

Digital Engagement and Mental Health Among University Students in Albania: Patterns, Risks and Coping Strategies

Edllira Çaro (Kola), Ornela Hasrama, Sokol Axhemi, Romeo Hanxhari
Department of Geography, University of Tirana, Albania
Romeo Hanxhari

Abstract

The use of technology has become a central part of university students' daily lives, influencing their academic and social experiences. This study examines the patterns of digital engagement and their effects on mental health among university students in Albania. Drawing on a survey of 432 students from multiple universities, the study explores digital use behaviours, associated mental health risks, and coping strategies. The findings show that excessive digital engagement is linked to higher levels of anxiety, stress, and depressive symptoms. To counterbalance these effects, students primarily rely on engaging in face-to-face interactions with peers, spending time in natural environments, and applying structured time management. Meanwhile, only a small minority of students have utilized structured coping strategies supported by the university or other institutions. Since a significant portion of digital engagement occurs as part of academic activities, universities, and educational systems must become more attentive and proactive in providing resources and support to help students cope effectively. The study underscores the crucial responsibility of higher education institutions to foster digital well-being by providing mental health support and proactive interventions. These results add to the understanding of the complex relationship between technology use and student mental health within Albania's educational context. It concludes with recommendations for university administrators and policymakers to encourage balanced digital engagement and strengthen mental health resources tailored to student needs.

Keywords: digital engagement, digital wellness, technology, mental health, university students, Albania

JEL classification: I23

Paper type: Research article

Received: 23 June 2025

Accepted: 15 July 2025

DOI: 10.54820/entrenova-2025-0059

Citation: Çaro (Kola), E., Hasrama, O., Axhemi, S., & Hanxhari, R. (2025). Digital Engagement and Mental Health Among University Students in Albania: Patterns, Risks and Coping Strategies. *ENTRENOVA - ENTERprise REsearch InNOVation*, 11(1), <https://doi.org/10.54820/entrenova-2025-0059>.

Introduction

Society is becoming ever more interconnected through the ongoing advancement of the internet and digital technologies (Dontre, 2021). The integration of digital technologies into daily life has profoundly transformed students' academic and social experiences. With nearly universal access to internet-connected devices, technology underpins all aspects of communication, research, and learning. Information is abundant and instantly available, thanks to digital platforms that remove traditional barriers. Learning—whether in lectures or through independent study—is now more varied, drawing from diverse sources and enabling richer dialogue between students and educators. Socially and practically, distance no longer restricts human interaction—online services like bill payments and shopping simplify life and save time.

However, as digital technologies permeate everyday life, their harmful effects are increasingly evident. Prolonged screen use often leads to eye strain, headaches, neck or back pain, and poor sleep quality. Beyond physical discomfort, chronic screen dependency can trigger anxiety, depression, and reduced attention spans, especially when usage becomes compulsive. Without mindful breaks and ergonomic habits, everyday tech use risks turning into a persistent threat to both physical and mental well-being.

Students, as active and continuous users of digital technologies across both academic and social spheres, are particularly vulnerable to the cumulative effects of digital exposure. Their reliance on digital tools for studying, communication, entertainment, and everyday tasks increases both the frequency and intensity of engagement, making them more susceptible to the physical, cognitive, and emotional consequences of overuse.

In Albania, where digital devices and internet access have become widespread and are now available to the majority of individuals, students find themselves in a similar situation, facing both the positive and negative effects of increased digital technology use. Meanwhile, their use is continually encouraged in both the teaching and learning process. Such a situation makes it “imperative to raise citizens' awareness of the challenges and needs to balance and counteract the more negative aspects of the digital world.” (Council of Europe, 2020).

Literature review and context of the study

Studies have identified significant links between human use of digital devices and performance in professional, academic, and everyday life contexts. However, the results regarding the nature of the impact do not always converge. These dilemmas become particularly sensitive when technology use is analysed in the context of students and their academic performance.

Although regarding academic performance, bibliographic sources struggle to reach a consensus on the benefits or impairments that technology use may have for students (Dontre, 2021), many studies show that, when used for learning purposes, digital technology is associated with positive effects for students, promoting their critical thinking skills (Fu, 2013; McMahon, 2009) and also stimulating creativity (Li et al., 2022). Integrated effectively in the classroom setting/environment, digital technologies encourage students to engage in richer resources and more complex tasks (Levin et al., 2006).

Some authors have placed the impact of digital device use on students' distraction at the center of their research (for a literature review focused on this issue, see Shih Dontre, 2021). Feng et al. (2019) have found a direct impact of Facebook use on the loss of students' academic focus, whereas, according to Chen et al. (2020), after a break from using digital technologies for non-academic purposes, it takes a

student approximately 30 minutes to regain focus on the task or assignment they were previously engaged in. Engagement in social media has also been identified as a source of distraction from academic tasks (Lukose et al., 2023).

In the context of the contemporary increase in digital device usage, various organizations and researchers have suggested the need to understand the concept of digital well-being (Aggrawal et al., 2023). Being related to the influence of digital tools and services exerted on individuals' psychological, physical, and social health (Al-Mansoori, 2023). To describe the challenges encountered in an increasingly digital environment (Vanden Abeele et al., 2022), digital well-being is defined as the condition in which individuals can sustain their personal sense of well-being despite excessive exposure to digital technologies (Li et al., 2022). The concept of digital well-being has emerged and been further developed by various authors, in parallel with other terms related to the impact of technology on individuals' lives and health. One such widely studied term is "technostress," defined as the state of stress experienced by individuals when they are unable to adapt to digital technologies (Tarafdar et al., 2007), and which is associated with physical health issues and psycho-emotional problems (La Torre et al., 2019). Other concepts related to the condition or consequences caused by prolonged exposure to digital environments include "digital fatigue," defined as a cognitive and emotional tiredness due to the intensive engagement with digital devices (Fiorillo et al., 2023), or even more specific terms, such as "social media fatigue" (see Adnan et al., 2025) "videoconference fatigue" (see Döring et al., 2022).

In Albania, studies on students' use of digital technologies mainly focus on the role these technologies play in teaching and learning, as well as the challenges that digital inclination faces within the education system overall (Osmani et al., 2024), on determining students' readiness to use these technologies as an integral part of the learning process (Çaro et al., 2025), as well as on the effectiveness of online learning during especially during the COVID-19 pandemic (Shoraj et al., 2022) and students' perceptions of this learning modality (Xhellili et al., 2021), combining the research findings with recommendations for implementing measures and strategies to integrate these technologies effectively. Other recent studies also focus on the role of Artificial Intelligence in the learning process (Hasrama et al., 2024).

Research on the role of digital technologies in students' digital wellbeing and academic performance in Albania is scarce. Nevertheless, the existing literature indicates a predominance of adverse effects. An interesting study by Haliti-Sylaj et al. (2024) finds that continuous exposure to rapid, attention-grabbing content can disrupt students' ability to concentrate during lectures, while reading, or when taking assessments, activities characterized by a slower pace. Focusing specifically on the consumption of reels, the authors emphasize that this form of digital use poses a significant risk to students, affecting both cognitive functioning and academic achievement. Agaj (2023), in her study on the impact of internet use among students, identifies a significant negative correlation between internet addiction and life satisfaction and psychological well-being in this group. These findings are further supported by Shkurti et al. (2023), which emphasizes the need to take measures to guide students toward the healthy use of digital technologies.

Meanwhile, the Albanian government's strategic focus on digital education, as outlined in the Digital Agenda 2022–2026 and the National Education Strategy 2021–2026, underscores the imperative to integrate digital technologies into teaching and learning processes. These initiatives aim to foster a digital learning culture, enhance digital competencies, and modernize educational infrastructure.

Clearly, such measures cannot be implemented universally by simply applying foreign experiences or models. Effective interventions require adaptation to the geographic and socio-demographic context of the targeted group, following a tailored approach. Identifying and analysing students' digital patterns, the effects of their digital engagement, and the strategies they use to maintain their mental, emotional, and physical health—regardless of whether their digital activities are academic or not—would help narrow the gap in the existing applied literature on Albania. This constitutes the main objective of this article, which aims to provide a more comprehensive overview of students' digital well-being in Albania. Such an overview could serve as a guide for the information, awareness, and support strategies that need to be offered to students to enhance their digital well-being. However, to achieve this awareness, it is first necessary to understand students' relationship with digital technologies, their role in academic and social life, digital behaviour patterns, and students' attitudes or responses to potential adverse effects stemming from technology use— all within the broader context of the impact and role of higher education institutions in shaping students' digital engagement and wellbeing.

This study employed a mixed-methods approach to comprehensively examine students' digital engagement patterns and their implications for mental health. A structured survey was administered to 432 students across multiple Albanian universities, gathering quantitative data on digital usage behaviours, mental health indicators, and coping strategies. Qualitative interviews complemented this to gain deeper insights into students' experiences and perceptions. The integration of both data types allows for a nuanced understanding of the complex interplay between digital engagement and student well-being.

Methodology

This study employed a mixed-methods research design to provide a comprehensive understanding of university students' digital engagement and its impact on their mental health in Albania. Based on the overall aim of the study, the existing literature, and a preliminary understanding of the context, the following research questions were formulated:

- What are the predominant patterns of digital technology use among university students in Albania?
- How do students perceive the role of digital technology in their academic performance and social interactions?
- How does the extent and nature of digital engagement relate to students' mental health outcomes?
- What coping strategies do students employ to manage the psychological and physical effects of digital technology use?
- To what degree are students supported by university resources or institutional programs aimed at promoting digital well-being, and what kind of knowledge or guidance do they seek from these sources?

These research themes guided the development of the data collection tools. The survey was conducted between February and April 2025 using a 20-item questionnaire comprising 15 multiple-choice, two multiple-response, and three open-ended questions. Participation was anonymous, with an estimated completion time of 7 to 8 minutes. The integration of quantitative and qualitative data facilitated a nuanced analysis of how digital engagement shapes both the academic and social dimensions

of student life. The responses were systematically analysed and integrated into the study's findings.

Respondents were selected through purposive (judgmental) sampling, ensuring all participants were current university students in Albania. The sample size was determined using Yamane's formula (1967): $n = N / 1 + N (e)^2$

In this formula, "n" represents the sample size, "N" denotes the population of the study, and "e" indicates the margin of error. With a population of approximately 121,000 students in Albanian universities for the 2024-2025 academic year and a margin of error set at 0.05, the resulting sample using Yamane's formula is as follows:

$$n = 121,000 / 1 + 121,000 (0.05)^2 = 399$$

A total of 432 students from multiple universities participated in the survey. The survey aimed to capture patterns of digital device use, associated mental health outcomes, and coping strategies. The large, diverse sample ensured that the data collected were representative of university students' current digital behaviours in Albania.

The study prioritized ethical considerations by obtaining informed consent from all participants and ensuring confidentiality. Data collection instruments were carefully designed and pre-tested to ensure validity and reliability within the Albanian context. Statistical analyses were employed to identify significant associations between digital engagement variables and mental health indicators.

Results

The survey and in-depth interviews provide a robust base of qualitative and quantitative evidence on Albanian university students' readiness for digital learning, their perceptions of its benefits, and the key challenges they associate with this transition. The respondents constitute a heterogeneous sample of university students. Of the total, 87% identified as female, 12% as male, while 1% preferred not to disclose their gender. The marked predominance of female respondents, in addition to reflecting their overall overrepresentation in the student population (with more than two-thirds of university students in Albania being women), may also be attributed to their greater willingness to participate in the survey.

Students' daily time spent using digital devices

The findings indicate that a substantial proportion of students spend several hours each day using digital devices, with the majority reporting between 3 to 6 hours of daily use. Notably, a significant segment (nearly one in five) exceeds 6 hours per day, suggesting intensive digital engagement. More detailed data on students' average daily screen time is presented in Table 1.

Table 1

Average daily time spent by students using digital devices

Average time	Students (%)
Less than 1 hour	0.9
1-2 hours	14.8
3-4 hours	38.0
5-6 hours	26.9
More than 6 hours	19.4
Total	100

Source: Authors' work

These figures reflect the centrality of digital technologies in students' academic and social routines, but also raise concerns about potential overexposure and its implications for their mental and physical well-being.

Which digital tools do students most commonly use for academic activities?

The survey results show that the overwhelming majority of students (96.7%) use digital platforms or programs for study purposes, confirming the central role of technology in their academic experience.

Table 2

Student usage of digital tools for academic purposes

Digital tools (platforms, sources, etc.)	Students (%)
The official platform used by the university	30.6
Online encyclopaedias	6.5
Platforms for academic articles/research	33.3
Platforms/apps for creating digital content	25.9
No use of digital tools for study purposes	3.7
Total	100

Source: Authors' work

As the results show (Table 2), the most commonly used tools include scientific research platforms (such as Google Scholar or ResearchGate), official university systems (such as Microsoft Teams or Google Classroom), and various content creation applications. Only a tiny proportion of respondents reported not using any digital platforms for studying. These findings highlight students' relatively high level of digital integration in academic tasks and suggest the importance of strengthening institutional support and training tailored to their actual digital learning practices. These figures reflect the centrality of digital technologies in students' academic and social routines, but also raise concerns about potential overexposure and its implications for their mental and physical well-being.

Proportion of students' daily digital device usage allocated to academic activities

The data indicate that most students dedicate a moderate portion of their daily digital device use to study-related activities (Table 3). Over half of the surveyed students report spending between 20% and 40% of their digital time on academic tasks, suggesting a balanced integration of study and other uses. A smaller, yet notable, share of students spends nearly half or more of their digital time focused on studying, while very few use their devices almost exclusively for academic purposes.

Table 3
Proportion of digital engagement time used for study

Amount of digital time allocated for study purposes	Students (%)
Less than 20%	15.4
20-40%	56.7
41-60%	21.1
61-80%	5.8
81-100%	1.0
Total	100¹

Source: Authors' work

While a significant portion of their screen time is dedicated to study-related tasks, the data suggest that students also allocate considerable time to non-academic uses, which may serve important social and psychological functions. This balancing act underscores the multifaceted role that digital technologies play in students' lives, acting not only as tools for learning but also as platforms for communication, relaxation, and self-expression. Understanding this dynamic is crucial for developing strategies that help students optimize their digital habits to enhance both academic success and overall well-being.

Students' engagement across different online platforms and activities

The data show a clear trend toward social interaction as the dominant form of online engagement among students. Social media emerges as the most frequently used tool, suggesting that students primarily use digital platforms to stay connected and interact with others. The table below provides a more detailed breakdown of students' average daily screen time (Table 4):

Table 4
Most used online tools and activities by students

Tools/activities	Citation frequency (%)
Social media	64.8
YouTube or similar platforms	30.6
Online games	9.3
Messaging/chatting	50.0
Online shopping	10.2

Source: Authors' work

This pattern suggests that students' digital engagement is primarily oriented toward social interaction and communication, rather than entertainment or consumption. The dominance of social media and messaging suggests that digital tools are primarily used to maintain connections and participate in online social life, with implications for both their academic focus and mental well-being.

Students' level of online activity

The results indicate that most respondents perceive themselves as moderately active online, engaging occasionally but not consistently (Table 5). A significant portion also identifies as passive users, mainly observing rather than participating. In contrast, only

¹ The question was addressed to the 104 students who reported using digital tools for academic purposes.

a smaller group describes themselves as highly active, frequently posting or interacting. More detailed results on this question are given in the following table:

Table 5

Self-perceived levels of online activity among students

Statement	Students (%)
"I am very active online (I regularly post and or/interact with others)"	15.7
"I am somewhat active online (I occasionally engage, but not frequently)"	52.8
"I am mostly passive online (I read or browse but rarely post or interact)"	31.5
Total	100.0

Source: Authors' work

This distribution suggests that while most individuals maintain a presence and participate to some extent, only a minority are deeply involved in frequent online interaction. Nevertheless, considering that more than two-thirds of respondents perceive themselves as at least somewhat active online, implying a regular investment of time and attention in digital engagement, this trend deserves closer attention. It suggests that a significant portion of the population is meaningfully engaged in the online environment, with implications for their digital well-being, time management, and even social dynamics.

Impact of non-academic digital technology use on studying

Another question asked the students about the extent to which non-academic digital technology use interferes with their studying. The data indicate that nearly half of the respondents perceive moderate interference. Importantly, more than one-quarter report experiencing interference to a considerable or very great extent, highlighting a substantial group for whom digital distractions significantly disrupt study activities. Meanwhile, a smaller share of students reports little to no interference. A detailed summary of responses is shown in Table 6.

Table 6

Perceived interference of non-academic digital technology use on studying

Extent of interference	Students (%)
Not at all	11.1
To a small extent	17.6
To a moderate extent	46.3
To a considerable extent	21.3
To a very great extent	3.7
Total	100.0

Source: Authors' work

The findings suggest that while many students experience moderate disruption, a considerable proportion face serious challenges in balancing non-academic digital use with effective studying.

Students' self-reported frequency of excessive online time

Students were also asked to report how frequently they feel they spend excessive time online (Table 7). The responses reveal a noteworthy pattern: only a small fraction (6.5%) of students report never feeling that their online time is excessive. At the same time,

the majority acknowledge experiencing this feeling to varying degrees. About one-quarter of students report rarely feeling this way, and nearly one-third experience it sometimes. Detailed response data are displayed in the table below:

Table 7

Frequency of perceived excessive time spent online by students

Frequency	Students (%)
Never	6.5
Rarely	25.9
Sometimes	31.5
Often	22.2
Always	13.9
Total	100.0

Source: Author's work

About one-quarter of students report rarely feeling this way, and nearly one-third experience it sometimes. Of greater concern, however, is that more than one-third of students, combining those who answered "often" and "always", perceive their online time as excessive and high-frequency. This substantial proportion suggests that many students struggle to regulate their digital engagement, potentially leading to negative consequences such as reduced academic focus, increased stress, and impaired well-being. The fact that many students frequently feel overwhelmed by their online usage indicates a growing challenge that may affect both their academic success and personal health.

Strength of the association between excessive time spent online and academic responsibilities

Students were asked to assess the extent to which their excessive time spent online is related to academic tasks (Table 8). The results indicate that the majority perceive a meaningful connection, with over 85% reporting at least some level of association. Notably, more than 40% of respondents consider this link to be either considerable or complete, suggesting that academic demands are a key driver of prolonged digital engagement. In contrast, only a small portion, approximately 15%, believe their excessive online time is unrelated primarily to academic activities. This distribution points to a broader trend in which academic responsibilities are closely intertwined with students' digital behaviours.

Table 8

Perceived relationship between excessive online time and academic tasks

Relation degree	Students (%)
Entirely	12.9
To a considerable extent	31.7
To some extent	40.6
To a small extent	10.9
Not at all	3.9
Total	100.0 ²

Source: Author's work

While such engagement may reflect the realities of contemporary learning environments, it also raises important questions about the intensity of academic digital

² The question was addressed to the 101 students who reported spending excessive time online.

demands and their implications for students' time management and digital well-being. These findings call for greater attention to how academic structures shape online habits and to how students can be supported in developing healthier, more sustainable digital practices.

The prevalence of negative emotional states among students and their perceived relationship with digital technology use

The survey also included a more direct question regarding students' emotional and mental health (Table 9). The findings reveal that nearly half of the students' report experiencing difficulties with concentration, while roughly one-third to one-quarter experience feelings such as irritability and anxiety. Around one-fifth of the respondents indicate feelings of sadness. Only a small fraction reports no negative emotional states at all, suggesting that the majority of students face some level of emotional or cognitive challenge. The table below summarizes the detailed results for this question.

Table 9
Students' reports of negative emotional states

Emotional states or feelings experienced	Frequency (%)
Anxiety	24.1
Sadness	22.2
Difficulty concentrating	49.1
Irritability	35.2
None of the above	17.6

Source: Authors' work

These results (Table 9) are particularly relevant in the context of digital engagement, as prolonged or excessive online activity, whether academic or non-academic, can contribute to cognitive overload, distraction, and emotional strain. The prevalence of concentration difficulties and mood-related symptoms among students may reflect the impact of sustained digital exposure, highlighting the need to better understand how digital habits influence mental well-being.

Students were also asked to evaluate the perceived relationship between their negative emotional states and the use of digital technologies (Table 10). The results reveal that a significant majority of students acknowledge some degree of connection between these factors. Nearly half of the respondents indicated that their negative emotional states are related to digital technology use to some extent. At the same time, more than one-quarter viewed this relationship as considerable or complete. Conversely, only a small minority believes that their emotional well-being is minimally or not at all affected by their digital engagement.

Table 10
Perceived relationship between negative emotional states and use of digital technologies

Relation degree	Students (%)
Entirely	7.4
To a considerable extent	25.9
To some extent	47.2
To a small extent	14.8
Not at all	7.4
Total	100.0

Source: Authors' work

These findings suggest that digital technology use is perceived as a contributing factor to various negative emotional and cognitive experiences, including emotional discomfort, mood disturbances, and difficulties with focus. This widespread perception underscores the need to investigate further how digital habits affect students' mental health and to develop effective support systems to mitigate potential adverse effects on emotional well-being.

Students' responses to psychological and emotional discomfort

Another valuable question explored in the survey concerned how students cope with psychological and emotional discomfort. The findings (Table 11) reveal notable patterns that raise important concerns about students' coping habits and their relationship with digital technologies. The following table provides a detailed overview of the results related to this topic:

Table 11

Students' coping mechanisms for psychological and emotional discomfort

Coping mechanisms	Students (%)
Disconnection from digital devices or programs	5.6
Social interaction with relatives or friends	28.7
Use of social media or online games for entertainment or relaxation	10.2
Engagement in physical activity (e.g., exercise)	13.0
Spending time in nature	18.5
Pursuit of personal hobbies	7.4
Seeking help from mental health professionals	0.0
Waiting for the discomfort to pass naturally	16.7
Total	100.0

Source: Authors' work

Most notably, only a small fraction, around 5%, report disconnecting from digital devices or programs as a coping mechanism. This low percentage may reflect a limited self-awareness of the role digital engagement plays in emotional distress, or possibly a form of dependency on technology that makes intentional disconnection difficult, even when it may be beneficial. Equally striking is the finding that none of the students reported seeking help from mental health professionals, not even those who previously indicated experiencing symptoms such as anxiety or sadness. This absence suggests either a lack of access, awareness, or trust in professional psychological support, or the persistence of stigma around mental health help-seeking among students. In addition, nearly one in seven students reports simply waiting for the discomfort to pass, indicating a passive approach to emotional regulation. While this may reflect temporary coping, it also suggests a possible underestimation of the need for active strategies or support when dealing with recurring or intense emotional states. In combination, these findings point to a reliance on informal, and at times avoidant, coping strategies. They underscore the need for more targeted mental health education, promotion of digital self-regulation, and more substantial institutional efforts to make professional support both accessible and normalized within the student community.

Students' level of awareness about the relationship between digital technologies and mental health

As shown in Table 12, students' self-assessed levels of information regarding coping mechanisms for psychological and emotional discomfort provide important insights:

Table 12

Students' coping mechanisms for psychological and emotional discomfort

Level of information	Students (%)
Fully informed	34.3
Sufficiently informed	38.9
Somewhat informed	24.1
Slightly informed	1.8
Not informed at all	0.9
Total	100.0

Source: Authors' work

The majority feel either fully or sufficiently informed, together representing more than two-thirds of respondents, indicating that many students perceive themselves as reasonably knowledgeable about managing emotional and psychological challenges. Nevertheless, about one-quarter of students consider themselves only somewhat informed, reflecting a degree of uncertainty or incomplete understanding of effective coping strategies. A small minority report being slightly informed or not informed at all, suggesting that a lack of awareness is relatively uncommon but still present. These findings highlight that, while overall awareness is pretty strong, there remains a significant portion of students who could benefit from enhanced education and resources to deepen their understanding and improve their ability to cope with psychological discomfort effectively.

Students' participation in activities related to the relationship between digital technology use and mental or emotional health

The survey reveals that a significant majority of students, 85.2%, have not participated in any activity (such as informational sessions, trainings, or workshops) related to the connection between digital device use and mental or emotional health. This low level of participation highlights a considerable gap in exposure to structured educational efforts addressing the psychological impact of digital engagement. The activities mainly consist of informational meetings organized by the faculties to which the students belong or sessions conducted during high school, with only one reported case of participation in a formal training. Given growing concerns about students' emotional well-being related to their digital habits, this lack of involvement suggests that these topics remain underrepresented in student support programs and institutional initiatives. Conversely, only 14.8% of students report having participated in such activities, indicating limited opportunities or outreach on these important issues. This small proportion may reflect a broader lack of awareness, accessibility, or perceived relevance of these interventions among the student population.

Perceived need for university initiatives on digital device use and health

The survey shows that a clear majority of students (86.1%) consider it necessary for their university or faculty to initiate or increase efforts to inform and support students about the use of digital devices and their impact on health. This reflects strong student recognition of the importance of institutional support in addressing the mental and emotional challenges linked to digital technology. In contrast, 13.9% of students do not see the need for such initiatives, possibly because they feel adequately informed or are unconcerned about the issue. However, the high level of overall agreement

points to strong demand for universities to take a proactive role in promoting healthier digital habits and supporting student wellbeing.

Based on the students' answers, several clear themes emerge regarding initiatives to address the impact of digital device use on mental and emotional health. The most frequently suggested actions include informative trainings and workshops, which many students see as crucial for raising awareness about the risks of excessive digital use, such as addiction, anxiety, and reduced concentration. These trainings are recommended both for students and educators, with an emphasis on interactive formats, practical time-management techniques, and expert involvement (psychologists, IT specialists, and medical professionals). Another widely supported initiative is organizing awareness campaigns and seminars, including proposals for regular information sessions throughout the academic year, especially during stressful periods such as exams. Students also suggest creating device-free zones or days without devices on campus to encourage breaks from screens and promote social interaction. Alongside this, many highlight the importance of encouraging physical activities, time spent in nature, and hobbies as healthy alternatives to screen time. Some responses also advocate integrating digital well-being topics into the curriculum through dedicated lectures or embedding them into existing courses, to ensure continuous education on balancing technology use and mental health. Overall, these ideas reflect a strong student desire for a multifaceted approach combining education, practical support, and lifestyle alternatives.

Towards understanding students' digital technology usage patterns

The analysis of survey and interview data reveals distinct patterns in Albanian university students' use of digital technologies, highlighting their extensive daily engagement and multifaceted digital routines. Most students spend between 3 and 6 hours online daily, with a significant minority exceeding 6 hours, reflecting the central role of digital devices in both academic and social life. Academic purposes constitute a substantial, though not exclusive, portion of this usage; over half of the students dedicate 20–40% of their screen time to study-related activities, while the remainder balances learning with social, entertainment, and relaxation. This dual nature of digital engagement illustrates how technology serves as both an indispensable academic tool and a social lifeline, underscoring the complex demands it places on students' time and attention.

Students' online activity patterns further emphasize the dominance of social interaction as a key driver of digital use. Social media and messaging platforms are the most frequently used tools, overshadowing purely entertainment-based activities like gaming or online shopping. This preference for connectivity reflects broader social needs and suggests that digital spaces are primarily viewed as environments for maintaining relationships and social presence. However, this pattern also contributes to challenges in managing digital distractions, as nearly half of the students perceive non-academic digital use as moderately to significantly interfering with their study focus. Additionally, many students report spending excessive time online, with over a third acknowledging frequent or constant experiences of excessive digital engagement, pointing to difficulties in self-regulating their use amid competing academic and social demands.

The findings related to students' mental and emotional well-being reveal notable concerns linked to digital technology use. Nearly half of respondents report cognitive and emotional difficulties, such as concentration problems, irritability, and anxiety, which they primarily associate with their digital habits. Coping strategies tend to rely heavily on social interactions and passive approaches rather than active disconnection or professional support, which is rarely sought despite evident

emotional distress. This indicates a limited awareness or availability of mental health resources and possibly a digital dependency that complicates detachment from devices. The majority of students recognize the need for institutional initiatives to address these issues, advocating for targeted training, awareness campaigns, and healthier lifestyle alternatives. Together, these patterns point to the critical importance of balancing digital engagement with adequate mental health support and time management education within the university environment.

Discussion

This study offers a comprehensive overview of Albanian university students' digital technology use, perceptions, and their implications for academic performance, social interaction, and mental health. The findings reveal predominant patterns and nuanced dynamics that contribute to a deeper understanding of students' digital behaviours and wellbeing.

- **RQ1:** *What are the predominant patterns of digital technology use among university students in Albania?*

The findings indicate that Albanian university students engage intensively with digital technologies, spending predominantly 3-6 hours daily online, with a notable portion exceeding 6 hours. Their digital time is divided between academic activities, such as accessing scientific research platforms, official university learning management systems, and content creation apps, and significant use of social media and messaging platforms for communication and social interaction. This pattern highlights a dual role of digital devices as essential tools for both study and social engagement, emphasizing their centrality in students' everyday lives. Given the complexity of the relationships between well-being and the digital world (Molinari et al., 2024), understanding these usage patterns is crucial for addressing the broader implications for student health and success.

- **RQ2:** *How do students perceive the role of digital technology in their academic performance and social interactions?*

Students generally recognize digital technology as critical to their academic success, with a majority utilizing various platforms to support research, collaboration, and content development. Concurrently, social media remains the primary avenue for maintaining personal connections, indicating that digital engagement extends well beyond academic purposes. However, many students acknowledge that non-academic use of digital devices frequently interferes with their study time, revealing a complex balance between the productive and distracting aspects of technology in their educational and social experiences. Since personal well-being positively predicts future academic achievement (Yu et al., 2018), this highlights the importance of fostering positive digital behaviours to support both mental health and academic outcomes.

- **RQ3:** *How does the extent and nature of digital engagement relate to students' mental health outcomes, including anxiety, stress, and depression?*

There is a clear association between digital technology use and negative emotional states among students. Many report difficulties such as impaired concentration, irritability, and anxiety, which they attribute, at least partially, to their digital habits. Additionally, many frequently feel they spend excessive time online, indicating challenges in managing their digital engagement. These patterns suggest that high levels of digital exposure may contribute to mental health risks, including

stress and emotional strain, warranting further attention to the psychological impacts of students' digital behaviours. Given that higher digital literacy and positive digital behaviours reduce cognitive load and thereby foster students' academic self-efficacy (Khan et al., 2024; Bond et al., 2024), universities must train students in digital skills and the healthy use of digital technologies, integrating these topics into curricula. While digital well-being apps can help users monitor and limit screen time, mere app use is insufficient to establish a healthy digital relationship. Effective use of digital technologies without compromising well-being depends mainly on individual awareness and balanced digital engagement (Parry et al., 2020).

- **RQ4:** *What coping strategies do students employ to manage the psychological and physical effects of digital technology use?*

Students primarily adopt informal coping mechanisms, with social interactions, physical activity, and spending time in nature being the most common. Notably, only a small fraction actively disconnects from digital devices, and none report seeking professional psychological support, even among those experiencing emotional distress. Moreover, a sizeable group resorts to passively waiting for discomfort to subside, which points to limited engagement with proactive coping strategies and possible barriers to accessing or utilizing formal mental health resources.

- **RQ5:** *To what degree are students supported by university resources or institutional programs aimed at promoting digital wellbeing, and what kind of knowledge or guidance do they seek from these sources?*

The data reveal a substantial gap in university-led initiatives addressing the link between digital device use and mental health, with most students not having participated in related informational or training activities. Nonetheless, there is strong student demand for increased institutional efforts, including workshops, awareness campaigns, expert-led seminars, and practical support to foster healthier digital habits. Students also express interest in integrated educational programs and digital-free campus zones, underscoring a desire for comprehensive, multifaceted digital wellbeing initiatives facilitated by their universities.

Despite offering valuable insights into students' digital well-being and usage patterns, this study is subject to several limitations. First, the data were self-reported, which may introduce response biases, such as under- or overestimation of screen time or digital fatigue. Second, the sample was limited to students from a specific educational context, potentially limiting the generalizability of the findings to broader student populations. Lastly, specific qualitative dimensions of digital experiences—such as emotional responses or social pressures—were not deeply explored and could be better captured through in-depth interviews or longitudinal studies in future research.

Conclusion

This study offers key insights into Albanian university students' use of digital technology and its effects. Students spend significant time online daily, balancing academic tasks with social interactions on digital platforms. While valuing technology for learning, many are disrupted by non-academic uses that affect their studies and concentration. Mental health concerns are evident, with many reporting anxiety, irritability, and difficulty focusing, often linked to their digital habits. However, active coping is limited; most rely on informal strategies like socializing or physical activity, with few disconnecting or seeking professional help, revealing gaps in mental health awareness and support. Institutional efforts are lacking, as most students have not

engaged in digital well-being programs, despite strong demand for university-led initiatives. Recommended actions include awareness campaigns, workshops, expert seminars, and embedding digital literacy in curricula to promote healthier habits and wellbeing. The findings underscore the complex relationship between digital use, academic pressures, and mental health. Universities must proactively equip students with skills and resources to foster positive digital engagement, supporting both academic success and psychological resilience.

References

1. Adnan, W. H., Ying, H., & Ayub, S. H. (2025). The influence of information and social overload on academic performance: The role of social media fatigue, cognitive depletion, and self-control. *Revista de Psicodidáctica (English Edition)*, 30(1), 1–10. <https://doi.org/10.1016/j.psicoe.2025.500164>
2. Aggarwal, A., & Grover, P. (2023). Exploring the concept of digital well-being: A bibliometric analysis. *International Journal of Early Childhood Special Education*, 15(2), 1246–1257. <https://doi.org/10.9756/INT-JECSE/V15I2.233092>
3. Al Mansoori, A. (2023). Designing for digital wellbeing: From theory to practice—A scoping review. *Human Behavior and Emerging Technologies*, 5(2), e992402. <https://doi.org/10.1155/2023/992402>
4. Bond, S., Getenet, S., Cattle, R., Redmond, P., & Albion, P. (2024). Students' digital technology attitude, literacy and self-efficacy and their effect on online learning engagement. *International Journal of Educational Technology in Higher Education*, 21, Article 3.
5. Chen, L., Nath, R., & Tang, Z. (2019). Understanding the determinants of digital distraction: An automatic thinking behavior perspective. *Computers in Human Behavior*, 104, 106195. <https://doi.org/10.1016/j.chb.2019.106195>
6. Council of Europe. (2020). *Manuali për Edukimin e Qytetarisë Digjitale: Të qenit online; Mirëqenia online; Të drejtat online*. Janice Richardson, Elizabeth Milovidov, Divina Frau-Meigs, Vitor Tomé, Brian O'Neill, Pascale Raulin-Serrier, Martin Schmalzried, Alessandro Soriani (Eds.). Council of Europe.
7. Çaro, E. (Kola), Hasrama, O., & Sinjari (Xhafa), S. (2025). Readiness of Albanian students to engage in digital learning: Perceptions, challenges and opportunities. *Në Proceedings of the ENTRENOVA – ENTERprise REsearch InNOVation Conference (Vol. 10, Nr. 1, f. 148–162)*. IRENET. <https://doi.org/10.54820/entrenova-2024-0014>
8. Döring, N., Moor, K. D., Fiedler, M., Schoenenberg, K., & Raake, A. (2022). Videoconference fatigue: A conceptual analysis. *International Journal of Environmental Research and Public Health*, 19(4), 2061. <https://doi.org/10.3390/ijerph19042061>
9. Dontre, A. (2021). The influence of technology on academic distraction: A review. *Human Behavior and Emerging Technologies*, 3(3), 379–390. <https://doi.org/10.1002/hbe2.229>
10. Feng, S., Wong, Y., Wong, L., & Hossain, L. (2019). The internet and Facebook usage on academic distraction of college students.
11. Fiorillo, A., Gorwood, P., & De Luca, P. (2023). Digital fatigue in the remote work era: Psychological effects and coping strategies. *Frontiers in Psychology*, 14, 1098234. <https://doi.org/10.3389/fpsyg.2023.1098234>
12. Fu, J. S. (2013). ICT in education: A critical literature review and its implications. *International Journal of Education and Development using Information and Communication Technology*, 9(1), 112–125.
13. Hasrama, O., & Çaro, E. (2024). *Edukimi gjeografik përmes inteligjencës artificiale: Po lundrojmë drejt së ardhmës? Studime Gjeografike, 27 (botimi i dytë) [Geographic education through artificial intelligence: Are we navigating toward the future?]*. ISSN 1562-8183.

14. Khan, F., Tahir, M., & Ali, S. (2024). Leveraging digital skills to reduce cognitive strain: Implications for academic self efficacy in medical education. *Medical Education Online* (preprint; PubMed ID 39541913).
15. La Torre, G., Esposito, A., Sciarra, I., & Chiappetta, M. (2019). Definition, symptoms and risk of technostress: A systematic review. *International Archives of Occupational and Environmental Health*, 92(1), 13–35.
16. Levin, T., & Wadmany, R. (2006). Teachers' beliefs and practices in technology-based classrooms: A developmental view. *Journal of Research on Technology in Education*, 39, 417–441.
17. Li, X., Liu, Q., & Ren, J. (2022). A scoping review of digital well-being in early childhood: Definitions, measurements, contributors, and interventions. *International Journal of Environmental Research and Public Health*, 19(4), 2345. <https://doi.org/10.3390/ijerph19042345>
18. Lukose, J., Mwansa, G., Ngandu, R., & Oki, O. (2023). Investigating the impact of social media usage on the mental health of young adults in Buffalo City, South Africa. *International Journal of Social Science Research and Review*, 6(6), 303–314. <https://doi.org/10.47814/ijssr.v6i6.1365>
19. Li, Y., Kim, M., & Palkar, J. (2022). Using emerging technologies to promote creativity in education: A systematic review. *International Journal of Educational Research*, 3. <https://doi.org/10.1016/j.ijedro.2022.100177>
20. McMahan, G. (2009). Critical thinking and ICT integration in a Western Australian secondary school. *Educational Technology & Society*, 12, 269–281.
21. Molinari, G., Mamprin, C., & Poellhuber, B. (2024). Bien-être et technologies numériques : quels enjeux pour l'apprentissage et l'enseignement au postsecondaire? Introduction au numéro thématique. *Revue internationale des technologies en pédagogie universitaire*, 21(2), Article 1. <https://doi.org/10.18162/ritpu-2024-v21n2-01>
22. Osmani, S., & Tartari, D. (2024). The impact of digital technology on learning and teaching: A case study of schools in Durrës, Albania. *Journal of Educational and Social Research*, 14(6), 193–205. <https://doi.org/10.36941/jesr-2024-0165>
23. Parry, D., Le Roux, D., Morton, J., Pons, R., Pretorius, R., & Schoeman, A. (2020). Digital wellbeing applications: Adoption, use and perceived effects. <https://doi.org/10.31235/osf.io/6e9ap>
24. Shoraj, D., & Kadiu, E. (2022). Efficiency of online learning and difficulties encountered: Case of Albanian students. *European Journal of Social Science Education and Research*, 9, 94. <https://doi.org/10.26417/548yypg53>
25. Vanden Abeele, M. M. P., & Nguyen, M. H. (2022). Digital well-being in an age of mobile connectivity: An introduction to the Special Issue. *Media International Australia*, 184(1), 3–14. <https://doi.org/10.1177/20501579221080899>
26. Xhelili, P., Ibrahim, E., Ruci, E., & Sheme, K. (2021). Adaptation and perception of online learning during COVID-19 pandemic by Albanian university students. *International Journal on Studies in Education (IJonSE)*, 3(2), 103–111.
27. Yamane, T. (1967). *Statistics: An Introductory Analysis* (2nd ed.). Harper and Row.
28. Yu, L., Shek, D. T. L., & Zhu, X. (2018). The influence of personal well-being on learning achievement in university students over time: Mediating or moderating effects of internal and external university engagement. *Frontiers in Psychology*, 8, 2287.

About the authors

Edlira Çaro (Kola) graduated in Geography from the University of Tirana. She pursued her Master's studies at the University of Thessaly in Greece and, in 2016, defended her doctoral thesis in Human Geography at Clermont Auvergne University in France. Currently, she serves as a lecturer at the Department of Geography at the University of Tirana. Her main areas of expertise include rural geography and contemporary teaching and learning methods. She has participated in several conferences and has published numerous articles. The author can be contacted at: edlirakola@yahoo.com

Ornela Hasrama is part of the academic staff at the University of Tirana, Faculty of History and Philology, Department of Geography. She is pursuing a PhD in Social and Human Sciences at the "UMR Territoire" Research Centre, University of Clermont-Auvergne, France. Her scientific research is primarily in human geography. She has published several articles in national and international scientific journals. Thanks to her participation in different projects, she has gained expertise in new teaching methods and pedagogy-related training. The author can be contacted at: ornela.hasrama@fhf.edu.al

Sokol Axhemi is a full-time professor at the Department of Geography, Faculty of History and Philology, University of Tirana. He has over 35 years of experience in higher education as a lecturer and scientific researcher. He was awarded the academic title of Professor in Geography (Prof. Dr.) in 2004, and his academic/research interests lie in human geography, with a special focus on Social Geography, Population and Settlement Geography, and related areas. His expertise covers topics such as migration, sustainable social development, socio-geographical space, and social policies. Throughout his career, Professor Axhemi has served in various academic leadership roles at both faculty and university levels. He currently serves as Vice-Chair of the Academic Senate at the University of Tirana. The author can be contacted at: sokol.axhemi@fhf.edu.al

Romeo Hanxhari is a geographer who graduated from the University of Tirana (1987-1991). He had a Master's Degree (DEA) at the University of Aix-en-Provence, France (1994-1995) on "Physical geography: Climatology, karsts, geosystems", and a PhD degree at the University of Lecce, Italy (2000-2004) on "Management of the environment and of the resources of the territory". He has been part of the Department of Geography at the University of Tirana since 1991, and from 2016 to 2024, he served as Head of Department. Actually, he is the Vice-Dean of the Faculty, responsible for scientific research/publications and doctoral studies. He has worked on questions related to environmental management, climate change adaptation, sustainability, the environmental impact of tourism, instruments for valorising the territory's resources, thematic parks, cultural routes, thematic itineraries, etc. He has published one book in Italy (2011) and two in Albania (2011 and 2012), as well as several articles in scientific journals and chapters in thematic books. He has participated in many conferences and in several international projects. The author can be contacted at: romeo.hanxhari@fhf.edu.al