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A Study On Talent Acquisition Practices Followed In Star-Rated Hotels At Kerala

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Abstract– *The transition to online education has resulted in considerable challenges and transformations for engineering students. This study looks at the main challenges that engineering students in Kanyakumari District encounter when it comes to online learning, as well as the impact on their academic performance, engagement levels, and interaction with teachers. A quantitative research approach is used, with standardized questionnaires distributed to 450 students across various years of study. Differences and connections among critical variables are assessed using statistical analyses such as t-tests, ANOVA, and Pearson correlation. The findings show that technological concerns, distractions at home, and self-discipline challenges have a substantial influence on pupils, with male students reporting more difficulty. The ANOVA results demonstrate that first-year students perform better academically, have a longer attention span, and are more engaged than second-year students, implying that motivation declines with time. Pearson correlation analysis reveals a significant positive association between teacher communication, classroom engagement, and peer contact, underscoring the value of an interactive learning environment. The study indicates that, while online learning is flexible, it also has drawbacks that can hinder students' performance and participation. To improve engineering students' online learning experience, recommendations include enhancing digital infrastructure, introducing interactive teaching methods, and boosting peer collaboration.*

Index Terms— *Online Learning for Engineering Students, Academic Performance, Student Engagement, Teacher Interaction, Challenges of E-Learning.*

I. INTRODUCTION

The ease of information accessibility in modern times has made online learning the most effective educational method it has ever been. The internet together with fast technological developments changed the educational landscape to deliver studies through accessible platforms with customizable hours and cheaper costs. Online learning offers many positive aspects to students but it faces specific obstacles as well.

The experience of students frequently includes difficulties arising from absent motivation together with home distractions and restricted opportunities to interact with peers and instructors. A nonstructured classroom allows students to procrastinate and become less accountable [5]. The struggle to maintain efficient learning stems from three main technical problems where unstable internet connections and unfamiliarity with online platforms both take place. The successful accomplishment of these obstacles requires students and teachers to implement structured solution methods. Students who establish a specific study area while developing consistent routine schedules yet maintain self-control experience better focus together with increased productivity. Students who participate in virtual discussions and ask their instructors for instructions improve their learning performance.

Educators have the ability to create classroom activities through which students stay focused on lessons. A combination of multimedia technology tools including videos quizzes and collaborative activities produces more interesting instructional materials. Frequent feedback together with tailored support allows teachers to resolve personal learning requirements thus maintaining student interest and academic progression. These practical solutions combined with online learning problem recognition allow students to improve their academic results under teacher supervision. By building flexible online learning environments containing team-based interactions students achieve better educational success with greater satisfaction in their studies.

A. Statement of the Problems

The transition to online education has created both opportunities and challenges for engineering students. While it provides flexibility and accessibility, students in Kanyakumari District confront a

number of challenges that impact their learning experience. Issues such as a lack of enthusiasm, trouble focusing, technical restrictions, and insufficient study tools all make it challenging to adjust to online learning. Furthermore, poor time management, insufficient engagement with instructors, and excessive screen time all contribute to a drop in academic performance and overall well-being. This project investigate these issues in depth and propose methods to improve the effectiveness of online education for engineering students in Kanyakumari District.

B. Objectives of the Study

- To identify the primary challenges encountered by engineering students in Kanyakumari District while pursuing online education.
- To investigate the effects of online learning on students' academic performance of engineering students in Kanyakumari District while pursuing online education.
- To investigate student involvement and interactions with teachers in an online learning environment.

C. Hypothesis of the Study

H_0: Engineering students in Kanyakumari District do not face significant challenges while pursuing online education.

H_0: Online learning has no significant impact on students' academic performance.

H_0: There is no significant difference in student involvement and interactions with teachers in an online learning environment.

II. REVIEW OF LITERATURE

Akhtar, S. et al. (2023). This research focuses on the online teaching and learning techniques of an engineering curriculum offered by Pakistani universities during the COVID-19 epidemic. According to the survey, on average, teachers believe that virtual education during COVID-19 helps to close the learning gap and shape students' futures during a crisis. However, they found a number of challenges while teaching online, including technical concerns, student participation issues, difficulties with online tests and evaluations, and so on. The lesson is learned in order to improve the online delivery of engineering students. It is particularly advised that colleges adapt their courses to incorporate technology into content delivery and learning outcome assessment. The availability of resources and necessary training for faculty, staff, and students may be advantageous in this regard.

Mushtaha, E. et al. (2022). In comparison to practical colleges, theoretical colleges appear to have a more positive assessment of user productivity, motivation, knowledge gain, and interactivity. Overall, users supported the idea of incorporating online learning techniques into traditional classroom learning in the future; 75% preferred a blended model of face-to-face and e-learning techniques, rather than relying solely on either online learning or traditional learning.

Erlangga, D. T. (2022). This study sought to identify potential answers to students' problems in the online learning process. This survey included 25 English education students from a private university in Bandar Lampung. To collect data, the researcher disseminated a closed-ended questionnaire of 9 questions via Google, and qualitative data was utilized to demonstrate the questionnaire's outcomes in data findings. According to the study's findings, some of the challenges that students have when learning online include: (1) difficulty understanding materials, (2) technological difficulties, (3) limited internet quotas, (4) inadequate communication, and (5) learning becoming less effective. The solutions that researchers have found to overcome the problems are as follows: (1) teachers or lecturers must implement face-to-face classes twice a week, (2) teachers should use platforms with simpler operations in online learning, (3) teachers or lecturers should provide interactive, dynamic, and appealing material, and (4) the government must extend quota assistance to students.

Khan, Z.H., et al. (2021). This research examines online teaching and learning strategies in several engineering programs offered by Pakistani institutions during the COVID-19 epidemic. It's worth noting that this crisis led to the discovery of new dimensions in online engineering course teaching, as well as the implementation of various distance-learning methods for instruction and assessment. Distance learning is utilized to comprehend and apply essential concepts of engineering processes in an online setting. It is underlined that an Online Certification decision matrix for online teaching readiness assessment is critical for maintaining quality by certifying online courses at various levels and include

student feedback as a key performance indicator. Furthermore, policy standards are especially studied for the purpose of administering an online theory/lab exam and assessing the Final Year Project.

Asgari, S. et al. (2021). This observational study investigates obstacles experienced as a result of the sudden change to online engineering courses during the COVID-19 epidemic by surveying (quantitatively and qualitatively) students and teachers at our minority-serving school. Several logistical, technological, and learning/teaching challenges were discovered, and multiple treatments were offered to solve them. The findings of this study contribute to the growing body of knowledge about the impact of a pandemic on engineering education. This study also provides empirical evidence to support the proposed solutions for improving (and thereby promoting) online engineering education during and after the epidemic.

III. RESEARCH METHODOLOGY

The methodology of this study describes the technique utilized to investigate the problems that engineering students in Kanyakumari District encounter when pursuing online education, as well as the effects on academic performance, engagement, and teacher-student relationships. The study employs a quantitative research design, which enables numerical data collecting and statistical analysis to reveal patterns and linkages.

A. Research Design

This study employs a quantitative research methodology to examine the difficulties encountered by engineering students in Kanyakumari District when pursuing online education. The study also looks into the effects of online learning on academic achievement, engagement, and teacher-student interactions.

B. Sample Size

The intended audience consists of engineering students from several colleges in Kanyakumari District. To assure representation during the four-year study period, a stratified random sample procedure is adopted. The ultimate sample size is 450 students, with 270 men (60%) and 180 women (40%).

C. Data Collection

Primary data is collected using a structured questionnaire, which included both closed-ended and Likert-scale questions to measure students' experiences with online learning. The questionnaire focused on:

- Challenges encountered (technical problems, distractions, health concerns, motivation)
- Impact on academic achievement (grades, attention span, and engagement)
- Student contact and participation (teacher communication, classroom engagement, peer interaction)

D. Data analysis

- Descriptive statistics (frequency, percentages, means, and standard deviations) are employed to summarize demographic data.
- Independent t-tests are used to compare gender differences in the challenges faced.
- ANOVA tests are used to compare academic performance between years of study.
- Pearson correlation analysis is used to investigate the links between student engagement, instructor communication, and peer interaction.

IV. DATA ANALYSIS AND INTERPRETATION

H_0: Engineering students in Kanyakumari District do not face significant challenges while pursuing online education.

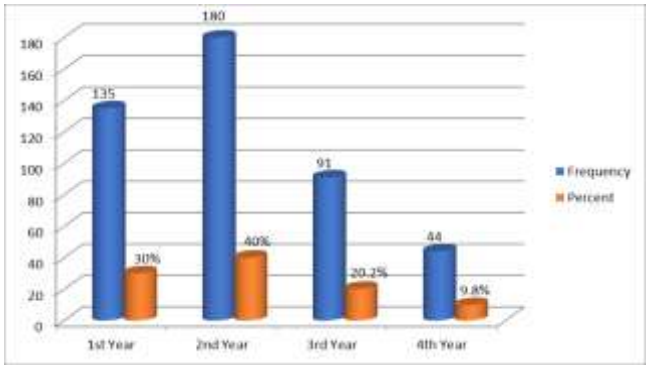

Fig. 1 Year of the Study of the Respondents

Fig. 1 shows the distribution of respondents according to their year of study. The blue bars represent the

frequency (number of students), while the red bars show the proportion of total responders in each academic year. The data shows that the majority of respondents are in their second year (180 students, 40%), followed by first-year students (135 students, 30%). As the year of study progresses, involvement gradually drops, with third-year students accounting for 20.2% (91 students) and fourth-year students accounting for the smallest proportion (9.8%, 44 students).

TABLE I t-TEST FOR GENDER AND CHALLENGES FACED BY STUDENTS

Challenges Faced by Students	Gender	N	Mean	Std. Deviation	t-Value	F Value	P Value
Technical issues	Male	270	4.78	0.417	23.803	178.656	0.000
	Female	180	3.17	0.989	20.672		
Distractions at home	Male	270	4.72	0.449	22.603	148.827	0.000
	Female	180	3.17	0.989	19.792		
Health Concerns	Male	270	4.72	0.449	24.421	91.672	0.000
	Female	180	3.08	0.956	21.468		
Self-Discipline and Motivation	Male	270	4.67	0.472	25.734	87.375	0.000
	Female	180	2.92	0.956	22.767		

TABLE I results show significant gender inequalities in the difficulties encountered by engineering students in Kanyakumari District when pursuing online education. Males had higher mean scores than females for all key hurdles, including technical issues, distractions at home, health concerns, and self-discipline and motivation, indicating that they perceive these difficulties more intensely. The p-values (0.000) for all tasks show statistical significance, rejecting the null hypothesis (H_0). The high t-values and F-values confirm significant disparities between male and female students. Males reported more technical difficulties (Mean = 4.78) and distractions (Mean = 4.72) than females (Mean = 3.17 for both), implying more issues with digital infrastructure and the home environment. Similarly, males expressed more health concerns (Mean = 4.72) and self-discipline/motivation issues (Mean = 4.67) than females (Mean = 3.08 and 2.92, respectively), indicating increased stress and difficulty keeping engaged in online learning. These data indicate that male students suffer much more obstacles than female students in adjusting to the online learning environment.

H_0: Online learning has no significant impact on students' academic performance.

TABLE II ANOVA TEST FOR YEAR OF STUDY AND IMPACT ON ACADEMIC PERFORMANCE

Impact on Academic Performance	Year of Study	N	Mean	Std. Deviation	F Value	P Value
Grades and performance	1st Year	212	4.85	0.359		
	2nd Year	148	3.80	0.403		
	3rd Year	77	1.97	0.648	1051.777	0.000
	4th Year	13	1.00	0.000		
	Total	450	3.90	1.222		
Attention Span	1st Year	212	4.92	0.272		
	2nd Year	148	3.80	0.403		
	3rd Year	77	2.17	0.768	987.116	0.000
	4th Year	13	1.00	0.000		
	Total	450	3.97	1.198		
Student Engagement	1st Year	212	4.92	0.272		
	2nd Year	148	3.90	0.303		

	3rd Year	77	2.17	0.768	1118.349	0.000
	4th Year	13	1.00	0.000		
	Total	450	4.00	1.185		
Isolation	1st Year	212	4.78	0.416		
	2nd Year	148	3.59	0.493		
	3rd Year	77	1.78	0.417	1086.707	0.000
	4th Year	13	1.00	0.000		
	Total	450	3.77	1.258		

TABLE II results show that online learning has a significant impact on students' academic performance across multiple years of study, as indicated by p-values (0.000) for all assessed parameters. First-year students reported the highest mean grades, attention span, involvement, and feelings of isolation, whereas scores decreased in subsequent years, with fourth-year students having the lowest values. This shows that online learning may be more beneficial for researching kids but gets more difficult as they mature, maybe due to higher academic workload, lower motivation, and more isolation in later years.

H_0: There is no significant difference in student involvement and interactions with teachers in an online learning environment.

TABLE III shows a strong positive association between instructor communication, classroom engagement, and peer interaction in an online learning environment. The correlation coefficients (0.975) indicate that stronger teacher communication considerably improves classroom engagement and peer interaction, stressing the importance of good instructor involvement in encouraging student participation. The null hypothesis (H_0) is rejected as all correlations are significant at the 0.01 level, indicating a substantial relationship between student involvement and interactions with teachers in online learning environments.

TABLE III PEARSON CORRELATIONS FOR STUDENT INVOLVEMENT AND INTERACTIONS WITH TEACHERS IN AN ONLINE LEARNING ENVIRONMENT

Student Engagement in an Online Learning Environment		Teacher Communication	Classroom Engagement	Peer Interaction
Teacher Communication	Pearson Correlation	1	0.975**	0.975**
	Sig. (2-tailed)	-	0.000	0.000
	N	-	450	450
Classroom Engagement	Pearson Correlation	-	1	1.000**
	Sig. (2-tailed)	-	-	0.000
	N	-	-	450
Peer Interaction	Pearson Correlation	-	-	1
	Sig. (2-tailed)	-	-	-
	N	-	-	450

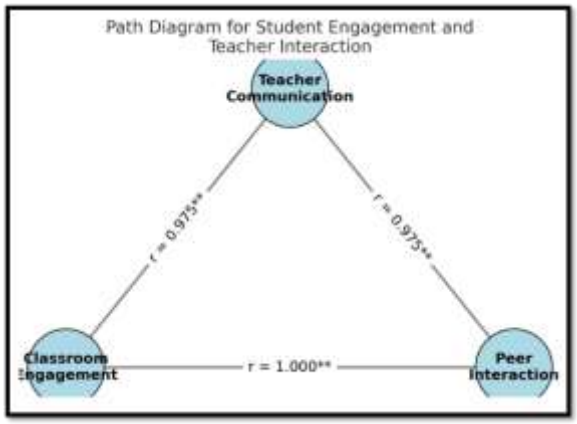

Fig. 2 Path Diagram for Student Involvement and Interactions with Teachers in an Online Learning Environment

Fig. 2 shows the association between student engagement and teacher involvement in an online learning environment. The substantial positive correlations show that teacher communication (r = 0.975**) has a considerable impact on both classroom engagement and peer interactions. Furthermore, classroom engagement and peer interaction have a perfect association (r = 1.000**), implying that students who actively participate in class are also very interactive with their classmates. These findings emphasize the importance of excellent teacher communication in promoting student engagement and collaborative learning in an online setting.

V. FINDINGS AND SUGGESTIONS

A. Findings

The data indicate that male students encounter more obstacles in online education than female students, particularly in terms of technological issues, distractions, health concerns, and motivation. These findings underline the need of specific interventions, such as improved digital infrastructure, student support programs, and mental health efforts, in improving the online learning experience for all students.

The study found that online learning has a substantial impact on students' academic performance, attention span, engagement, and feelings of isolation, with first-year students suffering the fewest obstacles and fourth-year students facing the most difficulties. The downward trend in scores implies that as students continue through their academic careers, they struggle more with engagement, motivation, and performance in an online setting.

The study found a high positive association between teacher communication, classroom engagement, and peer interaction, implying that good instructor involvement boosts student participation in an online learning environment. The significant association values indicate that students who receive better communication from their teachers are more involved in class activities and peer conversations.

B. Suggestions

Enhancing technical infrastructure, reducing home distractions, addressing health concerns, increasing motivation through interactive learning, providing gender-specific support, and implementing hybrid models can all contribute to a more effective and inclusive online learning environment for engineering students in Kanyakumari District.

To improve the effectiveness of online learning, institutions should implement interactive and engaging teaching methods, offer additional academic support to senior students, implement mental health and peer interaction initiatives, and use a blended learning approach to reduce isolation and increase overall engagement.

Institutions should prioritize teacher-student contact by implementing interactive teaching methods, providing regular feedback, and holding real-time conversations. Encourage collaborative learning activities and peer interactions to improve student engagement in online education.

CONCLUSION

According to the study, engineering students in Kanyakumari District encounter a number of issues in

their online education, including poor internet connectivity, numerous diversions at home, health concerns as a result of excessive screen time, and difficulties maintaining self-control. It also emphasizes that characteristics such as gender and year of study have a substantial impact on students' learning experiences, altering academic achievement, attention span, and engagement. A important message is the necessity of teacher communication in maintaining student engagement and encouraging peer connection. To improve online education, universities should prioritize improving digital infrastructure, designing structured and engaging learning environments, and using interactive teaching methods. Encouraging student participation in conversations, group activities, and providing timely feedback can all improve learning results. By addressing these difficulties and fostering an engaged and supportive online learning culture, engineering students can benefit from a more effective and enriching educational experience.

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