



THE COGNITIVE COST OF DIGITAL DISTRACTION IN EDUCATION.

*Author: Intizor Arifdjanova,
Student of English Faculty, SamSIFL*

Abstract

In this essay, we will discuss how the use of smartphones in our daily lives affects the concentration span and academic performance of students. Digital distraction is referred to as the disruption that technology causes in our lives. It affects our productivity, our mental and emotional well-being, and our physical well-being as well. Digital distraction in the classroom affects the concentration span, knowledge retention, and academic performance of students. Our constant connectivity and notifications affect our productivity and cause stress in our lives, leading to emotional issues such as depression and anxiety. Most smart devices have in-built apps to help any user manage their digital distraction. Apple devices come with “Screen Time” in the settings, while “Digital Wellbeing” helps in reducing digital distraction in “Android” devices. Think about how much time you spend using screens. It helps in setting ground rules at home to manage digital distraction.

Key Words: *loss of attention, smartphone use, brain cells, social media*

Introduction

It's widely acknowledged that our attention can both be controlled and consumed by digital devices such as smartphones, especially in both adults and youth. These can be demonstrated in the following three scenarios:

Teenagers are seated in a row alongside each other. They are all looking at screens in front of them.

Passengers in public transport are crouched over mobile phones, scrolling through endless pages of social media sites or playing an addictive computer game.



Very few people are engrossed in reading a book or merely looking out of the window.

You are working on finishing up your presentation at work when your computer receives an email notification from a fellow employee about a link to a funny video clip. After clicking on the link from the social website, you are presented with another video clip, and so on, such that after an hour, your presentation is not complete.

Trapped in an app

These three examples above highlight how mobile apps are designed to catch our attention. Most apps function in such a manner because they cost the consumer nothing. They make money in other ways through data and advertisement. The longer our gaze stays fixed upon the screen, the greater the data intake and advertisement exposure. The number of children using mobile devices increases dramatically as they grow in age. Data from 2022, published in the Spanish National Statistics Institute, reports that 40% of children at age 11 own a mobile phone. However, when they turn 12, the figure increases to 75%, and when they turn 14, it rises to 90% of all children surveyed. The apps they use in these mobile devices do not vary much from what adults use, because these apps function according to the logical patterns of cyberspace, namely giving something quickly, with efficiency, and with little cost or effort.

Cell phones can lead to challenges in the ability of the students to concentrate in class. Social interactions, online games, messages, and other applications can divert the attention of the students from studying. It also makes studying less effective and difficult for the students to concentrate on knowledge acquisition. Cell phones lead to intense competition for the time of the students. Too much time spent by the student using the phone for things other than studying affects the student's attention towards studying and developing him or herself. Too much use of mobile phones can result in damage to the student's eyes, sleep, and psychological state.



Excessive use of the phone can affect the student's psychological state, stress, and sleep. Students can be exposed to harmful and inappropriate information through the use of mobile phones. Being exposed to images and messages affecting the student emotionally can psychologically stress him or her. Using mobile phones inhibits physical interaction between people; it affects the development of social behavior in the student.

Distraction from learning One of the most pressing issues about using phones in the classroom is the fact that they can act as a distraction. Students can easily take the opportunity to check messages or play games when in class.

One of the most interesting discoveries is that having your phone in the same room, turned off or not, affects our capacity to think effectively. Otherwise known as the “brain drain” phenomenon, it implies that we aren’t using our brains at optimum capacity when we know that we could simply “Google” the solution rather than figure it out ourselves. “Our brains, in essence, take the easiest route,” leading to the degradation of our problem-solving capacities and our memory performance in the process, as our impulse changes from “figure it out” to “look it up.”

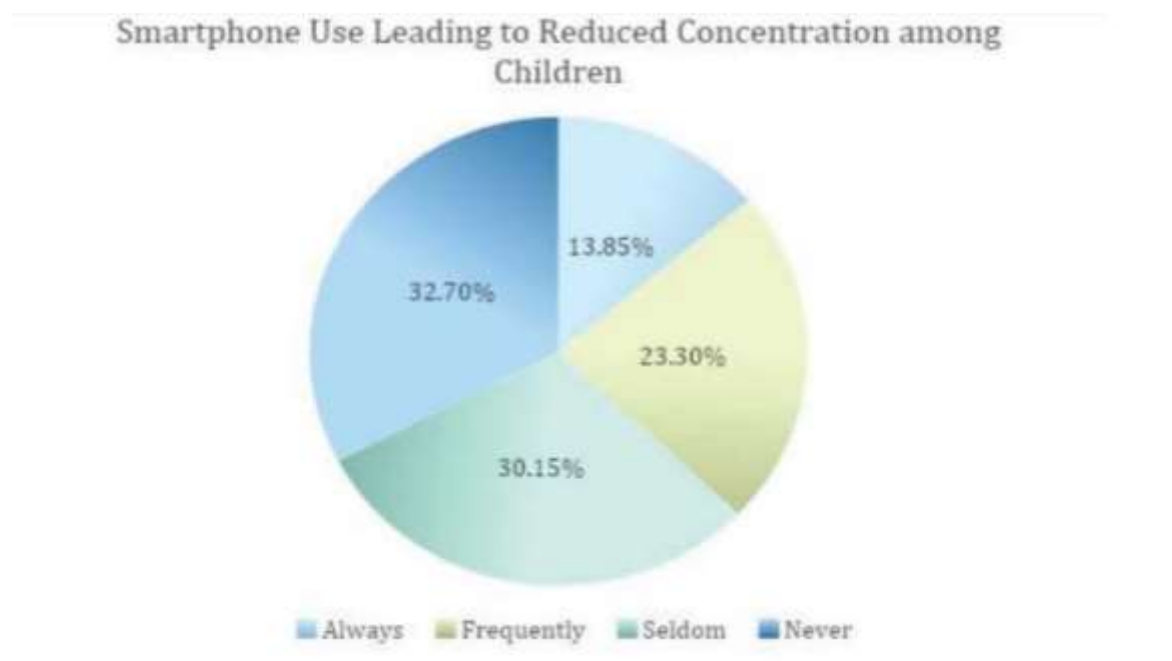
Reduced Academic Performance:

Using the phone in class can result in lower academic performance. Students in classroom settings can miss essential information, not participate actively, or produce low quality work because of divided attention. Thanks to the pioneering research of social psychologist Jean Twenge, we understand that “what shapes generations can’t be described simply by looking backwards at the things that happen in childhood wars, depressions but must take into account changes in the technology children are using when they’re growing up radio, television, personal computers, the internet, the iPhone” The first generation Z'ers entered puberty in 2009, when several technology waves converged, including “the widespread adoption of high-speed internet in the 2000s, the introduction of the iPhone in 2007, and the dawn of the era of 'hyper-viralized' social media.” The final factor was



kicked off in 2009 when “the 'like' and 'retweet' (or 'share') button era” was born, “which reshapes the social topography of the online world. To date, social media was most relevant as something to help keep up with what was happening in your friends' lives, and without so many instant and feedback-driven functions, there was less toxicity in it than there was in today’s society.”

Around 37.15% of children experienced reduced levels of concentration due to smartphone use



It was found in statistics that smartphone usage affects attention negatively, with some studies showing that the average attention span of the human being has been impacted in a drastic manner, along with evidence that frequent messages and small pieces of information can affect focused attention.

Many educational institutions and communities have come up with rules regarding the use of cell phones by students from all levels. All these are based on several factors, with academic performance being key among them. Advantages associated with the restriction of the use of cell phones include:



Improved academic performance: In Southern Australia, there was an observed positive effect of curtailing the use of cell phones in schools on academic performance, especially in poorly achieving students.

Enhancement in the level of engagement with schooling in the students: It is good for the students in an American school to have an assignment where they are compelled to have face-to-face interactions without using any screens.

Enhance instructional time: One study in the UK proved that curtailing the use of mobile phones raises the number of instructional hours per week by an hour.

Conclusion

The evidence presented in this paper highlights an extremely important issue in today's educational needs, concerned with the significant influence of digital distraction because of the prevalence of smartphone use in modern society on the focused attention and academic performance of today's generations. However, there is no need to be overly pessimistic about the existence of such issues in today's society, since both the technology enterprise and educational establishments are working towards resolving such issues. The fact that there are permanent tools in devices that aim at managing the usage of such devices can positively affect the management of the devices by users because, at the end of the day, what matters most is the evidence emerging from research already undertaken in other countries with positive impacts concerning academic performance because of the limitations imposed in such settings concerning the use of cell phones and such distractions.

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