

Review Article

Exploring Digital Amnesia Among Generation Z: A Literature Review

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Introduction

Over the past decade, mobile gadgets like smartphones have become a common form of communication, particularly among teenagers. The rapid adoption of portable gadgets such as smartphones and tablets has significantly transformed the information and communication landscape. Phones have evolved from simple calling devices to nearly replacing computers for online browsing, instant messaging, and productivity applications. However, constant connectivity has led to heavy smartphone usage, potentially causing distraction [9].

Brief distractions, such as using a phone for three seconds, can shift attention away from cognitive tasks, resulting in decreased academic performance. Concerns have arisen regarding the impact of technology on the well-being of children and adolescents, particularly regarding mental health disorders [2]. Additionally, the growing use of technology has changed how individuals interact with and rely on technology, leading to phenomena such as the 'Google Effect', or in other ways 'digital amnesia,' where people tend to forget easily accessible information stored on digital devices [3]. It's like leaning on a crutch so much that our legs become weak. So, when we don't have access to our devices, we might struggle to remember basic information or tasks that we would have easily remembered before. Neelima and Sunder (2019) as cited in Ellison's article

Abstract

Over the past ten years, the widespread use of mobile devices, especially smartphones, has changed how teenagers communicate. But worries have surfaced about how using a smartphone excessively affects cognitive abilities, particularly memory and attention, which can result in a condition called "digital amnesia." The effects of excessive reliance on smartphones, computers, and search engines on short-term memory are the main focus of this literature review, which also examines and summarizes empirical findings on digital amnesia among Generation Z. A methodical search strategy was used to find studies, that were then assessed for methodological rigor and relevance. The findings suggest that using a smartphone during adolescence may interfere with the development of attention and memory. Digital amnesia may be influenced by digital devices, which emphasizes the need for more study and treatment. Improving functional media literacy, along with addressing concerns about long-term cognitive effects and encouraging healthier technology habits, emerges as a critical strategy to prevent digital amnesia. The results highlight the need for more research, interventions, and improved media literacy to protect people's general and cognitive health in the digital age, especially for Generation Z.

Keywords: Digital amnesia; Generation Z; Smartphones; Memory; Smartphone; Academic performance; Literature review

"Are Smart Phones Making Us Dumber?" highlighted that short-term memory serves as an indicator of an individual's attention span during the learning process, and investigated its adverse impacts on brain function.

By examining several studies, this paper aims to explore, synthesize, and integrate important empirical results about digital amnesia in Generation Z. Excessive reliance on smartphones, computers, and search engines may weaken short-term memory, leading to the forgetting easily accessible information. To stop digital amnesia from impairing people's ability to think clearly, researchers should continue examining the effects of technology on memory in the future. This work seeks to assist future researchers who wish to delve deeper into this subject by providing an overview of what we currently know.

Methodology

A systematic search approach was utilized in this study to locate pertinent literature from a comprehensive range of electronic databases and scholarly platforms. Specifically, searches were conducted across prominent databases including PubMed, Google Scholar, Web of Science, ResearchGate, Springer, Mendeley, and reputable international journals. Articles with a focus on the terms "digital amnesia," "memory," "Generation Z", "lit-

Table 1: Representative publications exploring digital amnesia among Generation Z.

Reference	Finding Summary
Neelima P, & Sunder RR [6].	Smartphone usage can disrupt attention and memory formation, potentially affecting adolescents, but the correlation between smartphone usage and short-term memory scores is weak and statistically insignificant.
Lodha P [3].	Digital devices may influence digital amnesia, a potential neurological issue, highlighting the need for further research and intervention.
Oleshko & Oleshko [7]	Enhancing functional media literacy is important for preventing digital amnesia, encouraging multimedia content, lowering smartphone dependency, and encouraging audience and communicator dialogue.
Swaminathan & History [8]	Highlights the increasing reliance on electronic devices among students, causing memory erosion and digital amnesia, which threatens academic rigor and essential human skills development.
Yadav [10]	The potential long-term effects of digital amnesia and memory loss, emphasize the need for understanding and safeguarding our memories in the digital age.
Tanil & Yong [9]	Excessive phone use can hinder focus, memory, and performance in tasks requiring thinking and recall, potentially indicating excessive phone attachment.
Musa & Mohd Sobhi Ishak [4]	Academic achievement, motivation, critical thinking abilities, and independence can all be badly impacted by digital amnesia, a condition marked by an overwhelming dependence on technology.
Daniyal et al [1]	The study revealed a significant link between excessive cellphone use and physical and mental health issues, underscoring the need for healthier technology habits.
Musa & Ishak [5]	Concerns regarding long-term cognitive effects are raised by digital amnesia. etc. in developing nations such as Indonesia, which calls for thorough research and active stakeholder participation.
Girela-Serrano et al [2]	The review suggests that increased mobile phone usage may lead to poorer mental health in children and adolescents, especially during bed-time, but no direct impact of RF-EMF was identified.

erature review", "academic performance" and "smartphones" that were published between 2019 and 2024 were chosen. Every paper was put through a rigorous evaluation process that determined whether or not it should be included based on factors such as the presentation of primary data, methodological reliability, the clarity of the findings, and the use of reputable assessment tools. This narrative literature review only included research that was considered exceptionally good and especially pertinent.

Results

Table 1

Discussion

Concern over digital amnesia among Generation Z is rising, and smartphones are a big part of the problem. Neelima and Sunder (2019) and Yadav (2019) have both underscored the potential disruption of attention and memory formation resulting from smartphone usage, particularly among adolescents. However, Lodha (2019) highlights the need for further research and intervention to address digital amnesia as a neurological issue influenced by digital devices.

To counteract digital amnesia, Oleshko and Oleshko [7] recommend improving functional media literacy. This strategy calls for increasing the use of multimedia content, decreasing reliance on smartphones, and encouraging communication between communicators and audiences. Concerns raised by Swaminathan and History [8] regarding students' declining academic rigor and memory as a result of their growing reliance on electronic devices are mirrored in the research conducted by Musa and Mohd Sobhi Ishak [5].

The detrimental effects of excessive phone use on focus, memory, and task performance are highlighted by Tanil and Yong [9], who may also be hinting at an unhealthy attachment to phones. Daniyal et al. [1] similarly underscore the importance of adopting healthier technology habits by stressing the strong correlation between excessive cellphone use and problems related to mental and physical health.

Extending the discourse to developing countries such as Indonesia, Musa and Ishak [5] express apprehensions regarding

enduring cognitive consequences and propose comprehensive investigation and engaged involvement of stakeholders. These worries are further reinforced by Girela-Serrano et al. [2], who raises the possibility that children's and adolescents' mental health may suffer as a result of increased mobile phone use.

In summary, digital amnesia poses a significant concern among Generation Z, it's not just about forgetting a few things here and there; it's about the long-term effects on our brains. That's why we need to keep researching and get everyone involved in finding ways to deal with this digital memory loss impacting academic performance, and overall quality of life. The aforementioned literature review highlights the complex aspects of digital amnesia in Generation Z and stresses the need for research, intervention, and enhanced media literacy to protect cognitive health and overall well-being in the digital age.

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