

Challenges Faced by The PG Arts Students Towards Online Education in Namakkal District

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Abstract—Arts and Science colleges provide comprehensive education in humanities, sciences, and commerce, fostering critical thinking, creativity, and analytical skills. These institutions emphasize academic knowledge, practical learning, and holistic development, preparing students for higher education, research, and diverse career opportunities while contributing to social and economic progress. Online education for college students enables learning through digital platforms, offering flexibility and easy access to academic resources. It supports self-paced study, enhances digital skills, and ensures continuity of education. However, its success depends on reliable technology, effective teaching methods, and active student engagement. Although, PG students in Namakkal district face several challenges in online education, including poor internet connectivity in rural areas and limited access to digital devices. Also, Lack of direct interaction with faculty, difficulty in understanding advanced concepts, technical issues, and low motivation further affect learning effectiveness and academic performance. Accordingly, this study aimed to examine the challenges faced by postgraduate students in online education within Namakkal district. The study adopts a descriptive research design and employs the survey method for data collection. A random sampling technique was used to select a sample of 175 postgraduate students from Arts and Science colleges. In this study, primary data were gathered using a well-structured questionnaire designed on a five-point Likert scale to capture students' challenges associated with online education. The collected data were coded and tabulated using MS-Excel and subsequently analyzed with SPSS version 26.0. For analysis purpose, the statistical tools such as percentage analysis, mean and standard deviation, correlation analysis and linear regression analysis were applied. This study justified that high level of challenges towards online education is perceived by the students who belong to upto Rs.40,000 as monthly family income, studying in government colleges, co-educational colleges, science department, 2nd year of post-graduation and spending above 4 hours daily on online education.

Keywords—Online Education, Postgraduate Students, Learning Challenges, Digital Learning, Arts and Science Colleges, Internet Accessibility, Virtual Classes.

I. INTRODUCTION

Higher education institutions (HEIs) worldwide serve as crucibles for advanced learning, research innovation, and professional development beyond secondary schooling. These encompass universities, colleges, polytechnics, and specialized academies offering undergraduate, postgraduate, doctoral, and vocational programs across disciplines like humanities, STEM, business, and health sciences. In diverse ecosystems, HEIs blend traditional pedagogy with emerging paradigms such as experiential learning, online platforms, and interdisciplinary majors to cultivate critical thinking and global competencies. Online education refers to a mode of learning that utilizes digital technologies and internet-based platforms to deliver educational content beyond the constraints of time and location. It enables students to access lectures, learning materials, assessments, and interactive sessions through computers, tablets, or smartphones. With the rapid advancement of information and communication technologies, online education has emerged as an effective alternative and supplement to traditional classroom instruction. It promotes flexibility, self-paced learning, and wider accessibility, especially for learners from diverse socio-economic and geographical backgrounds. Online education also encourages the use of innovative teaching tools such as virtual classrooms, multimedia resources, and learning management systems. Students face several challenges in adapting to online education despite its advantages. Limited access to reliable internet connectivity and digital devices creates inequality among learners, particularly in rural and economically weaker

sections. Many students experience difficulty in understanding concepts due to the absence of face-to-face interaction with teachers and peers. Technical issues, lack of digital skills, and unfamiliarity with online platforms further hinder effective learning. Prolonged screen time leads to health problems such as eye strain and fatigue. Additionally, students often struggle with self-discipline, time management, and motivation, making it challenging to remain engaged and focused in an online learning environment.

II. REVIEW OF LITERATURE

According to Sivagami et al. (2025) illustrated that college students experienced considerable challenges in adapting to online classes during the COVID-19 pandemic. The analysis indicated that the mean age of respondents was 20.58 years, and students spent an average of over 6 hours per day on electronic gadgets. Further, a significant majority (80.2%) reported health-related issues arising from prolonged online learning. Students at lower levels of education faced greater difficulty in coping with online classes, particularly in understanding course content and maintaining academic performance. Moreover, technological barriers, reduced social interaction, lack of motivation, and difficulties in concentration contributed to heightened stress levels and concerns regarding academic outcomes. In case of Khalid and Hassan (2025) indicated that the issues included technological and connectivity barriers, with 29% of households lacking internet access and rural areas being disproportionately affected. Limited digital literacy, socio-economic disparities, reduced student engagement, screen-induced fatigue, and challenges in maintaining assessment integrity were also reported. Despite these obstacles, online learning played a crucial role in sustaining education during the crisis. The authors Kavitha and Deepa (2024) displayed that the majority of postgraduate students (86.1%) belonged to the 23–26 age group, with a nearly equal representation of male and female respondents. Also, most students (78.7%) were aware of Google education tools, indicating a high level of familiarity with digital learning resources, although a considerable proportion still lacked awareness and Google Meet and Google Classroom emerged as the most commonly used tools for online education. While a significant majority of students (87%) had received training on these tools, nearly half of the respondents (46.3%) reported facing challenges in their usage. In terms of preferences, Google Drive

was the most widely used cloud storage platform, and students expressed a strong need for enhanced accessibility, improved formatting options, better mobile experiences, and stronger collaboration features.

In view of Muniyasamy and Jeyshankar (2023) noticed that all postgraduate science students at Alagappa University were aware of Open Educational Resources (OER), but their frequency of use varied, with one-fourth of students using OER daily and only a few on a monthly basis. In addition, faculty-led instruction significantly contributed to student awareness and usage of OER whereas challenges identified included low-quality OER materials, limited technological infrastructure, inadequate OER repositories, and time-consuming downloads. The study also highlighted that increased communication, such as posting announcements on official university platforms, could enhance student engagement with OER. The study of Praba (2020) observed that e-learning, particularly through Massive Open Online Courses (MOOCs), has brought significant advantages to higher education in Tamil Nadu by expanding access to learning and promoting skill development. India ranks as the second-largest user of MOOCs globally, reflecting the growing adoption of online education. However, the study found that approximately 30% of government Arts and Science universities in Tamil Nadu lack proper access to e-learning due to insufficient infrastructure, limited management support, inadequate technology resources, and low investment. The study emphasizes that the effective implementation of e-learning depends on both student readiness, such as digital literacy and motivation, and institutional support. The researcher Zouhaier Slimi (2020) assumed that there was a challenging experience that had reinforced new styles of learning and teaching although online learning and teaching was a novel experience in Oman. Also, majority of respondents enjoyed the experience as they had since developed independent learning skills, problem-solving skills, communication skills and technological communication and IT skills. However, the significant challenges faced were related to network issues as internet connection, students' cooperation, autonomy and dependency as well as compliance with educational policies and cultural issues in Oman.

III. STATEMENT OF THE PROBLEM

The rapid shift towards online education has transformed the teaching–learning process in higher education institutions. While online learning offers flexibility and wider access to educational resources, it has also posed several challenges for students, particularly at the postgraduate level where advanced conceptual understanding, research orientation, and continuous academic interaction are essential. PG students in Arts and Science colleges often depend on direct classroom engagement, practical exposure, seminars, and close faculty guidance, which are difficult to replicate effectively in a virtual learning environment. In districts like Namakkal, infrastructural limitations such as inadequate internet connectivity, lack of digital devices, and frequent technical disruptions further intensify these challenges. Additionally, students face issues related to reduced motivation, difficulty in time management, limited peer interaction, and health concerns due to prolonged screen exposure.

IV. OBJECTIVES OF THE STUDY

- To explore the demographic profile of the Arts and Science College students in Namakkal district.
- To examine the challenges faced by the students towards online education in the study area.

V. HYPOTHESIS OF THE STUDY

- There is no positive significant association in challenges faced by the students towards online education.

- There is significant relationship with challenges faced by the students towards online education with respect to monthly family income.
- There is significant relationship of challenges faced by the students towards online education with studying year.
- There is significant relationship of challenges faced by the students towards online education with spending time daily on online education.

VI. RESEARCH METHODS

This study examines the challenges associated with online education among postgraduate students enrolled in Arts and Science colleges in Namakkal district. A descriptive research design was adopted, employing the survey method for primary data collection. Data were gathered through a structured questionnaire administered to a randomly selected sample of 175 postgraduate students. The responses were coded and organized using MS-Excel, and subsequent statistical analysis was carried out with the aid of SPSS version 26.0. Analytical tools such as percentage analysis, mean score, standard deviation, Correlation analysis and Linear Regression Analysis were applied.

VII. RESULTS AND DISCUSSION

7.1 Demographic Profile of the Students

The details of demographic profile of the selected PG students of arts and science colleges have been discussed in the following table.

Table 1: Demographic Profile and Challenges towards Online Education of the Students

No.	Variables Name	Number of Respondents	Percentage	Mean Score	Standard Deviation
1	Monthly Family Income				
	• Upto Rs.40,000	56	32.0	3.79	0.58
	• Rs.40,001 – Rs.80,000	81	46.3	3.44	0.57
	• Above Rs.80,000	38	21.7	3.66	0.54
	Total	175	100.0		
2	Type of the College				
	• Government College	34	19.4	3.67	0.55
	• Self-Financing	52	29.7	3.54	0.63
	• Aided	89	50.9	3.65	0.50
	Total	175	100.0		
3	Nature of College				

No.	Variables Name	Number of Respondents	Percentage	Mean Score	Standard Deviation
	• Gents	43	24.6	3.45	0.62
	• Women	60	34.3	3.62	0.60
	• Co-education	72	41.1	3.67	0.53
	Total	175	100.0		
4	Department Studying				
	• Arts	108	61.7	3.52	0.61
	• Science	67	38.3	3.73	0.52
	Total	175	100.0		
5	Studying Year				
	• 1 st Year	96	54.9	3.50	0.60
	• 2 nd Year	79	45.1	3.72	0.55
	Total	175	100.0		
6	Spending Time Daily on Online Education				
	• Less than 2 hours	35	20.0	3.59	0.52
	• 2-4 hours	82	46.9	3.38	0.61
	• Above 4 hours	58	33.1	3.76	0.55
	Total	175	100.0		

- From the above table, it is observed that 32.0% of the students belong to the monthly family income group upto Rs.40,000, 46.3% of the students fall under Rs.40,001–Rs.80,000 as monthly family income and 21.7% of the students are from the above Rs.80,000 category.
- With regard to the type of college, 19.4% of the students are studying in government colleges, 29.7% of the students are studying in self-financing colleges and 50.9% of the students are studying in aided colleges.
- In terms of the nature of the college, 24.6% of the students are from gents colleges, 34.3% of the students from women’s colleges and 41.1% of the students from co-educational colleges.
- In case of the department of study, 61.7% of the students belong to the arts stream and

38.3% of the students belong to the science stream.

- With respect to the studying year, 54.9% of the students are first-year students and 45.1% are second-year students.
- Concerning time spent daily on online education, 20.0% of the students spend less than 2 hours, 46.9% of the students spend 2–4 hours and 33.1% of the students spend above 4 hours per day.

7.2 Challenges Faced by the students towards Online Education

The researcher has focused that the challenges faced by the students towards online education in Arts and Science Colleges. For this purpose, eight statements have been developed to know the challenges faced by the students towards online education. The Cronbach Alpha value for the statements of challenges faced by the students towards online education is 0.937.

Table 2: Challenges Faced by the students towards Online Education

S.No	Factors	SA	A
1	I am not comfortable doing assignments through online education and virtual classes	3.88	1.20
2	Money spent on online education and virtual classrooms is being wasted	3.50	1.48
3	Online education and virtual classes increase my anxiety, tension, and fear over my grades	3.63	1.13

S.No	Factors	SA	A
4	I need training programs to help me efficiently use online education platform and virtual classes	3.99	1.13
5	I am worried about online exams	3.06	1.29
6	I prefer regular exams more than online exams	3.49	1.28
7	I had to pay more money for better internet connection at home	3.51	1.26
8	Acquiring online education skills is necessary for every student	3.73	1.20

The above table examined that the reliability of the challenges faced by the students towards online education is good and fit for analysis of this study. It could be observed that most of the college students are need training programs to help efficiently use online education platform and virtual classes with the mean score and standard deviation of 3.99 and 1.13 respectively followed by they are not comfortable doing assignments through online education and virtual classes with the mean score and standard deviation of 3.88 and 1.20 respectively.

7.3 Challenges faced by the students towards Online Education (Hypothesis Testing)

Degree of Relationship between selected independent variables and Challenges faced by the

students towards Online Education (Correlation analysis)

The following analysis has examined that the relationship between the selected variables and the dependent variable challenges faced by the students towards online education via correlation analysis. For this study, the independent variables have been chosen namely monthly family income, studying year and spending time daily on online education of the respondents.

H₀: There is no positive significant association in challenges faced by the students towards online education.

Table 3: Degree of Relationship between selected Independent Variables and Challenges faced by the students towards Online Education (Correlation analysis)

Variables	Monthly Family Income	Studying Year	Spending Time Daily on Online Education	Challenges towards Online Education
Monthly Family Income	1.000			
Studying Year	-0.109 (0.152 ^{NS})	1.000		
Spending Time Daily on Online Education	-0.314 (0.000*)	0.122 (0.108 ^{NS})	1.000	
Challenges towards Online Education	-0.113 (0.137 ^{NS})	0.193 (0.011**)	-0.170* (0.025**)	1.000

Note: * - Significant at 1% level; ** - Significant at 5% level; NS - Not Significant

From the above analysis, the values represent correlation coefficients measuring the degree of association between the selected independent variables and the challenges faced by students towards online education. The correlation analysis reveals that studying year (0.193), which is significant at the 5% level, shows a positive and significant relationship with challenges towards online education. This indicates that as students progress to higher years of study, the level of challenges faced in online education tends to increase. Further, spending time daily on online education (-0.170) exhibits a negative and significant

relationship with challenges towards online education at the 5% level, implying that students who spend more time daily on online education experience comparatively fewer challenges, possibly due to better adaptation and familiarity with online learning platforms. On the other hand, monthly family income (-0.113) does not show a significant relationship with challenges towards online education, indicating that income level does not significantly influence the challenges faced by students in online education. Hence, the analysis concludes that studying year and time spent daily on online education are significant factors influencing

the challenges faced by students towards online education, while monthly family income does not have a significant impact.

Relationship between Monthly Family Income and Challenges faced by the students towards Online Education (Linear Regression Analysis)

Table 4: Relationship between Monthly Family Income and Challenges faced by the students towards Online Education (Linear Regression Analysis)

No.	Variables	Coefficient	SE	't' value	'p' value
	(Constant)	3.772			
1	Monthly Family Income	-0.091	0.061	-1.496	0.137 ^{NS}
	R Value	0.713			
	R ² Value	0.508			
	F Value	62.237*			

Note: * - Significant at 1% level; NS - Not Significant

From the above table, the R value of 0.713 indicates a moderate relationship between monthly family income and challenges towards online education. The R² value of 0.508 shows that 50.8% of the variation in challenges faced by students towards online education is explained by monthly family income. The F value of 62.237, which is significant at the 1% level, confirms that the regression model as a whole is statistically significant. However, despite the overall significance of the model, monthly family income does not emerge as a significant determinant of challenges faced by students towards online education. The linear regression analysis examined the relationship between monthly family income and the challenges faced by students towards online education reveal that monthly family income has a

The relationship between monthly family income and challenges faced by the students towards online education with selected variables among respondents is explored in the following table.

H₀: There is significant relationship of challenges faced by the students towards online education with monthly family income.

negative but statistically not significant influence on the challenges faced by students. The coefficient value (-0.091) is not significant (p = 0.137).

Relationship between Studying Year and Challenges faced by the students towards Online Education (Linear Regression Analysis)

The relationship between studying year and challenges faced by the students towards online education with selected variables among respondents is explored in the following table.

H₀: There is significant relationship of challenges faced by the students towards online education with studying year.

Table 5: Relationship between Studying Year and Challenges faced by the students towards Online Education (Linear Regression Analysis)

No.	Variables	Coefficient	SE	't' value	'p' value
	(Constant)	3.274			
1	Studying Year	0.225	0.087	2.583	0.011**
	R Value	0.893			
	R ² Value	0.797			
	F Value	76.672*			

Note: * - Significant at 1% level; ** - Significant at 5% level

It is mentioned from the analysis that the high R value (0.893) signifies a strong positive relationship between studying year and challenges towards online education. The R² value of 0.797 indicates that 79.7% of the variation in challenges faced by students towards online education is explained by the studying year. Further, the F value of 76.672, which is

significant at the 1% level, confirms the overall significance and goodness of fit of the regression model. The result of the regression analysis examining the relationship between studying year and the challenges faced by students towards online education reveal that the studying year has a statistically significant positive influence on the

challenges encountered by students. The coefficient value of studying year (0.225) is significant at the 5% level ($p = 0.011$).

Relationship between Spending Time Daily on Online Education and Challenges faced by the students towards Online Education (Linear Regression Analysis)

Table 6: Relationship between Spending Time Daily on Online Education and Challenges faced by the students towards Online Education (Linear Regression Analysis)

No.	Variables	Coefficient	SE	't' value	'p' value
	(Constant)	3.894			
1	Spending Time Daily on Online Education	-0.138	0.061	-2.264	0.025**
	R Value	0.872			
	R ² Value	0.760			
	F Value	65.127*			

Note: * - Significant at 1% level; ** - Significant at 5% level;

From the above table, the R value of 0.872 denotes a strong relationship between spending time daily on online education and challenges faced by students. The R² value of 0.760 reveals that 76.0% of the variation in challenges towards online education is explained by the time spent daily on online education. Furthermore, the F value of 65.127, which is significant at the 1% level, confirms the overall statistical significance and robustness of the regression model. Thus, the model adequately explains the influence of spending time daily on online education in determining the challenges faced by students. The linear regression analysis examining the relationship between spending time daily on online education and the challenges faced by students towards online education indicate that spending time daily has a statistically significant negative influence on the challenges faced by students. The coefficient value (-0.138) is significant at the 5% level ($p = 0.025$).

VIII. FINDINGS

- It is illustrated that most of the students are belong to the monthly family income group of Rs.40,001–Rs.80,000. The analysis indicated that students from the upto Rs.40,000 as monthly family income perceive high level of challenges towards online education compared to other income groups.
- It is obtained that most of the students are studying in government aided colleges. The

The relationship between spending time daily on online education and challenges faced by the students towards online education with selected variables among respondents is presented in the below table.

H₀: There is significant relationship of challenges faced by the students towards online education with spending time daily on online education.

analysis displayed that students from government colleges perceive high level of challenges towards online education.

- It is mentioned that most of the students are studying in co-educational colleges. The analysis observed that students studying in co-educational colleges experience a high level of challenges towards online education.
- It is found that most of the students are studying arts department in the study area. The analysis indicated that science students perceive high level of challenges towards online education than arts students.
- It is identified that most of the students are studying 1st year of post-graduation. The analysis revealed that second-year students perceive high level of challenges towards online education compared to first-year students.
- It is confirmed that most of the students are spending 2-4 hours daily on online education. The analysis mentioned that students spending above 4 hours daily on online education perceive high level of challenges, while those spending above 4 hours experience comparatively lower challenges towards online education.
- The mean score analysis depicted that that most of the college students are need training programs to help efficiently use online education platform and virtual classes and followed by they are not comfortable doing assignments through online education and virtual classes with the mean score of 3.99 and 3.88 respectively.

- The Correlation analysis noticed that studying year (positive) and time spent daily on online education (negative) are significant factors influencing the challenges faced by students towards online education as studying year increase, the challenges faced by the students towards online education also tends to rise among selected PG students in Namakkal District.
- The linear regression analysis indicated that monthly family income has a negative but statistically not significant influence on the challenges faced by students. Also, the coefficient value (-0.091) is not significant ($p = 0.137$), indicating that variations in family income do not have a meaningful impact on the level of challenges experienced by students in online education.
- From the result of the regression analysis, it is mentioned that the studying year has a statistically significant positive influence on the challenges encountered by students. Further, the coefficient value of studying year (0.225) is significant at the 5% level ($p = 0.011$), indicating that as students progress to higher years of study, the level of challenges faced in online education tends to increase.
- The linear regression analysis revealed that spending time daily has a statistically significant negative influence on the challenges faced by students. In addition, the coefficient value (-0.138) is significant at the 5% level ($p = 0.025$), implying that an increase in the spending time daily on online education leads to a reduction in the level of challenges faced by students.

IX. SUGGESTIONS

- It is obtained that PG students from government colleges perceive a high level of challenges towards online education. Therefore, government colleges should prioritize infrastructure upgrades, including reliable Wi-Fi networks and computer labs, along with faculty development programs focused on digital pedagogy.
- It is mentioned that PG students studying in co-educational colleges experience a high level of challenges towards online education. So, co-educational institutions should conduct gender-inclusive digital literacy workshops and create

peer support groups to address diverse interaction challenges in virtual environments.

- It is found that PG science students perceive high level of challenges towards online education than arts students. Thus, science departments should develop specialized online lab simulations, virtual experiment tools, and hands-on hybrid modules to mitigate practical learning difficulties.
- It is identified that second-year PG students perceive high level of challenges towards online education compared to first-year students. Accordingly, colleges should offer orientation refreshers and progressive digital skill-building sessions for second-year cohorts to build confidence in advancing online coursework.
- It is confirmed that PG students spending above 4 hours daily on online education perceive high level of challenges, while those spending below 4 hours experience comparatively lower challenges. Hence, institutions should promote time management training, blended learning schedules with offline components, and wellness breaks to prevent digital fatigue among heavy users.

X. CONCLUSION

This study aimed to analyze the challenges faced by the post graduate students towards online education in Namakkal district. This study depicted that studying year has a statistically significant positive influence and spending time daily has a statistically significant negative influence on the challenges faced by PG students. Further, monthly family income has a negative but statistically not significant influence on the challenges faced by PG students. Hence, this study pointed out that educational institutions should implement targeted interventions like subsidized digital access, infrastructure upgrades in government colleges, specialized training for PG students, and time management programs for heavy online users to comprehensively address these multifaceted challenges.

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