electronic learning solution by world over.

Research Methodology
The study was conducted in Kanpur Nagar and Gautam Budh Nagar districts of Uttar Pradesh, in each district two colleges/ universities were randomly selected therefore 75 students from each college/university were randomly selected so 300 students from four colleges/universities of two districts were randomly selected. Dependent and independent variables, namely age, sex, course of the study, academic status, caste, religion, family type, occupation of head of the family, means of communication for online classes, type of gadget, perception, effectiveness, constraints and challenges, suggestions, etc. were used. The data collected were subjected to statistical analysis for which statistical tools, such as percentage, rank, weighted mean,

median, correlation coefficient, Z-test and standard deviation.

Results

Table 1: Distribution of students according to sex (N=300)

Gender	Frequency	Percent
Male	181	60.3
Female	119	39.7
Total	300	100.0

The data presented in table 1 shows the distribution of students according to sex wise, 60.3 per cent of students were found to be male whereas 39.7 per cent of students were female in the study area.

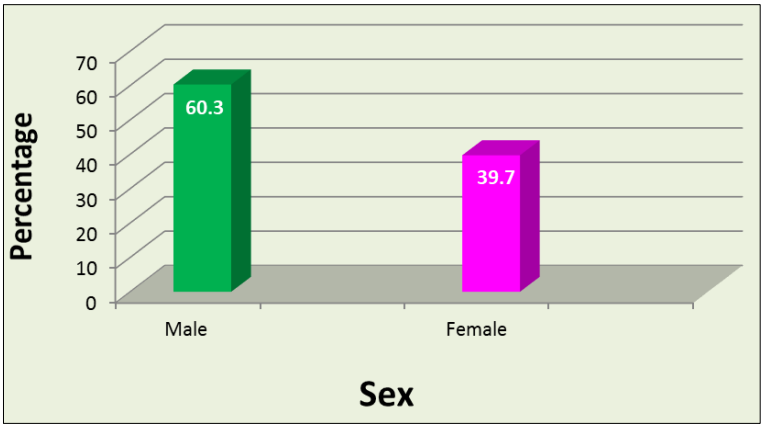

Fig 1: Distribution of students according to sex wise

Table 2: Distribution of students according to academic status (N=300)

Academic status	Frequency	Percent
Undergraduate	226	75.3
Post graduate	51	17.0
Doctorate	23	7.7
Total	300	100.0

The data denoted in the table 2 shows the distribution of students according to the academic status, 75.3 per cent of students were undergraduate whereas 17.0 per cent of students were postgraduate and 7.7 per cent of students studied in doctorate category. Hence, the majority of students were from undergraduate category of academic status.

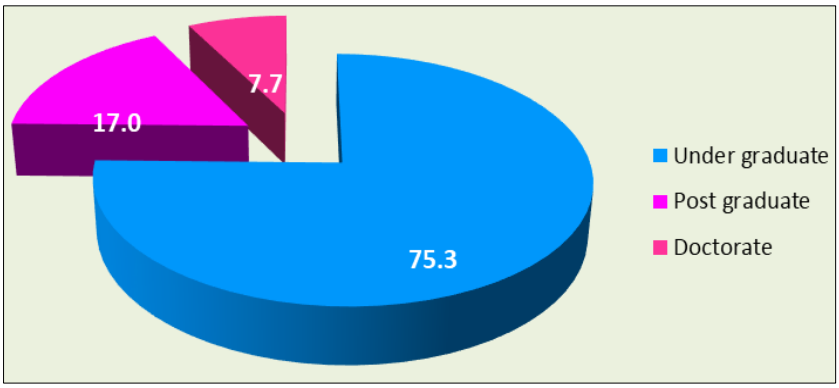

Fig 2: Distribution of students according to academic status.

Table 3: Distribution of students according to application used for online classes. N=300)

S. No.	Application used for online classes	Frequency	Percent
1.	Google meet	196	65.4
2.	Zoom	52	17.3
3.	Microsoft teams	34	11.3
4.	Skype	12	4.0
5.	Cisco web Ex	6	2.0

The data of table 3 shows the distribution of students according to the application used for online classes, 65.4 per cent of students were using Google meet followed by 17.3 per cent of the students were using zoom whereas 11.3 per cent of students were using Microsoft teams and 4 per cent of students were using Skype and only 2 per cent of students Cisco WebEx application for online classes. The majority of students were found to be using Google meet for online classes in the study area.

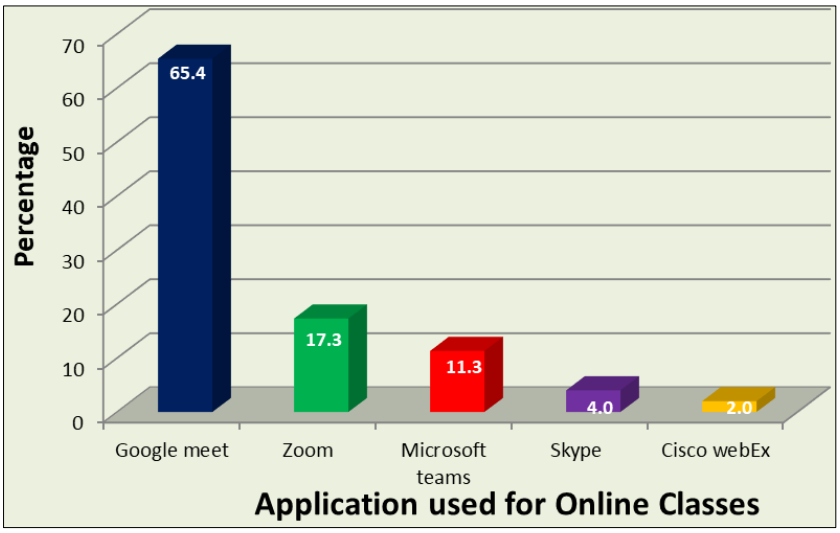

Fig 3: Distribution of students according to application used for online classes.

Table 4: Constraints and challenges faced by the students in colleges/ universities in online classes during the COVID-19 outbreak.

Table 4.1: Distribution of students according to physical challenges during online classes. (N=300)

S. No.	Physical challenges	Symbol	Agree	Undecided	Disagree	Mean Score	S.D.	Rank
1.	Difficulty to focus on screen for long time causing headache	A	80.7	12.7	6.7	2.74	2.26	I
2.	Eyesight problems due to long screen time	B	77.3	15.7	7.0	2.70	2.23	II
3.	Bad ergonomics resulting back pain, etc.	C	75.0	17.3	7.7	2.67	2.20	III
4.	Lack of physical exercise	D	52.7	31.3	16.0	2.37	1.95	IV
5.	Improper meal time and lack of sunlight resulting vitamin D deficiency	E	11.3	57.7	31.0	1.80	1.35	V

Table 4 (I) shows the distribution of students according to the physical challenges faced by students, 80.7 per cent of students agreed that they faced difficulty to focus on screen for long time causing headache while 12.7 per cent of students were undecided with mean score value 2.74, S.D. 2.26 and rank I. 77.3 per cent of students agreed that they faced eyesight problems due to long screen time while 15.7 per cent of students were undecided with mean score value 2.70, S.D. 2.23 and rank II. 75.0 per cent of students agreed that they had bad ergonomics resulting back pain, etc while 17.3 per cent of students were undecided with mean score value 2.67, S.D. 2.20 and rank III. 52.7 per cent of students lacked physical exercise while 31.3 per cent of students were undecided with mean score value 2.37, S.D. 1.95 and rank IV. 11.3 per cent of students agreed that they had improper meal time and lack of sunlight resulting vitamin D deficiency while 57.7 per cent of students were undecided with mean score value 1.80, S.D. 1.35 and rank V.

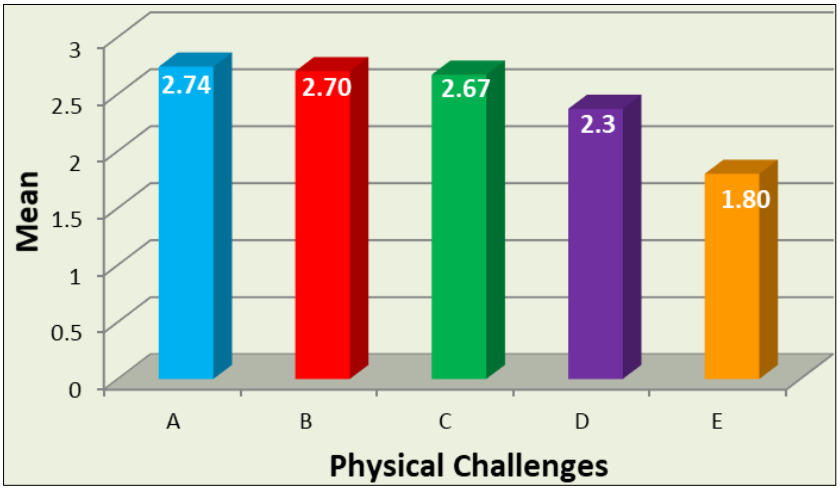

Fig 4.1: Distribution of students according to physical challenges during online education.

Table 4.2: Distribution of students according to psychological challenges during online classes.

S. No.	Psychological challenges	Symbol	Agree	Undecided	Disagree	Mean Score	S.D.	Rank
1.	Lack of Interest and motivation	A	84.7	7.3	8.0	2.77	2.29	II
2.	Stress and anxiety	B	69.0	16.0	15.0	2.54	2.11	III
3.	Feeling of loneliness	C	61.7	21.0	17.3	2.44	2.03	V
4.	Lack of confidence	D	27.0	39.0	34.0	1.93	1.55	VI
5.	Virtual learning causes mental fatigue	E	84.3	11.0	4.7	2.80	2.30	I
6.	Negative attitude towards online learning	F	72.7	8.0	19.3	2.53	2.13	IV

Table 4 (II) shows the distribution of students according to the psychological challenges faced by students, 84.3 per cent of students agreed that virtual learning causes mental fatigue whereas 11 per cent of students were undecided with mean score value 2.80, S.D. 2.30 and rank I. 84.7 per cent of students agreed that they lacked interest and motivation in online classes whereas 11 per cent of students were undecided with mean score value 2.77, S.D. 2.29 and rank II. 69.0 per cent of students agreed that they had stress and anxiety during online classes whereas 16.0 per cent of students were undecided with mean score value 2.54, S.D. 2.11 and rank III. 72.7 per cent of students agreed that they had negative attitude towards online classes whereas 8 per cent of students were undecided with mean score value 2.53, S.D. 2.13 and rank IV. 61.7 per cent of students agreed that they had feeling of loneliness during online classes whereas 21.0 per cent of students were undecided with mean score value 2.44, S.D. 2.03 and rank V. 27.0 per cent of students agreed that they lacked confidence in online classes whereas 39 per cent of students were undecided with mean score value 1.93, S.D. 1.55 and rank VI.

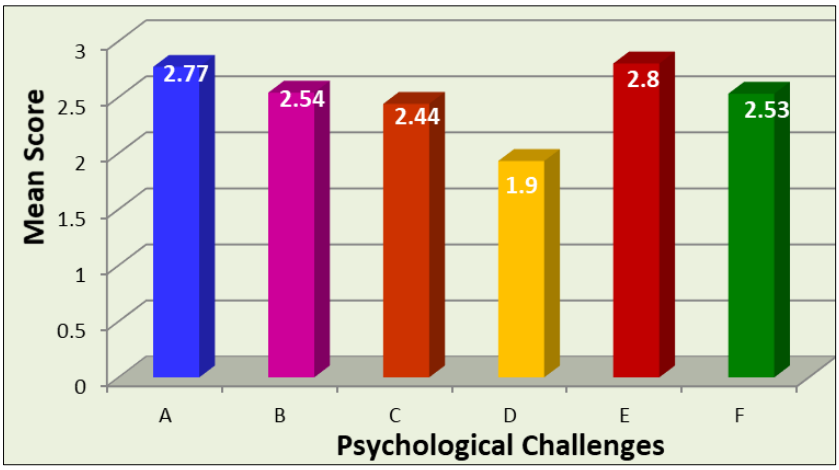

Fig 4.2: Distribution of students according to psychological challenges during online education.

Table 4.3: Distribution of students according to technical challenges during online classes (N=300)

S. No.	Technical challenges	Symbol	Agree	Undecided	Disagree	Mean Score	S.D.	Rank
1.	Unstable internet connectivity	A	82.3	9.0	8.7	2.74	2.26	II
2.	Lack of electronic devices for classes	B	58.7	22.7	18.7	2.40	1.99	IV
3.	Technical issues in electronic gadget	C	77.0	15.7	7.3	2.70	2.22	III
4.	Difficulty using applications (ex- google meet, zoom)	D	42.7	33.3	24.0	2.19	1.80	V
5.	Privacy concerns with technology	E	80.0	15.0	5.0	2.75	2.26	I
6.	Challenges with application software used	F	27.3	50.0	22.7	2.05	1.62	VI

Table 4(III) shows the distribution of students according to the technical challenges faced by students, 80.0 per cent of students agreed that they had privacy concerns with technology whereas 15 per cent of students were undecided with mean score value 2.75, S.D. 2.26 and rank I. 82.3 per cent of students agreed that they faced the problem of unstable internet connection whereas 9 per cent of students were undecided with mean score value 2.74, S.D. 2.26 and rank II. 77.0 per cent of students agreed that they had technical issues with electronic gadgets whereas 15.7 per cent of students were undecided with mean score value 2.70, S.D. 2.22 and rank III. 58.7 per cent of students agreed that they lacked electronic devices for online classes whereas 22.7 per cent of students were undecided with mean score value 2.40, S.D. 1.99 and rank IV. 42.7 per cent of students agreed that they faced the problem of difficulty using applications whereas 33.3 per cent of students were undecided with mean score value 2.19, S.D. 1.80 and rank V. 27.3 per cent of students agreed that they faced challenges with the application software used whereas 50 per cent of students were undecided with mean score value 2.05, S.D. 1.62 and rank VI.

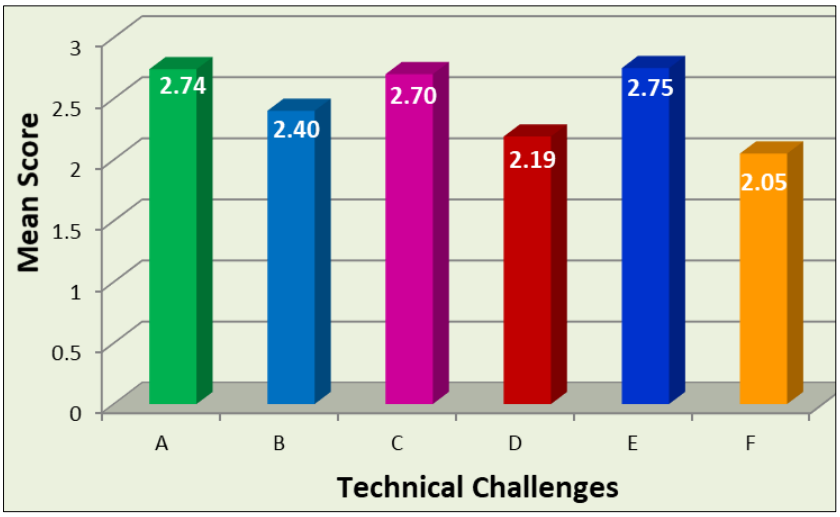

Fig 4.3: Distribution of students according to technical challenges during online education.

Table 4.4: Distribution of students according to other challenges during online classes. (N=300)

S. No.	Other challenges	Symbol	Agree	Undecided	Disagree	Mean Score	S.D.	Rank
1.	Difficulty applying online learning for practical sessions and courses	A	82.3	10.0	7.7	2.75	2.27	III
2.	Lack of suitable environment at home for study	B	84.7	7.0	8.3	2.76	2.28	II
3.	Additional expenditure of buying laptops and other gadgets	C	72.7	15.3	12.0	2.61	2.16	V
4.	Unable to interact with other students and teacher	D	55.7	21.7	22.7	2.33	1.94	VII
5.	Lack of teacher's training for conducting classes	E	28.7	16.0	55.3	1.73	1.43	VIII
6.	Requires good grasp to technical knowledge	F	91.0	6.0	3.0	2.88	2.36	I
7.	Limited data	G	66.3	21.0	12.7	2.54	2.10	VI
8.	Increase in workload	H	78.3	11.7	10.0	2.68	2.22	IV

Table 4 (IV) shows the distribution of students according to the other challenges faced by students, 91.0 per cent of students agreed that it required good grasp to technical knowledge whereas 6 per cent of students were undecided with mean score value 2.88, S.D. 2.36 and rank I. 84.7 per cent of students agreed that they lacked suitable environment at home for study whereas 7.0 per cent of students were undecided with mean score value 2.76, S.D. 2.28 and rank II. 82.3 per cent of students agreed that they faced difficulty applying online learning for practical sessions and courses whereas 10.0 per cent of students were undecided with mean score value 2.75, S.D. 2.27 and rank III. 78.3 per cent of students agreed that they faced problem of increased workload whereas 11.7 per cent of students were undecided with mean score value 2.68, S.D. 2.22 and rank IV. 72.7 per cent of students agreed that they had to do additional expenditure of buying laptops and other gadgets whereas 15.3 per cent of students were undecided with mean score value 2.61, S.D. 2.16 and rank V. 66.3 per cent of students agreed that they faced problem of limited data whereas 21.0 per cent of students were undecided with mean score value 2.54, S.D. 2.10 and rank VI. 55.7 per cent of students agreed that they were unable to interact with other students and teachers whereas 21.7 per cent of students were undecided with mean score value 2.33, S.D. 1.94 and rank VII. 28.7 per cent of students agreed that they faced problem of lack of teacher's training for conducting classes whereas 16.0 per cent of students were undecided with mean score value 1.73, S.D. 1.43 and rank VIII.

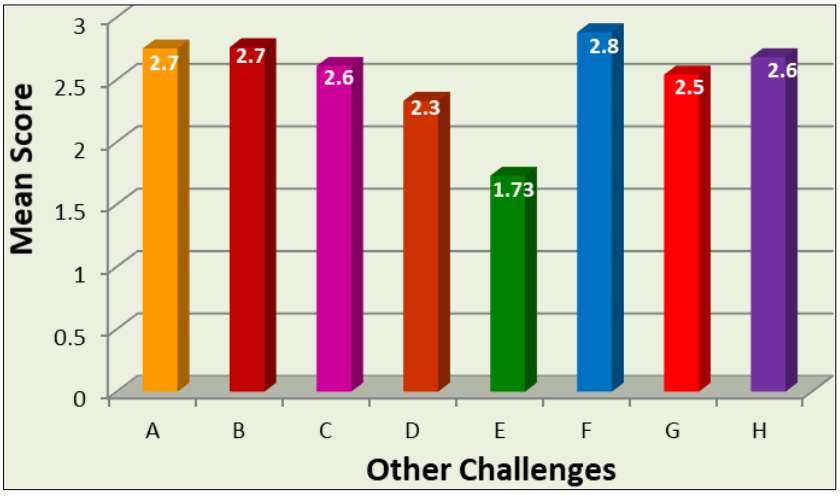

Fig 4.4: Distribution of students according to other challenges during online education.

Conclusion

The study reveals that students faced many challenges during online classes such as difficulty to focus on screen for long time causing headache. Virtual learning causes mental fatigue which leads lack of interest and motivation among students leading to stress. Students also faced the problem of unstable internet connection and technical issues with electronic gadget causing hindrance in online education. It was also found that students faced difficulty applying online learning for practical sessions and courses. Thus it is an evident that students faced many constraints and challenges in colleges/universities in online classes during COVID-19 outbreak which can be met by bringing changes in education practices and technology.

Recommendations and Suggestions

1. The course materials should be made available to students before conducting online session. Students should be advised to read those contents prior to attending the online session. In online session, faculty should hold a discussion session on the topic of uploaded/delivered course materials, thus maintaining interactive sessions.
2. Government must provide un-interrupted power supply to facilitate ease of online teaching and learning.
3. Delivery content for the teachers should be trained prior to initiate online teaching, which gives the clarity in communication and also helps to impart innovative techniques.
4. The teachers will be properly prepared and trained to use ICT and electronic teaching resources to address these obstacles in the future. This helps in completing some percent of the syllabus through online teaching and remaining syllabus through classroom teaching.
5. Students should be motivated through online student counseling and decorum should be maintained through supervision of students, setting ground rules for online interaction, counseling and disciplinary actions.

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