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The Effect Of Smart Phone Addiction On E- Learning Of The Students

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Abstract:
This study investigates the effect of smartphone addiction on e-learning among secondary school students, specifically focusing on class XI and XII students. A total sample of 200 students (100 male and 100 female) from higher secondary schools was selected. The study employed standardized tools: the Smartphone Addiction Scale (SAS–VAM) developed by Vijayshri and Masaud Ansari, and the E-Learning Scale (ELS–MKM) developed by Mahesh Kumar Muchhal. The research design followed a 2×2 factorial approach and applied statistical methods including mean, standard deviation, correlation, and t-test to evaluate the effect of smartphone addiction on e-learning. The findings reveal no statistically significant effect of smartphone addiction on e-learning performance in either class XI or XII students, for both genders.
Keywords: *Smartphone Addiction, E-Learning, Secondary School Students.*

INTRODUCTION:

In the digital age, smart phones have become an indispensable part of daily life, revolutionizing communication, entertainment, and information access. For school students, smart phones offer numerous educational benefits, including access to online resources, educational apps, and the ability to connect with peers and teachers. However, the pervasive presence of smart phones has also given rise to a significant and concerning issue: smartphone addiction.

Smartphone addiction, characterized by excessive or compulsive use of smartphones that disrupts daily activities and well-being, has emerged as a prevalent problem among school students. This phenomenon is driven by the multifunctionality and convenience of smart phones, coupled with the engaging design of social media platforms and online games. As students increasingly rely on their smartphones for social interaction, entertainment, and even academic purposes, the line between healthy use and addiction becomes blurred.

The implications of Smartphone addiction are profound and multifaceted, affecting various aspects of students' lives. Academically, excessive smartphone use can lead to decreased attention spans, lower academic performance, and reduced engagement in classroom activities. From a learning perspective, smartphone addiction is associated with higher levels of anxiety, depression, and stress. Additionally, the overuse of smart phones can hinder the development of essential social skills and reduce the quality of face-to-face interactions.

Given the significant impact of smartphone addiction on school students, it is crucial to understand the underlying causes, identify the effects, and explore effective interventions. This essay delves into the multifaceted nature of Smartphone addiction among school students, examining the psychological, social, and technological factors that contribute to this issue. It also discusses the far-reaching consequences of Smartphone addiction on academic performance, learning, and social relationships. Finally, the essay highlights potential solutions and strategies to address this growing concern, emphasizing the roles of educators, parents, and policymakers in fostering a balanced and healthy approach to Smartphone use.

Smartphone's have become ubiquitous in modern society, providing numerous benefits such as easy access to information, enhanced communication, and entertainment. However, the pervasive use of Smartphone's has also led to growing concerns about addiction, particularly among school students. This essay explores the phenomenon of smartphone addiction among school students, examining its causes, effects, and potential solutions. Mobile phone use has become a necessity, due to wide – spread availability. Addiction to Smartphone usage is a common problem among adults worldwide which is manifested as an excessive usage of phones, while engaged in other activities such as studying, driving, and social gatherings and even sleeping.

Young people watch videos, express themselves, communicate with friends, and search for information using Smartphone's, while older people use their Smartphone for having video calls with their children living far away and for playing games. However, many people don't realize that addiction to Smartphone is a serious issue leading to a negative effect on the person's thoughts, behavior, tendencies, feelings, and sense of well-being. In particular, it can be a risk factor for depression, loneliness, anxiety and sleep disturbances. Recent researches have shown that the use of mobile phone is associated with headaches, neurodegenerative dystopia, irritability, sleep disorders, fatigue, and dizziness. So, smart phone has overall negative impact in learning, physical health and social well-being of an individual.

Scope of the Study:

The study explores the relationship between smartphone addiction and e-learning performance among higher secondary school students (Classes XI and XII). It focuses on assessing whether smartphone addiction influences the e-learning capabilities of students in a digital learning environment. The study includes both male and female students and uses reliable and validated tools to measure smartphone addiction and e-learning performance. The scope is limited to government and private schools in a selected urban region and considers academic, psychological, and technological factors in relation to students' learning processes.

Area of the Study:

The area of the study is Bhilai City**,** an educational and industrial hub in Chhattisgarh, India**.** The city has a diverse population with a mix of students from government and private institutions, making it suitable for studying the impact of digital behavior (such as smartphone addiction) on modern educational practices like e-learning.

Sample:

The study was conducted on a **sample of 200 higher secondary school students**, selected through stratified random sampling. The sample was distributed as follows:

Class	**Male**	**Female**	**Total**
XI	50	50	100
XII	50	50	100
Total	**100**	**100**	**200**

Both government and private school students were included, ensuring equal gender representation across both classes.

REVIEW OF LITERATURE:

1. Kuss, & Griffiths (2015)

"Smartphone Addiction: An Overview of Recent Research."

This study explores behavioral patterns related to excessive smartphone use and how it can disrupt sleep, academic performance, and mental focus. It found that although addiction levels are rising, their academic impact varies with usage patterns.

Relevance: Supports investigating smartphone usage's psychological effects on academic environments.

2. Aljomaa, et al. (2016)

"Smartphone Addiction among University Students in the Light of Some Variables."

The study revealed that excessive smartphone use can negatively impact academic performance and social interaction, especially when it interferes with study time.

Relevance: Highlights need to measure the relationship between addiction levels and learning performance.

3. Hawi, & Samaha, (2016)

"The Relations Among Smartphone Addiction, Anxiety, and Academic Achievement."

This study concluded that smartphone addiction correlates positively with anxiety but negatively with academic performance, especially when students rely on mobile devices for non-educational purposes.

Relevance: Provides background for analyzing how smartphone usage patterns impact e-learning.

4. Chen, Liu, & et al. (2017)

"Gender differences in factors affecting Smartphone addiction among medical college students."

The research emphasized that while both genders are vulnerable to smartphone addiction, usage motives vary, which may impact learning differently.
Relevance: Justifies inclusion of gender-wise analysis in the current study.

5. Muchhal (2021)

Development of E-Learning Scale (ELS–MKM).
The ELS–MKM scale was designed to measure e-learning engagement, providing validated parameters like cognitive involvement, learning satisfaction, and interaction quality.

OBJECTIVES OF THE STUDIES -

Keeping in view the need of the study the following major objectives are framed for the study:
(1) To study The Effect of Smart Phone addiction on E- Learning of class XI th Students.
(2) To study The Effect of Smart Phone addiction on E- Learning of class XIIth Students.

HYPOTHESIS OF STUDIES -

Keeping In View The Objectives Of The Study, The Following Hypotheses Have Been Formulated For This Study:-
$H_0$1 –There would be no significant Effect of Smart Phone addiction on E- Learning of class XI th Students.
$H_0$2 –There would be no significant Effect of Smart Phone addiction on E- Learning of class XIIth Students.
TOOL: 1.The tools used for present study isSmart Phone Addiction Vijayshri and Masaud Ansari. Smartphone Addiction Scale SAS–VAM).
2. The tools used for present study isMahesh Kumar Muchhal. E–Learning Scale ELS–MKM.

Analysis and Interpretation of Data:

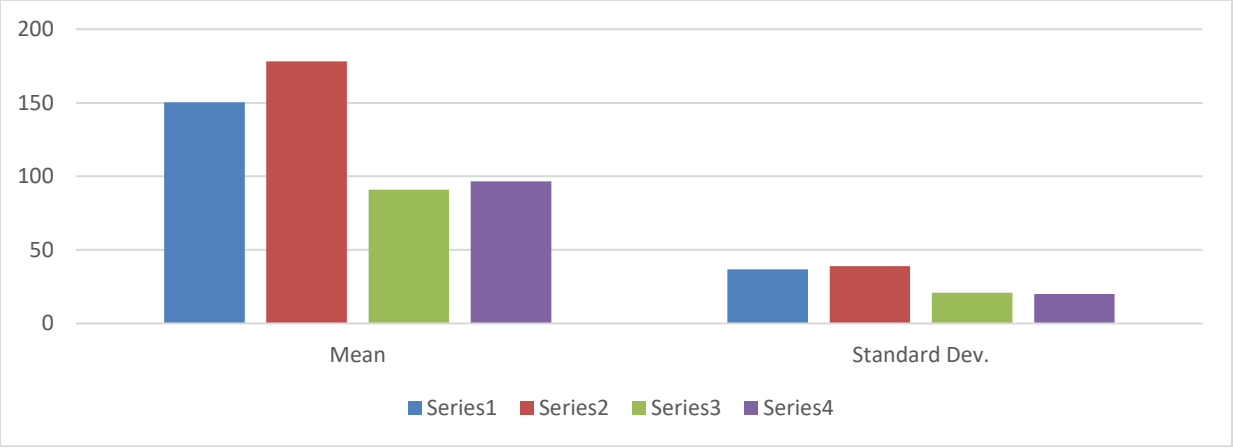
HYPOTHESIS:

$H_0$1 There would be no significant Effect of Smart Phone addiction on E- Learning of class XIth Students.
For the sake of convenience, the information regarding the hypothesis obtained through the various statistical applications is analyzed. To see the effect of Effect of Smart Phone addiction On E-Learning among class XIth students of Male & Female Students Of Higher Secondary schools mean and standard deviation is computed and presented in Table 1(A) and bar graph is presented in table 1 (B).

Table 1(A) (Comparison of mean and standard deviation of Smart Phone addiction On E- Learning among class XIth students)

Measure	E-learning (Male)	E-learning (Female)	Smartphone Use (Male)	Smartphone Use (Female)
Mean	150.42	178.26	90.92	96.50
Standard Dev.	36.80	38.88	20.95	20.00

Bar Graph for Comparison of mean and standard deviation of Smart Phone addiction On E- Learning among class XIth students



Correlation and t-value:

Group	Correlation (r)	t-value
Male	0.066	0.455
Female	-0.016	-0.114

Interpretation:

- For male students, there is a very weak positive correlation between smartphone use and e-learning scores (r = 0.066), which is statistically insignificant (t = 0.455 < critical value ~2.01 for df = 48).
- For female students, the correlation is slightly negative and also statistically insignificant (r = -0.016, t = -0.114).

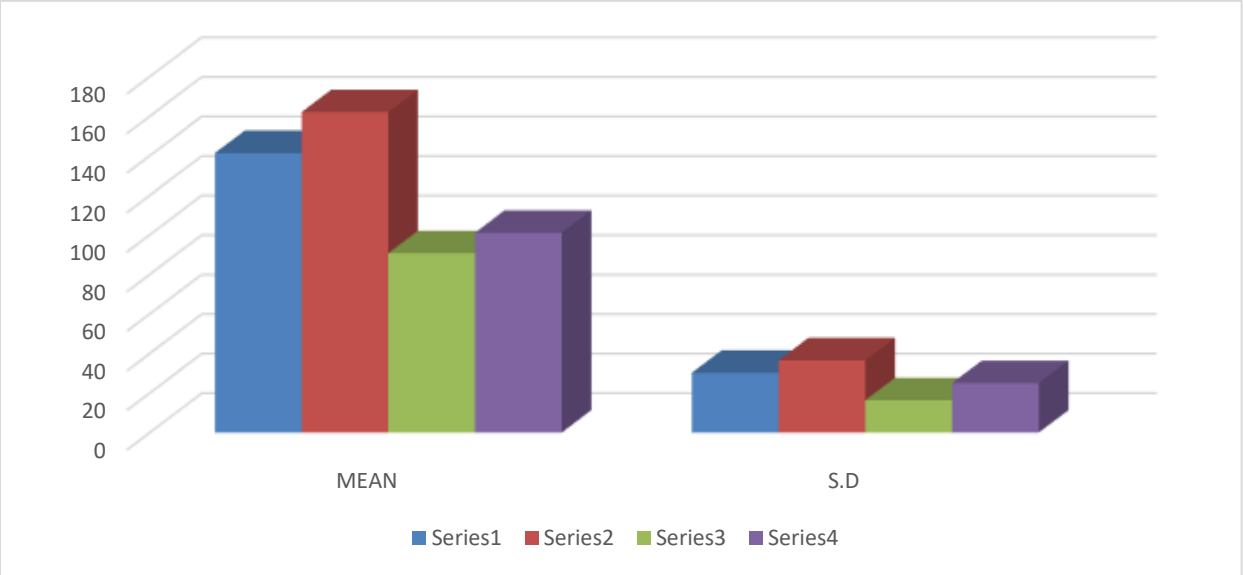
The statistical analysis shows no significant relationship between smartphone addiction and e-learning performance among Class 11 students (both male and female).
Hence, the hypothesis H1 is accepted:

RESULT:
There is no significant effect of smartphone addiction on e-learning among class XI students.
HYPOTHESIS $H_0$2 There would be no significant Effect of Smart Phone addiction on E- Learning of class XIIth Students.
For the sake of convenience, the information regarding the hypothesis obtained through the various statistical applications is analyzed. To see the effect of Effect of Smart Phone addiction On E-Learning among class XIIth students of Male & Female Students Of Higher Secondary schools mean and standard deviation is computed and presented in Table 2(A) and bar graph is presented in table 2 (B).

Table 1(A) (Comparison of mean and standard deviation of Smart Phone addiction on E- Learning among class XIIth students)

Measure	E-learning (Male)	E-learning (Female)	Smartphone Use (Male)	Smartphone Use (Female)
Mean	141.32	162.02	90.68	101.04
Standard Dev.	30.20	36.49	16.31	24.98

Bar Graph for Comparison of mean and standard deviation of Smart Phone addiction on E- Learning among class XIIth students



Correlation and t-value:

Group	Correlation (r)	t-value
Male	0.0078	0.054
Female	0.0016	0.011

- Among male students, the correlation between smartphone use and e-learning is near zero (r = 0.0078), and statistically insignificant (t = 0.054).
- Among female students, the correlation is also near zero (r = 0.0016), and the t-value (0.011) confirms it is not statistically significant.

The analysis shows no significant effect of smartphone addiction on e-learning performance among Class 12 students (both male and female).

Hence, the hypothesis H2 is accepted:

Result: There is no significant effect of smartphone addiction on e-learning among class XII students.

Educational Implications:

1. **Balanced Smartphone Usage**

Although smartphone addiction did not show a significant direct effect on e-learning, schools and educators should still monitor usage patterns, as excessive smartphone use can impact other aspects of learning indirectly (e.g., concentration, sleep patterns).

2. **Technology Integration in Learning:**

Educators can use this finding to positively integrate smartphones in learning activities without assuming an inherent negative effect, provided the use is controlled and structured.

3. **Awareness Programs:**

Institutions can run awareness sessions to promote responsible smartphone usage among students while encouraging the productive use of technology for educational purposes.

4. **Gender-Neutral Strategies:**

As the study found no gender differences in the impact of smartphone addiction on e-learning, educational interventions can be applied uniformly across male and female students.

5. **Further Research Encouraged:**

Since no significant effect was found, it opens up avenues to explore other mediating variables such as time management, motivation, or the nature of e-learning content.

CONCLUSION:

The present study concludes that smartphone addiction does not significantly affect the e-learning outcomes of class XI and XII students, irrespective of gender. Despite high smartphone usage among adolescents, its direct impact on academic e-learning performance is statistically insignificant. This implies that other factors may play a more critical role in determining students' e-learning success. Schools, teachers, and parents should therefore focus on creating a balanced learning environment where smartphones are used as educational tools rather than distractions.

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