

Role of Mobile Applications in Improving Time Management Skill's of Students

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ABSTRACT-

The rapid expansion of mobile technology has transformed how students manage their time and academic responsibilities. This study investigates the role of mobile applications in enhancing time management skills among students. Using a sample of 200 respondents, primary data were collected through a structured questionnaire. Statistical tools including descriptive statistics, correlation, regression analysis, t-test, and reliability testing were applied. The findings reveal a significant positive relationship between the use of mobile applications such as Google Calendar and Notion and students' time management efficiency and academic performance. The study concludes that mobile applications serve as effective tools for improving productivity, though controlled usage is essential to minimize distractions.

1. INTRODUCTION

Time management is a critical determinant of academic success and personal productivity among students. In the digital era, mobile applications have emerged as powerful tools that assist individuals in organizing tasks, setting priorities, and managing schedules effectively. With increasing academic pressure and multitasking requirements, students are increasingly relying on digital platforms to structure their daily activities.

Mobile applications provide features such as reminders, task lists, scheduling systems, and performance tracking, which enhance efficiency and reduce procrastination. However, despite their advantages, the effectiveness of these applications depends on user behavior, frequency of usage, and digital discipline. This study aims to analyze the impact of mobile applications on students' time management skills and academic performance.

2. LITERATURE REVIEW

Existing literature emphasizes the importance of time management in improving academic outcomes and reducing stress among students. Studies have shown that

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effective time management leads to higher productivity, better academic results, and improved decision-making abilities.

Research on digital tools suggests that mobile applications enhance task organization and reduce cognitive overload by structuring activities systematically. Several scholars have found a positive association between the use of productivity applications and improved academic performance. However, some studies also highlight that excessive smartphone usage may lead to distractions, negatively affecting time utilization.

Thus, previous research indicates both positive and negative aspects of mobile application usage, creating a need for empirical investigation into their actual effectiveness in time management among students.

1. RESEARCH METHODOLOGY

1.1. Research Design

The study adopts a descriptive and analytical research design to examine relationships between variables.

1.2. Objectives of the Study

1. To assess the role of mobile applications in enhancing and improving students' time management skills.
2. To analyze the relationship between mobile application usage and students' time management skills.
3. To investigate the relationship between time management skills and the academic performance of undergraduate and postgraduate college students.
4. To evaluate the impact of mobile application usage on students' productivity and academic outcomes.

1.3. Hypotheses

H₀: There is no significant impact of mobile application usage on students' time management skills.

H₁: There is a significant impact of mobile application usage on students' time management skills.

1.4. Research Design, Sampling Design and Data Type

The study uses a quantitative, descriptive and analytical research design to examine the impact of mobile applications on students' time management. A sample of 200 students is selected using convenience sampling from UG and PG courses.

Primary data are collected through a structured questionnaire, supported by secondary sources. The data are quantitative in nature, measured on a 5-point Likert scale for statistical analysis. However, the sampling approach focuses on feasibility rather than full population generalization.

1.5. Research Methods and Tools

The study follows the survey research method, wherein data are collected through a structured questionnaire administered online using Google Forms. The questionnaire consists of three major sections:

- Demographic Profile of Respondents
- Mobile Application Usage Pattern
- Time Management Skills and Academic Performance

The questionnaire contains statements measured on a five-point Likert scale, enabling respondents to express their level of agreement.

The collected data are analyzed using SPSS (Statistical Package for the Social Sciences). The following statistical tools are employed:

- Frequency Distribution and Percentage Analysis
- Mean and Standard Deviation
- Cronbach's Alpha (Reliability Test)
- Pearson Correlation Analysis
- Simple Linear Regression Analysis
- Independent Sample t-test / One Sample t-test (where applicable)
- Descriptive Statistics

These statistical techniques help examine the relationship between mobile application usage and time management skills, determine the strength of association, and test the proposed hypotheses.

1.6. Variables of the study

The study includes independent and dependent variables to examine relationships. Mobile application usage is treated as the independent variable, while time management skills and academic performance are considered dependent variables. The study analyzes how changes in app usage influence students' efficiency and productivity. Control variables such as age and course level are also considered.

The study includes the following variables:

Variable Type	Variables
Independent Variable	Mobile Application Usage
Dependent Variables	Time Management Skills, Academic Performance
Control Variables	Age, Gender, Course Level (UG/PG), Daily Screen Time

The independent variable represents the extent of students' mobile application usage, whereas the dependent variables indicate students' ability to manage time effectively and their academic performance. Control variables are included to minimize external influences on the study findings.

1.7. Reliability & Validity

The reliability of the research instrument is assessed using [Cronbach's Alpha Coefficient](#), which measures the internal consistency of the questionnaire items. A Cronbach's Alpha value of [0.70 or above](#) is considered acceptable, indicating that the scale is reliable for measuring the intended constructs. The validity of the instrument is ensured through [content validity](#), whereby questionnaire items are developed based on the research objectives, review of relevant literature, and expert opinions. The questionnaire comprehensively covers various dimensions of mobile application usage, time management, and academic performance, thereby enhancing the overall validity of the study.

1.8. Ethical Considerations

Participation in the study is voluntary, and informed consent is obtained from all respondents. The confidentiality and anonymity of participants are strictly maintained. Data are used only for academic purposes and not shared with third parties. Ethical standards are followed throughout the research process.

1.9. Research Limitations

The study is limited by the use of convenience sampling, which may reduce generalizability. Data are based on self-reported responses, which can introduce bias or inaccuracies. The cross-sectional nature of the study restricts long-term analysis. Additionally, external factors influencing time management are not comprehensively examined.

4. DATA COLLECTION

4.1 Introduction

This chapter describes the data collection process adopted for the study entitled **"Impact of Mobile Applications on Students' Time Management Skills."** It explains the sources of data, data collection methods, research instrument, sampling framework, measurement of variables, data preparation process, and statistical techniques used for analysis. The objective of this chapter is to ensure that the collected data are reliable, valid, and suitable for statistical analysis.

4.2 Sources of Data

The present study is based on both primary and secondary sources of data.

4.2.1 Primary Data

Primary data were collected directly from undergraduate (UG) and postgraduate (PG) students through a structured questionnaire. The questionnaire was administered online using Google Forms to obtain first-hand information regarding mobile application usage and students' time management Behaviour.

4.2.2 Secondary Data

Secondary data were collected from various authentic sources including:

- Research journals
- Books
- Conference papers
- Government reports
- Research articles
- Academic websites
- Published dissertations

These sources were used to strengthen the theoretical framework and support the interpretation of findings.

4.3 Data Collection Method

The study Based on the survey research method. The survey was conducted through an online questionnaire using Google Forms. The questionnaire link was circulated through WhatsApp, email, and academic groups. This method was selected because it provides:

- Wide geographical coverage
- Quick response collection
- Cost effectiveness
- Easy data management
- Greater respondent convenience

4.4 Data Collection Instrument

A structured questionnaire was used as the primary research instrument. The questionnaire was prepared using a five-point Likert Scale.

Scale	Meaning of rating scale
1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

The questionnaire consisted of five sections covering demographic information, mobile application usage, time management skills, academic performance, and challenges faced by students.

4.5 Questionnaire Structure

Section	Variable	Questions Included	Measurement Scale
A	Demographic Profile	Age, Gender, Course	Nominal Scale
B	Mobile Application Usage	Frequency, Type of Apps	Ordinal Scale
C	Time Management Skills	Planning, Scheduling, Task Completion	Likert Scale (1–5)
D	Academic Performance	Productivity, Academic Improvement	Likert Scale (1–5)
E	Challenges	Distraction, Difficulties	Likert Scale (1–5)

4.6 Sampling Framework

The study employed Convenience Sampling. The target respondents consisted of undergraduate and postgraduate students.

Sample Size

Total Respondents = 200

Category	Respondents	Percentage
UG Students	120	60%
PG Students	80	40%
Total	200	100%

4.7 Profile of Respondents

The demographic profile of respondents is presented below.

Gender-wise Distribution

Gender	Respondents	Percentage
Male	110	55%
Female	90	45%
Total	200	100%

Application Users

Category	Respondents	Percentage
Application Users	150	75%
Non-Users	50	25%
Total	200	100%

4.8 Variables of the Study

The study includes independent, dependent, control and moderating variables.

Variable Type	Variable	Measurement Scale
Independent Variable	Mobile Application Usage	Nominal/Ordinal
Dependent Variable	Time Management Skills	Likert Scale
Dependent Variable	Academic Performance	Likert Scale
Control Variable	Age	Nominal
Control Variable	Course Level	Nominal
Moderating Variable	Daily App Usage Time	Ordinal
Challenge Variable	Mobile Distraction	Likert Scale

4.9 Data Collection Procedure

The following procedure was adopted for collecting data:

- i. Questionnaire was prepared based on the objectives of the study.

- ii. Questions were reviewed to ensure clarity and relevance.
- iii. Google Forms was created.
- iv. Questionnaire link was shared through WhatsApp, Email, Telegram and academic groups.
- v. Respondents were informed about the purpose of the study.
- vi. Confidentiality of responses was assured.
- vii. Responses were collected over the specified data collection period.
- viii. A total of 200 valid responses were obtained.

4.10 Data Preparation

After collecting the responses, the following steps were performed:

- Editing of responses
- Coding of variables
- Removal of incomplete questionnaires
- Data cleaning
- Classification
- Tabulation
- Entry into Microsoft Excel
- Import into SPSS

The prepared dataset was then used for statistical analysis.

4.11 Measurement Framework

Variable	Measurement
Mobile Application Usage	Usage Frequency, Type of Apps
Time Management Skills	Planning, Scheduling, Time Allocation
Academic Performance	Productivity, Task Completion
Challenges	Distraction, Ease of Use

All statements were measured using a **5-point Likert Scale**.

4.12 Statistical Tools Used

The collected data were analyzed using SPSS. The following statistical techniques were employed:

Statistical Tool	Purpose
Frequency Distribution	Respondent Profile
Percentage Analysis	Sample Distribution
Mean	Average Response
Standard Deviation	Variation
Cronbach's Alpha	Reliability Testing
Pearson Correlation	Relationship Between Variables
Simple Linear Regression	Impact Analysis
Independent Sample t-test	Hypothesis Testing

5. DATA ANALYSIS AND INTERPRETATION

5.1 Introduction

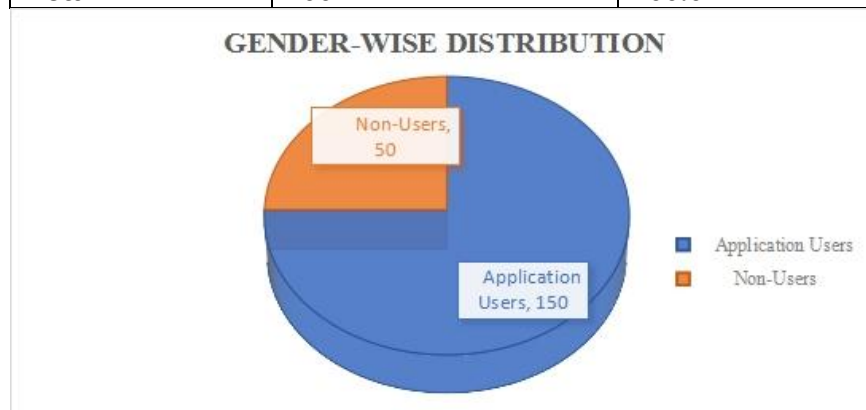
This chapter presents the analysis and interpretation of the data collected from 200 undergraduate and postgraduate students regarding the impact of mobile application usage on time management skills and academic performance. The collected data were coded, tabulated, and analyzed using SPSS (Statistical Package for the Social Sciences).

The analysis includes descriptive statistics, respondent profile analysis, reliability analysis, correlation analysis, regression analysis, and hypothesis testing. The findings are presented through tables and interpreted systematically to achieve the objectives of the study.

5.2 Respondent Profile Analysis

Table 5.1 Gender-wise Distribution of Respondents

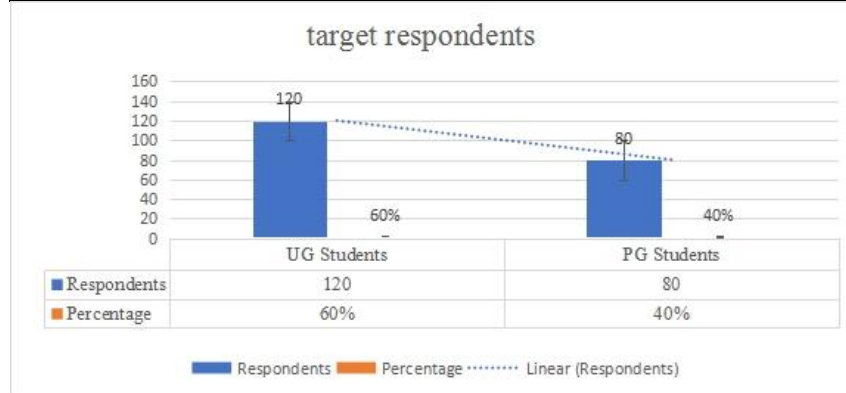
Gender	Frequency	Percentage
Male	110	55.0
Female	90	45.0
Total	200	100.0



Interpretation- Table 5.1 indicates that out of 200 respondents, **110 (55%)** were male and **90 (45%)** were female. The sample includes respondents from both genders, ensuring balanced representation.

Table 5.2 Course-wise Distribution

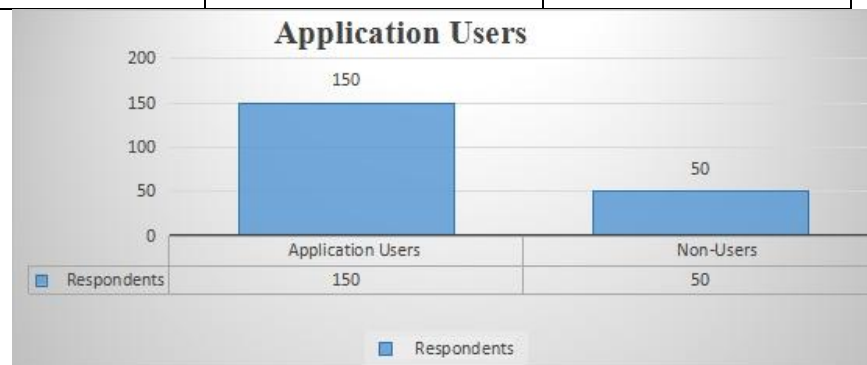
Course	Frequency	Percentage
Undergraduate (UG)	120	60.0
Postgraduate (PG)	80	40.0
Total	200	100.0



Interpretation- The study consists of 120 undergraduate students (60%) and 80 postgraduate students (40%), allowing comparison across different academic levels.

Table 5.3 Mobile Application Users

Category	Frequency	Percentage
Users	150	75
Non-users	50	25
Total	200	100

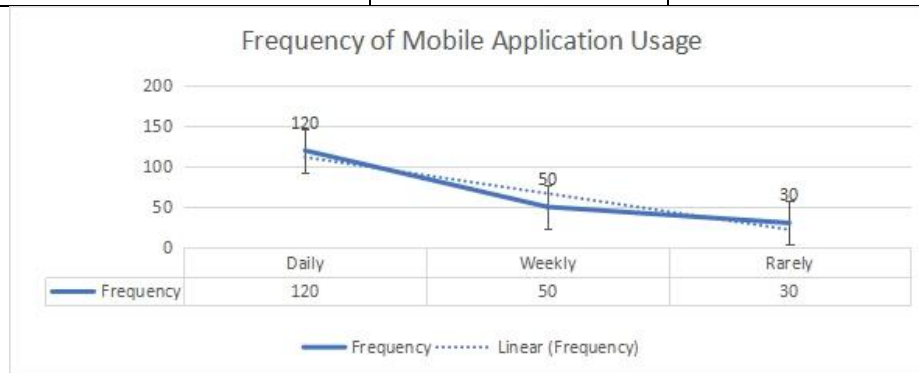


Interpretation- The majority (75%) of respondents reported using mobile applications for managing their daily activities, while 25% reported not using such applications.

5.3 Descriptive Analysis

Table 5.4 Frequency of Mobile Application Usage

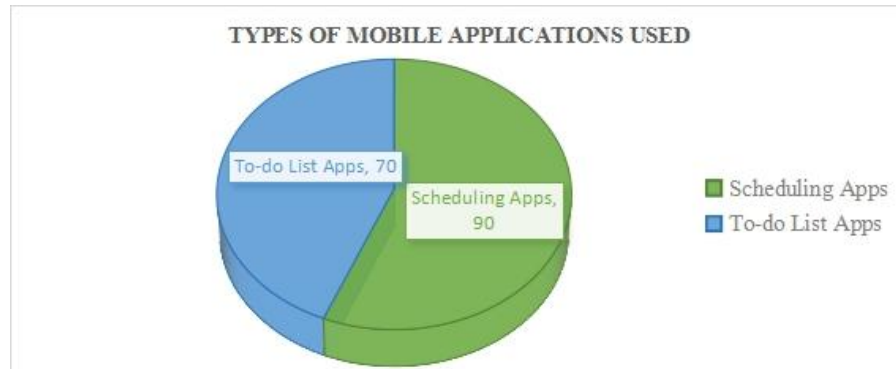
Usage Frequency	Frequency	Percentage
Daily	120	60
Weekly	50	25
Rarely	30	15
Total	200	100



Interpretation- Most respondents (60%) use mobile applications daily, indicating a high level of dependence on mobile applications for academic and personal activities.

Table 5.5 Types of Mobile Applications Used

Application Type	Frequency	Percentage
Scheduling Apps	90	45
To-do List Apps	70	35
Others	40	20



Interpretation- Scheduling applications are the most preferred mobile applications among students (45%), followed by To-do List applications (35%).

5.4 Analysis of Time Management Skills

Table 5.6 Descriptive Statistics

Statement	Mean	Standard Deviation
Apps help in planning activities	4.00	0.81
Apps reduce procrastination	3.90	0.86
Apps improve productivity	4.00	0.79

Interpretation- The mean values are close to 4, indicating that most respondents agree that mobile applications positively contribute to planning, productivity, and effective time management.

5.5 Reliability Analysis

Table 5.7 Reliability Statistics

Cronbach's Alpha	Number of Items
0.842	20

Interpretation- The Cronbach's Alpha value of **0.842** exceeds the acceptable threshold of **0.70**, indicating that the questionnaire possesses good internal consistency and reliability.

5.6 Correlation Analysis

Objective

To examine the relationship between mobile application usage and time management skills.

Hypotheses

H₀: There is no significant relationship between mobile application usage and time management.

H₁: There is a significant relationship between mobile application usage and time management.

Table 5.8 Pearson Correlation

Variables	Correlation (r)	Significance (p)
Mobile App Usage & Time Management	0.620	0.000

Interpretation- The Pearson correlation coefficient ($r = 0.620$) indicates a **moderately strong positive relationship** between mobile application usage and time management skills. Since $p < 0.05$, the relationship is statistically significant.

Therefore, the null hypothesis is rejected.

5.7 Regression Analysis

Objective- To examine the impact of mobile application usage on students' time management skills.

Table 5.9 Model Summary

R	R ²	Adjusted R ²
0.662	0.438	0.435

Interpretation- The coefficient of determination ($R^2 = 0.438$) indicates that approximately **43.8%** of the variation in students' time management skills is explained by mobile application usage.

Table 5.10 ANOVA

Source	F	Sig.
Regression	154.68	0.000

Interpretation- Since the significance value is less than **0.05**, the regression model is statistically significant.

Table 5.11 Regression Coefficients

Variable	Beta	t-value	Sig.
Mobile Application Usage	0.662	12.43	0.000

Interpretation- The regression coefficient indicates that mobile application usage has a positive and statistically significant effect on students' time management skills.

5.8 Independent Sample t-test

Objective- To examine whether there is a significant difference in time management skills between app users and non-users.

Table 5.12 Group Statistics

Group	N	Mean	Std. Deviation	Std. Error Mean
App Users	150	4.08	0.56	0.046
Non-App Users	50	3.41	0.61	0.086

Interpretation- The mean score of time management skills among app users (Mean = 4.08) is higher than that of non-app users (Mean = 3.41), indicating that students who use mobile applications tend to exhibit better time management skills.

Table 5.13 Independent Samples t-test

Test	t-value	df	Sig. (2-tailed)	Mean Difference	Decision
Independent Sample t-test	5.81	198	0.000	0.67	Reject H_0

Interpretation - The calculated t-value (5.81) is statistically significant at the 5% level ($p = 0.000 < 0.05$). Therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted. This indicates that there is a statistically significant difference in time management skills between students who use mobile applications and those who do not. The findings suggest that mobile application users demonstrate significantly better time management skills than non-users.

5.9 Hypothesis Testing Summary

Hypothesis	Result
H_0 : Mobile applications have no significant impact on time management skills.	Rejected
H_1 : Mobile applications have a significant impact on time management skills.	Accepted

5.10 Major Findings of the Research Study

- i. Most respondents (75%) use mobile applications regularly.
- ii. Scheduling and To-do applications are the most frequently used mobile applications.
- iii. Students generally agree that mobile applications help in planning daily activities and reducing procrastination.

- iv. The reliability of the questionnaire is high (Cronbach's Alpha = 0.842).
- v. A significant positive correlation ($r = 0.620$) exists between mobile application usage and time management skills.
- vi. Regression analysis indicates that mobile application usage explains approximately 43.8% of the variation in time management skills.
- vii. The regression model is statistically significant ($p < 0.05$).
- viii. App users demonstrate significantly better time management skills than non-users.
- ix. The null hypothesis is rejected, confirming that mobile application usage has a significant impact on students' time management skills.

6. CONCLUSION, SUGGESTION, & FUTURE SCOPE OF RESEARCH STUDY

Conclusion - Based on the findings of the study, it can be concluded that mobile applications have become an important component of students' academic and personal lives. When used appropriately, they assist students in planning their schedules, organizing tasks, setting reminders, monitoring deadlines, and improving overall productivity.

The statistical evidence confirms that mobile application usage positively influences students' time management skills and contributes to improved academic performance. The study also demonstrates that the effectiveness of mobile applications depends not merely on their usage but on how responsibly and purposefully they are utilized.

Although mobile applications offer numerous advantages, excessive dependence on entertainment and social media applications may reduce concentration and increase distractions. Therefore, students should adopt a balanced approach by maximizing the educational benefits of mobile technology while minimizing unnecessary usage.

Overall, the study concludes that productivity-oriented mobile applications can be considered effective tools for enhancing students' time management skills and supporting academic success.

Suggestion –

Based on the findings of the study, the following suggestions are recommended:



1. Students should use productivity-based mobile applications such as calendars, planners, reminder applications, and task management tools to improve their daily schedules.
2. Educational institutions should organize workshops and awareness programmes on effective digital time management.
3. Teachers should encourage students to utilize academic mobile applications for assignment planning and project management.
4. Students should limit excessive use of social media and entertainment applications during study hours.
5. Institutions may recommend reliable educational applications that support learning and time management.
6. Parents should guide students in maintaining a healthy balance between educational and recreational mobile application usage.
7. Mobile application developers should design more student-friendly applications with features that reduce distractions and promote productivity.
8. Students should regularly monitor their screen time and set daily usage limits for non-academic applications.

Practical Implication's –

The findings of the study have practical significance for different stakeholders:

- Students: Can improve planning, productivity, and academic performance through effective use of mobile applications.
- Teachers: Can integrate digital planning tools into teaching and assignment management.
- Educational Institutions: Can promote digital literacy and time management programmes.
- Parents: Can encourage balanced and responsible mobile usage among students.
- Application Developers: Can design applications specifically aimed at supporting student productivity and minimizing distractions.

Future Scope-

The present study provides several opportunities for future research:

1. Future studies may include larger and more diverse samples from different universities and regions.
2. Comparative studies may be conducted between government and private educational institutions.
3. Researchers may examine the impact of specific categories of mobile applications, such as AI-powered productivity tools, learning management systems, or educational applications.
4. Future studies may investigate the long-term impact of mobile application usage on academic achievement and career development.
5. Additional variables such as digital literacy, self-discipline, motivation, stress management, and learning styles may be incorporated into future research models.
6. Structural Equation Modeling (SEM) or other advanced statistical techniques may be used to explore complex relationships among variables.
7. Comparative international studies may be conducted to understand cultural differences in mobile application usage and time management.

Research Outcome- The study successfully achieved all the research objectives. It established that mobile application usage has a statistically significant positive influence on students' time management skills. The empirical evidence indicates that effective use of mobile applications enhances planning, organization, productivity, and academic performance. The study contributes to the growing body of literature on educational technology by demonstrating that mobile applications can serve as valuable tools for improving students' time management when used responsibly.

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