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IMPACT OF TECHNOLOGY ON STUDENTS' ACADEMIC PERFORMANCE IN RGCMS COLLEGE

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ABSTRACT
This research paper explores the transformative role of technology in enhancing academic performance among students at Rajeev Gandhi College of Management Studies (RGCMS). With the rapid evolution of digital tools and online platforms, education has transcended traditional boundaries, allowing for more interactive, inclusive, and personalized learning experiences. The study employs a mixed-method approach involving surveys, interviews, and institutional data to assess the influence of technology on student engagement, academic outcomes, and skill development. Findings reveal that while technology greatly contributes to academic success through improved accessibility, collaboration, and self-paced learning, challenges like the digital divide, information overload, and distractions persist. The research offers strategic recommendations for policymakers and educators to bridge these gaps and leverage digital innovations effectively.

KEYWORDS: *Educational Technology, Digital Learning, Academic Performance, Personalized Learning, Higher Education, RGCMS, Blended Learning.*

INTRODUCTION

In the rapidly evolving digital age, educational institutions around the world are adopting technology to transform traditional teaching and learning practices. The use of Learning Management Systems (LMS), smart classrooms, virtual laboratories, and cloud-based platforms has become increasingly common in higher education. These tools not only enhance access to academic content but also promote interactive learning, real-time feedback, and personalized instruction. Technology enables students to collaborate virtually, manage assignments efficiently, and access a vast range of learning resources beyond textbooks and lecture halls. This digital shift is reshaping the educational landscape, aligning academic delivery with the expectations of tech-savvy learners.

At Rajeev Gandhi College of Management Studies (RGCMS) in India, technology integration has been a strategic initiative aimed at improving academic outcomes and overall student experience. As a forward-thinking management institute, RGCMS has embraced digital tools to support both faculty and students in achieving excellence. The college has invested in digital infrastructure, online platforms, and training programs to enhance teaching methods and make learning more engaging and effective. This research paper examines how these technological advancements have been adopted within RGCMS and analyzes their direct and indirect impact on students' academic performance, skill development, and learning satisfaction.

OBJECTIVES OF THE STUDY

- To examine the correlation between technology use and academic performance at RGCMS.
- To analyze how digital tools facilitate personalized learning and engagement.
- To identify the challenges students face in adapting to technology-based learning environments.
- To propose actionable strategies to enhance educational outcomes through digital means.

SCOPE OF THE STUDY

The study is restricted to students of RGCMS, focusing on their interactions with educational technology. It evaluates various technological interventions from smart classrooms to adaptive learning platforms and assesses their effect on academic achievements and engagement.

LITERATURE REVIEW

The Role of Technology in Education

(M.L. Niess, 2005)
Niess explores how technology has fundamentally transformed the educational landscape, shifting traditional teaching methodologies toward digital tools and interactive learning environments. The study highlights the impact of technology on student engagement and comprehension, as digital tools provide diverse learning experiences through multimedia resources, online simulations, and interactive learning platforms. The research establishes a foundation for understanding why technology is an essential component in modern education. Niess also emphasizes the importance of preparing educators to effectively integrate technology into their teaching practices, ensuring they can leverage digital advancements to enhance students' learning experiences. The study suggests that a well-implemented technological framework in education can improve accessibility, learning outcomes, and overall student motivation.

Impact of Technology on Teaching and Learning

(H. Kay, 2004)
Kay conducted extensive surveys among educators who adopted digital tools in their classrooms, assessing the impact on student engagement and learning outcomes. The research

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revealed that students displayed greater enthusiasm, curiosity, and self-initiative when technology was incorporated into the curriculum. However, teachers faced significant challenges in adapting to technology-based teaching, as many required additional training to effectively utilize digital tools. The study highlights the need for professional development programs to help teachers transition smoothly into tech-driven education. Additionally, Kay discusses the varying degrees of success across different subjects, with STEM fields benefiting significantly from digital integration due to their reliance on simulations, virtual labs, and interactive learning applications.

Challenges in Implementing Technology in Education
(A. Ertmer & Ottenbreit - Lefwich, 2010)
This study examines the obstacles hindering the successful integration of technology into education. Key challenges include a lack of infrastructure, limited access to digital devices, inadequate teacher training, and resistance to change among educators and institutions. Ertmer and Ottenbreit-Lefwich argue that without proper institutional support, teachers may struggle to adapt to new technologies, affecting the quality of education. The research suggests that successful technology implementation requires a collaborative approach, involving policymakers, educators, and technology experts to design effective digital learning strategies. The study further emphasizes the importance of digital literacy among educators, proposing that continuous training programs are necessary to bridge the knowledge gap and encourage widespread adoption.

Technological Knowledge as a Fundamental Teaching Skill
(Kimberly A. Lawless & James W., 2007)
This study discusses the importance of technological literacy as a fundamental skill for modern educators. The authors argue that despite the availability of advanced digital tools, many teachers still rely on traditional teaching methods due to a lack of familiarity with technology. The study highlights the benefits of digital tools in enhancing classroom instruction, including interactive whiteboards, online assessments, and virtual collaboration platforms. However, without proper training, educators may fail to utilize these tools effectively. The research calls for educational institutions to integrate technology training into teacher preparation programs, ensuring that future educators are well-equipped to implement digital learning strategies.

Technology Exposure Among University Students
(F. Katz, 2008)
Katz explores the impact of early exposure to technology on university students, emphasizing their dependence on digital platforms for academic and social interactions. The study highlights the shift from traditional learning methods to digital approaches, such as video lectures, online forums, and gamified learning experiences. Katz examines how students' cognitive development is influenced by digital media, noting that while technology enhances accessibility to information, it may also contribute to reduced attention spans and multitasking tendencies. The study suggests that universities must balance traditional and digital learning methods to optimize student engagement and academic performance.

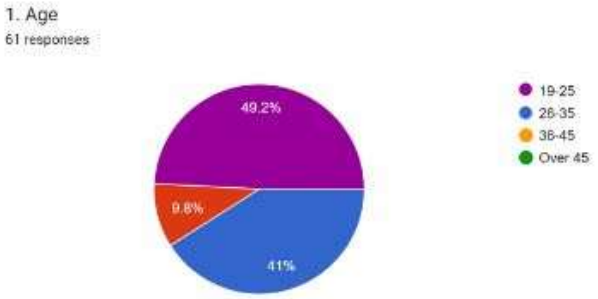
RESEARCH METHODOLOGY

Component	Description
Research Design	Descriptive and analytical approach combining both quantitative and qualitative components.
Target Population	Students of MMS I and II year at Rajeev Gandhi College of Management Studies (RGCMS).
Sample Size	72 respondents
Sampling Technique	Stratified random sampling to ensure representation across academic levels.
Data Collection Methods	- Surveys: Structured questionnaires using Likert scales - Interviews: Semi-structured for deeper insights - Secondary data from institutional sources
Instrumentation	- Questionnaire on technology usage and academic impact - Interview guide for student experiences
Data Analysis Techniques	- Descriptive statistics for survey data - Thematic analysis for qualitative responses - Comparative performance review
Ethical Considerations	Informed consent, participant anonymity, and no data manipulation.
Limitations	Self-reported data may include bias; findings may not be fully generalizable beyond RGCMS context.

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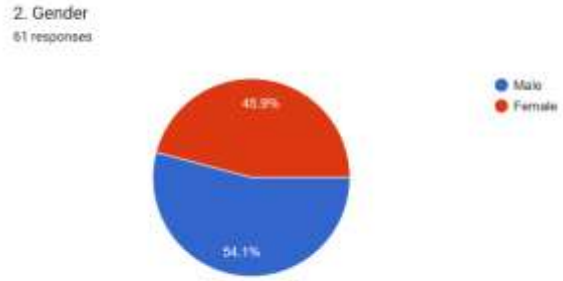
DATA ANALYSIS AND INTERPRETATION

1. Age



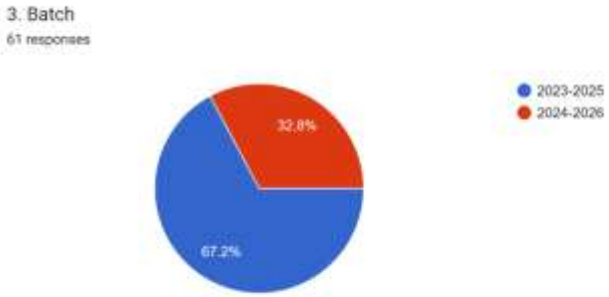
Age
Most participants (49.2%) are aged 19–25, followed by 41% in the 26–35 range. This indicates a predominantly young, tech-savvy respondent base.

2. Gender



Gender
The survey had a nearly balanced gender distribution: 54.1% male and 45.9% female, ensuring diverse viewpoints.

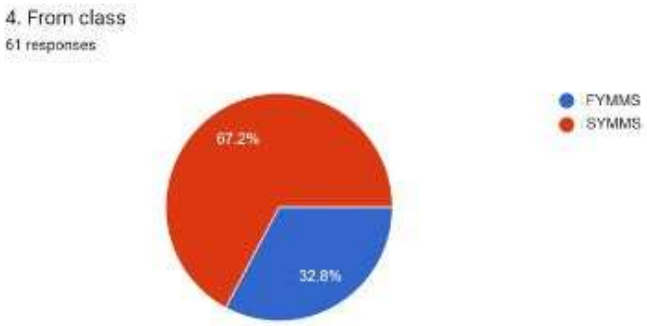
3. Batch



Batch
A majority (67.2%) belong to the 2023–2025 batch, suggesting more feedback from experienced second-year students.

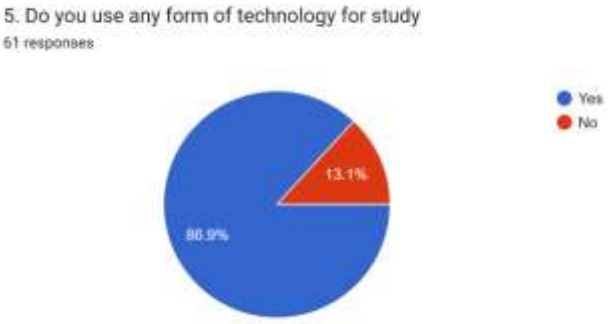
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4. From Class



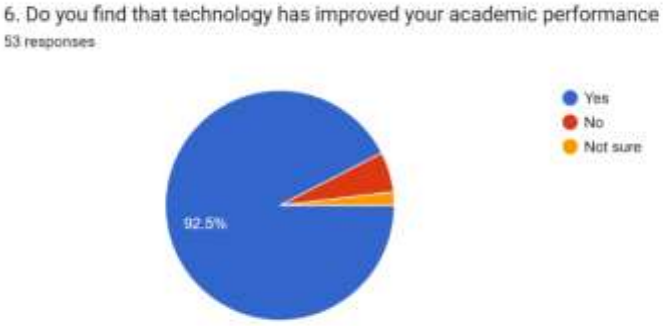
From Class
SYMMS students contributed 67.2% of responses, while FYMMS accounted for 32.8%, highlighting stronger insights from senior students.

5. Do you use any form of technology for study



Technology Usage Among Students
A high 86.9% of RGCMS students reported regularly using digital tools such as laptops and smartphones for academic purposes, indicating strong adoption of educational technology.

6. Do you find that technology has improved your academic performance

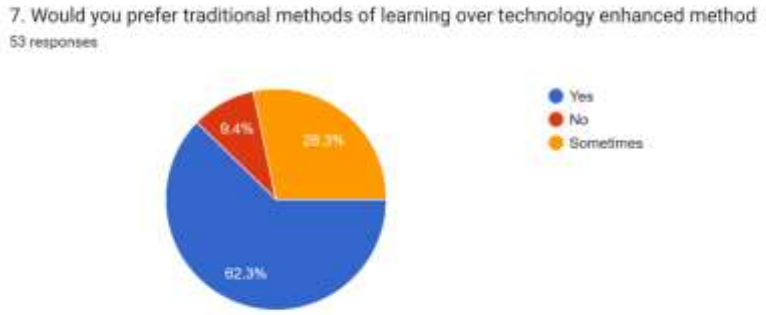


Perceived Academic Improvement
92.5% of respondents believe that the use of technology has positively impacted their academic performance by enhancing accessibility, comprehension, and collaboration.

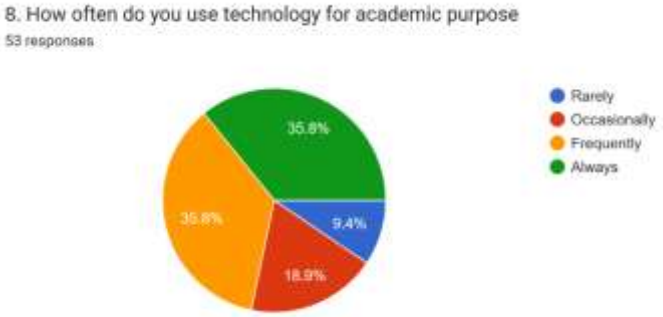
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7. Would you prefer traditional methods of learning over technology enhanced method

Learning Preference
62.3% of students prefer traditional methods over tech-based learning, while 28.3% are open to it sometimes, showing a general inclination toward face-to-face education.

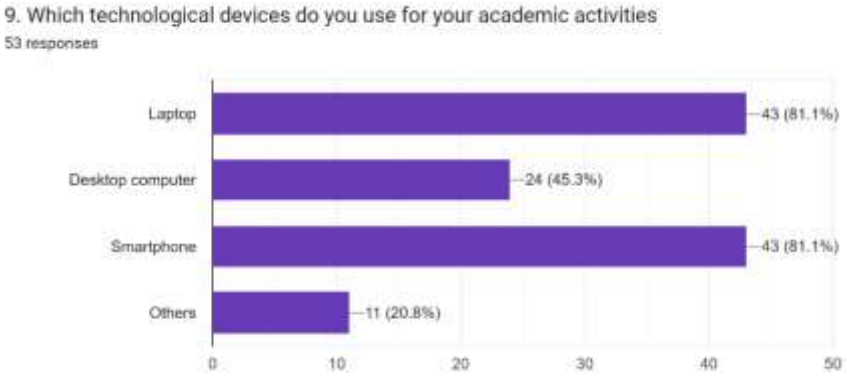


8. How often do you use technology for academic purpose



Tech Usage Frequency
Most students (71.6%) use technology either frequently or always for academic work, with only 9.4% rarely using it—highlighting tech as a regular learning tool.

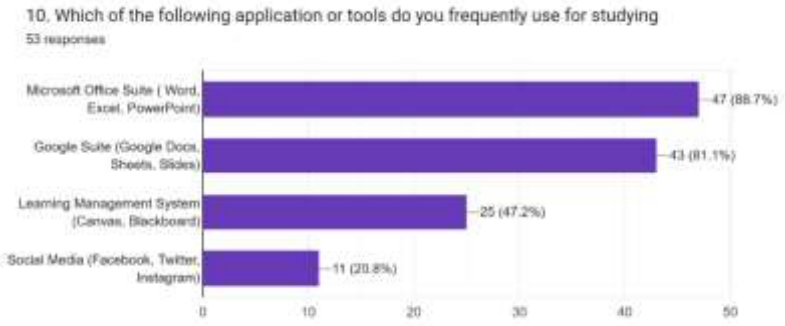
9. Which technological devices do you use for your academic activities



Devices for Learning
Laptops and smartphones are used equally by 81.1% of students for academic tasks. Desktop usage is moderate (45.3%), while 20.8% use other devices.

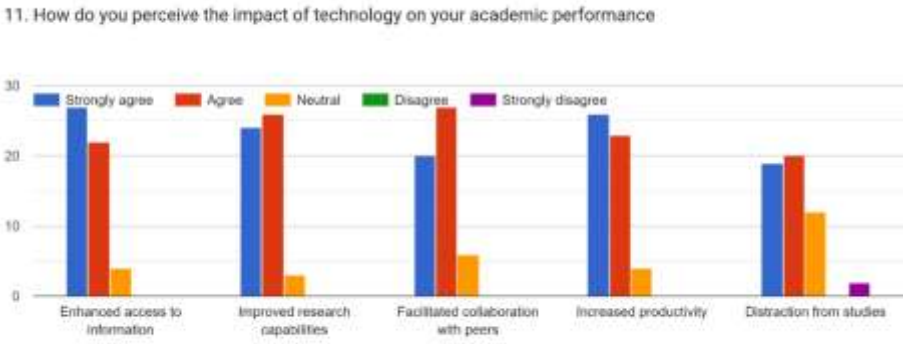
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10. Which of the following application or tools do you frequently use for studying



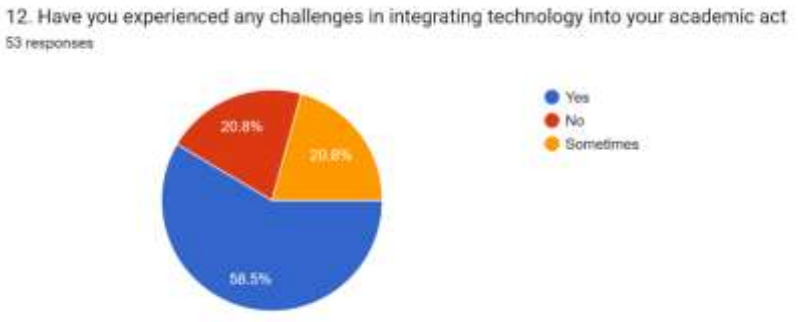
Popular Study Tools
Microsoft Office Suite (88.7%) and Google Suite (81.1%) are the most used study tools, followed by LMS platforms (47.2%). Social media use is minimal (20.8%) for academics.

11. How do you perceive the impact of technology on your academic performance



Perceived Impact of Technology on Academic Performance
Most students agree that technology enhances access to information, improves research and collaboration, and increases productivity. However, a notable number also feel it can be a source of distraction.

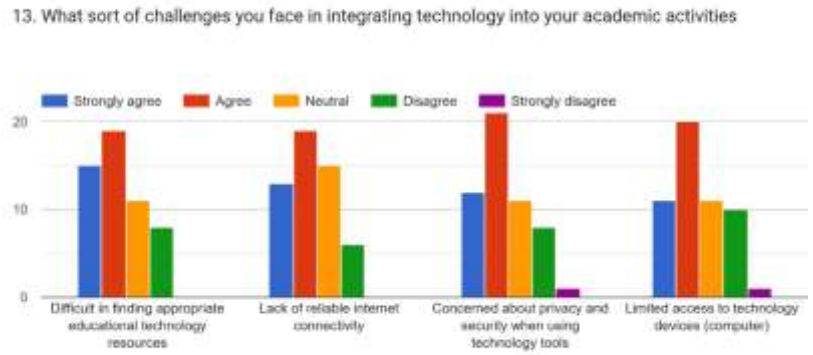
12. Have you experienced any challenges in integrating technology into your academic activities



Challenges in Technology Integration (General)
58.5% of students report facing challenges in integrating technology into academics, while 41.5% face them either occasionally or not at all, indicating room for improvement.

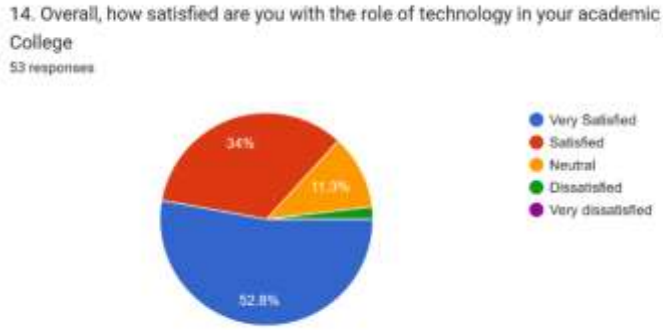
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13. What sort of challenges you face in integrating technology into your academic activities



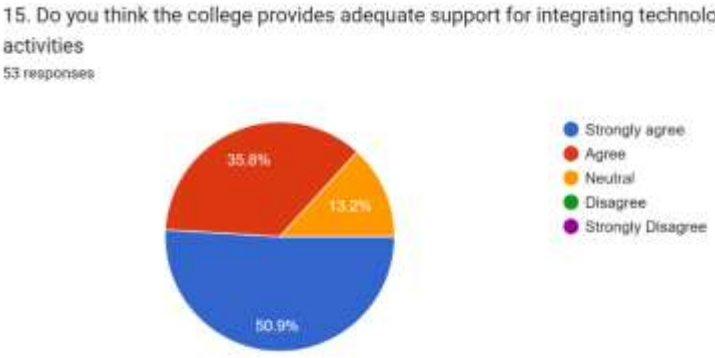
Specific Tech Challenges Faced
Key issues include lack of internet, limited device access, and privacy concerns. Difficulty in finding suitable tech tools was also noted, though less critically.

14. Overall, how satisfied are you with the role of technology in your academic journey at RGCMS College



Student Satisfaction with Tech in Academics
Over half of students (52.8%) are very satisfied with the role of technology in their studies, and 34% are satisfied, showing overall positive sentiment.

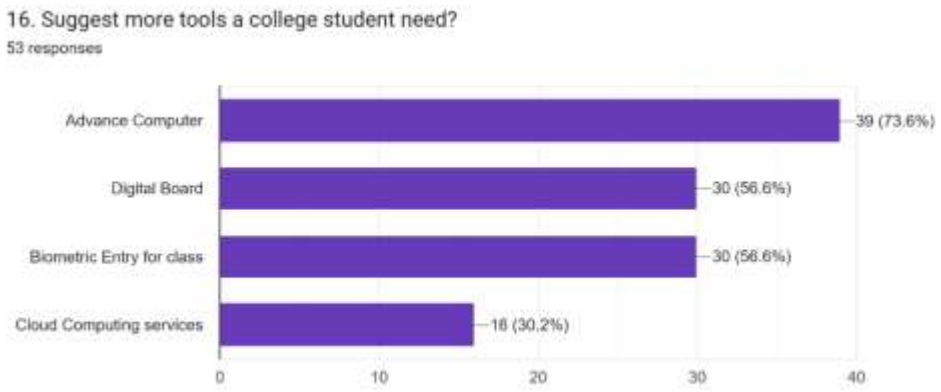
15. Do you think the college provides adequate support for integrating technology into academic activities



Perception of College Support
50.9% of students strongly agree that RGCMS offers adequate tech support, while 35.8% agree—highlighting the college's effective efforts in digital integration.

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16. Suggest more tools a college student need?



Most Suggested Tools by Students
Students strongly favor advanced computers (73.6%), followed by digital boards and biometric entry (both 56.6%). Cloud computing is least prioritized (30.2%).

CONCLUSION

Technology has become a foundational element of education at RGCMS, enabling self-paced learning, improving research skills, and enhancing access to global knowledge. The data indicates strong student support for digital learning, although a notable percentage still value traditional learning environments. A hybrid approach that combines the best of both worlds appears to be the most effective path forward.

RECOMMENDATIONS

1. Provide laptop/tablet loan schemes for underprivileged students.
2. Expand faculty development programs focused on digital pedagogy.
3. Adopt hybrid models combining in-person and digital methods.
4. Introduce programs for screen time management and mental well-being.
5. Enhance cybersecurity awareness and data privacy protocols.
6. Maintain 24/7 technical support and increase digital literacy workshops.

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