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Analyzing the Information-Seeking Behavior of Management Students: A Smartphone- Centric Study

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Abstract

This study explores how postgraduate management students seek and gather academic information in a world where smart devices like smartphones dominate learning. Since smartphones have become integral part in higher education, especially in business programs, the study looks at how these devices affect students' research habits, platform choices, and overall learning effectiveness. A survey of 73 management students from Mumbai was conducted using structured questionnaire. The survey focused on how students use smartphones for learning, their preferred digital platforms, how they check information accuracy, and their perceived learning outcomes. The results show that students widely use smartphones for tasks such as completing assignments, preparing for tests, and engaging in online learning. Platforms like YouTube, ChatGPT, and Google Scholar were the most popular platforms, reflecting a shift toward interactive and AI-powered tools. While many students verify the authenticity of information, some do not, this increases the risk of misinformation. Common challenges included distractions, eye strain, and difficulties in verifying the credibility of sources. The study concludes that although smartphones provide flexibility and easy access to information, their effectiveness depends on how well students apply critical thinking and digital literacy. These findings emphasize the need for institutions to provide better support and targeted digital education to maximize the benefits of smartphone-assisted learning.

Keywords: Information-Seeking Behavior, Smartphones, Management Students, Digital Learning, Academic Productivity, Mobile Learning, Credibility Assessment.

1. Introduction

Background of the Study

The rapid expansion of digital technologies has drastically transformed how students search for scholastic information. Among these innovations, smartphones have surfaced as a dominant tool, replacing traditional resources like libraries and desktop computers. With instant internet access, research apps, AI tools, and digital libraries at their finger tips, students can promptly conduct research anytime and anywhere.

Management students, in particular, require constant access to real-time business insights, case studies, and scholarly materials. Their growing reliance on smartphones for academic work raises crucial questions about how they search for, evaluate, and use information via mobile technology. Despite the advantages, issues such as source reliability, digital overload, and reduced concentration persist.

While past studies have broadly examined digital information-seeking among university students, few have specifically focused on the behavior of management students in smartphone- oriented contexts. Their academic needs—like accessing current business trends or market data—are unique. Understanding their preferences and challenges will offer precious insights for educators, institutions, and digital learning platforms.

Problem Statement

Smartphones have become a core element in how management students pursue academic research. Although mobile-friendly academic resources are readily available, not all content accessed is reliable or academically sound.

Students often rely on platforms like social media, Wikipedia, or AI tools like ChatGPT— sources that may lack academic rigor. Additionally, distractions from social apps, subscription- based barriers to high-quality content, and information

overload can hamper effective learning. Despite these concerns, there is limited research that particularly analyzes how management students seek and assess academic information via smartphones.

This study seeks to bridge that gap by identifying students' digital preferences, challenges faced, and how mobile technology affects their academic performance.

Objectives of the Study

1. To examine how frequently and why management students use smart phone devices for academic information.
2. To identify the digital platforms most commonly accessed for academic work.
3. To assess students' strategies for verifying information credibility.
4. To evaluate the impact of smartphone use on learning outcomes and productivity.

Research Questions

1. How often do students use smart phone devices for their academic purposes, and for what tasks?
2. Which platforms are most commonly used, and what types of content are preferred?
3. How do students determine if information accessed is credible and trustworthy?
4. What are the advantages and challenges of using smart phones for academic productivity?

Significance of the Study

This study sheds light on how smartphones shape academic habits among management students. It offers actionable insights for:

- Educators and institutions adapting to mobile learning environments,
- Policy-makers formulating digital literacy strategies,
- Future researchers exploring smartphone usage in academia.

2. Literature Review

The rise of mobile technology has redefined how students access academic resources. Smartphones, in particular, have become central to learning for postgraduate students, especially those in business and management. Understanding how these learners navigate the digital information landscape is crucial in today's mobile-first academic environment.

Information-seeking behavior involves the methods individuals use to locate and apply information for specific goals. According to Wilson (1999), "it is a goal-driven process of obtaining information". "Latest studies indicate that students are moving away from conventional library research in favor of digital tools due to ease and speed" (Kumar & Kaur, 2021). Management students increasingly rely on smartphones to access industry reports, scholarly articles, and real-time market data (Rahman & Tripathi, 2020).

Smartphones support academic tasks by enabling access to e-books, online courses, and collaboration tools (Alzougool, 2020). Chen and Denoyelles (2018) noted that mobile learning encourages self-paced study through apps and databases. However, Junco (2015) warned that "extreme smart phone use can lead to reduced attention and academic disengagement".

Popular platforms like ResearchGate, Google Scholar, and YouTube serve both formal and interactive learning needs (Mtebe & Raisamo, 2014; Zhang et al., 2004). In management education, platforms such as Coursera and LinkedIn Learning enhance learning through practical, business-focused content. Meanwhile, social platforms like Twitter and

LinkedIn have started playing roles in academic discussion (Veletsianos & Kimmons, 2016).

Evaluating source credibility remains a challenge. Metzger and Flanagin (2015) observed that students often struggle to tell trustworthy content from misinformation. Factors like author expertise, peer reviews, and institutional affiliation influence their judgments (Jamali et al., 2021). However, easy access to user-generated content increases the risk of false information (Singh et al., 2022).

Smartphones offer both benefits and drawbacks for academic productivity. While they help students manage time and access information efficiently (Traxler, 2018), they also introduce distractions that may affect concentration (Rosen et al., 2013). Lepp et al. (2015) discovered that students with higher smartphone usage reported lower academic performance, highlighting the need for self-discipline.

Research Gap:

Though much is known about smartphone use in higher education, limited studies aim specifically on management students. Their academic demands—like accessing current business news or engaging in real-world problem-solving—require targeted research. This study aims to fill that gap by examining how mobile technology supports or hinders their academic goals.

3. Research Methodology Research Design

The study employs a descriptive research design to analyze the information-seeking behavior of management students in a smartphone-centric learning environment. A quantitative method is used to gather structured data through a questionnaire-based survey, allowing for statistical assessment of students' smartphone usage patterns, preferred digital sources, and the impact on academic productivity.

Population and Sampling

- **Target Population:** Postgraduate management students enrolled in PGDM and MMS programs.
- **Sample Size:** 73 students.
- **Sampling Technique:** purposive sampling is applied to select students based on accessibility and inclination to participate in the study.

Data Collection Method

- A structured questionnaire is designed as the primary data gathering tool.
- The questionnaire includes close-ended questions (Likert scale, multiple-choice, ranking).
- The survey is distributed online (Google Forms, university portals, WhatsApp groups, and email) and/or offline (printed copies in classrooms).

Questionnaire Structure

The questionnaire is divided into the following sections:

1. **Demographic Information:** Age, gender, course (PGDM/MMS), year of study.
2. **Smartphone Usage Pattern:** Frequency and purpose of smartphone use for academic purposes.
3. **Preferred Digital Sources:** Most commonly used platforms (Google Scholar, YouTube, research databases, etc.).

4. **Credibility Assessment:** How students evaluate the reliability of academic information.
5. **Impact on Learning Efficiency:** Perceived benefits and challenges of using smartphones for academic purposes.

Data Analysis Technique

- **Descriptive Statistics:** Mean, percentage, along with frequency distribution are used to analyze quantitative data.
- **Inferential Statistics:** If applicable, chi-square tests, correlation analysis, or regression are applied to assess relationships between variables.

Limitations of the Study

- This study is limited to **a sample size of 73 Management students in Mumbai (MMR)**, which may not fully represent all Management students.
- Self-reported data may be subject to **bias** or inaccurate recall.
- The study examines smartphone-based information-seeking and does not consider other digital instruments/devices such as laptops or tablets.

4. Data Analysis and Findings Data Analysis Approach

The gathered data was analysed using descriptive statistics to identify patterns and trends in smartphone-based information-seeking behavior among Management students. The analysis was done using Microsoft Excel, utilizing the following statistical techniques:

- Frequency distribution and percentages to determine common smartphone usage behaviors.
- Mean and standard deviation to evaluate the magnitude of reliance on smartphone- based research.
- Chi-square tests to inspect relationships between demographic factors and information- seeking behavior.

Objective 1:

Evaluate the Frequency and Purpose of Smartphone Usage for Academic Information Seeking

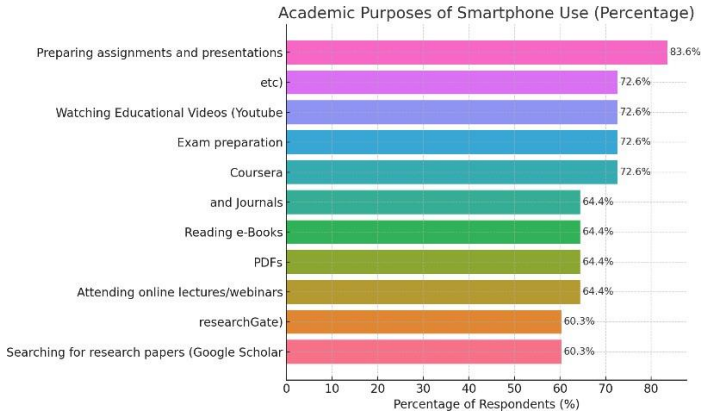
1. Frequency of Usage

- A extensive majority (~83.6%) of students stated using their smart phone devices for academic purposes multiple times a day.
- Occasional usage was reported by about 9.6%, while only 2.7% used it once a day or a few times a week.
- This indicates a high reliance on smart phone devices for academic engagement among management students.

2. Time Spent on Smartphones

- The most common duration was "More than 4 hours per day", followed by "3-4 hours".
- This suggests smartphones are a primary tool for academic learning and information seeking.

3. Academic Purposes of Use (Multiple Response Analysis)



- The most common academic uses included:
  - Preparing assignments and presentations (83.6%)
  - Exam preparation (72.6%)
  - Coursera and online courses (72.6%)
  - Reading PDFs, e-books, and journals (64.4%)
  - Attending online lectures/webinars (64.4%)
- This reflects a diverse usage, ranging from passive consumption (reading) to active participation (assignments, online courses).

4. Chi-Square Test: Usage Frequency × Year of Study

- The chi-square test result ($\chi^2 = 5.28$, $p = 0.152$) indicated no statistically significant association between the frequency of smartphone use and students' year of study.
- This implies that high usage is consistent across all academic years.

Objective 2:

Identify the most preferred digital sources and platforms accessed via smartphones for educational purposes.

1. Overall Platform Preferences

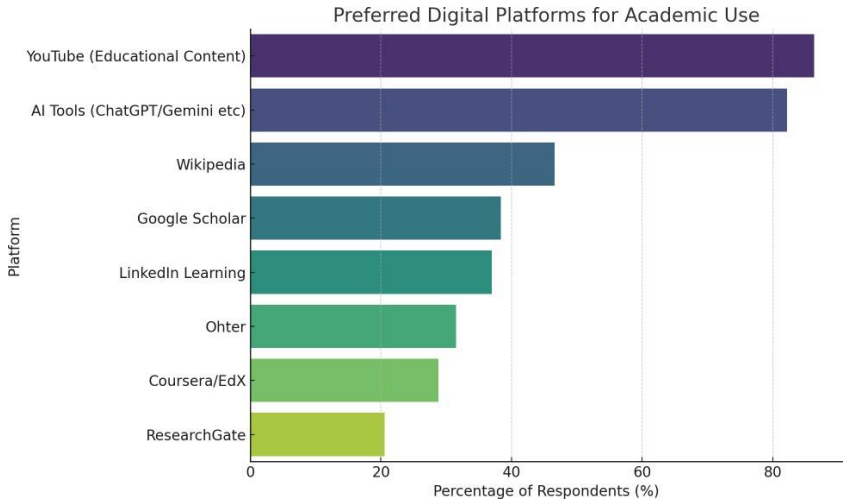
Centered on the multiple response analysis:

- YouTube (Educational Content) is the most commonly used platform, with 86.3% of students using it for academic purposes.
- AI tools like ChatGPT and Gemini follow closely, with 82.2% usage, indicating high engagement with generative AI for learning.
- Other notable platforms include:
  - Wikipedia – 46.6%
  - Google Scholar – 38.4%
  - LinkedIn Learning – 37.0%

These results indicate a preference for a mix of visual content (YouTube), interactive AI tools, and quick-reference or formal

academic resources like Wikipedia and Google Scholar.

2. Visualization Insights (Bar Chart)



The bar chart highlights a clear popularity hierarchy among platforms. Visual and AI-powered tools dominate, while traditional academic databases (like Google Scholar) are used to a lesser extent.

This indicates that students prefer platforms that offer:

- Ease of access
- Multimedia explanations
- Instant responses or assistance

3. Gender-Based Platform Usage

From the demographic breakdown:

- Males and females Both show a strong inclination for AI tools and YouTube.
- Females showed slightly higher usage of LinkedIn Learning.
- Usage across genders is largely balanced, indicating no significant gender gap in digital academic habits.

4. Age Group-Based Platform Usage

- 23–25-year-olds showed the highest usage of AI tools (24.3%), followed by 20–22 year- olds (20.2%).
- Google Scholar is most used by students aged 23–25 years, suggesting more formal research usage in senior years.
- Students aged 26 and above showed relatively balanced use of all platforms, slightly favoring Coursera and LinkedIn Learning.

This indicates that younger students lean more toward interactive and visual content, while older or senior students diversify their sources, using formal and structured platforms as well.

Objective 3:

Evaluate how management students assess the legitimacy and dependability of smartphone-derived information.

1. Multiple Response Analysis – Credibility Checking Strategies

From the multiple response analysis:

- The most common strategy was verifying from multiple sources (72.6%).

- Other frequently used methods:
  - Checking author credentials and affiliations (46.6%)
  - Recommendations from professors/peers (32.9%)
  - Peer-reviewed journal sources (26%)
- Notably, 16.4% of students admitted they do not verify information at all.

This shows that while commonly students attempt to validate information, a small yet significant portion rely on unverified sources.

2. Descriptive Stats – Verification Frequency

- "Sometimes" was the common selected verification frequency.
- A fair amount of students (Always) verify the information, while others do so Rarely or Never.
- This suggests varying degrees of information literacy and skepticism among students.

3. Cross-tabulation – Verification Frequency × Experience with Misleading Information

- Students who "Always" verify information reported fewer misleading experiences.
- Those who "Rarely" or "Never" verify are more likely to have encountered false or misleading academic content.
- This supports the theory that verification practices help avoid misinformation.

4. Factor Analysis – Interpreting Credibility Behaviors

Using factor analysis, two key behavioral patterns emerged:

- Factor 1: Independent Validation vs non-verification
  - High negative loading for "Verifying information from multiple sources"
  - High positive loading for "I don't verify information"
  - This contrast reflects a divide between active validators and passive consumers.
- Factor 2: External Reliance
  - High loadings for "Recommendations from peers/professors" and "Peer- reviewed journals"
  - Indicates reliance on external credibility cues rather than independent evaluation.

These patterns help group students into behavioral types: critical thinkers, authority-dependent, and uninformed acceptors.

Objective 4:

Analyze the impact of smartphone usage on students' academic productivity and learning efficiency.

1. Descriptive Statistics

a. Impact on Academic Performance

- 44.3% of students reported "Somewhat improved" performance due to smartphone use.
- 41.4% stated it has "Significantly improved" their performance.
- Only a insignificant percentage felt there was "No impact" or negative effects.

Interpretation: A strong majority perceive smartphones as having a positive impact on academic outcomes.

b. Perceived Effectiveness vs Traditional Methods

- 44.3% believe smartphone-based learning is "Somewhat effective".

- 41.4% say it is "more effective" than traditional learning.
- Only 14.3% favor traditional methods exclusively.

Conclusion: Students generally favor smartphone-based learning, seeing it as a valuable or superior complement to traditional education.

2. Multiple Response Analysis – Challenges Faced

Top challenges faced while using smartphones academically include:

- Distractions from non-academic apps
- Eye strain or fatigue
- Difficulty verifying information credibility
- Internet connectivity issues

These challenges reflect both physical and cognitive limitations of smartphone-based learning environments.

3. Cross-Tabulation – Effectiveness Belief × Academic Year

The cross-tab shows how perceptions of effectiveness vary by academic year. Insights:

- Second-year students tend to believe smartphone learning is more effective, possibly due to greater academic independence or exposure to hybrid models.
- First-year students were more cautious, leaning toward "somewhat effective".

4. Ordinal Regression – Predicting Performance Impact from Challenges

The regression analysis modelled which challenges predict students' perceptions of improved performance.

Key Findings

- Negative predictors of academic performance:
  - Difficulty in verifying information credibility (strongest negative impact)
  - Distractions from non-academic apps
  - Eye strain
- Mild positive influence: Internet connectivity issues, surprisingly, showed a weak positive coefficient, possibly due to adaptive coping strategies.
- "Other" challenges also had a negative impact.

Conclusion: Students who struggle with credibility checking and distractions are less likely to report academic benefits from smartphone use.

Significant Insights and Analysis

1. As the technology is at boost, a high rise in usage of smartphones is found among students, be it for academic routines, research, preparation of study material or online learning, which suggests smartphones as an important tool in education for management students.

2. A variety of pattern is seen in the usage of different platforms among management students varying according to their age, gender, their core area, etc. A preference for usage of YouTube, AI Tools and Wikipedia has been on top for formal research and learning.

3. Usage of Technology proved both boon and bone among students as most students cater the need of cross checking the information derived from various sources and others relied without validating the information, which led to exposure to misinformation and misjudgement of data used. this has led to the assessment of critical thinking and Dependence on

authoritative sources among students

4. Smartphones being a significant learning tool to students, it also has its own disadvantages like a mode of distraction or credibility of information that can affect their performance.

5. Conclusion

This study underlines that smartphones have become indispensable gear for academic engagement among management students, offering convenience, flexibility, and access to diverse digital resources. Students primarily use smartphones for assignments, exam preparation, and online learning through platforms like YouTube and AI tools. While most attempt to verify information, challenges such as distractions and misinformation persist. The findings emphasize the need for enhanced digital literacy and institutional strategies to support effective smartphone use. By attending these issues, educators can help students optimize mobile learning, ensuring smartphones are used as productive tools in academic research and knowledge acquisition.

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