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Effects of Different Electronic Gadgets on Academic Performance of Students the Study's Context

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Abstract: ***As mobile phone technology advances, the device looks to be capable of contributing to student learning and increased academic achievement. The recent fast growth in cell phone use has had an impact on many facets of our everyday lives, especially those of students. As a result, the current study attempts to investigate the impact of mobile phone usage on academic performance among male and female students in the Nandurbar area. A face-to-face survey was done among 274 students, 159 male students and 115 female students ranging from second to fourth year from various college departments. Gender, age, and connection with opposite sex have a considerable favourable influence on pupils' academic achievement, according to the findings. However, marital status, mobile phone usage, and the detrimental effect of mobile phone and application usage while studying all have a negative influence on students' academic performance. Cell phones are indisputably convenient and useful study aids, but they may also be a harmful source of distraction depending on a student's mindset and use behaviour. The author, on the other hand, proposes that mobile phone manufacturers consider how young people utilise cell phones for educational reasons.***

Keywords: Electronic gadgets, Academic performance, CGPA, Smartphone, technology.

I. INTRODUCTION

Technology has altered and transformed people's lives, making them more efficient and comfortable. There is barely anyone who has not been affected by today's technological and digital breakthroughs. New technical breakthroughs have immensely aided communication, transportation, and education. Many individuals are less stressed since new beneficial hi-tech products are made every day to help them do things faster and simpler. Cell phones, PCs, laptops, tablets, and the Internet are examples of useful technology. The goal of this research is to determine the good and negative consequences, as well as the frequency of usage, of the following gadgets: mobile, computer, and tablet. The influence of devices on learning as reported by students, as well as the substantial association between frequency of usage and impact of electronics.

This study investigated the use of technology on student learning. This was noteworthy for the following reasons:

Students: They will understand the advantages of utilising technology in studying and how it may help them study more efficiently.

instructors: This will raise awareness among instructors about allowing pupils to use devices more freely and guiding them in their use of the gadgets. Administrator of the School: This research might be included into school policy. The application of technology in the classroom. The following findings were reached as a result of data analysis and interpretation: Cell phones were constantly used by students, laptops were occasionally used by students, and tablets were seldom utilised by students during learning. The usage of gadgets has a relatively favourable influence on learning because of its features that allow students to accomplish more things, but it also has a little negative impact since it is likely to distract pupils. There was no significant association between the frequency of usage and the impact of gadgets, suggesting that the frequency of use of gadgets does not change their impact, but rather how we utilise them.

II. PROBLEM STATEMENT

This study was carried out to explore or determine the influence or impacts of electronic devices on the academic performance of Senior High and College students. This research discusses how to determine the impact of electronic gadgets on students, particularly in their studies. The purpose of this study is to assess the influence of gadgets on learning outcomes among Indonesian junior high school pupils. This study is a sort of qualitative research that use the case study approach. Data collecting methods include observation, interviews, and documentation. Data analysis included stages for data reduction, data display, and conclusions being drawn.

A. Hypothesis Expression

1) The use of various technological gadgets has a positive influence on linguistic ability, typing abilities, and mathematics skills. The negative consequence of utilising various electronic devices is the hazard or risk of gadget radiation, which has a significant impact on the development of the child's brain and immune system. They will get lethargic to study, such as reading boring novels or playing video games, and their academic success will suffer as a result. They will be unable to spend time with their families.

2) Every day, the average adolescent consumes around 9 hours on various forms of media.

3) There's the TV, the laptop, the desktop, the phone, the tablet, the MP3 player, any handheld video game devices, and so much more. Most schools allow students to use computers for schoolwork, and homework is generally done on a computer.

III.LITERATURE REVIEW

Although cell phones are likely to be present in college students' hands while in class and studying, research on their relevance to academic achievement is sparse. In an early investigation of the problem, Sánchez-Martnez and Otero (2009) identified intense mobile phone users in a large sample of Spanish high school students using a combination of self-reported monthly cell phone costs and frequency of usage data.

In the study, heavy mobile phone usage was linked to school failure as well as other harmful behaviours including smoking and excessive alcohol consumption. More recent research operationalize mobile phone use as calling and texting while employing a number of academic performance indicators. Jacobsen and Forste (2011), for example, discovered a negative association between phoning, texting, and self-reported grade point average (GPA) among US university students.

Similarly, Hong et al. (2012) discovered that texting and phoning were positively connected to a self-reported measure of academic difficulties in a sample of female Taiwanese university students. While these studies provide a beginning point for evaluating the association between mobile phone usage and academic achievement, neither objective measures of academic performance nor the cell phone's developing capabilities beyond calling and texting are used. Users of modern mobile phones may access a wide range of electronic material at practically any time and from any location. Popular activities such as video game playing, Internet surfing, and monitoring social networking sites are now all readily achieved with most cell phones. Researchers have connected each of these activities to academic success, regardless of mobile phone use. Heavy video game playing, for example, has been linked to poorer GPAs (Jackson et al., 2011; Jackson et al., 2011). Furthermore, modest levels of Internet use have been linked to better academic achievement (Chen and Peng, 2008).

Chen and Tzeng (2010) discovered that information searching was connected with improved academic achievement among heavy Internet users, but video game playing was associated with lower levels of academic performance.

Several recent research (e.g., Rosen et al., 2013; Stollak et al., 2011) have found a negative association between social networking site use (e.g., Facebook, MySpace, Twitter) and academic achievement. Kirschner and Karpinski (2010), in instance, found that Facebook users had a worse self-reported GPA and spend less hours per week studying than nonusers. Similarly, Junco (2012a, 2012b) discovered a substantial, negative association between Facebook time and real cumulative GPA. These unfavourable associations have been discovered in populations all across the world, including North America, Europe, and Asia (e.g., Chen and Tzeng, 2010; Karpinski et al., 2013).

Multitasking has recently emerged as a potential explanation for the negative relationship between electronic media use (including cell phone use) and academic performance (Jacobsen and Forste, 2011; Junco and Cotton, 2011; 2012; Karpinski, et al., 2013; Kirschner and Karpinski, 2010; Rosen et al., 2013; Wood, et al., 2012). Several studies have found that students often use electronic media, including mobile phones, while in class, studying, and completing homework (Jacobsen and Forste, 2011; Junco and Cotton, 2012; Sánchez-Martnez and Otero, 2009; Tindell and Bohlander, 2012).

To begin, Wood et al. (2012) investigated the impact of multitasking with a variety of electronic media on students' capacity to learn from traditional university classroom lectures.

Emailing, MSN chatting, and Facebook use on a computer, as well as mobile phone texting, were all studied. Multitasking with any of the technologies was related with decreased follow-up test performance when compared to students who did not multitask. Second, Junco and Cotton (2012) employed a hierarchical regression to assess the ability of multitasking to predict real total college GPA.

After adjusting for sex, real high school GPA, time spent preparing for class, and a student's Internet abilities, the results revealed that Facebook-multitasking and texting-multitasking were significantly and adversely associated to college GPA.

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IV. METHODOLOGY

A face-to-face survey was done among University students in their second to fourth years from various disciplines. The survey was given to 274 students, 159 of whom were male and 115 of whom were female. Nonprobability sampling (Convenience sampling) was used to pick respondents from several departments at University. In terms of infrastructure, teaching, student strength, and other facilities, the departments are diverse.

V. RESULT AND DISCUSSION

Out of 200 samples surveyed, it was discovered that approximately 91% of respondents use Android mobile phones to attend their online classes, 6.6% use laptops, 1.8% use tablets, and the remaining 0.6% use desktop computers to attend their online classes (Figure 1). Respondents believe that the reason for the dominance of mobile phone use is because they may use this device while sitting in a comfortable body posture. Aside from charging, mobile phones have no connection to power outages. Respondents responded that even if the power goes out, they can still attend their lessons using their mobile phones and the mobile internet package. The reason for the low use of desktop computers is that they cannot be utilised if the power goes off.

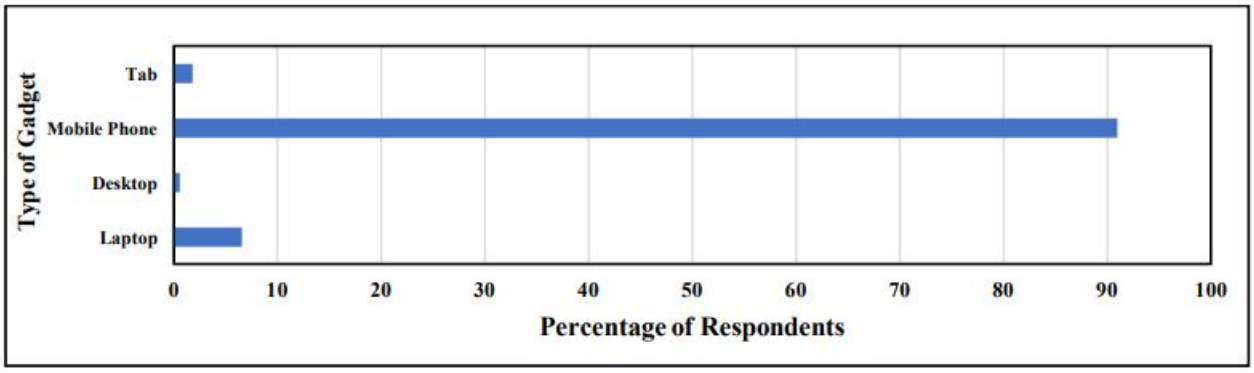

Figure 1. Participants' Gadget Type Used for Online Class Hrs of Use of Digital Equipment for Internet Class

The impact of excessive use of electronic devices on human health is mostly influenced by how long a person is exposed to the device . Because online education is the sole option in the midst of a pandemic, this element was also considered. According to the study, out of 200 respondents, approximately 40.1% use technology for less than 4 hours for attending online classes, 46.1% use electronic gadget for 4 to 6 hours for attending online classes, and 13.8% use electronic gadget for more than 6 hours for attending online classes.

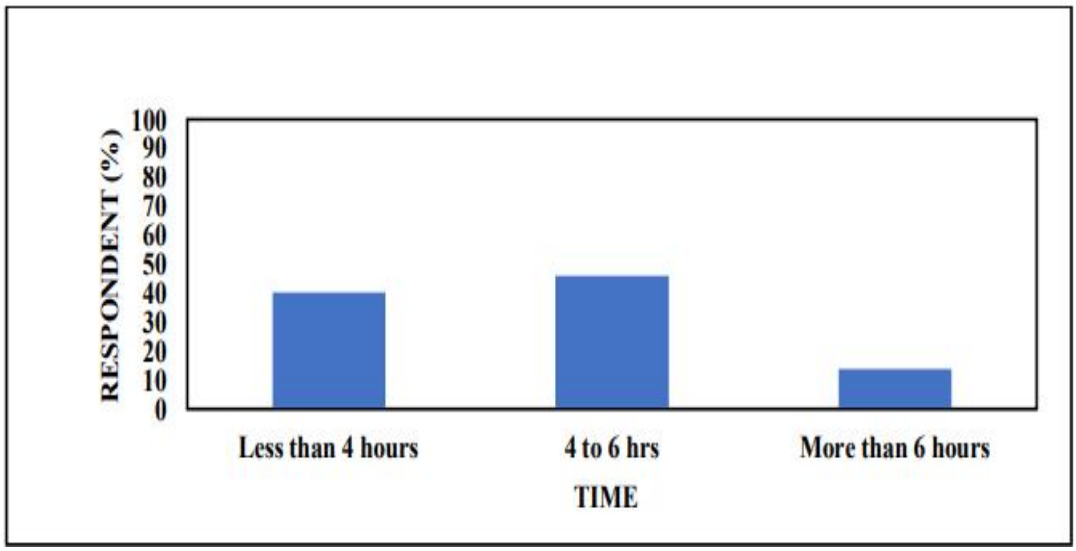

Figure 2. Electronic Device Use Hours for Online Class

A. Intermission Between Classes

Because continual exposure to electronic devices is damaging to a person's health, there must be a pause between two classes. After conducting the survey, it was discovered that 82% (164 respondents) of the 200 respondents claimed that they are provided a break between two classes, while the remaining 18% stated that there is no break between the classes . Out of 164 respondents who answered that they appreciate a break between courses, 42.5% claimed that they prefer the break for less than 15 minutes, 26.4% said they love the break for 15 to 30 minutes, and 31.1% said they enjoy the break for more than 30 minutes.

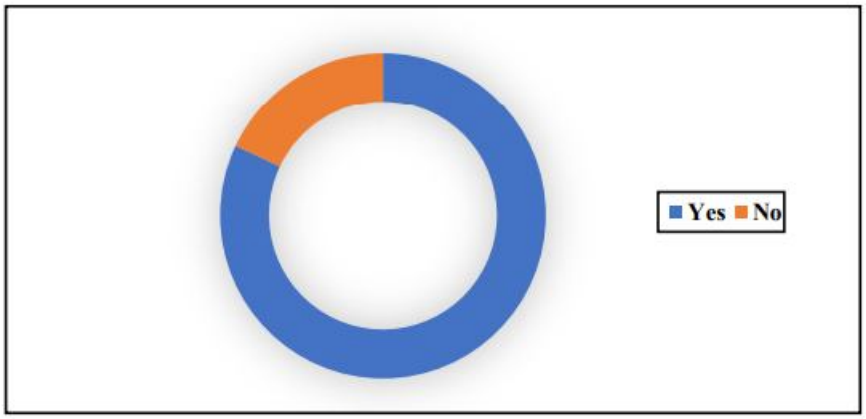

Figure 3A: Breaks between online classes are common.

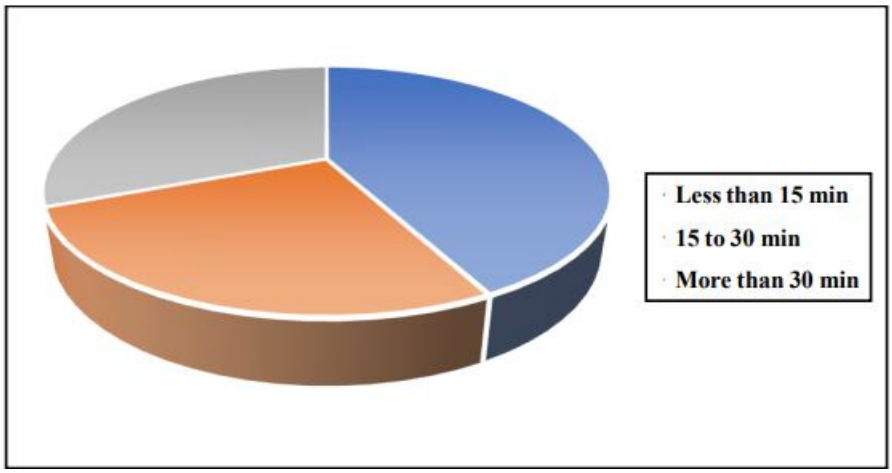

Figure 3B : Interval among online classes

B. Other than Online Classes, use of Electronic Devices

We cannot imagine a day in our modern society without technological gadgets and internet connectivity. The significance of these technologies has grown even more apparent after the planet was engulfed by the terrible clutches of COVID-19. Students are taking online lessons because all educational institutions are closed. Furthermore, people are utilising these gadgets for other activities, which increases their exposure to the device. According to the poll, around 93.4% of 200 respondents are using electronic devices for other reasons, while a very small fraction of 6.6% are not utilising electronic devices for other purposes other than online class. Out of 187 respondents who use electronic devices for purposes other than online classes, 2.4% use them to watch films on the internet, 8.4% use them to play games, 5.4% use them to watch web series, and 34.1% use them to explore social networking sites such as Facebook, Twitter, and WhatsApp.

Telegram, Instagram, and so forth. It was also discovered that the majority of respondents, 49.7%, utilise these gadgets for all of the aforementioned functions . Man has gotten exceedingly isolated in the midst of the epidemic. Respondents believe that since they are unable to leave their homes, they are only able to communicate with the outside world through social media, which has increased their reliance on technological gadgets. They believe that because they are unable to go out, they frequently conduct conference calls or video conversations.

Using various programmes such as Google Meet, Webex, Zoom, and so forth. Respondents also believe that when schools and institutions are closed, they are unable to obtain enriched study resources from their institutional libraries. As a result, kids frequently have to spend more time on the internet searching for study resources or watching YouTube lesson videos. The telephone interview also indicated that even after the online class has ended, students frequently have to listen to the lecture given by their teacher during the online class using video recordings provided to them by their individual schools. It has also been observed that some respondents are now utilising electronic gadgets to watch news, read electronic books, read electronic newspapers, and so on. As a result of the preceding debate, it is evident that there has been a precipitous growth in the usage of electronic devices by students for reasons other than online class.

VI. CONCLUSIONS

Cell phones have become an indispensible component of our everyday lives, as well as of campus life and culture. Even a simple inspection of today's university students will discover mobile phones being utilised in every imaginable campus environment, including the classroom, both explicitly and discreetly. As a cell As phone technology advances, the device looks capable of contributing to student learning and increased academic achievement. For example, current "smartphones" give students instant, portable access to many of the same education-enhancing features as an Internet-connected PC, such as online information searching, file sharing, and engaging with instructors and peers. The findings indicate that a mobile phone is an extremely useful tool for studying, since the majority of respondents utilised their phones for this reason. Cell phones are becoming increasingly popular as information access devices.

The research's utilisation of interactive, multiuser functions, which can be disruptive or useful during study, stands out. In summary, the study found that cell phones are useful for studying, but that students abuse them. Because university students are intrinsically motivated to interact amongst themselves, higher education institutions may capitalise on the mobile phone's potential for instructional reasons. The study's findings also indicate that mobile phone makers must consider how young people utilise cell phones for educational reasons. The proliferation of cell phones creates a plethora of opportunities and problems for today's pupils. Cell phones are indisputably convenient and useful study aids, but they may also be a harmful source of distraction depending on a student's mindset and use behaviour.

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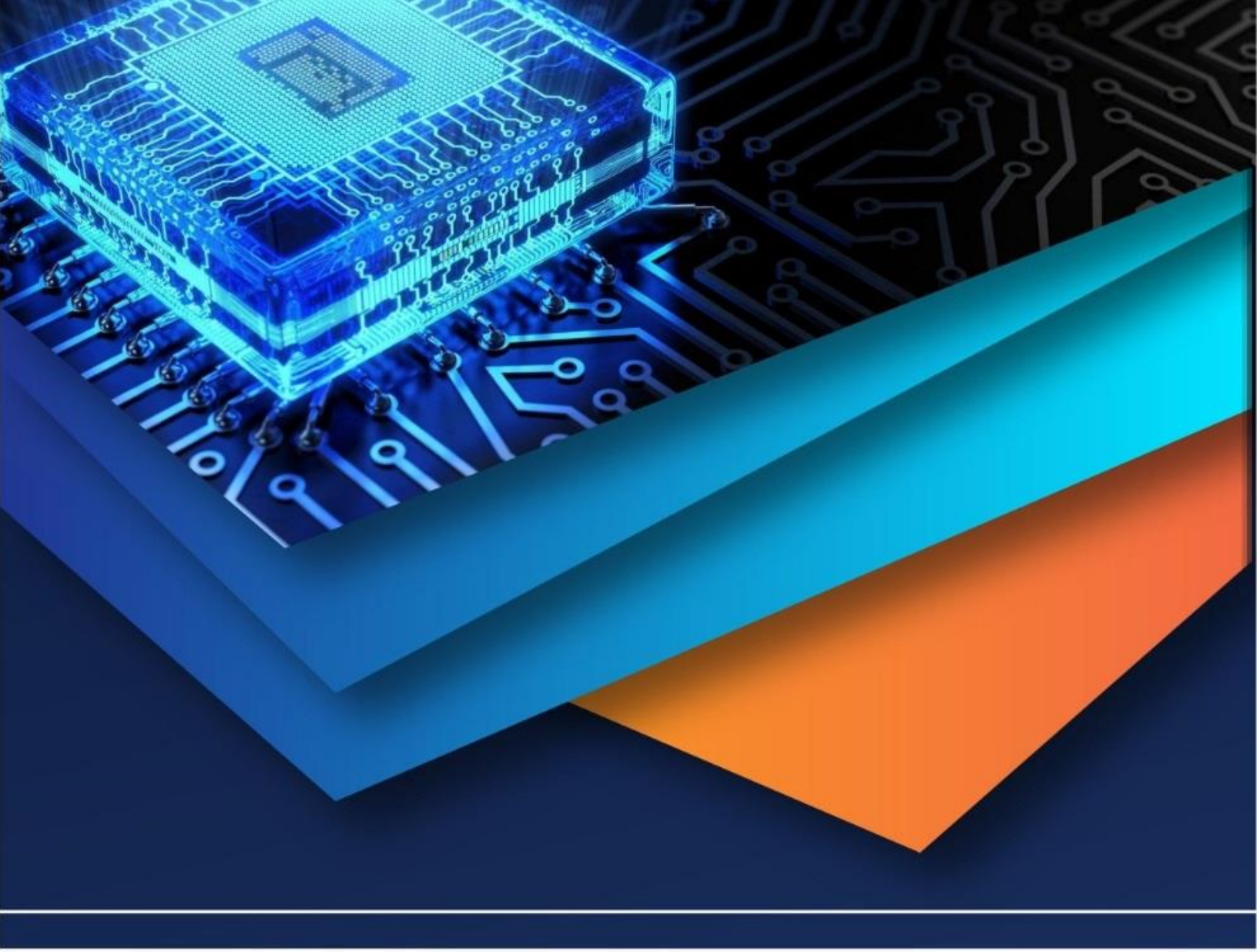

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