Digital Wellness among Students and Faculty in AI-Enabled Learning Environments: Impact on Academic Productivity and Psychological Well-being

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Abstract

The challenge of digital wellness has emerged as one of the most important in the field of AI-enabled learning where the increasing popularity of artificial intelligence tools has changed teaching and learning practices and brought a range of concerns like cognitive overload, screen burnout and diminished interpersonal communication. The overall goal is to investigate the connection between digital wellness, academic productivity, and psychological well-being between the students and faculty involved in AI-facilitated education. The research design chosen is a mixed-method study that applies both the survey method, which employed 200 participants of various academic backgrounds and cross-sectional survey. Descriptive statistics, correlation analysis and paired sample t-tests were used to analyze data examining relationships and differences among key variables. The results show that there is a strong positive relationship between digital wellness and academic productivity, which means that mindful use of digital devices results in increased learning effectiveness and efficiency. Further, psychological well-being increases moderately and positively in response to exposure to AI-enabled tools indicating that it brings increased confidence and less academic stress. But the findings also point to heightened screen fatigue as an important barrier to the longer digital interaction. This discussion focuses on the two-sided character of AI integration, which provides some opportunities to improve learning and factors detrimental to mental and physical health. The conclusion lays emphasis on the concept of a balance between digital and sustainable academic success. Implications underscore institutional policies of healthy technology usage, with shortcoming being in terms of smaller sample and cross-sectional design. Long-term implications and the effective intervention should be studied using longitudinal and experimental study methods in the future.

Keywords: Digital Wellness, Artificial Intelligence in Education, Academic Productivity, Psychological Well-being, Screen Fatigue

1. Introduction

The inclusion of artificial intelligence (AI) in educational spaces around the globe has been unprecedented leading to the years of students and faculty engaging with learning systems changing considerably. While AI-enabled tools such as intelligent tutoring systems, chatbots, and adaptive learning platforms have helped to improve accessibility, personalization, and efficiency across many educational contexts (e.g., Li & Miao, 2025). But with these developments, digital wellness has become a major concern. Digital wellness is the intentional and healthy use of digital tools to support cognition, emotion, or psychological functioning. Over dependence on AI tools can result in cognitive overload, less human interactions and more screen fatigue which may adversely impact academic productivity as well as psychological well-being (Dubey, & Ningthoujam, 2025).

AI technologies are being widely implemented in educational institutions across the globe to optimize learning outcomes, yet little focus has been given to their psychological implications. As it

increases the reliance on digital systems, it is helpful to consider how these systems may impact both students and faculty in AI-enabled environments. As systems of education become increasingly digitalized, striking a balance between technological efficiency and human well-being are critical to sustainable academic success (Shifa, et al., 2025).

In the study, have explored the interdependent relationship of digital wellness with academic productivity and psychological well-being in AI-enabled learning setups. Digital wellness is a subdomain that it can define as how people use digital technologies in a balanced and healthy way, while academic productivity represents the extent to which learning or teaching outcomes are realized with the help of AI-backed systems (Velastegui, et al., 2023). Mental wellness includes psychological balance, anxiety control as well as general cognitive condition . The study aims at exploring ways through which proper use of technology impacts students' perfor mances as goes about their studies thereby improving mental health status among them; this is a relat ionship that has been established whereby there exists an association between usage patterns on gadg ets such computers phones etc. with productivity levels amongst learners (Li, et al., 2025).

- **Definition of key terms**

Artificial Intelligence (AI): In study context an artificial intelligence system is a machine designed with computer programming logic so as it functions like humans do but also has its own ability for self-learning from data collected by itself. The main application of AI for teaching includes machine learning algorithms, natural language processing (NLP), robotics etc that can be helpful with improving efficiency & customization (Dubey, & Ningthoujam, 2025).

Learning Behaviors: The learning behavior is a manifestation of behavioral activities that an individual exhibits when interacting with education materials as well as situations for purposes such acquiring new information; developing existing abilities; changing beliefs concerning education; modifying ways one behaves towards others etc. AI-based educational behavior includes interaction with ais, fit for individualized study settings as well as automation-oriented material distribution programs.

Psychological Well-being: Psychological well-being in this review is defined as a state encompassing the presence of positive emotions and moods (e.g., contentment, happiness), the absence of negative emotions (e.g., depression, anxiety), satisfaction with life, fulfillment and positive functioning. This also refers to student's psychological well-being while interacting within conventional education systems along side artificial intelligence enabled classrooms.

The study offers significant conceptual as well as applied advances to this field of study. Conceptually speaking, the study enhances previous study through incorporating aspects of online health practices; student performance; mental wellbeing within an empirically validated mediated effect framework. It would help to advance the knowledge regarding interplay between technology-related behavior as well as psychology with respect to artificial intelligence based learning systems. It is, therefore, the study contributes towards new discourses around e-wellbeing, which positions this factor as an important predictor for educational performance and psychological wellbeing (Velastegui, et al., 2023).

From practical perspective, these results are helpful information that are useful as guidelines by teachers, administrators etc. on how best it can use artificial intelligence without compromising people's health. The study underscores the significance of encouraging a healthy balance between digital technologies' usage, as well as developing artificial intelligence tools to enhance productivity while maintaining users' psychological wellbeing. Highlighting a focus on 'digital well-being', the study provides practical recommendations for improving long-term educational efficiency while promoting more beneficial conditions within online education settings (Shifa, et al., 2025).

The study starts with an introduction describing AI-enabled learning and digital wellness, proceeds to literature review of the cognitive load theory and important variables relationships, then presents the methodology, including design, sampling, and analysis, results, including statistical finding, discussion of result interpretation, and ultimately, conclusions, limitations, and future research.

2. Literature review

2.1 Cognitive load theory (CLT)

The theory states that human working memory has a limited capacity, and when students are subjected to too much information, their ability to process and remember it is greatly reduced. Students & instructors often engage via several technologies like chatbot, adaptive system and automated system (Alshammari, M. E. 2025). Although these tools improve access to information, it also raises the cognitive load of users. Failure of proper management may cause a state called information overloading that has negative consequences for performance and productivity during study processes (Nafees, N., et al., 2025). Thus, it's important to maintain a healthy level of online interaction if the students' learning experience as well their educational results are going be successful. Cognitive loads are divided as follows; intrinsic load, Extraninsic loads and Germanic cognitive load (Prajapti, E., & Dadariya, S. 2025).

Intrinsic load refers to the difficulty of the material while extraneous load is due to how information is displayed on a computer screen. Sometimes AI-based solutions can be too complicated due to poor interface design and overuse of alerts adding extra workload for users (Dai, Y., et al., 2020). Digital wellness assists people in regulating their relationship with those devices by reducing distractions and concentrating on pertinent data. Through conscious online behaviors students could minimize excess mental effort thus improving focus for important study activities (Klepsch, M., & Seufert, T. 2020). Controlled use improves study effectiveness as well has leads to improved education results; therefore, it is a vital element of maintaining brain health while studying efficiently under conditions typical for today's schools. Germane cognitive load is defined as the mental energy used for meaningful learning and knowledge building (Skulmowski, A., & Xu, K. M. 2022).

Educational platforms that utilize AI technologies are well-positioned to control different forms of cognitive load by providing personalized feedback, adjusting content dynamically, and providing stimulating activities. By maintaining a healthy balance within digital sphere usage, participants have been able to utilize their mental energy effectively toward educational tasks (Tampubolon, M. S., 2023). Digital Wellness creates an environment in which users interact with technology that enhances their understanding of subjects, thereby resulting in improved performance as well as greater absorption of information over long periods of time in increasingly complex educational settings (Das, J. P., 2023). When users maintain a balanced approach toward their digital behaviours, it can effectively distribute their cognitive resources into learning activities that are meaningful (Ahuja, N. J., 2023). Finally, the overall goal of digital wellness is to facilitate deeper comprehension through engagement with technology, therefore creating improved productivity in academia and more prolonged retention of knowledge in an evolving educational landscape (Taylor, T. A., et al., 2022).

The Cognitive load theory required to understand how online interaction influences mental health conditions as well. Continuous exposure to excessive cognitive loads due to interactions with technology causes mental exhaustion, anxiety, and decreased interest (Tampubolon, M. S. 2025). When people interact with artificial intelligence systems it tends to experience high levels of stress due to excessive workload and constant data input. Digital wellness is an important factor that helps to reduce these impacts as it promotes healthy digital habits and provides time for relaxation (Ahuja, N. J., et al., 2021). Individuals who can control their online activities successfully are able to keep themselves emotionally stable and decrease their anxiety levels. It helps to maintain both scholastic and mental well-being because of this equilibrium. Thus, knowledge of cognitive load theory helps to address psychological problems related to online education systems (Taylor, T. A., et al., 2022). Digital wellness is a critical factor that influences students' academic performance in artificial intelligence-based educational systems. It is about people's capability to utilize digital technologies appropriately for their educational needs without interfering with learning processes. Students and teachers in today's education system are frequently engaged with technology that can positively or negatively impact their performance based on how utilize it (Dai, Y., et al., 2020).

2.2 Variable Relationships and Hypotheses

- **Digital Wellness and Academic Productivity**

Digital well-being is a crucial factor in influencing academic efficiency in learning environments that utilize artificial intelligence (Alenezi, A. 2024). The term describes how people use digital technology through their ability to maintain balanced and deliberate control over their digital device usage which helps them to achieve academic goals with technology assistance (Li, E. Y., & Jan, A. 2023). In contemporary educational environments both students and educators use digital tools for their learning activities because these tools can help or hinder their progress depending on their actual usage (Das, J. P. 2025). People who focus on maintaining digital well-being can achieve higher academic results through improved time management which enables them to complete essential academic work without distractions (Ellikkal, A., & Rajamohan, S. 2025). The complete approach supports proper interaction with AI-powered systems which leads to better work performance. Digital wellness has become an essential factor that influences academic success in modern educational environments which use technology for learning purposes (LAKSHMI, S. 2025).

Digital tools cause academic work to suffer when students use them excessively without understanding their proper limits (NAZ, S., & DISSANAYAKE, D. M. 2025). The combination of notifications and the need to handle multiple tasks together with AI-created content results in interrupted work time which decreases work efficiency (Ahn, H. Y. 2024). People who follow digital wellness practices develop effective study schedules which help them achieve their educational objectives (Li, E. Y., & Jan, A. 2023). Students can process information better which enables them to finish their academic work with increased precision (Burgueño López, J., et al., 2024). People who manage their digital usage into balanced periods between online and offline time make better choices while their chances of delaying work decrease (Samadhiya, A., et al., 2025). Digital wellness practices help people keep their work output at high levels because it need digital tools for their educational activities which occur throughout higher education institutions around the world (Soni, M. S. 2025).

The AI learning systems operate with digital wellness as a factor which improves all user interactions with technological systems (LAKSHMI, S. 2025). Users who work with AI tools through a system that encourages them to use its functions in a controlled way achieve the benefits of personalized feedback and adaptive learning without overwhelming their mental capacity (Ellikkal, A., & Rajamohan, S. 2025). The optimized interaction between students and their educational resources produces better academic results with increased study effectiveness (Alenezi, A. 2024). People who use AI tools without any restrictions develops an unhealthy dependence which diminishes their ability to think critically (Ahn, H. Y. 2024). Digital wellness enables people to control their learning activities because it allows them to use technology while it think independently (Li, E. Y., & Jan, A. 2023). The need to study how digital wellness affects academic productivity has emerged as a central study that helps explain how students perform in contemporary educational frameworks (Ezeanya, C. U., et al., 2024).

- **Psychological Well-being Before and After AI-enabled Learning**

The use of AI-enabled learning tools has changed the educational experience considerably in psychological and academic use (Soni, M. S, 2025). Prior to implementing AI technologies, there is a heavy reliance on traditional methods in learning environments, with very few digital systems used and most of the instruction provided through in-person interactions only (Deckker, D. & Sumanasekara, S. 2025). As a result of this method of learning, student psychological wellbeing is impacted by many variables: academic load, peers, and college structures were all major influences on their psychological wellbeing (Samadhiya, A. et al., 2025). Though learning environments of the past created some barriers, face-to-face human contact served as a means to alleviate the negative impact of using second-hand information and has been proven to positively impact a student's emotional stability (Tang, Z. & Liao, J. 2025). The transition from traditional methods of learning to learning using AI technology has changed these dynamics, creating new forms of interaction that have a positive or negative effect on perceptions and management of mental health within the academic setting (Zong, Y., & Yang, L. 2025).

Psychological well-being may change for the better after being exposed to AI-enabled learning environments as a result of the benefits that are given by the advanced technologies. AI tools offer personalized learning, instant feedback, and access to learning content anytime, which lessens academic pressure and builds confidence (Tang, Z., & Liao, J. 2025). Another feature is that the users can learn at their own pace, on their own enhancing their knowledge gaps with more accurate learning skills (Burgueño López, J., et al., 2024). In addition, the artificial intelligence systems can revise complex tasks, thereby making the academic activities easier to handle (Zhang, T., &Liu, X. 2025). Consequently, many second-language learners suffer less anxiety and become more motivated as use AI-enabled tools (Alruwaili, N. M., et al., 2025). This emphasizes the role of technology in reshaping learning spaces to be more accessible and conducive to the psychological health of learners and instructors (Deckker, D., & Sumanasekara, S. 2025).

However, despite these benefits, increased reliance on AI technologies may also have some challenges that harm one's psychological well-being (Alruwaili, N. M., et al., 2025). This is because reduced face-to-face interaction can exacerbate isolation and reduce social support, which is key to emotional well-being (Soni, M. S. 2025). Also, stress and anxiety can set in due to the challenges of keeping up with modernized technologies (Zong, Y., & Yang, L. 2025). Some individuals are also prone to developing overdependence on AI systems at the expense of their autonomy and self-efficacy (Ezeanya, C. U., et al., 2024). These factors lead to emotional instability, and learning experience dissatisfaction (ibid). Hence, a comparison of psychological well-being before and after exposure to AI-enabled learning environments is necessary to assess the implications of technological integration on health outcomes (Tang, Z., & Liao, J. 2025).

- **Screen Fatigue Before and After AI-based Technology Adoption**

The adoption of AI-based educational technologies has resulted in a significant increase in screen exposure for students and faculty (Routray, R., & Khandelwal, K. 2024). Before this technology is integrated, academic activities used both digital and non-digital approaches, which helped individuals to have different kinds of learning experiences (Beirat, M. A., et al., 2025). However, the transition to AI-enabled learning environments has resulted in prolonged interaction with digital devices as individuals rely heavily on online platforms for instruction, communication, and assessment (Zhang, H., & Cao, J. 2025). This shift poses the risk of screen time affecting individuals physically and cognitively (Zong, Y., & Yang, L. 2025). In this respect, screen fatigue is crucial to understanding the effects of digital transformation of education systems in various learning environments worldwide (Melweth, H. M. A., et al., 2024).

After the adoption of AI-based technologies, individuals often record higher levels of screen fatigue attributable to prolonged hours of digital engagement (Zhang, T., & Liu, X. 2025). The symptoms of eye strain are common, headache problems, blurred vision, and low concentration. This is due to the prolonged focusing on the screens and the need to cognitively assimilate information from the digital sources (Deckker, D., & Sumanasekara, S. 2025). The screen time is also considered to disturb the sleep cycle and cause lethargy, thus having an overall impact on academic performance and health. The intensity of screen fatigue may vary depending on individual usage patterns and the nature of digital tasks performed (Routray, R., & Khandelwal, K. 2024). Still, screen fatigue due to extensive AI technology adoption is a critical factor to consider in educational contexts worldwide (Zhang, H., & Cao, J. 2025).

The changes in screen fatigue pre- and post-AI integration (Melweth et al., 2024) allows for discovering potential health implications of the digital learning environment. Pre- and post-AI screens also provide resources for examining whether increased digital screen time has contributed to physical discomfort and cognitive overload (Tampubolon, 2025). In addition, the study allows for evaluating the need for digital wellness initiatives to manage both faculty and student screen time (Zong & Yang, 2025). Consequently, through this exploration of how faculty and student screen fatigue differs, universities can implement break scheduling, ergonomic practices when operating computers, and increase awareness of factors that may reduce both faculty and student screen fatigue (Zhang & Cao, 2025) To prevent excessive digital consumption from detracting from the benefits of

AI-enhanced academic learning, all of these efforts are necessary (Routray, R., & Khandelwal, K. 2024).

Despite the increasing use of AI-enabled learning environments, there is still a lack of study on the overall impact on both academic outcomes and psychological outcomes. Most studies currently conducted examine whether the technologies are efficient (as defined by some predetermined criteria) and are only measuring how successful learners are academically. Some studies, have tried to study digital wellness, one of the primary behavioral influences on student academic and psychological outcomes (Alshammari, 2025; Li & Jan, 2023). Additionally, most of the past study considered at each aspect of academic productivity, psychological well-being and screen fatigue separately, without providing a means for researchers to connect them (Soni, 2025; Routray & Khandelwal, 2024). Although, there is a lack of comparative studies looking at pre-AI and post-AI adoption to demonstrate the temporal nature of change; therefore, there is still a limited understanding of how digital practices are related to academic performance and psychological well-being because this has not been sufficiently researched in education today.

2.3 Conceptual Framework

The Conceptual Framework (CF) provides a visual representation of the relationship between digital wellness, AI-enabled learning tools, and AI -focused educational technology adoption, and how each of these factors relate to key academic and psychological outcomes. Digital wellness describes how well the balance in digital interactions (e.g., with technology) so to remain engaged in academic work; by doing so, it can effectively concentrate, focus, and increase the efficiency. Exposure to AI-enabled learning tools describes the level of exposure to intelligent systems that support the ability to learn-through the use of AI-enabled tools. Adoption of AI-based educational technologies describes the extent to which AI-based educational technologies in the academic work are adopted, incorporated, and integrated into the everyday academic activities. Together, these constructs help determine the performance, psychological (mental) well -being, and how fatigued it may feel because of using screen media while completing the academic work. This CF highlights how different levels of digital engagement impact each of these performance measures directly and indirectly and the mental health in today's educational engine.

3. Methodology

3.1 Research Design and Procedure

A mixed-method research approach including both quantitative and qualitative research methods are used to evaluate the concept of digital wellness, and its influence upon academic productivity and an individual learner's psychological well-being when are in a learning environment where artificial intelligence/A.I. (uses) are implemented. The study uses a descriptive and analytical research design to study and measure relationships between multiple variables, across time and space. Then a cross-sectional survey is used to collect data only once (at a point in time). Data collected using quantitative methods are analyzed using statistical methods, and the data collected from qualitative methods supports the interpretation of quantitative analysis. Tools (software applications) e.g., MS Excel and SPSS (version 27) are used to analyze the data using correlation (to assess the relationship) and paired sample t-test (to assess the difference).

3.2 Population and Sampling

The subjects of the study are students and faculty members from the Bangalore region that are currently engaged in AI-based learning environments. A stratified random sampling (to ensure an equitable existing proportionate to a variety of groups represented (different disciplines)) method are used to improve validity and reliability, and generalizability of findings; with a total of 200 subjects selected as respondents (to ensure feasibility and representativeness). These individuals are selected as respondents due to their prior experience using digital technology and digital tools relative to A.I., which makes them relevant to the focus of the study as it relates to the concept of digital wellness and its impact on the academic and psychological outcomes for those individuals; therefore, making them ideal respondents for use in this study.

3.3 Participants Profile

This study sample comprises students and staff members from different academic backgrounds throughout the Bangalore. The demographic profile of the participants illustrates the differences in age(s) of the respondents, their gender, their educational level(s), as well as the types of academic discipline(s) it represents. Age groupings were used to investigate generational differences in digital participation and engagement with technology. A balanced gender representation is also considered. The educational backgrounds of the participants include undergraduate, graduate and doctoral degree candidates, as well as faculty member(s) from other fields of educational study. The study measures the relative familiarity and interaction level of participants with AI-enabled learning tools, thereby enhancing the external generalizability of the study's findings to a broader academic population.

3.4 Measurement Instruments

The scales are sectioned for the purposes of obtaining potential bias and increasing answer quality. Section A is for demographic data, age, sex, qualification and area of study. Section B is for data on Digital Well-Being and Use of AI Tools. Section C is for academic productivity, psychological well-being and amount of screen fatigue. By creating a structure using all the sections of the survey, it decreases the opportunity for bias to affect the quality of professors' responses. By providing the respondents clear instruction for each section of the survey it also assists in ensuring the respondents produce accurate responses and can provide thoughtful responses.

3.5 Data Collection Procedure

The data is obtained from Primary as well as secondary sources. Primary Data is collected via a structured questionnaire which is sent out to Students and Faculty in Banglore on both an online and offline basis. Online respondents are identified through institutions and digital platforms and offline respondents are also collected through institutions. Secondary Data is obtained from Journals and Reports. The study collects data over a defined period of time, thus creating a consistent process, whilst participation is strictly Voluntary and Informed Consent is obtained before any data is collected.

3.6 Ethical Considerations

Ethically sound procedures are established for the study participants. Participants are informed of the purpose of the study and offer their consent to participate (prior to any data collection). Participation is voluntary, and a person may withdraw or discontinue participation at any point in time. The confidentiality and anonymity of Participants are maintained. Personal Information gathered from Participants only be used for the purposes of this research. All collected data are stored securely and are managed in accordance with ethical guidelines to ensure transparency, integrity, and respect for Participants.

3.7 Data Analysis Technique

Data analysis is performed using Microsoft Excel and SPSS (Version 27) to ensure accurate and reliable results. Data screening is the first stage of this analysis process. During the data screening process, missing values and outliers are identified and removed from the data set. After that, descriptive statistics (mean and standard deviation) summarize the data collected for the study. Next, correlation analyses is conducted to evaluate the degree of relationship between digital wellness and academic productivity. Finally, paired sample t-tests (used to compare two different variables before and after) are used to evaluate the relationship(s) and difference(s) between psychological well-being and screen fatigue among people who utilized AI-assisted educational tools.

4. Results and data analysis

Table 1: Demographic profile of the respondents

S.NO	Demographic variable		N	%
1	Gender	Female	97	48.5
		Male	103	51.5
2	Age in years	18-25	31	15.5
		26-35	44	22
		36-45	40	20

		46-55	42	21
		Above 55	43	21.5
3	Educational qualification	Doctoral	43	21.5
		Postgraduate	41	20.5
		Professional qualification	59	29.5
		Undergraduate	57	28.5
4	Category of respondent	Faculty	96	48
		Student	104	52
5	Type of institution	Deemed institution	61	30.5
		Government institution	41	20
		Private institution	53	26.5
		Research institution	45	2.5
6	Field of study	Humanities & Social Sciences	36	18.0
		Medical Sciences	48	24.0
		Science & Technology	38	19.0
		Commerce	41	20.5
		Management	18	9.0
		Others	19	9.0
7	Experience with AI-enabled tools	Less than 6 months	58	29
		6 months–1 year	44	22
		1-3 years	52	26
		More than 3 years	46	23

The demographic profile of respondents indicates a well-balanced and diverse sample. In terms of gender, the distribution is nearly equal, with males (51.5%) slightly outnumbering females (48.5%). The age composition is fairly spread across categories, with the highest representation from respondents above 55 years (21.5%) and those aged 46–55 (21%), suggesting a mature and experienced participant base. Educationally, respondents are highly qualified, with a significant proportion holding professional qualifications (29.5%), followed by undergraduate (28.5%), doctoral (21.5%), and postgraduate (20.5%) degrees. The sample includes both students (52%) and faculty members (48%), ensuring balanced perspectives. Regarding institutional affiliation, deemed institutions (30.5%) and private institutions (26.5%) form the largest segments, followed by research (22.5%) and government institutions (20%). In terms of academic disciplines, Management (24%) and Science & Technology (20.5%) dominate, followed by Medical Sciences (19%) and Humanities (18%), while the inclusion of Commerce (9%) provides additional disciplinary clarity, reducing the ambiguity of the "Others" category (9.5%). Finally, respondents demonstrate varied experience with AI-enabled tools, with the largest group having less than 6 months of experience (29%), followed by those with 1–3 years (26%), more than 3 years (23%), and 6 months to 1 year (22%), indicating a mix of novice and experienced users suitable for comprehensive analysis.

H1: There is a significant relationship between digital wellness and academic productivity among students and faculty in AI-enabled learning environments.

Table 2: Descriptive statistics table

Descriptive Statistics			
	Mean	Std. Deviation	N
Digital Wellness	23.2350	4.73093	200
Academic Productivity	24.3200	4.76246	200

Table 2 presents the descriptive statistics of Digital Wellness and Academic Productivity among respondents. The average score of Digital Wellness (23.23) represents an average degree of digital well-being and Academic Productivity demonstrates a little greater average score (24.32), meaning slightly better performance in academic activities. The value of the standard deviation of both

variables (4.73 and 4.76) are close, indicating a median variability of the respondents. It means that the population respondents vary in their level of digital wellness and performance to some extent and responses generally remain similar with a sample of 200 people.

Table 3: Correlations table

Correlations			
		Digital Wellness	Academic Productivity
Digital Wellness	Pearson Correlation	1	.600**
	Sig. (2-tailed)		.000
	N	200	200
Academic Productivity	Pearson Correlation	.600**	1
	Sig. (2-tailed)	.000	
	N	200	200
**. Correlation is significant at the 0.01 level (2-tailed).			

Table 3 shows the correlation between Digital Wellness and Academic Productivity. Pearson correlation (r = 0.600) suggests that the degree of academic productivity is positively correlated with the levels of digital wellness; therefore, greater the level of digital wellness, the greater the academic productivity. This relationship can be statistically significant at the 0.01 level because significance value (p = 0.000) proves that this relation is significant. This means that there are small chances of getting the result by chance. On the whole, results provided by the researcher indicate that the level of digital wellness can be used to facilitate academic success of respondents.

H2: There is a significant difference in psychological well-being among students and faculty before and after exposure to AI-enabled learning tools.

Table 4: Paired sample statistics table

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Exposure to AI-enabled Learning Tools	23.7050	200	5.21093	.36847
	Psychological Well-being	24.4750	200	4.85150	.34305

Table 4 shows the paired samples value of Exposure to AI-enabled Learning Tools and Psychological Well-being. The average score of psychological well-being (24.47) is marginally higher than the one of AI tool exposure (23.70), thus its optimal overall well being of respondents. Standard deviations of both variables are moderate (5.21 and 4.85) indicating that there has been a variation in responses. The values of standard errors are fairly small, which suggests good estimates of means. Altogether, the data indicate that even though AI tools exposure is relatively high, the group of respondents is psychologically more well-adjusted across the sample.

Table 5: Paired samples Correlations table

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Exposure to AI-enabled Learning Tools & Psychological Well-being	200	.418	.000

The paired samples correlation between Exposure to AI-enabled Learning Tools and Psychological Well-being is shown in Table 5. The coefficient of correlation (r = 0.418) is a moderate positive relationship between two variables, which indicates that the more people are exposed to AI-enabled tools, the higher is their psychological well-being. The value of the significance (p = 0.000) indicates that the relationship is statistically significant. This implies that the observed association is unlikely due to chance. On the whole, the results indicate that the exposure to AI-based learning devices can potentially have a positive impact on the psychological well-being of respondents.

Table 6: Paired samples test table

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Exposure to AI-enabled Learning Tools - Psychological Well-being	-.77000	5.43552	.38435	-1.52792	-.01208	-2.003	199	.046

Table 6 shows a comparison between Exposure to AI-enabled Learning Tools and Psychological Well-being using the paired samples t-test. The average difference (-.77) means that the psychological well-being is a bit higher compared to exposure to AI tools. The statistical significance of the difference is statistically significant (t-value - 2.003) with a degree of freedom (199) since, the p-value (0.046) is less than 0.05. Further, zero is not contained in the confidence interval and this ensures significance. On the whole, the findings indicate that there is a significant difference between the two items, which means that psychological well-being among the respondents is slightly higher than the exposure to AI tools.

H3: There is a significant difference in screen fatigue levels before and after the adoption of AI-based educational technologies in academic settings.

Table 7: Paired Samples Statistics table

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Adoption of AI-based Educational Technologies	22.3450	200	5.49609	.38863
	Screen Fatigue Levels	24.6200	200	5.22033	.36913

Table 7 provides paired samples statistics of AI-based educational technologies adoption and screen fatigue in 200 respondents. The average AI adoption (22.34) score is a bit lower than the average effective screen fatigue (24.62) score, which suggests that the participants have rather high levels of screen fatigue than it did during AI tools adoption. The values of the standard deviations (5.49 and 5.22) indicate the moderate variability in responses. Also, the standard errors are low (.388 and .369) meaning that the sample means are good estimates in the population.

Table 8: Paired Samples Correlations table

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Adoption of AI-based Educational Technologies & Screen Fatigue Levels	200	.289	.000

Table 8 shows a paired samples correlation of adoption of AI-based learning technologies with level of screen fatigue among 200 respondents. The correlation coefficient (r =.289) shows that there exists a positive and weak correlation between the two variables; thus, the more AI technologies are adopted, the higher, on average, are screen fatigue levels. The significance value (Sig. =.000) indicates that this relationship is significant at traditional levels. Thus, the relationship is not high, but meaningful and suggests that greater interaction with AI tools can lead to greater screen fatigue in its users.

Table 9: Paired Samples Test table

Paired Samples Test				
	Paired Differences	t	df	Sig. (2-

									tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Adoption of AI-based Educational Technologies - Screen Fatigue Levels	-2.27500	6.39404	.45213	-3.16658	-1.38342	-5.032	199	.000

Table 9 gives the paired samples t-test of adoption of the AI based educational technologies and level of screen fatigue. The difference of the means (-2.275) shows that the level of screen fatigue is more than the level of AI adoption scores. The value (-5.032) of the t-value of having 199 degrees of freedom indicates a significant difference in the two variables. The p-value (.000) is below 0.05, which supports this. In addition, the lower limit of the 95 percent confidence interval (-3.166 to -1.383) is not equal to zero further confirming the significance. On the whole, the findings indicate that there is a significant difference in AI adoption and screen fatigue in respondents.

5. Findings and Discussion

The discourse on AI-based approaches to digital wellness in the learning environment reflects conflicting academic views in terms of academic productivity (Alshammari, M. E.). 2025). Deckker, D., & Sumanasekara, S. Here, (2025) notes that AI-assisted learning tools are more efficient than conventional ones because of individualized learning routes, automatic feedback functions, and fewer people to handle administration, which is reflected in quantifiable performances across the student and faculty levels. Taylor, T. A., et al, (2022) brings up the issue that the overreliance on AI could undermine critical thinking, decrease long-term intellectual activity, and promote superficial processing of academic material. There is acceptance of AI as an aid to productivity as well as rejection is shown by academic critics emphasising the danger of cognitive dependence and degeneration of academic quality in digitally mediated learning environments (NAZ, S., & DISSANAYAKE, D. M. 2025).

Different academic perspectives are also understood as a barometer to psychological well-being in AI-integrated education (Beirat, M. A., et al., 2025). Ahn, H. Y. According to (2024), adaptive learning systems and mechanisms of continuous academic support lead to lower levels of stress, better time management, and emotional stability in learners and teachers. Dubey, P. A., S. Ningthoujam. (2025) indicate that constant connectivity, algorithm tracking, and increased exposure to the digital world are some of the contributing factors to anxiety, fatigue, and decreased attention span. The simultaneity of AI as a supportive structure of mental health is accompanied by critical arguments that equate increased integration with digital interaction with emotional overload and new manifestations of digital burnout in education (Ezeanya, C. U., et al., 2024).

The faculty experience with academic systems powered by AI also demonstrates even more dissimilarity in scholarly meaning (Alenezi, A.). 2024). Zong, Y., & Yang, L. (2025) claim that AI improves teaching effectiveness with automated grading, instructional support, and data-based learning plans that are more efficient and overall increase professionals and institutional performance. Prajapti, E., Dadariya, S. in contrast. Queries to these benefits are offered by (2025) who express that more automated dependency on AI comes with more technical burdens, less academic autonomy, and a transformation of teachers into technicians by the system. There is acknowledgment of AI as a means of facilitating academic support and denial basing on fears of decreased pedagogical agency and slow loss of the old academic identity (LAKSHMI, S. 2025).

The theoretical approach to digital wellness is proposed as the concept of balance that can be found between technology and people-centered education (Nafees, N., et al., 2025). The study by Velastegui, D., et al., (2023) supports systematic models with digital literacy, ethical AI governance

and institutional wellness policies as measures to streamline learning conditions and safeguard mental health. Skulmowski, A., & Xu, K. M. (2022) argue that such frameworks are impractical because of the inequitable access to digital materials, the dissimilarity in the levels of technological expertise, and institutional challenges which reduce the effective application of such models. There is consensus over the significance of protecting well-being in AI-based education, and the degree of divergence over the extent of consistency of systemic balance between innovation and wellness across a variety of academic situations (Ahuja, N. J., et al., 2021).

6. Conclusion of the study

The study summarizes a connected finding: digital wellness is significant in determining academic output and mental health in the context of AI-enabling learning processes. The results demonstrate a high positive correlation between digital wellness and academic performance, which means that an efficient and effective use of digital tools leads to improved performance and efficiency. Moreover, the exposure to AI technologies has a moderate positive effect on psychological health, but more screen fatigue is also a worry. The findings reveal that although AI integration has significant academic and emotional gains, its usefulness is conditional on controlled and healthy use patterns. Thus, digital balance is vital towards a successful and sustainable academic performance and general well-being in contemporary education settings.

6.1 Implication of the study

The study offers valuable insights to teachers and institutions, as well as to policymakers, by highlighting the necessity to incorporate digital wellness activities into AI-based systems of learning. Policies that facilitate balanced use of technology, with breaks, ergonomic behaviors, and digital literacy should be designed in institutions of learning. The educated personnel can embrace structured AI devices that facilitate productivity without bombarding the users. Also, the programmers are expected to engineer easy-to-use AI platforms that do not cause cognitive overload. The study also indicates that mental health support system is essential in online learning experiences, where technologies should be implemented in ways that lead to positive outcomes in education as well as psychological health.

6.2 Limitation of the study

There are some limitations with regard to the study. First, the sample only combines 200 respondents within a particular geographic location meaning that the findings may not be extrapolated. Second, a cross-sectional research design records the data at one moment and fails to consider the long-term impacts caused by the use of AI. Third, it could be biased by the use of self-reported data. Also, the study does not delve into the issue of discipline-specific differences in digital wellness extensively. Future studies ought to incorporate larger samples, and longitudinal studies to make conclusions more robust and applicable.

6.3 Recommendation for future study

Further studies must broaden the sample to include more and more diverse samples across areas and systems of education to enhance generalizability. To explore the effects of digital wellness, productivity, and mental health of AI-enabled learning in the long term, longitudinal studies are suggested. The field of study ought to also examine discipline-based variations and the impact of personal elements like digital literacy and personality aspects. Alternatively, it is possible to carry out experimental studies to determine the effectiveness of digital wellness interventions. More advanced study on the new AI tools and their ethical aspects are able to give a more profound critique of sustainable and human-related educational development.

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