

Smartphone: A Big Threat for Student's Education

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Article Received: 17 November 2020

Article Accepted: 30 November 2020

Article Published: 29 December 2020

ABSTRACT

Background and aims: This paper is based on both survey and literature review. The main purpose of this investigation is to discover are the smartphones are reducing the quality of education and affecting the grades, marks, or GPA of students? 70% of world's population use smartphones and the large ratio belong to students. Students use smartphones for their study but at the same time, they waste their most valuable time in other unimportant and unnecessary activities e.g. using social media, playing games, watching movies, meaningless conversations etc. This thing has triggered us to find out if the use of smartphones is reducing the standards and quality of education. **Methods:** For data collection, it has been implemented a questionnaire comprising of eight different questions. The responses on questionnaire have been collected through social media because collecting physical responses were not possible during this unprecedented situation of COVID-19. The questionnaire has been sent to 180 people and 121 people responded. **Importance:** This study is helpful in knowing if the smartphones should be bought to kids or students by parents and should the students be restricted on using smartphones. **Results:** The outcomes of this study show that students are literally getting affected in their education by smartphones and the quality and standards of education is also declining. **Conclusion:** Through this study, it has been concluded that most of the people agreed that smartphones are reducing quality of education besides, the results have discovered that the smartphones negatively affect the performance of students.

Index Terms: Smartphones, Quality of education, Performance of student, Social media, Grade point average.

1. Introduction

Smartphones have the world inside them, everything can be done through smartphones and smartphones do have additional features as comparing to ordinary phones as a smartphone enables its users to access these features: Camera, touch sensitive, 4G internet speed, Wi-Fi, and works on an operating system which a normal phone does not allow (Falaki, Lymberopoulos et al. 2010). One can connect to anybody from one corner to another corner of the world, one can navigate any place throughout the world with the help of smartphones or one can do any type of study or other education's related activities on smartphones literally, everything is possible through smartphones (Iqbal, Ahmad et al. 2017). 70% of world's population use smartphones (Kang, Hong et al. 2011). Smartphones have facilitated in lots of places especially in education like now students can read any books on internet they want to (Ernsting, Dombrowski et al. 2017). They can do online courses from any other country staying at home through smartphones but as everything does have more or less drawbacks or negative effects similarly smartphones do also have (Anshari, Almunawar et al. 2017).

Smartphones can cause distraction to student as a student might spend their most of time in other unnecessary activities such as in playing games, using social media, watching movies or videos, unimportant lengthy chatting, or conversation etc (Wilson, Wong et al. 2012). In recent times, it has been noticed that the young generation use smartphones too much and they engage in meaningless activities on smartphones which are quite harmful for their future such as they spend a lot of time on Playing Games, watching movies and using social media (Gillespie, Ampofo et al. 2016). Before the time of smartphones becoming trivial, students used to devote plenty of time in their study related activities but nowadays the things have changed a lot now girls and boys both use smartphones generally and they make romantic chat with each other for almost whole night rather than doing their studies (Song, Cho et al. 2012). Now the new generation is becoming mentally weak as

it spends most of the time on smartphones instead of playing physical games and joining gatherings, wandering or the activities which can strengthen their mental and physical health etc and as they are getting mentally weak consequently, they are becoming unable to give proper attention to their studies because somehow, they have become addicted of smartphones (Papastergiou, M. 2009). Time to time new things is being launched in smartphones like the recent inventions are Pubg, TikTok. These things have markedly attracted smartphone users towards them and now the student go in school, college, or university but they are mentally captives of these things and they are only physically present during classes (Schilit, Theimer et al. 1993). Instead of competing based on higher grades, marks, quality education, students are competing on having better smartphones, more reacts on social media and girls in contact etc (Rich, J. M. 1988). In this study, we will discover if smartphones are reducing the quality of education. It has also been asked in the survey if people use smartphones for their study rather than engaging in other irrelevant activities.

2. Material and Methodology

Sample and Data Collection

The data collected for this research is based on both primary and secondary data. The primary data has been collected through survey while the secondary data has been collected from journals, articles, and websites. For collection of the primary data, a questionnaire consisting of eight questions has been implemented in order to get responses. The questionnaire was circulated on social media (e.g. Facebook and WhatsApp) for responses. 180 people were approached for their feedbacks out of them 121 people gave their feedbacks. The response rate stands 67% which is not bad as the responses of this number are hard to get through online surveys. Questions having the three different options (Yes, No, and Maybe) were added in the survey for the sake of collecting responses. The research questions (RQs) noted below was used for this study.

RQ1: Do you use smartphones?

RQ2: Do you think, smartphones have worsened the quality of education?

RQ3: Do you think, smartphones distract you from study?

RQ4: Is smartphone reducing your memory and you forget things soon after you study them?

RQ5: Overuse of smartphones, is it the cause of reduction in your CGPA, Marks or Grades?

RQ6: Despite having hardcover books, do you use smartphones for education?

RQ7: Do you think, you get disturbed in your study when you get new notifications on mobile?

RQ8: Do you think, your smartphone consumes your study time?

3. Background and Literature Review

In recent years, many papers were written on the merits and demerits of smartphones for students. Smartphones affect students in both ways negatively and positively. Students may use smartphones for assistance in their academic purposes, or they can engage in other meaningless activities. Three-fourth ratio of

world's population own phones. The data discussed below has been collected through reviewing relevant articles to the topic. It was investigated that students get unfocussed using smartphones generally, whereas 61.6% students said that they sometimes receive calls during class. Distraction is caused by getting calls or answering to them (Calisir, Atahan et al. 2013).

In a study it was discovered, the 65% student use smartphones for social purposes means for browsing, using social media, watching stuff etc while 20% use smartphones for the academic purposes and the rest of student use it for both purposes. 48% student said they use 5-7 hours on social purposes (Park., Moon et al. 2014). According to a study, smartphone poisoning means extreme habituality of using smartphone needlessly that the individual become anxious and restless when he does not use smartphone. The addictive features in smartphones turn users to habitual of them (Ifeanyi, Chukwuere et al. 2018).

According to a research that tells that 48% respondents said that they are addicted of smartphones and the university students who belong to bachelor level have the most addiction of smartphones besides, it suggests that the degree of addiction of smartphones vary based on the level of income of student (Aljomaa, Qudah et al. 2016). A research that tells the 99.8% of college students use cell phones and the student think that cell phones or smartphones are necessary for them. This research also discovered that Facebook is the most using social media platform for student and student also spend most time on social media in all other apps (Jesse, G. R. 2015). Impact of smartphones, According to this research, Smartphones allows users to involve in needless activities like overuse of social media, gaming, watching movies or sports. Smartphone is a big distraction for students. The surrounding student also gets distracted even though they do not have it by someone who is using in front of them (Gowthami, Kumar et al. 2016).

According to Around 72% respondents said that they sometimes use smartphones for the purpose of sharing knowledge while 14% people said they always use smartphones for the purpose gaining or sharing knowledge. The other 14% people responded they never use smartphones for this sake (Alfawareh, Jusoh, et al. 2017). A research conducted on the topic "Facebook and academic performance" suggests that the 26% student said the Facebook usage affected them positively and assisting to grow whereas 74% students said using Facebook markedly affects their academic performance (Kirschner, Karpinski et al. 2010).

4. Random Related Work

In a study it was discovered that an individual devotes 171 minutes on mobile every day and it was also found out that a user opens 21 times his mobile in a few minutes. This absolutely tells that the mobile is killing the precious time of student and another study also revealed that the most using app in smartphones is Facebook so the most time is being spent there by student.

Smartphones are owned by 2.71 billion people, according to a study conducted in 2019.

Ordinary mobiles are owned by more than 5 billion individuals.

A new mobile is bought by a kid on the age of 12, generally.

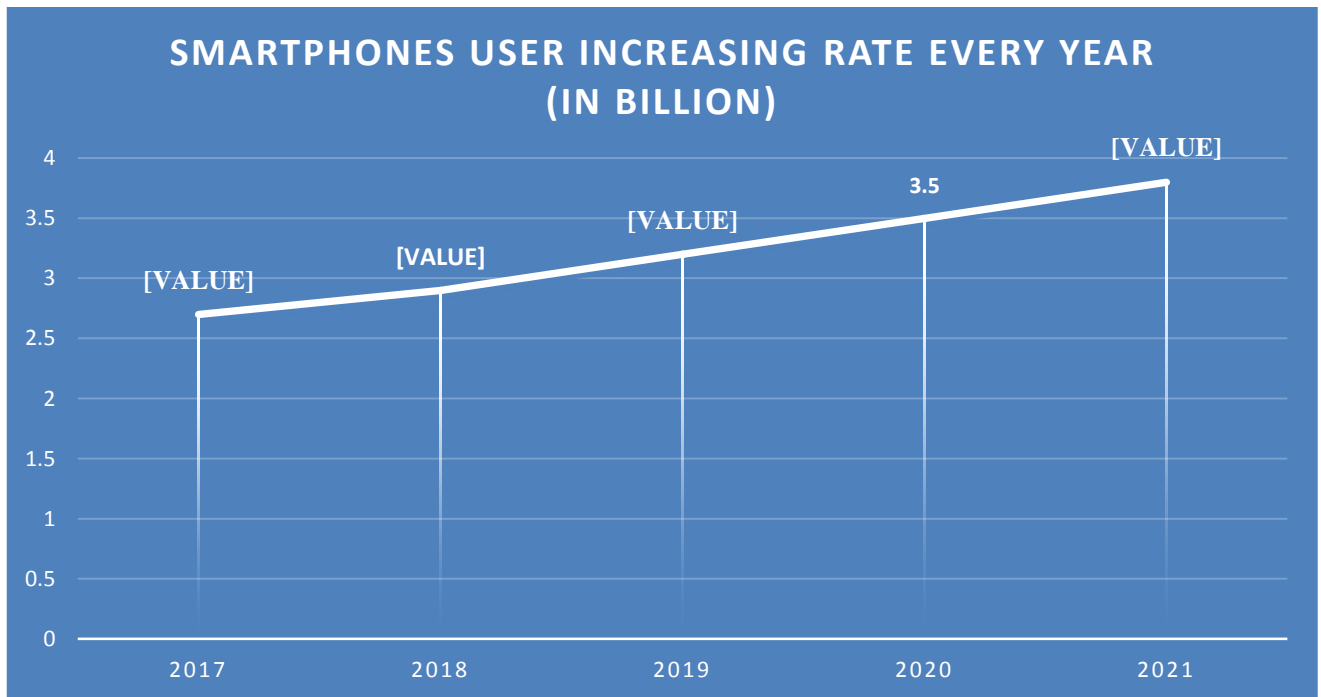
In 2019, Mobile users downloaded 194 billion mobile applications.

92% people in America said the mobile addiction is a fact.

The number of users will rise to more than 7 billion until 2023.

A recent study revealed that overuse of mobile can reduce the understanding ability of an individual. Using mobile a lot can cause lack in understanding the depth details.

From 2016 to 2021, the number of users will increase for smartphones. The data is represented in the following chart.



With passing of years, the users of smartphones are also increasing with a great rate. It can be clearly seen through the chart above that around 0.25 billion users for smartphones are increasing every year. This number includes student in it and as it is not hidden that smartphones are affecting education so in future education is going to get more effected due to smartphones.

One study also found that the most of time spent on mobiles is used on applications. 90% time is devoted on using applications in mobile. And it was also found that adults keep their mobile with them 22 hours in a day.

85% people use their mobiles while having conversation with either family or friends [20-24].

5. Objectives

The main objectives of carrying out this research are the followings

- To find out if the smartphones are reducing the quality of education and affecting the performances of student in terms of their Grades, GPA, marks.
- To know if smartphones are weakening the memory and making student forgetful.
- To know if students use smartphones for reading books rather than reading in hardcover books.

6. Statistical Analysis

For representation of data, different types of charts and tables were constructed, and the data was analyzed in the excel and for the results percentage analysis was used.

7. Result and Discussion

All the data was collected through survey and it is the entire primary data. The data has been represented in the following charts and tables.

Table 1: Smartphones are owned by respondents

	Frequency	Percentage	Cumulative Frequency
Yes	117	96.7	117
No	4	3.3	121
Maybe	0	0	121
Total	121	100	

This table tells that 96.7% people own and use smartphones and 3.3% do not use it. The data is presented in the chart below for easy understanding.

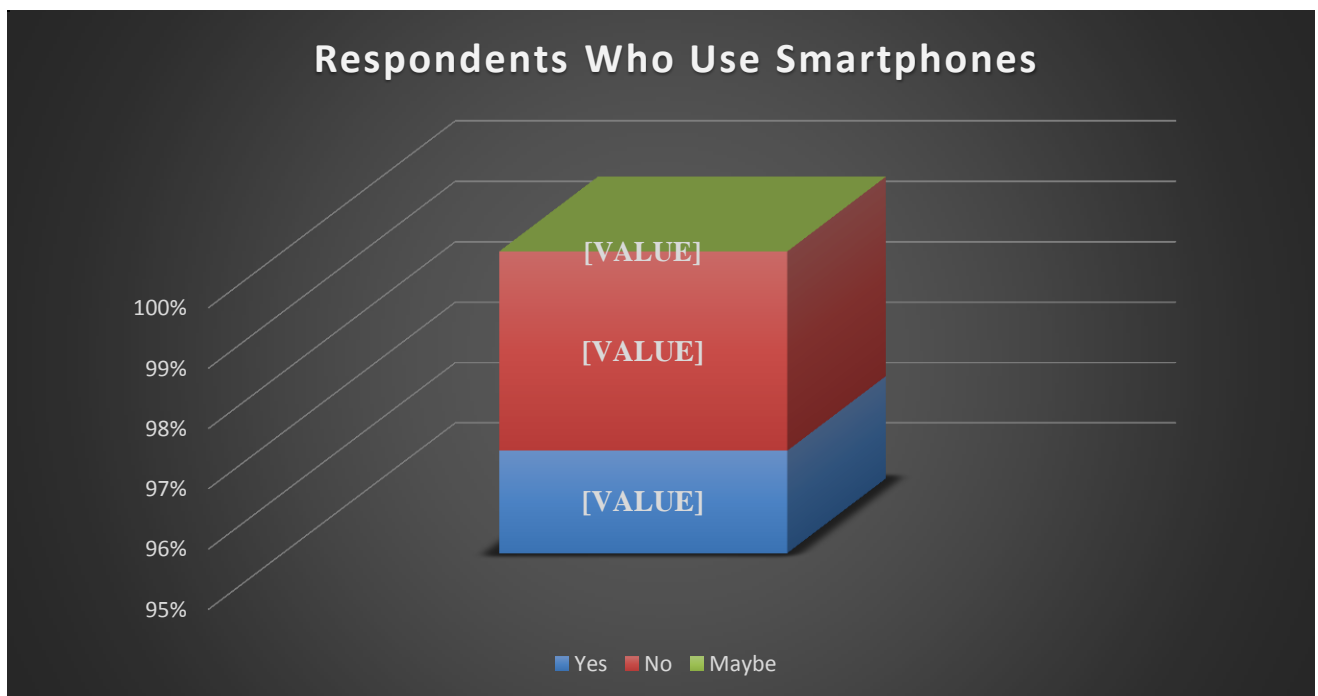


Fig.1. Respondents who use smartphones

This figure shows that 97% respondents said that they use smartphones whereas only 3% said that they do not. The question was asked from respondents was “Do you use smartphones” and it is the RQ1.

Table 2: The quality of education is reduced by using smartphones

	Frequency	Percentage	Cumulative Frequency
Yes	44	36	44
No	41	34	85
Maybe	36	30	121
Total	121	100.0	

In this table, it is known that 36% people agreed that the quality of education is decreasing due to smartphones however 34% people disagreed with that. The data is displayed in the figure below and further discussion is made on it.

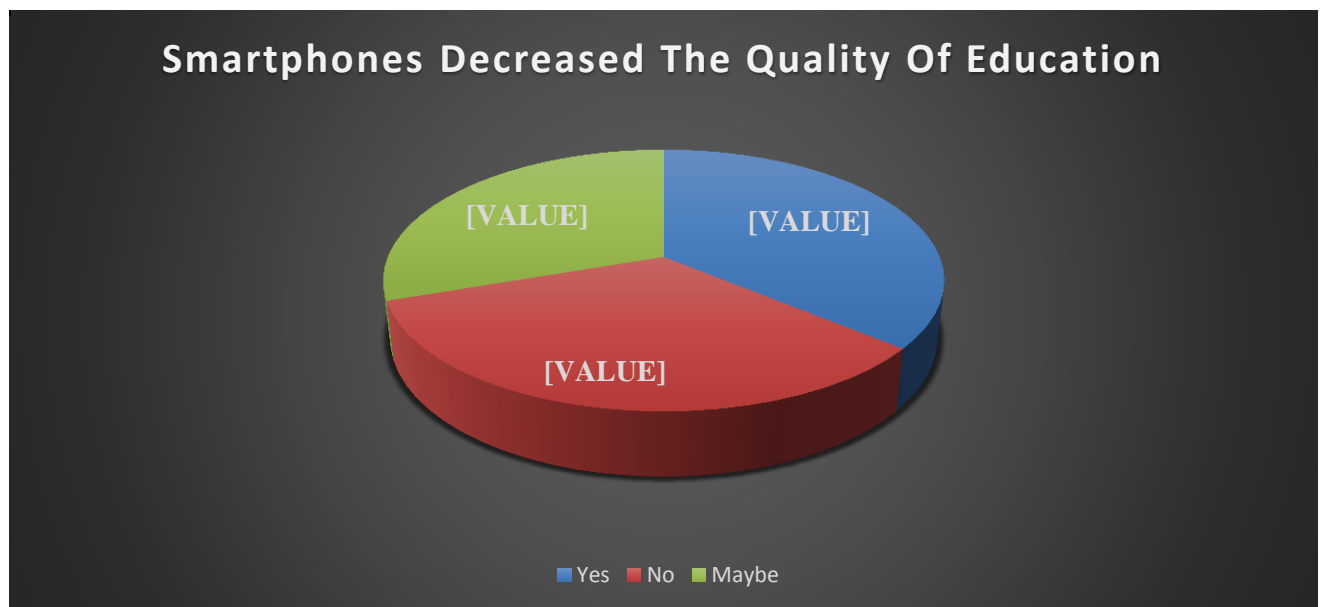


Fig.2. Smartphones decreased the quality of education

In this figure, it says, while responding to *RQ2*: Do you think, smartphones have worsened the quality of education? 36% people agreed that smartphones have decreased the quality of education whereas 34% people responded smartphones have not decreased it. 30% people remained unsure about the both scenarios.

Table 3: Smartphones distract from study

	Frequency	Percentage	Cumulative Frequency
Yes	83	69	83
No	27	22	110
Maybe	11	9	121
Total	121	100.0	

This table suggests that 69% people said that smartphones distract from study while 22% people said that smartphones do not distract from study. In the figure below, the data is shown graphically.

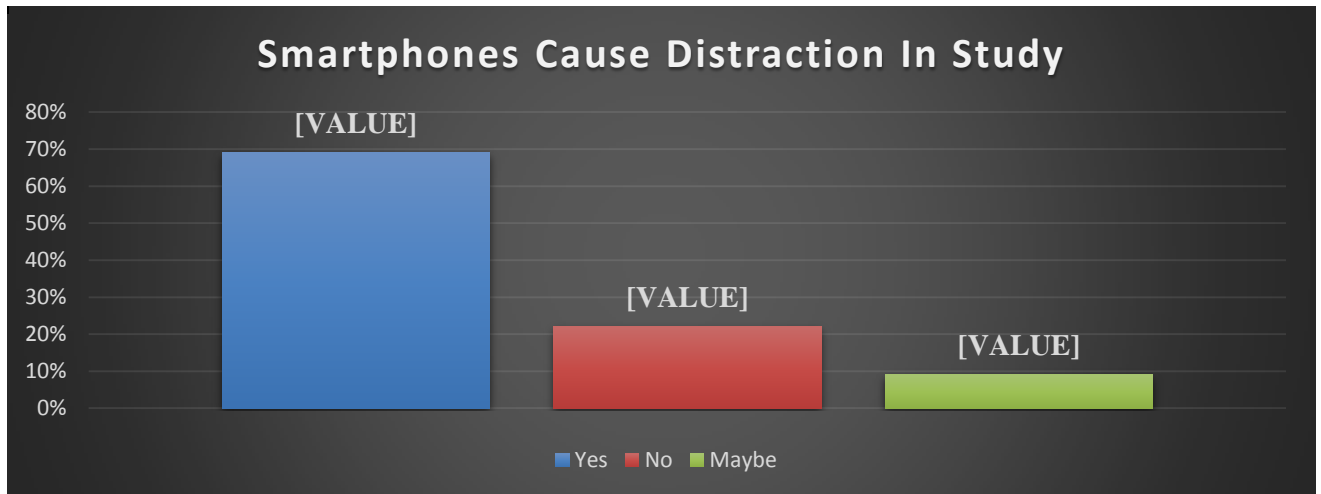


Fig.3. Smartphones cause distraction in study

This chart indicates that 69% people responded that smartphones do cause distraction during study while 22% people answered that it is not the case and smartphones do not distract them during study. Other respondents showed doubt about it. Their responses were to the RQ3: Do you think, smartphones distract you from study?

Table 4: Students' memory gets affected because of the use of smartphones

	Frequency	Percentage	Cumulative Frequency
Yes	56	46	56
No	36	30	91
Maybe	29	24	121
Total	121	100.0	

This table indicates 46% people agreed that smartphones affect the memory whereas 30% people disagreed with it. Further, the data is revealed in the figure below.

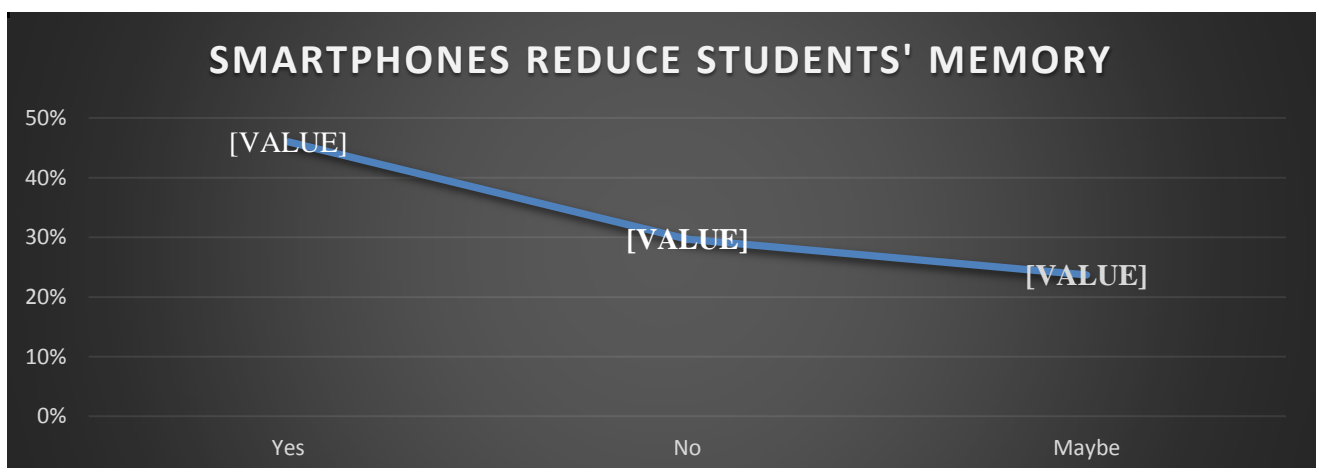


Fig.4. Smartphones reduce students' memory

This chart says that in response to the RQ4: Is smartphone reducing your memory and you forget things soon after you study them? 46% people agreed that smartphones affect the memory and reduce it whereas 30% people disagreed with it and the rest are unsure about it.

Table 5: Smartphones cause reduction in the Grades, marks, or GPA

	Frequency	Percentage	Cumulative Frequency
Yes	51	42	51
No	42	35	93
Maybe	28	23	119
Total	121	100.0	

This table explains that 42% people said that smartphones affect the grades, marks, or GPA while 35% people disagreed with this. The data is displayed in the chart below.

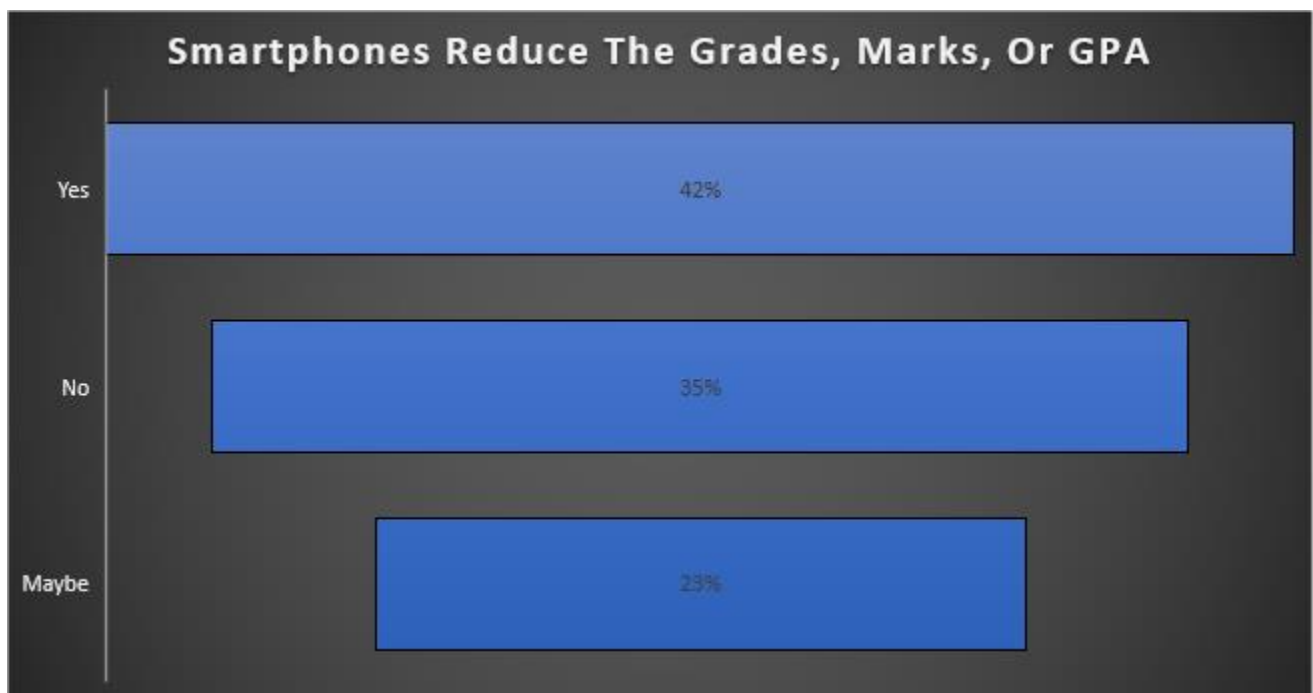


Fig.5 Smartphones reduce the Grades, marks, or GPA

This figure tells that 42% people said that Grades, marks, or GPA gets affected due to smartphones while 35% people said that this is not the case and other said they are not sure about this. The responses were given on the RQ5: Overuse of smartphones, is it the cause of reduction in your CGPA, Marks or Grades?

Table 6: Student use smartphones more than hardcover books for study

	Frequency	Percentage	Cumulative Frequency
Yes	83	69	83
No	24	20	107

Maybe	14	11	121
Total	121	100.0	

69% respondents said that smartphones are used more than hardcover books for study while 20% people were discord to it. Representation of data has been made in the picture below.

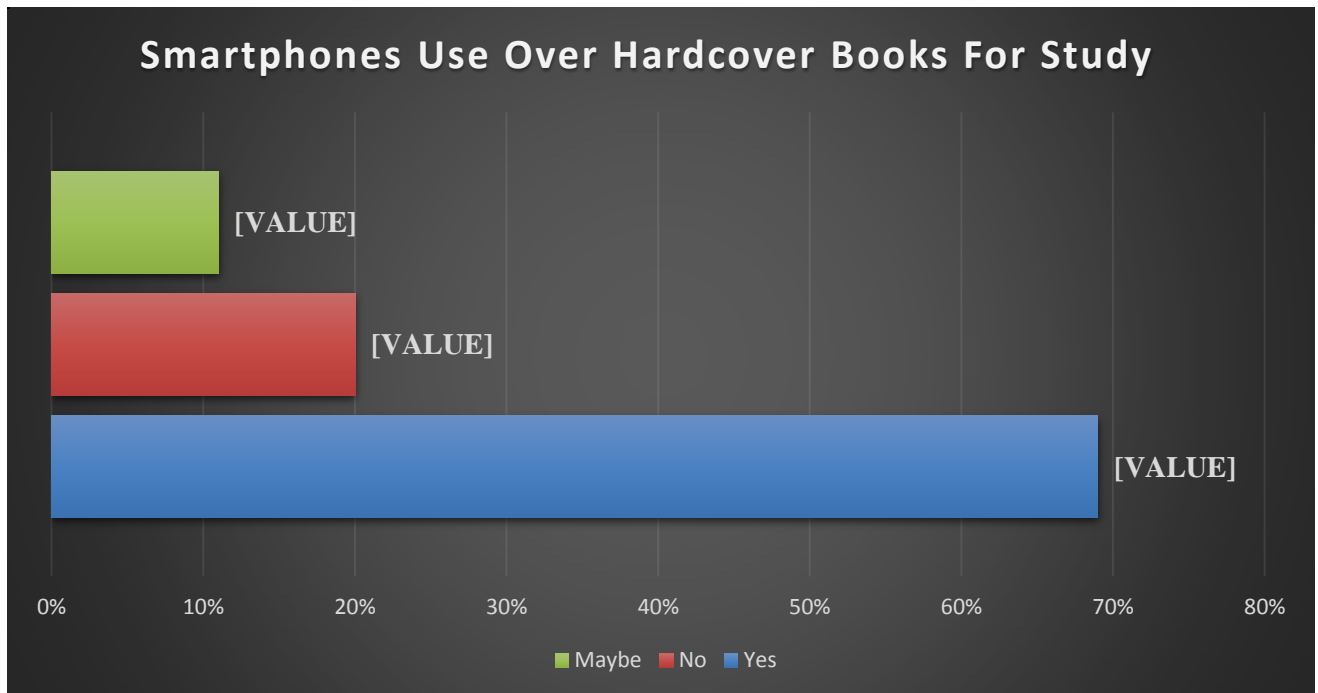


Fig.6. Smartphones use over hardcover books for study

These days, students use smartphones for doing their academic activities and they even read books online despite having the availability of hardcover books. So, the RQ6: Despite having hardcover books, do you use smartphones for education? Was asked from respondents. 69% respondents said that they use rather smartphones for than hardcover books for study while 20% people were discord to it. Other 11% respondents were uncertain about this.

Table 7: Incoming of new notification divert attentions from study

	Frequency	Percentage	Cumulative Frequency
Yes	89	74	89
No	19	16	10
Maybe	13	10	21
Total	121	100.0	

74% people said that notifications disturb them in the study while 16% people disagreed with this. A figure is given below on this statistic.

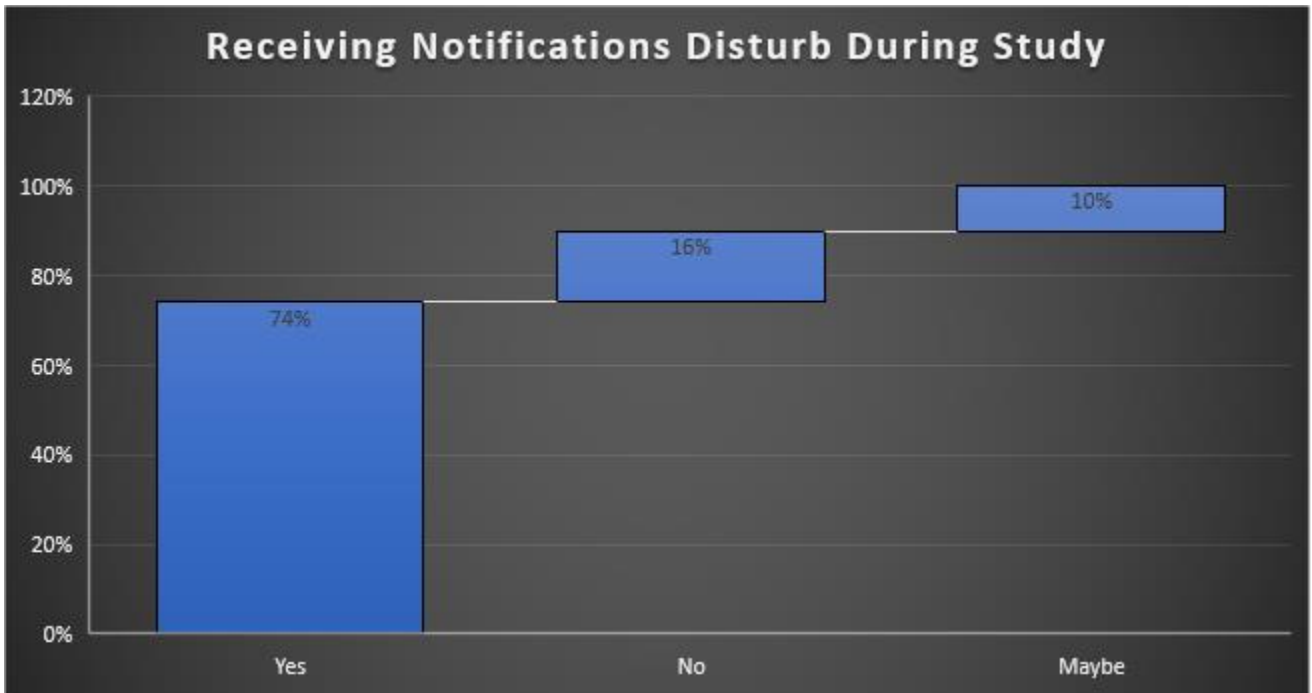


Fig.7. Receiving notifications disturb during study

Respondents were asked the RQ7: Do you think, you get disturbed in your study when you get new notifications on mobile? And 74% people said that they get disturbed when a new notification comes in mobile while 16% people said that they do not get disturbed. 10% expressed uncertainty.

Table 8: Study time is spent on smartphones

	Frequency	Percentage	Cumulative Frequency
Yes	88	73	87
No	20	17	106
Maybe	1	10	118
Total	121	100.0	

73% people said their study time is consumed by smartphones while 17% people disagreed to this. This data is exhibited in the chart below.

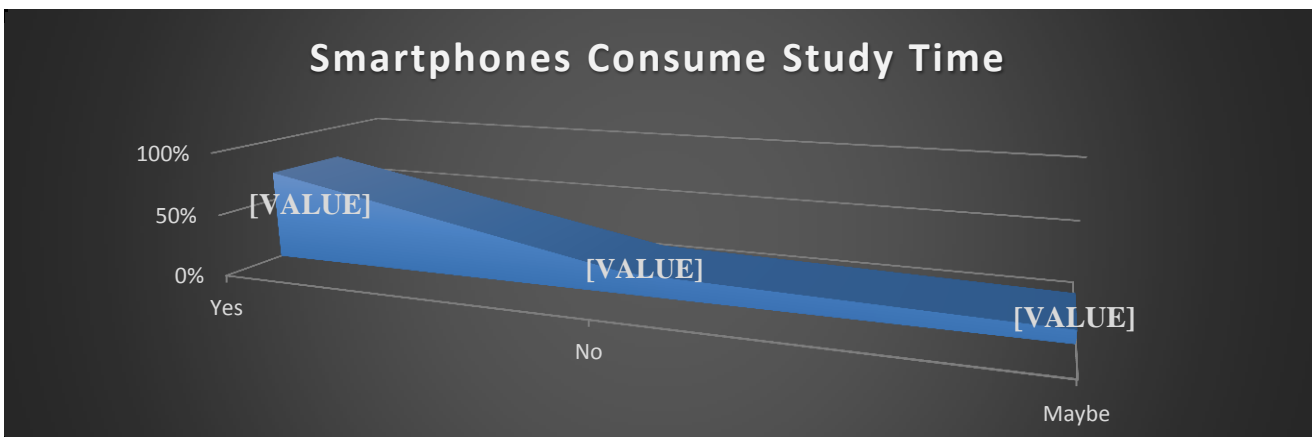


Fig.8. Smartphones Consume Study Time

Using smartphones require time so accordingly it was asked from respondents that RQ8: Do you think, your smartphone consumes your study time? and 73% people said smartphones consume their study time while 17% people disagreed to this. The rest of people remained unsure about this.

8. Significant Findings

- It has been discovered through this study that student use smartphones over hardcover books for study.
- This study also revealed that overuse of smartphones is reducing the memory of student.
- The results of this study also prove that smartphones consume the study time of student.

9. Conclusion

Through this study, it has been concluded that indeed, smartphones are reducing the quality and standards of education as the highest percentage of 36% people agreed to it while 34% did not show willingness and 30% were unsure about this question. 74% people said that they get disturbed while new notifications appear on the phone, It is also discovered that use of smartphones reducing the memory of students. Overuse of social media can cause depression. During study, receiving new notifications cause distraction in the study and make the student unfocused.

10. Recommendation and Future Work

The negative effects of smartphones on student's education have been discovered and discussed in this study now in the future there should be carried out a detail research on steps for reducing smartphones effects on student's education and how the smartphones can be turned to non-distracting source.

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