



The Impact of Technological Advancement on the Study Habits of PG Students

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ABSTRACT :

This research explores how technological advancements influence the study habits of postgraduate (PG) students, particularly those from Raiganj University and the University of Gour Banga in West Bengal. By analyzing the integration of digital tools and resources into students' academic routines, the study aims to provide a detailed understanding of the changing landscape of learning in the digital era. The research employs a quantitative methodology, using stratified random sampling to collect data from 100 PG students from various faculties. Data were obtained through structured online surveys and analyzed using statistical techniques. The regression analysis indicates a strong positive relationship between technological advancements and study habits, with a coefficient of 1.761, suggesting that greater engagement with technology significantly enhances academic practices. Technological advancements explain 70.5% of the variance in study habits, highlighting their essential role in improving learning flexibility and information access. The results illustrate the transformative impact of technology on higher education while also addressing the potential difficulties students encounter in embracing new technologies in different contexts.

Keywords: Technological Advancement, Study Habits, PG Students

Introduction :

In today's digital age, technology has become a pivotal force shaping various aspects of life, including education. The integration of technological tools and resources has transformed traditional learning environments, providing students with unprecedented access to information, flexibility in learning, and enhanced opportunities for academic collaboration. Particularly in higher education, postgraduate (PG) students are at the forefront of this technological shift, navigating a dynamic landscape where digital platforms and online resources are increasingly embedded into their academic practices. Postgraduate students often engage in specialized and advanced studies that demand a high level of research, critical thinking, and resource access. Technological advancements have allowed them to leverage digital tools such as e-libraries, online databases, and collaborative platforms (Khan & Kaur, 2018; Tan & Lo, 2016) that enable efficient information retrieval and foster global academic interactions. These innovations have not only transformed how students gather and process knowledge but have also influenced their study habits, learning strategies, and academic performance.

This research aims to investigate how technological advancements influence the study habits of postgraduate students from Raiganj University and the University of Gour Banga in West Bengal. By examining a varied group of students across different disciplines, this study intends to offer a thorough understanding of the integration of digital tools and resources into the academic experiences of PG students, as well as the effects of these tools on their academic achievements. The results of this research will not only emphasize the positive aspects of technological integration but also reveal the potential challenges that students encounter in diverse environments, providing insights for educational institutions and policymakers on how to better support PG students in a swiftly changing digital landscape. Through a detailed analysis, this study will illuminate how technology can be utilized to improve study habits, boost academic performance, and foster a more inclusive learning atmosphere in higher education.

Review of Related Literature :

Verma & Sonkar (2013) studied "Impact of E-Resources and Web Technology on Reading Habits". This study's findings indicated that digital media and the Internet impact reading habits and traditional and digital libraries supplement each other for readers. Ntui & Usang (2014) studied "Information and Communication Technology (ICT) Usage and Undergraduate Students Study Habits in Universities in Cross River State, Nigeria". The results of this study indicated that computer usage has a significant influence on students' study habits and internet usage has a significant influence on students' study habits. Shimray et al. (2015) studied "An Overview of Mobile Reading Habits". The main findings of this study showed that the shift from print to online to mobile reading habits and Mobile phone use is associated with health problems like cancer and stress. Vinay & Rassak (2015) studied "A Technological Framework for Teaching-Learning Process of Computer Networks to Increase the Learning Habit". The results of this study indicated that the proposed model enables practical visualization for networking topics in education and emphasizes student-centric learning through problem-

based and project-based methods. Kumara & Kumar (2018) studied “Impact of ICT on Reading Habits of Students: A Survey”. The findings of this study indicated that students access the Internet every day and students use ICT in support of their academic work. Tiwari (2022) studied “The Impact of Internet and Digital Media on Reading Habit”. This study's findings showed a noticeable shift from traditional reading habits to digital reading. People increasingly prefer accessing content electronically due to the convenience it offers, such as the ability to read while travelling or from any location and traditional and digital libraries complement each other in meeting the diverse needs of readers. While digital libraries offer convenience and broader access, traditional libraries continue to serve as important cultural and knowledge centres.

Objectives :

O₁: To know the status of technological advancement in enhancing the study habits of PG students.

O₂: To find out the impact of technological advancement on the study habits of PG students.

Research Question :

RQ₁: What is the present status of technological advancement in enhancing the study habits of PG students?

Hypothesis

H₀₁: There is no significant impact of technological advancement on the study habits of PG students.

Methodology :

Design

The descriptive survey method was used in this study. It employed quantitative data to provide a comprehensive understanding of the impact.

Population & Sample

The population for this study included 100 postgraduate students currently enrolled at Raiganj University and the University of Gour Banga in various departments in the state of West Bengal. The participants were chosen from different universities, ensuring representation from various faculties such as Arts, Language and Science using a stratified random selection technique.

Name of the College/University	Male	Female	Total no of Sample
Raiganj University	25	25	50
University of Gour Banga	25	25	50

Variables

Independent Variable: Technological advancement

Dependent Variable: Study habits of PG students

Tools

Structured questionnaires were designed. It contained 28 items to gather quantitative data on technology use, study habits, and academic performance. It was a self-reported questionnaire that employed a 3-point Likert scale response format from disagree = 1 to agree = 3. There was no item phrased negatively. The scores in each dimension were calculated by averaging the scores of each statement under the dimension. Therefore, the minimum score in each dimension is 1 and the maximum score is 3.

Techniques of Data Collection and Data Organization :

Google Forms was distributed to collect data from a large number of students efficiently. Data from questionnaires were coded and entered into statistical software (e.g., Microsoft Excel, SPSS) for analysis. Inferential statistics (e.g., regression analysis, ANOVA) were applied to test hypotheses and examine relationships between variables.

Delimitations

The study was delimited to:

1. Postgraduate students from Raiganj University and the University of Gour Banga.
2. 100 PG students.
3. Structured questionnaires for data collection.
4. Technological advancements such as digital tools, online resources, and e-learning platforms.

Data Analysis and Interpretation :

For O₁: The status of technological advancement in enhancing the study habits of PG students.

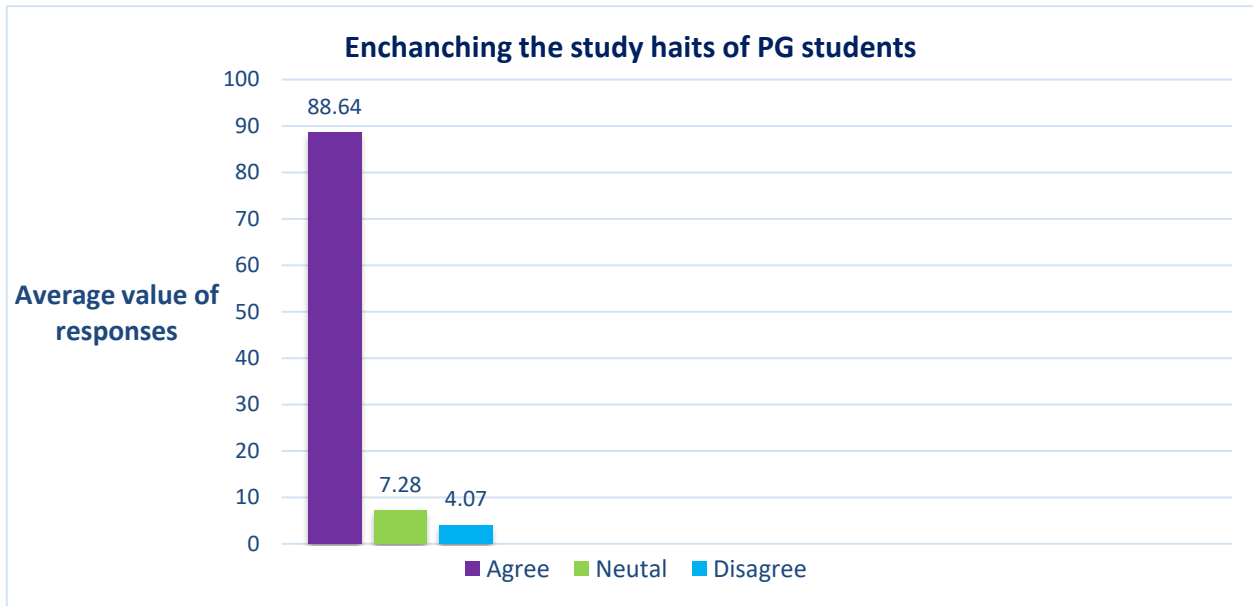


Fig. 1 - : Enhancing the study habits of PG students

The bar chart illustrates postgraduate (PG) students' perceptions of how technological advancements impact their study habits. A significant majority (88.64%) agree that technology has positively influenced their study practices, highlighting its perceived benefits such as online learning platforms and digital resources. A smaller portion (7.28%) remains neutral, suggesting they acknowledge technology's presence but do not feel it significantly affects their study habits. Only 4.07% disagree, indicating that some students either prefer traditional methods or face challenges in utilizing technology effectively. Overall, while technology is widely seen as beneficial, there is potential for improving its integration and impact for all students.

For O₂: The impact of technological advancement on the study habits of PG students.

Table No.-1: Model Summary of the Regression Analysis for the Impact of Technological Advancement				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.840 ^a	.705	.690	2.15142

a. Predictors: (Constant), Technological Advancement

The correlation coefficient (r) of 0.840 indicates a strong positive relationship between technological advancement and study habits, meaning as technology improves, study habits also tend to improve. The R-squared value of 0.705 suggests that 70.5% of the variability in study habits can be explained by technological advancement, highlighting its significant role in predicting study habits. The adjusted R-squared value of 0.690, which is close to the R-squared value, confirms the model's robustness even after accounting for the number of predictors. The standard error of the estimate is 2.15142, indicating that while there is some variability in the data, the model provides fairly accurate predictions.

Table No.- 2 ANOVA for the Regression Analysis of the Impact of Technological Advancement on Study Habits						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	210.342	1	210.342	45.444	.000 ^b
	Residual	87.944	19	4.629		
	Total	298.286	20			

a. Dependent Variable: Study Habits

b. Predictors: (Constant), Technological Advancement

The F-value of 45.444 indicates that the regression model is highly significant in predicting study habits, demonstrating that technological advancement is a strong predictor. The p-value of 0.000, which is below the standard alpha level of 0.05, confirms the statistical significance of the model and suggests that the observed relationship between technological advancement and study habits is unlikely due to random chance.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.371	5.792		.755	.460
1 Technological Advancement	1.761	.261	.840	6.741	.000

a. Dependent Variable: Study Habits

In the regression analysis, the constant (intercept) is not statistically significant ($p = 0.460$), indicating that its value when technological advancement is zero is not meaningfully different from zero. The coefficient for technological advancement is 1.761, suggesting that each unit increase in technological advancement results in a 1.761 unit increase in study habits score. This coefficient is statistically significant ($p = 0.000$) with a large effect size (Beta = 0.840), indicating a strong positive relationship. Overall, technological advancement significantly impacts study habits, explaining approximately 70.5% of the variance in study habits among PG students. Consequently, the null hypothesis is rejected, suggesting that there is a significant impact of technological advancement on the study habits of PG students.

Findings & Discussion :

For O₁: The Status of Technological Advancement in Enhancing the Study Habits of PG Students

This survey of PG students reveals that 88.64% agree that technological advancements have improved their study habits, indicating widespread recognition of the benefits of technological tools and resources. Meanwhile, 7.28% of students remain neutral, acknowledging the potential benefits of technology without experiencing significant changes in their study habits. A minority of 4.07% disagree, suggesting a preference for traditional study methods or difficulties in using technological tools effectively.

The study showed that the majority of PG students (88.64%) agree that technological advancements, like online learning platforms and digital libraries, enhance their study habits, offering convenience and better access to resources. A smaller group (7.28%) remains neutral, possibly due to limited access or effective usage, suggesting the need for targeted interventions. A minority (4.07%) disagree, potentially facing barriers such as technical issues or a preference for traditional methods. The chart reveals a predominantly positive perception of technological advancements in enhancing study habits among PG students (Jain & Kumari, 2021).

For O₂: Overall Impact of Technological Advancement on Study Habits

The regression analysis reveals a strong positive relationship between technological advancements and the study habits of PG students (Ghosh & Mukherjee, 2020), with a coefficient of 1.761 indicating that each unit increase in technological advancement boosts the study habits score by 1.761 units. This relationship is statistically significant, evidenced by a p-value of 0.000, and has a large effect size, shown by a Beta value of 0.840. Technological advancements explain 70.5% of the variance in study habits, highlighting their crucial role in enhancing students' study habits.

The study finds that technological tools, including online learning platforms, digital apps, and mobile technologies, have a significant and positive impact on the study habits of PG students, improving access to information, communication, and flexible learning opportunities. The relationship between technology and study habits is robust, with a p-value of 0.000 and a Beta value of 0.840, indicating a strong effect. This aligns with literature highlighting the benefits of technology, such as increased access to resources (Shimray et al., 2015) and enhanced study efficiency (Vinay & Rassak, 2015).

Significance of the study :

This study holds significant relevance in the current educational landscape, particularly in understanding how technological advancements impact the study habits of postgraduate (PG) students. As higher education institutions increasingly integrate digital tools and resources into their curricula, it becomes essential to assess their effectiveness and influence on students' academic practices. The findings of this research provide several key contributions:

- By focusing on the experiences of PG students from Raiganj University and the University of Gour Banga, the study offers valuable insights into how students navigate the digital learning environment. The results underscore how technological advancements such as e-libraries, online databases, and digital platforms have reshaped study habits, allowing students to access information more flexibly and efficiently.

- The study highlights the importance of integrating technology in higher education to enhance academic performance. With 70.5% of the variance in study habits explained by technological engagement.
- While the majority of students reported positive impacts from technology, a minority expressed difficulties in utilizing digital tools, which points to a need for addressing access disparities and user challenges. This research provides a foundation for creating strategies to support students who struggle with technology, ensuring that they are not left behind in an increasingly digital academic world.
- The study encourages a shift towards more adaptive learning strategies that align with technological trends. The positive correlation between technological advancements and improved study habits indicates that digital tools not only provide access to information but also promote better time management, research practices, and overall academic efficiency.

Conclusion :

The findings of this study emphasize the significant impact of technological advancements on the study habits of postgraduate (PG) students at Raiganj University and the University of Gour Banga in West Bengal. The integration of digital tools, online platforms, and e-resources has transformed the way students approach learning, offering increased flexibility, convenience, and access to information. With a majority of students acknowledging the positive influence of technology on their study habits, it is clear that technological advancements are essential in modern higher education, fostering better time management, more efficient research practices, and enhanced academic performance. The regression analysis demonstrates a strong positive correlation between technological engagement and improved study habits, with technology accounting for 70.5% of the variance in students' academic routines. This underscores the critical role that digital tools play in shaping effective learning strategies. However, the study also identifies challenges, as a minority of students express difficulties in fully utilizing these technological resources, either due to a preference for traditional methods or barriers in accessing or using digital tools. In conclusion, while technology has undeniably improved the study habits of the majority of PG students, there is a need for continued support to ensure that all students can benefit equally.

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