

The effect of multiple sources of information on mental focus among Egyptian university students: an inductive study to reduce information overload phenomenon

Research – English
Summary

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Abstract

The study reviews the effect of multiple sources of information on the mental focus of Egyptian university students, as the researcher tried to identify and understand the phenomenon of information overload and develop methodological ways to deal with it better. To achieve the objectives of the study, the researcher relied on the descriptive analytical research method through surveying and extrapolating studies and research related to the subject of the study. The researcher used a questionnaire directed to Egyptian university students to identify students' information behaviours and measure the degree of information dispersion among them.

One of the results of the study is that the more information sources students use, the higher their levels of distraction, which negatively affects academic achievement and increases the feeling of information overload. The study also indicates that students find it difficult to identify reliable sources and process the huge amount of information available. The study also presented the most important techniques and methods that can be used to improve concentration and control information overload.

Among the most important recommendations called for by the study is the importance of enhancing critical and analytical reading skills among students, in addition to encouraging them to benefit from reliable and high-quality sources. The study also recommended providing academic and psychological support to students to improve their tolerance of academic pressures and increase their level of concentration and academic performance.

Keywords

information resources, digital information resources, information overload, information literacy

Methodology

Study Problem

In the era of the information revolution, the rapid flow of data poses significant challenges to all segments of Egyptian society. Among these groups, Egyptian university students face unique difficulties. In addition to educational content and curricula, they are constantly exposed to a barrage of information from news outlets, social media, cultural platforms, and entertainment channels. This multiplicity of information sources—from traditional books and journals to digital websites and social media—threatens their ability to concentrate, thereby hindering academic achievement, innovation, and creativity.

Despite the prevalence of information overload and focus-related issues among Egyptian university students, few studies have thoroughly examined this phenomenon or proposed effective strategies to address it. This study seeks to fill this gap by investigating the impact of multiple information sources on students' focus levels and academic performance.

Importance of the Study

This study holds considerable significance both scientifically and practically, for the following reasons:

1. **Addressing a Knowledge Gap:** It provides empirical insights into the relationship between information source diversity and student concentration levels.
2. **Introducing Key Concepts:** It offers a clear understanding of the concept of informational balance and delineates the symptoms of both information overload and scarcity.
3. **Enhancing Understanding:** The study contributes to a deeper understanding of information overload and its effects on focus, aiding in the development of mitigation strategies.

4. **Practical Applications:** It proposes actionable recommendations to improve student concentration and academic performance.
5. **Improving Educational Environments:** By implementing the study's findings, educators can foster healthier and more productive learning environments for university students.

Study Objectives

This study aims to achieve the following objectives:

1. **Analyze Relationships:** Investigate the connection between the multiplicity of information sources and university students' concentration levels.
2. **Clarify Concepts:** Simplify the concepts of informational balance, overload, and scarcity.
3. **Assess Impact:** Determine whether distraction is influenced solely by information quantity or also by quality and depth.
4. **Measure Awareness:** Gauge students' awareness of how information sources impact their focus.
5. **Identify Strategies:** Explore methods used by students to manage distractions and enhance concentration.
6. **Propose Solutions:** Develop strategies to combat information distraction and foster improved concentration among students.

Study Questions

The study addresses the following primary question:

What is the impact of multiple sources of information on the concentration levels of Egyptian university students?

Supporting sub-questions include:

1. How do diverse information sources affect student concentration directly or indirectly, and to what extent?
2. Does the quality and depth of information impact distraction, or is it solely the quantity?

3. What is the relationship between academic level and strategies for concentration, information searching, and critical evaluation?
4. What are the most frequently utilized sources of information among students?
5. Which strategies are most effective in mitigating distraction and improving focus?
6. How well do these strategies align with the type of information and the academic task?

Study Hypotheses

The study will test the following hypotheses:

1. There are no statistically significant differences between academic levels and concentration strategies.
2. There are no statistically significant differences between academic levels and information search strategies.
3. There are no statistically significant differences between academic levels and critical evaluation strategies for information sources.
4. Multiple information sources have no statistically significant effect on Egyptian university students' concentration levels.

Key Terminology

1. **Digital Distraction:** Disruption caused by digital devices, leading to reduced productivity, negative mental and emotional effects, and potential physical consequences (VandenBos, 2007).
2. **Information Overload:** A state where excessive information availability, particularly during online searches, overwhelms the individual (Reitz, 2017).
3. **Information Scarcity:** A condition where inadequate information prevents appropriate decision-making (Plescan & Nestian, 2010).
4. **Informational Balance:** The cognitive state of satisfaction achieved when retrieved information is optimal in quantity and quality, enhancing focus

and reducing distraction. This state varies based on individual factors like age, education, and language.

5. **Focus:** The concentration of attention on a specific internal or external event (VandenBos, 2007).
6. **Information Sources:** Any medium—books, journals, websites, social media platforms—that provides information for research or learning purposes (Reitz, 2017).

Study Methodology and Data Collection Tools

The study will employ a mixed-methods approach, integrating quantitative and qualitative research methods to ensure comprehensive analysis. Specific tools and techniques will include surveys, interviews, and focus groups to collect data from Egyptian university students. Statistical analyses will be applied to validate the study's hypotheses and derive actionable insights.

Study Results

The study revealed several key findings, summarized as follows:

1. **Ambiguity in Understanding Information Overload:** A significant proportion of higher education students in Egypt exhibit a high degree of uncertainty about the concept of information overload or dispersion. Many struggle with managing large volumes of data, leading to an evident imbalance in their ability to process information effectively.
2. **Impact of Internet and Social Media:** The study identified the Internet and social networking sites as primary contributors to cognitive dispersion and poor concentration. Approximately 97.5% of Egyptian university students spend 3–6 hours daily on these platforms intermittently, marking a clear indicator of distraction.
3. **Diverse Use of Information Sources:** Over 87.8% of students prefer using multiple sources of information for a single topic. Specifically, 38.8% of respondents use two sources, 28.5% use three sources, 6.3% use four sources, and 14.1% rely on more than four sources, reflecting their reliance on a variety of references.

4. **Preference for Digital Resources:** Digital textual sources are the most frequently used by students, followed by digital visual sources (e.g., videos). Traditional paper sources are less utilized, with digital audio resources being the least preferred. This trend highlights the influence of modern technologies in diminishing reliance on paper-based materials.
5. **Ineffective Strategies to Manage Distraction:** Students predominantly depend on conventional methods to mitigate distraction, with limited adoption of modern, effective strategies. This underscores the need for innovative approaches to reduce information overload.
6. **Weak Information Retrieval Skills:** Many students lack adequate skills in searching and retrieving information. This indicates a pressing need for universities and educational institutions to introduce programs fostering information literacy, particularly in search and retrieval techniques.
7. **Challenges Beyond Volume of Information:** Students experience challenges not only due to the quantity of information but also its complexity, depth, and the language in which it is presented, further complicating comprehension and focus.
8. **No Link to Health Issues:** Analysis indicates no correlation between organic or psychological health problems and concentration levels, suggesting other underlying causes of distraction.
9. **Correlation Between Academic Level and Focus:** Students with higher academic levels exhibit better focus, information retrieval strategies, and critical evaluation skills. These improvements positively impact their ability to manage information overload.
10. **Negative Impact of Excessive Sources:** Using too many information sources increases distraction, negatively affecting academic performance and intensifying the sensation of information overload.

Study Recommendations

Based on these findings, the researcher offers the following recommendations to address the challenges of information overload and dispersion among Egyptian university students:

1. Recommendations for Universities and Higher Education Institutions

- Organize workshops and training programs to educate students about information overload and provide strategies for managing large volumes of data effectively.
- Promote alternatives to excessive Internet and social media usage during study periods, including traditional and innovative educational tools.
- Teach students to select the most relevant and reliable information sources for their academic needs, ensuring balanced and coordinated use of digital and textual materials.

2. Recommendations for Egyptian University Students

- Adopt modern strategies to reduce distraction, such as time management techniques (e.g., the Pomodoro Technique) and task organization methods.
- Enhance information search and retrieval skills by consulting library specialists or accredited university information centers.
- Develop critical evaluation skills to assess the quality and credibility of information, prioritizing substance over quantity.

3. Recommendations for University Library Information Specialists

- Design applications or tools to help students organize and manage information effectively, emphasizing prioritization and academic focus.
- Encourage balanced use of digital and traditional resources to foster a more comprehensive approach to information consumption.
- Conduct periodic studies to evaluate the effectiveness of search, retrieval, and critical evaluation strategies in improving academic outcomes and reducing information dispersion.

The researcher expresses hope that these recommendations will be adopted by educational institutions, library specialists, and students alike. By addressing these challenges, the study aims to enhance information management, improve academic focus, and foster a healthier balance in students' academic lives.