



Digital Well-Being and Ethical Technology Use in School Education

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Abstract: *The rapid integration of digital technologies into school education has transformed teaching-learning processes, communication patterns, and access to information. While these developments offer significant educational opportunities, they also raise serious concerns related to students' digital well-being and the ethical use of technology. Excessive screen time, digital distraction, cyber bullying, data privacy issues, and unequal access to technology have emerged as pressing challenges within school environments. This paper explores the concept of digital well-being in the context of school education and examines the ethical responsibilities associated with technology use by students, teachers, and institutions. Emphasis is placed on the role of schools in promoting balanced technology use, fostering responsible digital behaviour, and ensuring that technological advancement supports holistic child development rather than undermining it. The study highlights the need for value-based digital education, clear ethical guidelines, and collaborative efforts among educators, parents, and policymakers to create a safe, inclusive, and ethically grounded digital learning ecosystem.*

Keywords: Digital Well-Being; Ethical Technology Use, School Education, Digital Responsibility, Student Mental Health.

Introduction: The digital revolution has profoundly reshaped contemporary schooling, influencing how knowledge is delivered, accessed, and evaluated. Smart classrooms, online resources, learning management systems, and educational applications have become integral to everyday school practices. Especially after the expansion of online and blended learning models, technology is no longer a supplementary tool but a central component of the educational process. However, alongside its educational benefits, the increasing dependence on digital tools has generated new concerns related to students' physical, psychological, social, and moral development.

Digital well-being has emerged as a crucial educational concern, focusing on how technology use affects learners' mental health, attention span, emotional balance, and social relationships. At the same time, ethical technology use has gained importance as schools grapple with issues such as digital privacy, online safety, academic honesty, respectful online communication, and responsible use of digital resources. Schools are not merely sites for academic instruction; they are spaces where values, habits, and social norms are shaped. Therefore, guiding students toward ethical and balanced technology use has become an essential responsibility of school education.

In this context, the present paper examines digital well-being and ethical technology use as interconnected dimensions of modern schooling. It argues that technology should serve educational and human values rather

than dominate or distort them, and that schools must actively cultivate digital awareness, self-regulation, and ethical judgment among learners.

Conceptual Clarification

Digital well-being – It refers to a state in which individuals are able to use digital technologies in a balanced, mindful, and purposeful manner that supports their overall physical, mental, emotional, and social health. In the school context, digital well-being involves maintaining healthy screen habits, reducing digital stress, preventing technology addiction, and ensuring that digital engagement enhances learning without causing harm to students' well-being. It emphasizes self-control, awareness, and the ability to disengage from technology when necessary.

Common digital well-being issues experienced by school students-

1. **Screen Overexposure and Time Imbalance:** Many students spend excessive hours on smartphones, online classes, gaming platforms, and social networking sites. This prolonged exposure reduces time for physical activity, hobbies, family interaction, and outdoor play, leading to an unhealthy daily routine.
2. **Sleep Disruption and Fatigue:** Night-time device use, especially before bedtime, interferes with natural sleep cycles. Poor sleep quality often results in daytime tiredness, lack of alertness, mood swings, and decreased academic productivity.
3. **Decline in Academic Focus:** Continuous notifications, multitasking, and habitual scrolling weaken sustained attention. Students may find it difficult to concentrate on lessons, complete assignments effectively, or engage deeply in learning tasks.
4. **Emotional Stress and Anxiety:** Constant exposure to online content, competitive comparison, and the pressure to remain socially active can create anxiety and emotional strain. Students may develop fear of missing out (FOMO), insecurity, or social withdrawal.
5. **Cyber bullying and Online Harassment:** Digital platforms sometimes become spaces for teasing, rumour spreading, exclusion, and harassment. Victims of cyber bullying may experience emotional distress, reduced self-confidence, and academic disengagement.
6. **Digital Dependency and Habitual Checking:** Frequent urge to check messages, social media updates, or gaming rewards may develop into behavioural dependency. This reduces self-control and interferes with academic responsibilities and interpersonal relationships.
7. **Physical Health Complaints:** Extended screen use contributes to eye strain, headaches, poor posture, neck and shoulder pain, and reduced physical fitness. Sedentary behaviour further affects overall health.
8. **Reduced Interpersonal Skills:** Excessive reliance on online communication may limit opportunities to develop empathy, listening skills, and face-to-face interaction abilities, which are essential for holistic personality development.
9. **Exposure to Inappropriate Content:** Lack of supervision and digital literacy may expose students to harmful or age-inappropriate material, affecting moral and psychological development.
10. **Poor Self-Regulation and Digital Discipline:** Many students struggle to control their screen time, manage online distractions, and maintain balanced digital habits, reflecting weak self-regulation skills.

Ethical technology use denotes the responsible, fair, and value-oriented application of digital tools and platforms. In schools, this includes respecting privacy and data security, avoiding misuse of information,

practicing academic honesty, showing respect in online interactions, and using technology for constructive and lawful purposes. Ethical use also involves critical awareness of the social and moral implications of technology, such as digital inequality, misinformation, and online exploitation.

Digital responsibility is the collective obligation of students, teachers, school authorities, and parents to ensure that technology is used in ways that promote learning, dignity, and social good. It involves setting clear guidelines, modelling ethical behaviour, and integrating digital citizenship education into the curriculum so that learners develop not only technical skills but also moral sensitivity in digital spaces.

Significance of the Study: The study is significant as it highlights the growing importance of digital well-being and ethical technology use in school education. With the increasing integration of digital tools in classrooms, understanding their impact on students' mental, social, and moral development has become essential. The study provides valuable insights for teachers and school authorities to promote balanced technology use, responsible digital behaviour, and value-based digital practices. It also contributes to the development of informed educational policies aimed at ensuring that technology supports holistic student development rather than undermining well-being.

Statement of the Research Problem: The widespread use of digital technology in schools has raised concerns related to students' digital well-being and ethical conduct. Despite the increasing reliance on technology for learning, limited attention is given to its psychological, social, and ethical implications. There is a lack of structured approaches in schools to address issues such as excessive screen use, digital distraction, and unethical online behaviour. The present study seeks to examine this gap by exploring "Digital well-being and ethical technology use in school education".

Objectives

1. To find out the impact of using digital technology on students' physical and Mental health.
2. To find out the impact of digital device usage on students' concentration and attention in learning.
3. To find out the students' awareness on healthy digital habits and self-regulation strategies.
4. To find out the difference in the level of using ethical technology among school students with respect to selected demographic variables.
5. To find out the relationship between digital well-being and ethical technology use among school students.

Hypotheses:

1. **H01** There is no significant impact of using digital technology on students' physical and Mental Health.
2. **H02** There is no significant impact of digital device usage on students' concentration and attention in learning.
3. **H03** There is no significant level of awareness among students regarding healthy digital habits and self-regulation strategies.
4. **H04** There is no significant difference in the level of using ethical technology among school students with respect to selected demographic variables
5. **H05** There is no significant relationship between digital well-being and ethical technology use among school students.

Methodology: The present study is Descriptive Survey type research. This method was used by the researchers to study -“Digital Technology and Ethical Technology use in Schools”.

Population of the Study: The population of the present study consisted of all the students in High School.

Sample of the Study: The sample for the present study comprised 200 students. The sample included from different class.

Out of the total sample:

- 100 Male students
- 100 Female Students.

Sampling Technique: The sample was selected using the simple random sampling technique to ensure equal representation of Students and to reduce sampling bias. This technique provided every Students an equal opportunity to be included in the study.

Variables of the Study

Independent Variables	Dependent Variables
Digital technology use, Digital well-being	Physical & Mental Health, Concentration & attention, Ethical Technology use

Tools used: The present study employed both primary data collection instruments and statistical tools to examine Digital Well-being and Ethical technology use in schools. For present study researchers used Questionnaire and Likert-type Scale for necessary investigation covering:

Procedure for Data Collection:

Primary Data Collection: After procuring the standardized tools, researcher went to some Teachers Training Institution for data collection. Researchers clarify their identification for data collection. They are very much co-operate with Researcher. The valid information was given by them.

Secondary Data Collection: Researchers go through Journals, Books and Articles on Women's Empowerment to gather some knowledge on it.

Objective wise Statistical analysis and Interpretation

Objective-1: To find out the impact of using digital technology on students' physical and Mental health.

Hypothesis: H01 There is no significant impact of using digital technology on students' physical and Mental Health.

Correlation

Table No.1: Correlation between the use of Digital Technology and Physical Health

Category	No. Of Sample	Df(N-2)	r Value	Correlation
Use of Digital Technology	100	98	- 0.71	Moderate to high Negative correlation
Physical Health Condition	100	98		

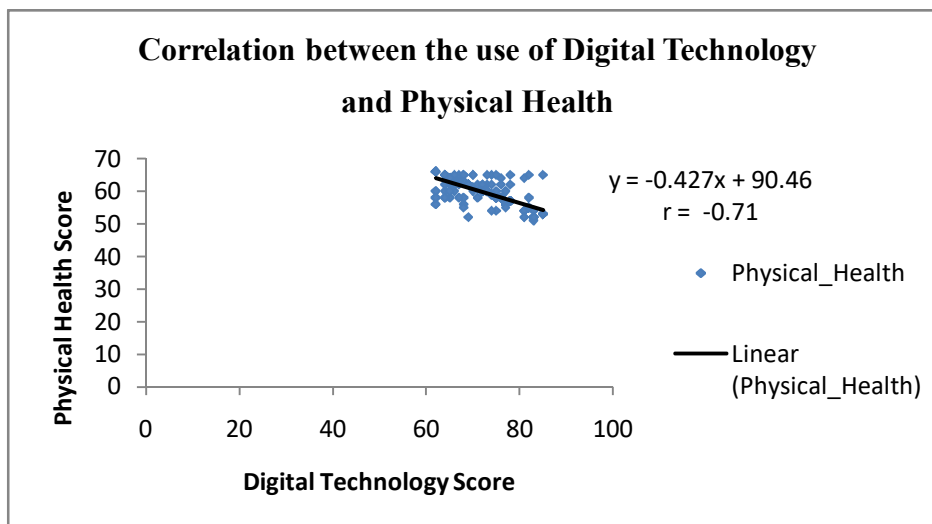


Fig. No.1: Correlation between the use of Digital Technology and Physical Health

Interpretation: The obtained correlation coefficient($r = -0.71$) between the use of Digital Technology and Physical Health is Negative and Statistically Significant. Hence, the null hypothesis is rejected, and alternative hypothesis is accepted.

A moderate to high Negative correlation ($r = -0.71$) shows that higher use of digital technology is negative impact on physical health.

Correlation

Table No.2: Correlation between the use of Digital Technology and Mental Health

Category	No. Of Sample	Df(N-2)	r Value	Correlation
Use of Digital Technology	100	98	- 0.76	Moderate to high Negative correlation
Mental Health Condition	100	98		

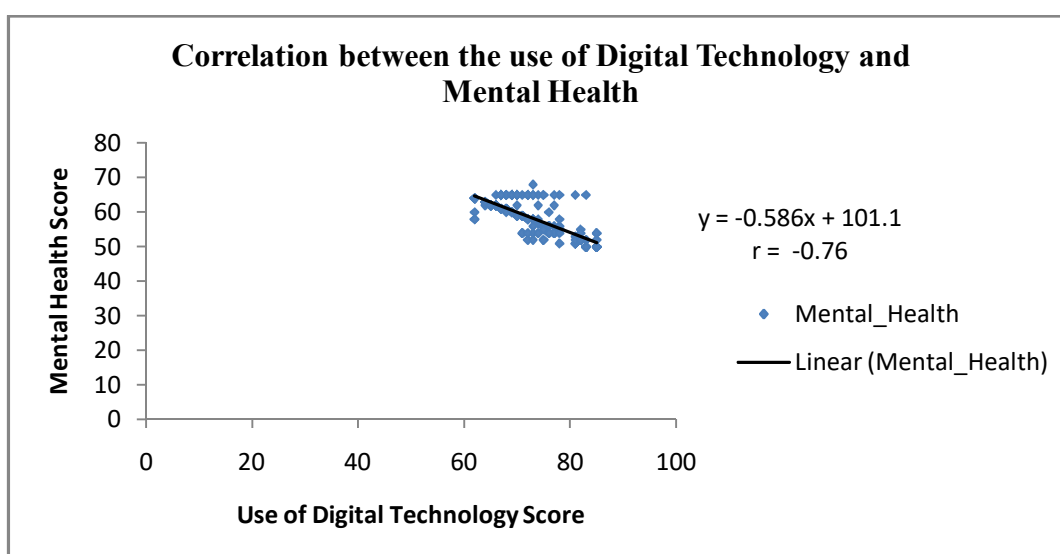


Fig. No.-2: Correlation between the use of Digital Technology and Mental Health

Interpretation: The obtained correlation coefficient($r = -0.76$) between the use of Digital Technology and Mental Health is Negative and Statistically Significant. Hence, the null hypothesis is rejected, and alternative hypothesis is accepted.

A moderate to high Negative correlation ($r = -0.76$) shows that higher use of digital technology is negative impact on Mental health.

Objective-2: To find out the impact of digital device usage on students' concentration and attention in learning.

Hypothesis:

H02 There is no significant impact of digital device usage on students' concentration and attention in learning.

Correlation

Table No.3: Correlation between Use of Digital Device and Students' Concentration and Attention in Learning

Category	No. Of Sample	Df(N-2)	r Value	Correlation
Use of Digital Technology	100	98	- 0.86	Moderate to high Negative correlation
Mental Health Condition	100	98		

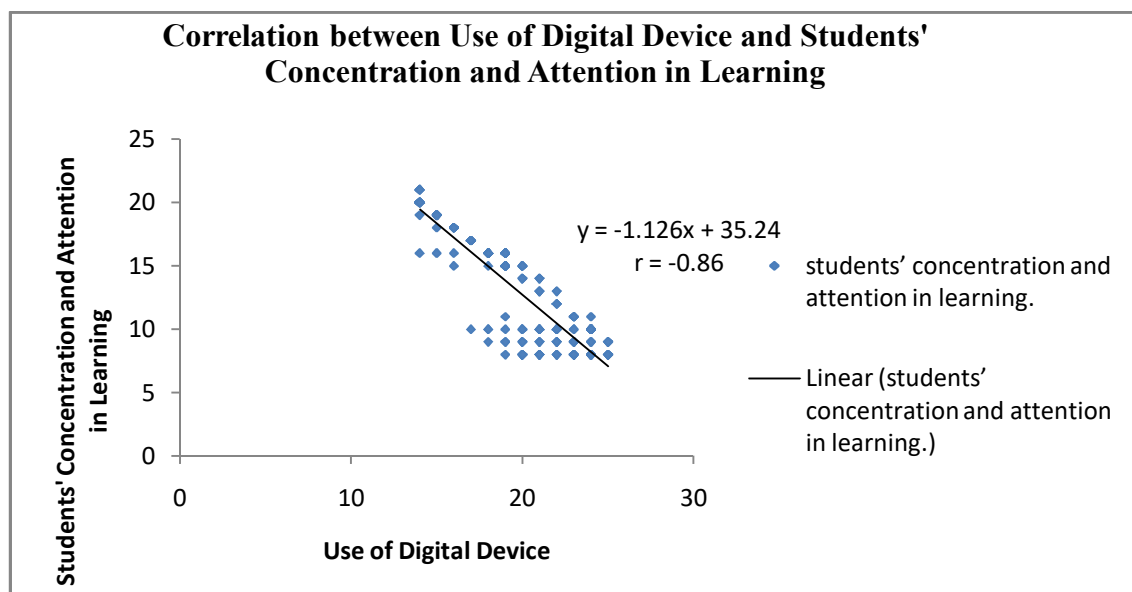


Fig. No.3: Correlation between Use of Digital Device and Students' Concentration and Attention in Learning

Interpretation: The obtained correlation coefficient($r = -0.86$) between the use of Digital Device and Students' Concentration and Attention in Learning is Negative and Statistically Significant. Hence, the null hypothesis is rejected, and alternative hypothesis is accepted.

A high Negative correlation ($r = -0.86$) shows that higher use of digital technology is negative impact on Students' Concentration and Attention in Learning.

Objective-3: To find out the students' awareness on healthy digital habits and self-regulation strategies.

Hypothesis-

H03 There is no significant level of awareness among students regarding healthy digital habits and self-regulation strategies.

Table No.4: Percentage distribution of Students' Awareness of Healthy Digital Habits and Self-Regulation Strategies

Level of Awareness	Frequency	Percentage(%)
High	72	36
Moderate	98	49
Low	30	15

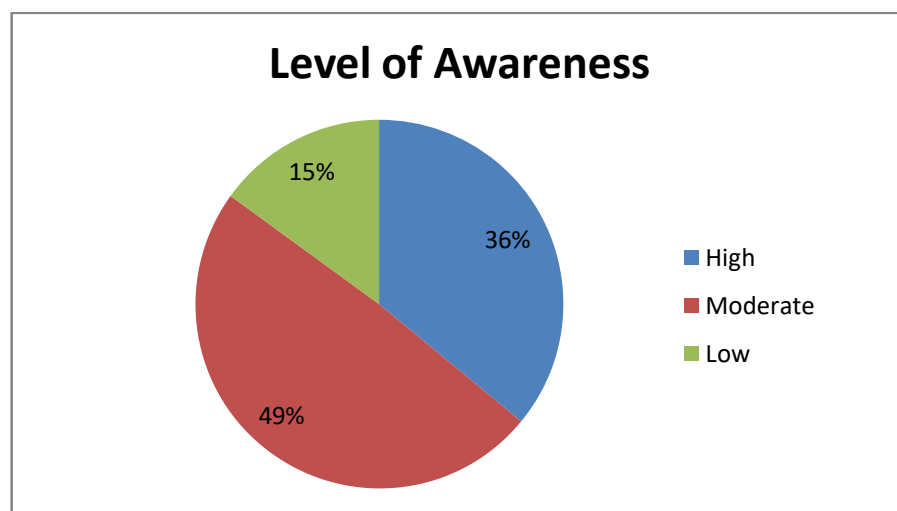


Fig. No. 4: Students' Awareness of Healthy Digital Habits and Self-Regulation Strategies

Interpretation: From the table we can see that 49% of students have a moderate level of awareness, while 36% show a high level of awareness regarding healthy digital habits and self-regulation strategies. However, 15% of the students exhibit a low level of awareness, indicating a need for awareness building initiatives.

It may concluded that the majority of school students demonstrate a moderate level of awareness of healthy digital habits and self regulation strategies. Nevertheless, targeted educational interventions are necessary to enhance awareness among students with low awareness levels.

Objective 4: To find out the difference in the level of using ethical technology among school students with respect to selected demographic variables.

Hypothesis-

H04 There is no significant difference in the level of using ethical technology among school students with respect to selected demographic variables

Mean difference-

After data analysis the following was found-

Table No. 5: Mean Difference in Ethical Technology Use with respect to Gender

Group	N	Total Score	Mean	SD	df	t-ratio	P Value	Table Value	Remarks
Male	100	6845	68.45	7.12	198	2.36	<0.05	1.97(at 0.05 level)	Null hypothesis rejected and Research hypothesis accepted.
Female	100	7128	71.28	6.85				2.60(at 0.01 level)	

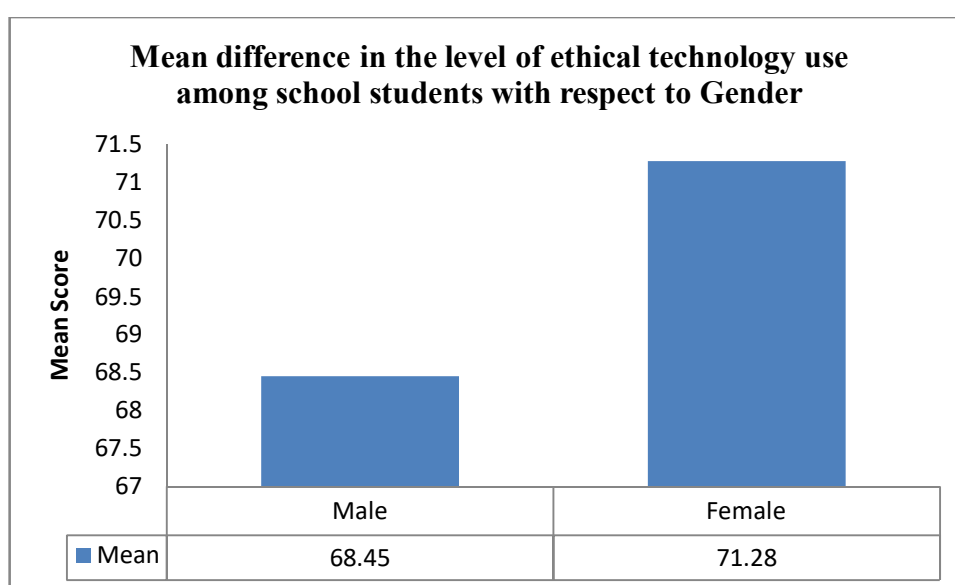


Fig. No. 5: Mean Difference in Ethical Technology Use with respect to Gender

Interpretation: The Mean score of Female (M=71.28, SD=6.85) is higher than Male (M=68.45, SD=7.12). The Calculated t-value(2.36) exceeds the critical values at both 0.05 and 0.01 levels of significance. Thus, the null hypothesis is rejected. There is a significant difference in the level of ethical technology use among school students with respect to Gender. Female Students show a better ethical technology practice.

ANOVA:

Table No.6: Difference in Ethical Technology Use with respect to Type of School (Govt., Govt. Aided, Private)

Source of Variation	Sum of Squares	Df	Mean Square	F Value	P Value	Result
Between Groups	842.60	2	421.30	4.18	<0.05	Significant
Within Groups	19875.40	197	100.89			
Total	20718.00	199				

Interpretation: The obtained F value (4.18) is significant at the 0.05 and 0.01 level, indicating a significant difference in ethical technology use among students studying in different types of schools.

It may concluded that Ethical technology use among school students differs significantly with respect to selected demographic variables such as gender and type of school.

Table No.7: Difference in Ethical Technology Use among students of different classes

Source of Variation	Sum of Squares	Df	Mean Square	F Value	P Value	Result
Between Groups	915.40	2	457.70	4.62	<0.05	Significant
Within Groups	19502.60	197	99.00			
Total	20418.00	199				

Interpretation: The obtained F value (4.62) is significant at the 0.05 and 0.01 level, indicating a significant difference in ethical technology use among students studying in different Classes of VIII, IX and X.

It may concluded that Ethical technology use among school students differs significantly with respect to different classes, Suggesting that class level influences students' ethical use of technology.

Objective-5: To find out the relationship between digital well-being and ethical technology use among school students.

Hypothesis- H05 There is no significant relationship between digital well-being and ethical technology use among school students.

Correlation

Table No 8: Correlation between digital well-being and ethical technology use among school students

Category	No. Of Sample	Df(N-2)	r Value	Correlation
Digital Well-being	100	98	0.89	High Positive correlation
Ethical Technology Use	100	98		

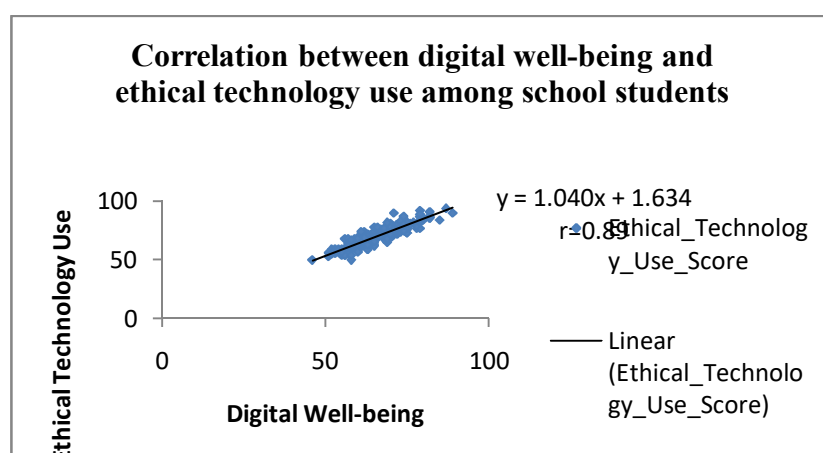


Fig. No.6: Correlation between digital well-being and ethical technology use among school students

Interpretation: The obtained correlation coefficient($r=-0.89$) between digital well-being and ethical technology use among school students is positive and Statistically Significant. Hence, the null hypothesis is rejected, and alternative hypothesis is accepted.

A high Positive correlation ($r=-0.89$) shows that Students who demonstrate higher level of digital well-being such as balance screen use, self-regulation, and awareness of Digital health also tend to exhibit higher levels of ethical technology use.

Major Findings of the Study

1. The study revealed that the manner and extent of digital technology use have a noticeable effect on students' physical and mental health. Excessive and unregulated use was linked with complaints such as eye strain, reduced physical activity, and feelings of stress. Students who maintained balanced digital habits showed comparatively better well-being.
2. It was found that digital device usage influences students' concentration and attention during learning. Students who used digital devices mainly for academic purposes and limited entertainment usage demonstrated better focus in classroom activities. On the other hand, prolonged non-academic screen time appeared to reduce attentiveness.
3. The findings indicate that most students possess an average level of awareness regarding healthy digital habits and self-regulation strategies. While many students understand the importance of limiting screen time and maintaining online discipline, a section of the sample still lacks adequate awareness and consistent practice of these habits.
4. A significant variation was observed in ethical technology use across different class levels. Students of higher classes showed comparatively more responsible and ethical behaviour in using digital platforms. This suggests that age, maturity, and academic exposure contribute to improved digital responsibility
5. The analysis further showed a positive relationship between digital well-being and ethical technology use. Students who reported better balance in their digital lives were also more likely to follow ethical norms such as respecting privacy, avoiding misuse of online content, and maintaining responsible communication

Educational Implications

1. Schools should integrate digital well-being education into the regular curriculum to help students develop healthy screen habits and self-regulation skills.
2. Teachers can play a crucial role by modelling ethical technology use and guiding students on responsible online behaviour, privacy awareness, and respectful communication.
3. Digital literacy programmes should move beyond technical skills and include discussions on mental health, online safety, and ethical decision-making.
4. Classroom practices should encourage purposeful use of digital devices for learning while discouraging excessive and non-academic usage during study hours.
5. School administrators may organize workshops and awareness sessions for students and parents to promote a shared understanding of healthy and ethical technology use.

Suggestions of the Study

1. Awareness programmes on digital well-being should be conducted regularly to strengthen students' understanding of healthy digital habits.

2. Schools may develop clear guidelines regarding ethical technology use to ensure safe and responsible digital engagement.
3. Parents should be actively involved in monitoring and guiding students' digital activities at home.
4. Counselling support may be provided for students who exhibit signs of digital overuse, stress, or reduced concentration.
5. Future studies may explore digital well-being across different regions, school boards, or age groups to gain broader insights.

Conclusion: The study concludes that digital technology plays a significant role in shaping students' health, learning behaviour, and ethical practices. While technology supports learning and access to information, excessive and unregulated use can negatively affect students' physical and mental well-being as well as their concentration. Most students were found to have a moderate level of awareness of healthy digital habits, indicating the need for further guidance and reinforcement. Differences in ethical technology use across class levels highlight the influence of age and maturity on responsible digital behaviour. The positive relationship between digital well-being and ethical technology use suggests that promoting balanced digital practices can help students develop ethical and responsible engagement with technology. Overall, the findings emphasize the importance of integrating digital well-being education into school system.

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