

SİBER GÜVENLİK VE VERİ GİZLİLİĞİ: DİJİTAL DÜNYADA ÖĞRENCİLERİN BİLİNÇALTI KORKULARININ İNCELENMESİ-FENOMENOLOJİK ANALİZ

Ayhan AKSAKALLI*

Öz

Bu çalışma, öğrencilerin dijital dünyaya ilişkin bilinçaltı korkularını Husserl'in fenomenolojik yaklaşımının merceğinden keşfetmeyi amaçlamaktadır. Nitel bir araştırma tasarımı kullanılarak, farklı sosyo-ekonomik ve kültürel geçmişlerden gelen 35 Öğrenci ve 12 eğitimciden oluşan bir grupla yarı yapılandırılmış görüşmeler, yansıtıcı günlükler ve odak grup tartışmaları yapılmıştır. Veriler fenomenolojik indirgeme kullanılarak analiz edilmiş, tematik olarak kodlanmış ve tekrar eden temalar ve kalıplar halinde kategorize edilmiştir. Bulgular, öğrencilerin dijital güvenlik, mahremiyet, siber zorbalık ve dijital bağımlılıkla ilgili önemli endişeleri olduğunu ve bunların psikolojik refahlarını ve eğitim deneyimlerini etkilediğini ortaya koymaktadır. Eğitimciler de öğrencilerin dijital güvenliği ve bunun sınıf dinamikleri üzerindeki etkisi konusunda benzer endişeler dile getirmiştir. Araştırmacılar, epoché ve paranteze alma tekniklerini kullanarak önyargıyı en aza indirmiş ve analizin özgünlüğünü ve derinliğini sağlamıştır. Bu araştırma, kapsamlı dijital okuryazarlık programları da dahil olmak üzere dijital güvenlik ve mahremiyeti ele alan eğitim politikalarına duyulan ihtiyacın altını çizmektedir. Fenomenolojik içgörüler, dijital ortamda gezinen öğrencilerin psikolojik ihtiyaçlarını ele alan empatik ve destekleyici eğitim stratejilerinin önemini vurgulamaktadır. Bulgular, dijital etkileşimin psikolojik boyutlarının daha iyi anlaşılmasına katkıda bulunmakta ve eğitimciler için içgörüler sağlamaktadır.

Anahtar Kelimeler: Dijital okuryazarlık, Dijital güvenlik, Fenomenolojik analiz, Gizlilik, Siber zorbalık

Cyber security and data privacy: Examining students' subconscious fears in the digital world-phenomenological analysis

Abstract

This study aims to explore students' subconscious fears of the digital world through the lens of Husserl's phenomenological approach. Using a qualitative research design, semi-structured interviews, reflective diaries and focus group discussions were conducted with a group of 35 Students and 12 educators from different socio-economic and cultural backgrounds. Data were analysed using phenomenological reduction, thematically coded and categorised into recurring themes and patterns. Findings reveal that students have significant concerns about digital safety, privacy, cyberbullying and digital addiction, which impact their psychological well-being and educational experiences. Educators expressed similar concerns about students' digital safety and its impact on classroom dynamics. By using epoché and bracketing techniques, the researchers minimised bias and ensured authenticity and depth of analysis. This research underlines the need for educational policies that address digital security and privacy, including comprehensive digital literacy programmes. Phenomenological insights highlight the importance of empathetic and supportive science education strategies that address the psychological needs of students navigating the digital environment. The findings contribute to a better understanding of the psychological dimensions of digital interaction, and provide insights for educators.

Keywords: Cyberbullying, Digital literacy, Digital safety, Phenomenological analysis, Privacy

* Bayburt Üniversitesi, Tıbbi Hizmetler ve Teknikler Bölümü, e-posta: ayhanaksakalli@bayburt.edu.tr
ORCID: 0000-0001-6281-5828

INTRODUCTION

Cybersecurity and data privacy have become crucial components of education in the digital age. As Students increasingly interact with digital technologies for learning, they face various online risks that could compromise their personal information and overall sense of security. These issues extend beyond technical challenges, impacting Students' psychological and emotional well-being (Bandara et al., 2014). The digital environment, rife with potential threats like hacking, phishing, and data breaches, can induce significant anxiety among Students (Fisk et al., 2015). This study aims to investigate not only the direct impacts of cybersecurity threats but also the accompanying underlying subconscious fears (Ulven & Wangen, 2021). While the integration of digital tools in education offers benefits, it also necessitates a deeper understanding of the psychological consequences these tools may have on young Students, especially those who may be less equipped to manage these risks without adequate support and guidance (Rahman et al., 2020).

The importance of examining the subconscious fears Students face in the digital world cannot be overstated (George & Odgers, 2015). Many studies have focused on the technical and behavioral aspects of cybersecurity, but the psychological dimensions are gaining recognition (Zhu et al., 2020). Students often internalize their digital experiences in ways that significantly affect their learning and behavior (Abramova et al., 2022). As Husserl (2012, p. 54) emphasized, "the essence of any experience can only be truly understood by exploring the perceptions and consciousness of those who live it." This perspective highlights the importance of delving into Students' subconscious fears to comprehensively understand their digital interactions. By focusing on these inner experiences, educators can better support Students in developing healthy digital habits and resilience against cyber threats, fostering a safer and more confident online presence (Sunderland et al., 2021).

Edmund Husserl's phenomenological approach provides a robust framework for this exploration. Phenomenology seeks to uncover the essence of experiences by examining them from a first-person perspective, free from external biases and preconceived notions (Dowling, 2007). Husserl's method of intentionality, which involves focusing on the directedness of consciousness towards specific phenomena, is particularly relevant here. By understanding what Students consciously and unconsciously focus on while navigating the digital world, educators can better address the root causes of their fears (Creely, 2018). This research applies Husserl's phenomenological principles to explore the subconscious dimensions of Students' experiences with cybersecurity and data privacy. In doing so, it aims to uncover the often-hidden fears and anxieties that shape their interactions with digital technologies (Borba et al., 2018), providing a foundation for more empathetic and effective educational strategies (O'Byrne et al., 2018).

This study seeks to provide a framework for understanding Students' experiences and subconscious fears in the digital world. Through phenomenological analysis, we aim to uncover the fundamental structures of these fears and how they manifest in Students' digital behaviors. By employing methods such as epoché and phenomenological reduction, we strive to eliminate external biases and reveal the essential elements of Students' experiences (Neisser, 1959). This approach not only illuminates the immediate reactions of Students to cybersecurity threats but also the deeper, often hidden psychological processes that shape these responses (Ruthven, 2018). Understanding these processes can help educators design interventions that align more closely with Students' psychological needs, promoting a safer and more supportive digital learning environment (Yousaf et al., 2023).

The significance of this research lies in its potential to inform the development of more effective educational strategies. By understanding Students' subconscious fears regarding cybersecurity and data privacy, educators can design interventions that address both the technical and emotional aspects of these issues (Dillard, 2011). For example, incorporating psychological

support mechanisms into cybersecurity education can help reduce anxiety and promote a safer learning environment. As Merleau-Ponty (1965) beautifully expressed, "True reflection presents me to myself not as idle and inaccessible subjectivity, but as identical with my presence in the world and to others." This reflection is crucial in designing educational practices that resonate with Students' lived experiences. Furthermore, by acknowledging and addressing these subconscious fears, educators can create a more inclusive and empathetic classroom environment where all Students feel understood and supported in their digital learning journeys (Sadala & Adorno, 2002).

Additionally, this study aims to bridge the gap between the technical and psychological dimensions of cybersecurity education (Brites, 2019). While technical competence is essential, addressing the emotional and psychological needs of Students is equally important (Herbstreit et al., 2021). The holistic understanding gained from this research can help educators create a more supportive and effective learning environment. Addressing subconscious fears is key to ensuring that Students feel secure and confident in their digital interactions, which can enhance their overall academic performance and digital literacy (Abramova et al., 2022). This dual focus on technical skills and psychological well-being can empower Students to navigate the digital world with greater assurance and resilience, preparing them for the challenges and opportunities of the digital age (Rogerson & Scott, 2010).

In conclusion, cybersecurity and data privacy are integral to Students' educational experiences in the digital age (Allcoat et al., 2021). This research aims to provide deeper insights into the psychological dimensions of these issues by examining the associated subconscious fears through Husserl's phenomenological lens. This understanding is crucial for developing comprehensive educational strategies that address both the technical and emotional aspects of cybersecurity, ultimately promoting a safer and more supportive learning environment (Twining et al., 2013). As we advance in the digital age, such nuanced insights are vital for equipping Students to navigate the complexities of the digital world with confidence and resilience (Saykılı, 2019). The insights gained from this study will not only benefit educators and policymakers but also contribute to broader discourses on digital literacy and mental health, ensuring that future generations are well-prepared to face the evolving landscape of digital threats and opportunities.

THEORETICAL FRAMEWORK

Husserl's Phenomenology

Edmund Husserl's phenomenology aims to reveal the structures of consciousness and the essence of experiences by examining them from a first-person perspective (De Warren, 2019). The concept of directionality states that consciousness is always about something and emphasizes that all experiences have an internal structure (De Warren, 2021). This concept allows phenomenologists to analyze the basic structures of experiences in order to understand conscious experiences. According to Husserl, examining these structures from a perspective free of preconceptions is the key to understanding the essence of human experience (De Warren, 2009).

Phenomenology is a particularly valuable approach to understanding unconscious processes and their impact on behavior. Unconscious processes greatly influence our perceptions and actions (De Warren, 2015). Phenomenology in education provides a deeper understanding of learning processes by examining the internal and emotional aspects of Students' experiences (Barmpouti et al., 2015). This approach can help educators to address Students' learning experiences in a more empathetic and supportive way (Standal, 2016).

In the educational context, phenomenology provides a powerful framework for understanding student experiences (Koopman & Koopman, 2017). This approach recognizes that learning is not only a cognitive activity, but also a highly personal and emotional process (Denton, 1974). By examining how Students experience learning, educators can gain insight into the factors that enhance or inhibit their engagement and success (Østergaard et al., 2008). Phenomenology also emphasizes the importance of empathy in education. By better understanding Students' experiences, educators can create a more empathetic and supportive learning environment (Howard et al., 2020, p.11). This empathic approach can help build stronger student-teacher relationships and make Students feel valued and understood.

As a result, Husserl's phenomenological approach provides a deep and comprehensive framework for exploring human experience (Sathiyaseelan, 2023). By focusing on the structures of consciousness and the essence of experiences, phenomenology provides valuable insights into both conscious and subconscious processes (Brown & Payne, 2009). In education, this approach is crucial for understanding Students' lived experiences, especially in the context of digital technologies. By applying phenomenological methods, educators can uncover hidden dimensions of student experiences and develop more effective and empathetic educational practices that support both cognitive and emotional development (Kim, 2012).

LITERATURE

Cyber Security and Data Privacy

Research on cybersecurity and data privacy has focused on the technical and behavioral aspects of these issues (Wylde et al., 2022). However, it is increasingly important to understand the psychological dimensions of this research. Husserl's phenomenological approach provides a powerful framework for exploring the subconscious fears and anxieties that Students experience in the digital world.

Students' concerns about digital identity and security have intensified with threats such as phishing scams and account takeovers (Bhatnagar & Pry, 2020). Chapman (2009), in his study on digital identity security, emphasizes the challenges individuals face in protecting their digital identities and the psychological effects of these challenges on individuals. Data privacy and privacy concerns cause Students to feel insecure in the digital world (Swedan et al., 2020). In their study on digital privacy, Ladis and Zolkefli (2021) examined how users' concerns about unauthorized sharing of personal information shake their trust in digital platforms and how this affects user behavior.

The problems experienced in online behaviors and interactions have revealed that online bullying and harassment have serious psychological effects on Students. According to Grohol (1999), in their research on online bullying, they stated that such bullying can create long-term psychological trauma on victims and negatively affect young people's social relationships.

Digital addiction and time management issues show that Students have difficulty controlling their screen time, which negatively affects their academic achievement. In their study on digital addiction, Caplan and High (2007) analyzed in detail how excessive screen time negatively affects individuals' academic and social lives. On social media and mental health, the anxiety and pressure to look perfect created by social media on Students threaten the psychological health of young people. Wang and Wang (2013), in their study on the effects of social media on young people, showed that depression and anxiety rates in young people increased with the increase in social media use.

Regarding the use of digital technologies in education, mixed opinions were obtained about the integration of digital tools into educational processes. Although digital tools are seen as an efficient educational tool for some Students, they have negative effects on some Students due to

technical problems and lack of motivation. Wajmelka and Matkovic (2021), in their study on digital educational technologies, emphasize the potential benefits of digital tools in education, as well as technical problems and difficulties in Students' adaptation to digital tools.

METHOD

Research Design

In this study, a phenomenological research design was adopted to explore Students' unconscious fears about cybersecurity and data privacy in the digital world. Developed by Edmund Husserl, phenomenology focuses on understanding the essence of experiences from the perspective of the individuals who experience them. This approach was specifically chosen for our study as it allows for an in-depth examination of Students' lived experiences and the underlying unconscious fears that influence their digital behavior (McMillan & Schumacher, 2001).

Study Group

This study used purposive sampling to select a diverse group of middle and high school Students and educators to provide detailed information about their experiences with cybersecurity and data privacy (McMillan & Schumacher, 2001). Middle and high school Students were selected due to their increased digital engagement and vulnerability to digital risks. A diverse sample of Students from various socio-economic backgrounds, genders and ethnicities was included. Educators, including teachers, school counselors and administrators, were selected for their insight and experience in teaching digital literacy. The recruitment process focused on voluntary participation and confidentiality, collaborating with schools to identify suitable participants. A sample size of approximately 30-40 Students and 10-15 educators was achieved, resulting in a rich data set (Table 1). This approach provides a solid understanding of subconscious fears around cybersecurity and data privacy, enabling effective educational strategies and interventions.

Table 1
Participants in The Study

Participant group	Number of participants	Selection criteria	Age range	Gender distribution (M/F)	Type of school
Students	35	Students from different socio-economic backgrounds, genders, ethnicities; actively engaged with digital technologies.	12-18	20/15	Middle and High School
Educators	12	Teaching experience in digital literacy or related subjects; experience in supporting Students in digital environments.	30-60	6/6	Educators from various schools

Data Collection Tool

In this article, in-depth interviews, reflective journals and focus group discussions were used as data collection tools. In-depth interviews helped us to understand in detail Students' and teachers' personal experiences and unconscious fears about digital security and data privacy. Reflective diaries allowed us to chronologically track Students' daily digital experiences and their emotional reactions in the process. Focus group interviews allowed Students to discuss their common experiences and fears, allowing for the collection of new information that emerged within the group dynamics. These

multifaceted data collection tools helped us gain the in-depth and holistic understanding required by the phenomenological approach (McMillan & Schumacher, 2001).



















Data Analysis

The data analysis for this paper is based on a phenomenological approach. First, the researchers used epoché and bracketing methods to suspend their own biases and assumptions. Thus, they were able to approach the participants' experiences in an unbiased way. The collected data were analyzed using phenomenological reduction, in which the participants' statements were carefully examined and key themes and codes were identified. Thematic analysis aimed to further categorize these themes and reveal the essence of Students' subconscious fears about digital security and data privacy. Finally, the findings were validated by sharing them with the participants and obtaining feedback through intersubjective validation (Groenawald, 2004).

FINDINGS

In this section, the data obtained from in-depth interviews, reflective diaries and focus group discussions with Students and educators were analyzed using Husserl's phenomenological approach. The results, supported by thematic analysis, revealed Students' subconscious fears about cybersecurity and data privacy in the digital world. These results were presented in the form of tables and graphs with the related themes and codes. The data reveal the depth and diversity of Students' concerns about identity theft, data privacy, and lack of digital security knowledge. Educators' observations and Students' reflective journals detail how these fears manifest in their daily digital interactions and the challenges they face. These analyses not only provide insight into Students' subconscious fears, but also show the underlying causes of these fears and their impact on Students' behavior in the digital world.

Table 2
Themes and Codes Obtained From Interviews With Students

Theme	Codes and symbols	Theme	Codes and symbols	Data analysis method
Identity Threats in the Digital World	 Identity theft,  Account takeovers,  Digital insecurity	Online Social Pressure and Bullying	 Social media pressure,  Digital bullying,  Online peer pressure	Epoché and Bracketing, Phenomenological Reduction, Thematic Analysis, Intersubjective Verification
Vulnerability of Digital Data Privacy	 Malicious use,  Social media concerns,  Fear of data sharing	Loss of Digital Privacy	 Disclosure of private information,  Privacy concerns,  Anonymity	
Lack of Digital Security Knowledge	 Lack of knowledge,  Inability to cope with digital threats,  Insecurity	Digital Fatigue and Burnout	 Disclosure of private information,  Privacy concerns,  Anonymity	





























Impact of Digital Fears on Education	 Creating digital security awareness,  Lack of educational materials,	Cyberbullying and Harassment	 Constant online presence pressure,  Digital fatigue,  Burnout
Technology Distrust Syndrome	 Distrust in technological devices,  Constant surveillance feeling,  Data privacy concerns	Inadequacy in Digital Interactions	 Bullying on digital platforms,  Cyber harassment,  Anonymous threats
Digital Addiction and Psychological Stress	 Excessive use of technology,  digital addiction,  stress and anxiety	Digital Isolation and Loneliness	 Feeling lonely in digital environments,  Social isolation,  Lack of face-to-face communication




Table 2 shows the themes and codes identified as a result of the phenomenological analysis conducted to understand Students' subconscious fears about cyber security and data privacy in the digital world.

Under the theme of Identity Threats in the Cyber World, it was observed that Students had serious concerns about identity theft (), account hijacking () and general digital insecurity (). One of the Students stated that he was “worried about identity theft and account compromise” (Interview#17). These concerns cause Students to question the security of their identity information on digital platforms and reduce their trust in these platforms.

Under the theme of Vulnerability of Digital Data Privacy, issues such as malicious use (), social media concerns () and fear of data sharing () stand out. One student said, “I am afraid that the information shared will be used by malicious people” (Interview#23). This shows that Students experience great insecurity about the control and privacy of the information they share in digital environments.

Under the theme of Insufficient Digital Security Knowledge, the concerns of lack of knowledge (), inability to cope with digital threats () and general insecurity () come to the fore. Students stated this deficiency by saying “I think I do not have enough knowledge about digital security” (Interview#8). This deficiency leads to Students' inability to effectively cope with the threats they face in the digital world and to feel vulnerable to these threats.

The theme of the Impact of Digital Fears on Education includes topics such as raising digital security awareness () and lack of educational materials (). One student expressed concern about “insufficient digital security trainings” (Interview#19). This theme shows that the inadequacy of educational institutions on digital security causes Students to lack knowledge about conscious and safe internet use.

The theme of Technology Distrust Syndrome focuses on issues such as the inability to trust technological devices (), the feeling of being constantly monitored () and data privacy concerns (). One of the Students said, “I do not trust technological devices because I feel like I

am constantly being watched” (Interview#6). This distrust causes Students to have a skeptical approach towards digital tools and feel uneasy while using them.

Under the theme of Digital Addiction and Psychological Stress, the concerns of excessive technology use (📱), digital addiction (🔒) and stress and anxiety (😟) were identified. One student said, "I feel that I am addicted to using digital devices too much and this causes me stress" (Interview#25). This situation reveals the psychological pressure of long periods of time spent in the digital world on Students and its negative effects on their daily lives.

The Online Social Pressure and Bullying theme includes topics such as social media pressure (📱), digital bullying (⚠️) and online peer pressure (📱). One student said, "I experience peer pressure and bullying on social media and other online platforms" (Interview#12). This theme shows that the social pressure and bullying that Students are exposed to in digital environments negatively affect their social relationships and psychological states.

The theme of Loss of Digital Privacy includes concerns about disclosure of private information (🔒), privacy concerns (🔒) and anonymity (👤). One of the Students expressed her privacy concerns by saying, "I am afraid that my posts will be spread beyond my control" (Interview# 34). This theme reveals that Students are concerned about protecting their personal information in the digital world and feel that their anonymity is under threat.

The Digital Fatigue and Burnout theme includes topics such as the pressure to be online all the time (📱), digital fatigue (😞) and the feeling of burnout (😞). Students stated how the long hours they spend in the digital world tire them by saying, "Having to be online all the time makes me tired and exhausted" (Interview#9). This theme refers to Students' physical and mental fatigue brought about by being constantly active in digital environments.

The Cyberbullying and Harassment theme covers topics such as bullying on digital platforms (⚠️), cyber harassment (⚠️) and anonymous threats (👤). One student expressed her fear in this regard by saying, "Threats from anonymous accounts scare me a lot" (Interview#27). This theme shows how the bullying and harassment that Students face in digital environments affect them.

The theme of Inadequacy in Digital Interactions includes topics such as lack of online communication skills (👤) and feeling inadequate in digital environments (😞). Students expressed their difficulties in this regard by saying, "I have difficulty expressing myself in online environments" (Interview#4). This theme reveals Students' feelings of inadequacy in expressing themselves in digital environments.

The theme of Digital Isolation and Loneliness covers topics such as feeling lonely in digital environments (😞), social isolation (🔒) and lack of face-to-face communication (👤). One student expressed her emotional isolation by saying, "Being in the digital world all the time makes me feel lonely" (Interview#15). This theme shows how the time Students spend in the digital world makes them lonely and causes them to feel social isolation.

In order to visualize the distribution of themes more clearly, Figure 1 presents a stacked bar graph showing the distribution of themes. This graph provides a visual representation of how often each identified theme recurs and which concerns are more prevalent.

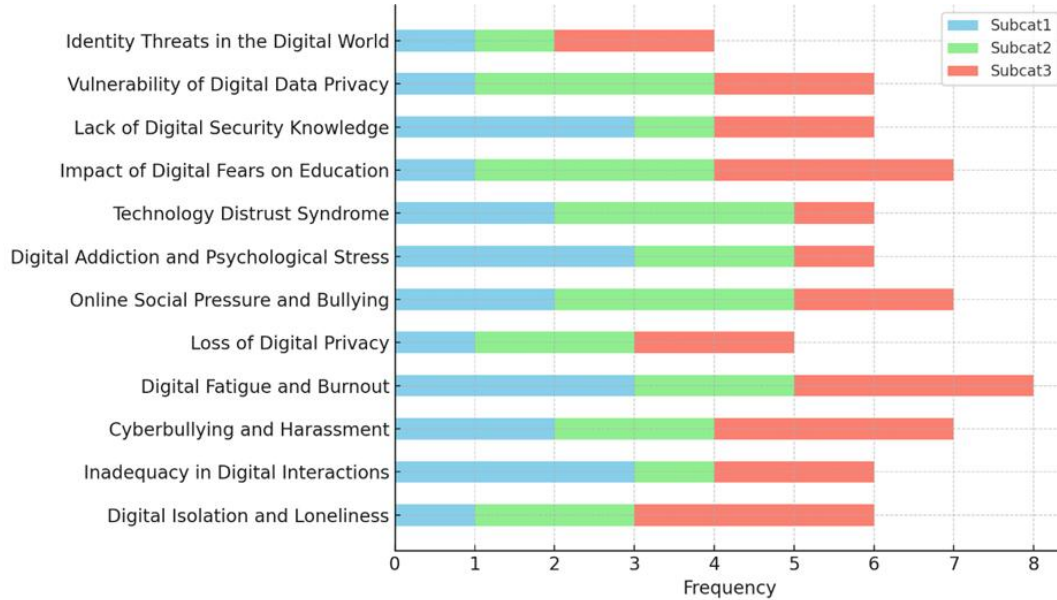


Figure 1. Thematic distribution and repetition number of Students' subconscious fears in the digital Word

Figure 1 shows the thematic distribution of subconscious fears in the digital world and the number of repetitions of these themes. The analyzed data reveals how Students feel about various digital threats and security concerns and how prevalent these fears are.

“Identity Threats in the Cyber World” theme reflects Students’ serious concerns about the security of their digital identities. Under this theme, it was observed that issues such as identity theft and compromise of accounts were frequently repeated. This situation reveals the insecurity and threat perception that Students experience in protecting their identity information in the digital world.

The theme “Fragility of Digital Data Privacy” shows that fear of data sharing and social media concerns are common among Students. Students’ fear of malicious people using the information they share shows that this theme is repeated with high frequency. This finding reveals that data privacy on digital platforms is a major concern for Students.

The theme “Insufficient Digital Security Knowledge” emphasizes Students’ lack of knowledge on digital security and the feeling of insecurity created by these deficiencies. Students stated that they did not know how to deal with digital threats. This situation shows the necessity of digital security education and the inadequacy of existing educational materials.

The theme “Syndrome of Distrust in Technology” includes distrust of technological devices and the feeling of being constantly monitored. Students have serious doubts about the reliability of digital devices and fear that these devices can be used as a tool for unauthorized surveillance. This situation increases the sensitivity about the protection of privacy in the digital world.

The theme “Digital Addiction and Psychological Stress” emphasizes the negative effects of excessive technology use and digital addiction on Students. Students reported that overuse of digital devices leads to stress and anxiety. This finding reveals the negative effects of digital addiction on Students' psychological health.

The theme “Online Social Pressure and Bullying” shows the prevalence of peer pressure and digital bullying on social media platforms. Students stated that the social pressure and bullying they were exposed to in online environments negatively affected their psychological state. This situation emphasizes the importance of creating a safe and supportive environment on digital platforms.

Other themes such as “Loss of Digital Privacy”, “Digital Fatigue and Burnout”, “Cyberbullying and Harassment”, “Inadequacy in Digital Interactions” and “Digital Isolation” and “Loneliness” similarly show the various problems Students face in the digital world and the frequencies of these problems. These themes provide important data for a deeper understanding of the challenges Students face in the digital world and the impact of these challenges on their daily lives.

The distribution of the themes presented in Figure 1 clearly reveals Students' main concerns in the digital world. However, it is also necessary to examine the distribution of the codes under these themes that detail Students' subconscious fears. Figure 2 presents a graph that visualizes how often the codes identified under each theme are repeated and the importance of these codes in the thematic structure. This graph will help to understand Students' fears in the digital world in more depth.

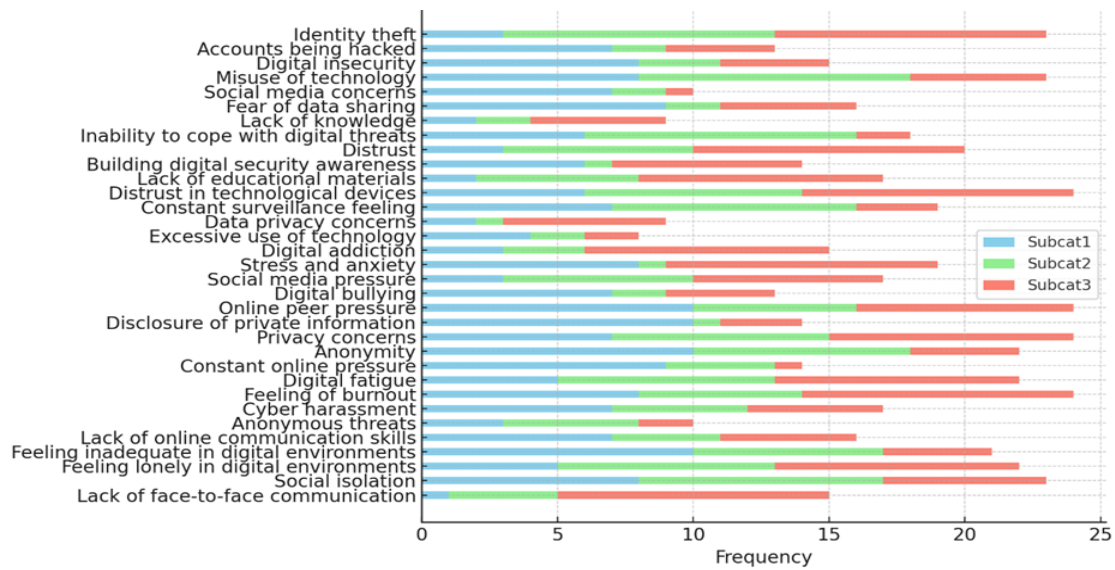


Figure 2. Code distribution and number of repetitions of Students' subconscious fears in the digital word

The code distribution in Figure 2 shows the specific elements of concern detailing Students' subconscious fears in the digital world and how often these elements are repeated. This analysis delves deeper into the specific codes under each theme, revealing Students' sensitivity to digital threats and security concerns.

Identity Theft (🔒) and Account Hijacking (🔑) codes stand out as the most frequently recurring concerns in the "Identity Threats in the Cyber World" theme. Identity theft reflects Students' fear of theft and misuse of their digital identity information. Account compromise, on the other hand, shows that Students are seriously concerned about the possibility of their digital accounts being compromised by unauthorized persons. These concerns reveal that Students are insecure about protecting their digital identities and that such threats are common.

Malicious Use (🚨) and Fear of Data Sharing (💡) codes are the most commonly mentioned concerns in the theme of "Vulnerability of Digital Data Privacy". Malicious use refers to Students' fear that the information they share in digital environments may be used by malicious people. Fear of data sharing, on the other hand, reflects the feeling of insecurity that Students experience when sharing their personal information. These findings show that data privacy on digital platforms is a major concern for Students.

Lack of Knowledge (📖) and Inability to Deal with Digital Threats (💡) codes are the prominent concerns in the theme of Insufficient Digital Security Knowledge. Students state that their lack of knowledge about digital security prevents them from effectively dealing with digital threats. This situation emphasizes the importance of digital security education and points to the inadequacy of existing educational materials.

Inability to Trust Technological Devices (📱) and Feeling of Constant Surveillance (👁️) codes are the most frequently expressed concerns in the theme of "Technology Insecurity Syndrome". Inability to trust technological devices indicates that Students have doubts about the reliability of digital devices. The feeling of being constantly monitored, on the other hand, reveals that Students think that they are monitored and their privacy is violated through digital devices. These findings show that the sensitivity about the protection of privacy in the digital world has increased.




















Excessive Use of Technology (📱) and Digital Addiction (🔒) codes are the prominent concerns in the theme "Digital Addiction and Psychological Stress". Students stated that overuse of digital devices leads to digital addiction and consequently stress and anxiety. These findings emphasize the negative effects of digital addiction on Students' psychological health.

Social Media Pressure (📱) and Digital Bullying (🚨) codes are the most commonly mentioned concerns in the "Online Social Pressure and Bullying" theme. Social media pressure refers to the peer pressure that Students are exposed to on online platforms. Digital bullying, on the other hand, reflects the bullying incidents that Students encounter in digital environments and the psychological effects of this situation. These findings show the importance of creating a safe and supportive environment on digital platforms.




Other codes such as Disclosure of Private Information (💡), Digital Fatigue (😓), Cyber Harassment (🚨), Lack of Online Communication Skills (🗣️) and Feeling Lonely in Digital Environments (😞) detail the specific concerns Students face in the digital world and the prevalence of these concerns. These codes provide important data for a deeper understanding of the various challenges Students face in the digital world and the impact of these challenges on their daily lives.




Table 3
Themes and Codes Obtained From The Interviews With Educators




Theme	Codes and symbols	Theme	Codes and Symbols	Data analysis method
Necessity of Digital Security Education	🔒 Digital security curriculum, 📖 Development of educational materials	Online Interaction and Social Media Use	🌐 Online interaction rules, 📱 Social media guidance, 🔒 Safe usage	




Data Privacy Policies	 Teacher training,  Data privacy rules,  updating policies,  legal regulations	Digital Addiction and Time Management	 Awareness of digital addiction,  Time management strategies,  Balanced use	Epoché and Bracketing, Phenomenological Reduction, Thematic Analysis, Intersubjective Verification
Technological Hardware and Software Security	 Security software,  Technological infrastructure,  hardware updates	Student Privacy and Anonymity	 Student privacy principles,  Anonymity rights,  Data protection	
Psychological Support and Counseling	 Psychological support programs,  Counseling services,  Student welfare	Cyberbullying and Safe Internet Use	 Cyberbullying prevention,  Safe internet usage training,  Raising awareness	

In Table 3, the themes and codes from the interviews with educators provide an in-depth look at various issues faced in the digital world. These themes and codes detail educators' concerns and recommendations in important areas such as digital security, privacy, psychological support and digital addiction.

“The theme of "Need for Digital Security Education” emphasizes issues such as creating a digital security curriculum (), developing educational materials () and teacher training () to increase educators' awareness on digital security. One educator stated, "More resources and support are needed for digital security curriculum and teacher training" (Interview#5).

“Under the theme of "Data Privacy Policies”, issues such as data privacy rules (), updating policies () and legal regulations () stand out. One educator stated, "Data privacy policies should be constantly updated and legal regulations should be made on this issue" (Interview#8). These findings suggest that a comprehensive policy change is needed to ensure data security in the digital world.

“The theme "Technological Hardware and Software Security” focuses on security software (), technological infrastructure () and hardware updates (). One educator said, "Security software and technological infrastructure must be kept up-to-date" (Interview#3). This theme reveals the importance of technological measures to ensure security in the digital world.

Under the “Psychological Support and Counseling” theme, there are psychological support programs (), counseling services () and student welfare (). One educator stated, "Psychological support and counseling services should be provided for Students to cope with digital addiction" (Interview#7). These findings suggest the need for psychological support to reduce the negative effects of issues such as digital addiction and stress on Students.

The theme “Online Interaction and Social Media Use” includes topics such as online interaction rules (), social media guidance () and safe use (). One educator said, "It is

important for Students to learn the rules of social media and online interaction" (Interview#4). This theme emphasizes the importance of setting safe and ethical rules of interaction in digital environments.

The "Digital Addiction and Time Management theme" focuses on digital addiction awareness (🔒), time management strategies (⌚) and balanced use (⚖️). One educator said, "Awareness should be raised about digital addiction and time management strategies should be taught" (Interview#2). These findings emphasize the role of educators and families to reduce the negative effects of digital addiction.

The theme "Student Privacy and Anonymity" includes student privacy principles (👤), anonymity rights (👤) and data protection (🔒). One educator said, "Students' privacy rights should be protected and anonymity should be guaranteed in the digital world" (Interview#6). This theme reveals the importance of protecting privacy in digital environments.

The theme "Cyberbullying and Safe Internet Use" includes cyberbullying prevention (🚫), safe internet use training (🌐) and awareness raising (📢). One educator said, "Awareness should be raised about cyberbullying and trainings should be provided on safe internet use" (Interview#1). These findings emphasize the importance of awareness raising activities to create a safe and healthy environment in the digital world.

This analysis provides a comprehensive picture of educators' concerns and solutions to security and privacy issues in the digital world. Educators' views on these issues provide important guidance for the development and implementation of digital security and privacy policies.

In this context, in order to visualize the distribution and number of repetitions of the themes mentioned by the educators more clearly, a graph showing the thematic distribution and number of repetitions is presented in Figure 3. This graph visually reveals which topics the educators emphasized more and how common these topics are.

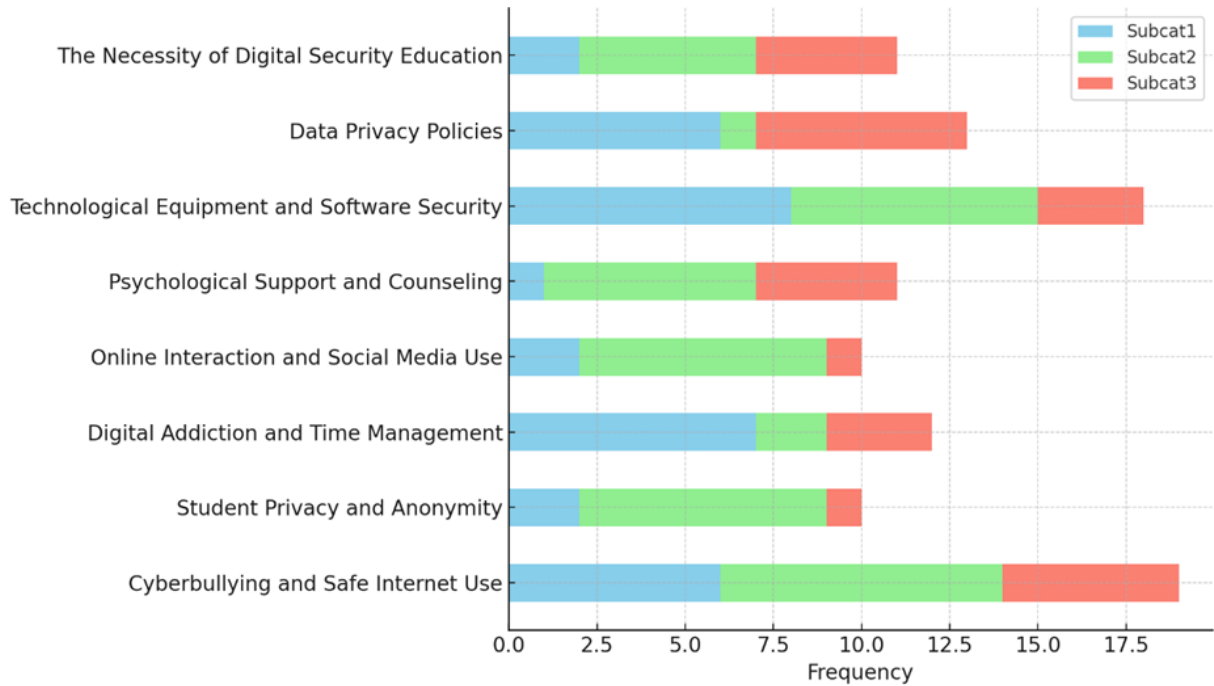


Figure 3: Distribution and number of repetitions of themes in educators' opinions

Figure 3, illustrates the distribution and number of repetitions of themes that emerged from an in-depth analysis of educators' concerns and recommendations in the digital world. This graph visually reveals which issues educators emphasized more and how prevalent they were.

The theme “The Need for Digital Security Training” emphasizes issues such as the creation of a digital security curriculum and teacher training in order to increase the awareness of educators on digital security and to ensure that they are adequately equipped in this regard. The high frequency of repetition of this theme shows the importance and urgency of digital security training.

The theme “Data Privacy Policies” emphasizes policies and legal regulations that need to be constantly updated to ensure data security in the digital world. The frequent mention of this theme reveals that protecting data privacy on digital platforms is a critical concern for educators.

The theme “Technological Hardware and Software Security” reflects concerns about security software and the need to keep technological infrastructure up-to-date. Educators emphasize the importance of technological measures to ensure security in the digital world. The repetition of this theme sends a strong message that digital security needs to be supported by technological infrastructure.

The theme “Psychological Support and Counseling” emphasizes the need for psychological support to reduce the negative effects of issues such as digital addiction and stress on Students. Educators stated that psychological support programs and counseling services would help Students cope with the challenges they face in the digital world. The high frequency of this theme reveals the importance of maintaining psychological health in the digital world.

The theme “Online Interaction and Social Media Use” emphasizes the importance of informing Students about safe and ethical interaction rules in online environments. Educators stated

that social media guidance and determining the rules of online interaction would enable Students to act more consciously in the digital world. The frequent mention of this theme emphasizes the role of educators in ensuring safe interaction in digital environments.

The theme “Digital Addiction and Time Management” includes the steps that need to be taken to reduce the negative effects of digital addiction and to raise Students' awareness about time management. Educators emphasized the importance of raising awareness about digital addiction and teaching time management strategies. The repetition of this theme emphasizes the role of educators and families in preventing the overuse of digital devices.

The theme “Student Privacy and Anonymity” emphasizes the need to protect Students' privacy rights and ensure their anonymity in the digital world. Educators stated that student privacy principles and data protection measures should be tightened. The high frequency of this theme reveals the importance of protecting privacy in digital environments.

The theme “Cyberbullying and Safe Internet Use” emphasizes the importance of raising awareness about cyberbullying and training on safe internet use. Educators stated that Students should be made aware of cyberbullying and trained on safe internet use. Although this theme is repeated with low frequency, it emphasizes the importance of raising awareness to create a safe and healthy environment in the digital world.

In order to visualize the distribution and repetition of the codes more clearly, Figure 4 presents a graph showing the distribution and repetition of the codes. This graph visually reveals how often the codes mentioned by the educators are repeated in which themes.

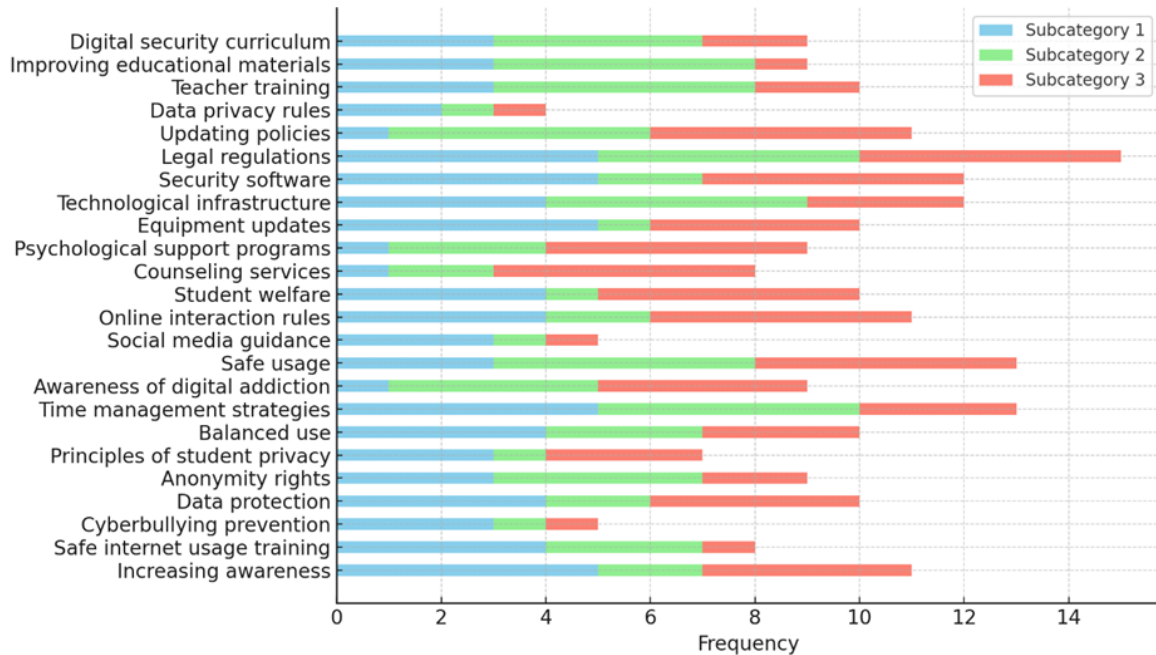


Figure 4: Number of Repetition of Codes For Themes Obtained From Educator Opinions

Figure 4, provides a visual representation of the distribution and repetition of codes reflecting educators' concerns and suggestions on various issues in the digital world. This graph helps us understand which codes are repeated more frequently and which themes stand out.

“Digital security curriculum and teacher training” codes were frequently emphasized by educators to draw attention to the importance of digital security. Educators stated that a digital security curriculum should be created and teachers should receive adequate training on this subject. The high frequency of repetition of these codes shows how critical digital security education is for educators.

The codes “Updating data privacy rules and policies” reflect concerns about the need to update and tighten existing policies to ensure data security in the digital world. Educators emphasized the need to continuously update data privacy rules and strengthen legal regulations. The frequent mention of these codes reveals that data security is a high priority for educators.











“Psychological support programs and counseling services” codes emphasize the necessity of psychological support to reduce the negative effects of issues such as digital addiction and stress on Students. Educators stated that psychological support programs and counseling services would help Students cope with the challenges they face in the digital world. The high frequency of repetition of these codes indicates the importance of maintaining psychological health in the digital world.

“Security software and technological infrastructure” codes emphasize the importance of technological measures to ensure security in the digital world. Educators stated that security software should be used effectively and technological infrastructure should be kept up-to-date. The frequent mention of these codes gives a strong message that digital security should be supported by technological infrastructure.

The codes “cyberbullying prevention and safe internet use training” emphasize that Students should be made aware of cyberbullying and trained on safe internet use. Educators stated that Students should gain awareness about cyberbullying and receive training on safe internet use. The high frequency of repetition of these codes emphasizes the importance of raising awareness to create a safe and healthy environment in the digital world.

This analysis provides a comprehensive picture of educators' concerns and solutions to security and privacy issues in the digital world. Educators' views on these issues provide important guidance for the development and implementation of digital security and privacy policies. This graph provides a visual representation of which issues educators emphasize more and how prevalent these issues are.

Table 4
Themes and Codes Obtained From Student Reflective Journals

Theme	Codes and symbols	Data analysis method
Digital Security Concerns	 Identity theft	Coding, Thematic Analysis, Intersubjective Verification
Digital Security Concerns	 Account security	
Data Privacy and Confidentiality	 Personal data breaches	
Data Privacy and Confidentiality	 Feeling of being watched	
Cyberbullying and Harassment	 Online bullying	
Cyberbullying and Harassment	 Anonymous harassment	
Digital Addiction and Time Management	 Fear of addiction	
Digital Addiction and Time Management	 Time management issues	
Social Media and Online Interaction	 Social pressure	
Social Media and Online Interaction	 Loneliness and isolation	

The findings from the reflective journals reveal various subconscious fears and concerns that Students face in the digital world. These findings were categorized under five main themes: digital security concerns, data privacy and confidentiality, cyberbullying and harassment, digital addiction and time management, social media and online interaction. In-depth analysis of each theme and code contributes to understanding Students' experiences in the digital world and how these experiences affect their learning processes.

Digital security concerns are one of the most common issues Students face in the digital world. Fears about identity theft and account security reflect Students' concerns about having their online credentials stolen and their social media accounts hacked. These findings emphasize the importance of digital security education and awareness raising. Educators and parents should make Students aware of these issues to ensure their safety in the digital world. In addition, digital platforms need to protect their users by increasing security measures.

Data privacy and confidentiality concerns include Students' fears about the protection of their personal data and the feeling of being tracked. Personal data breaches and the feeling of being tracked reflect Students' concerns about their privacy being violated in the digital world. These findings highlight the importance of digital platforms' responsibility to protect user data. Educational institutions should educate Students about data privacy so that they can act in an informed manner. In addition, necessary measures should be taken to protect data privacy through legal regulations.

Cyberbullying and harassment is one of the 34nony problems Students face in the digital world. Online bullying and 34nonymous harassment reflect cases of bullying and harassment that Students are exposed to on social media and other platforms. These findings suggest that digital bullying needs to be tackled. Educators should raise Students' awareness of cyberbullying and teach strategies to deal with such situations. Furthermore, digital platforms need to take more effective measures to prevent cyberbullying.

Digital addiction and time management issues include Students' concerns about addiction to digital devices and time management. Fear of addiction and time management issues reflect Students' difficulties in achieving balance in the digital world. These findings emphasize the importance of developing time management skills and coping with digital addiction. Educators and

parents should help Students develop healthy habits in the digital world. Furthermore, schools should organize programs and workshops to increase Students' time management skills.

Concerns about social media and online interaction include Students' fears of social pressure and loneliness. Social pressure and loneliness and isolation reflect Students' fears of pressure from social media and the effects of online interactions on real social connections. These findings suggest that social interactions and real-world connections need to be balanced in the digital world. Educators and parents should encourage Students to engage in healthy interactions on social media and guide them to strengthen real-world social connections.

These findings from reflective journals provide important clues for understanding the subconscious fears and concerns that Students face in the digital world. Issues such as digital security, data privacy, cyberbullying, digital addiction and social media use are key areas that need to be addressed for Students to have a healthy and safe presence in the digital world. Educators, parents and digital platform providers should work together to address these concerns and enable Students to have better experiences in the digital world. These findings provide an important basis for understanding the problems encountered in the digital world and developing solutions. To examine the frequency of repetition of the codes from the reflective journals in a more visual way, Figure 5, which shows the frequency of use of the codes, is presented below.

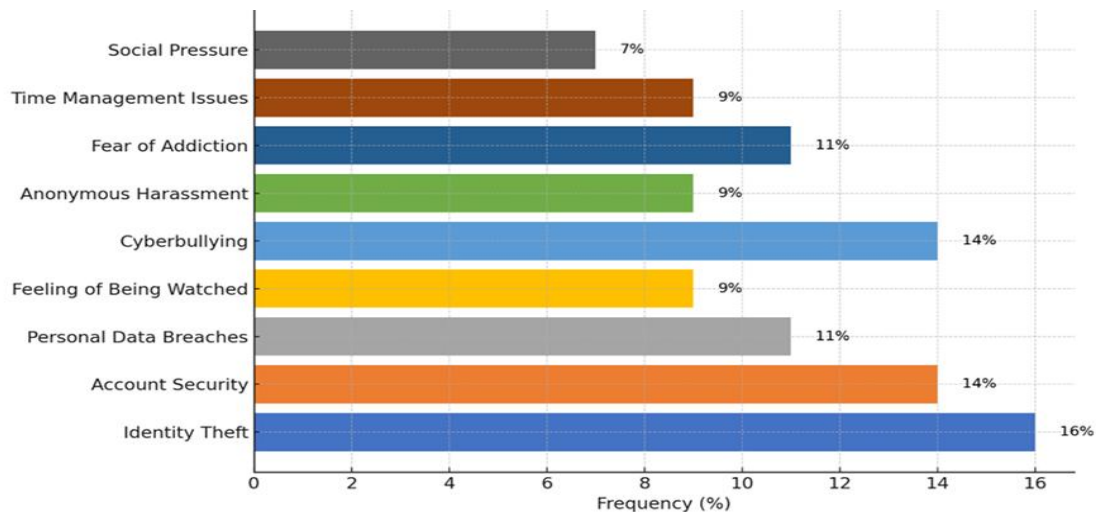


Figure 5. Frequency of Repetition Of Codes Obtained From Reflective Journals

As seen in Figure 5, the frequency of use of the codes reflecting Students' subconscious fears in the digital world is visualized with a stacked bar graph. This graph clearly reveals how often each code is mentioned by the Students.

"Identity Theft and Account Security" codes have the highest frequency, indicating that digital security concerns are common among Students. The fear of having their credentials stolen and accounts compromised is one of the major problems Students face in the digital world.

Personal Data Breaches and Feeling of Being Monitored" codes reveal that data privacy and confidentiality concerns are also evident. Students frequently expressed their discomfort with the unauthorized use of their personal information and the feeling of being constantly monitored.

The "Online Bullying and Anonymous Harassment" codes indicate that cyberbullying and harassment are a common concern among Students. These findings emphasize the need to combat digital bullying and develop Students' strategies to cope with such situations.

The codes "Fear of Addiction and Time Management Problems" reflect Students' difficulties with digital addiction and time management. These codes reveal Students' concerns about maintaining balance in the digital world and their need for support in this regard.

The codes "Social Pressure and Loneliness and Isolation" show the effects of social media and online interactions on Students' psychological health. Pressures from social media and insufficient online interactions cause Students to feel loneliness and isolation.

Table 5
Themes and Codes Obtained From Focus Group Discussions With Students











Theme	Code	Symbols	Data analysis	Description
Digital Identity and Security	Phishing scams		Coding, Thematic Analysis, Intersubjective Verification	Attempts to steal Students' identity information
Digital Identity and Security	Account takeover incidents			Incidents of Students' accounts being taken over
Data Privacy and Confidentiality	Unauthorized sharing of personal data			Unauthorized use of Students' personal data
Data Privacy and Confidentiality	Social media profile information			Privacy of personal information on social media platforms
Online Behaviors and Interaction	Online bullying and harassment			Bullying and harassment incidents in digital environments
Digital Addiction and Time Management	Screen time control			Difficulties in controlling Students' digital device usage times
Social Media and Mental Health	Social media anxiety			Anxiety caused by social media on Students
Digital Technologies in Education	Use of digital tools in education			Integration of digital tools into educational processes
Psychological and Physical Health	Digital media and sleep disorders			Effects of digital devices on sleep patterns
Technological Innovation and Society	Adaptation to new technologies			Difficulties in adapting to new technologies

Table 5, summarizes in detail the themes, codes, symbols, data analysis methods and explanations obtained from the focus group interviews and the challenges Students face in the digital world. The data obtained from the focus group interviews conducted with a total of 12 Students are analyzed below. In this analysis, the views of the participants are also included.

Digital world. Students expressed great fear when faced with threats such as phishing scams and account takeovers. For example, Student 7 expressed his concern by saying, "I am afraid of being exposed to phishing scams in e-mail messages. Sometimes it is difficult to distinguish whether it is real or fake." Similarly, Student 2 stated, "I am very afraid of my social media accounts being hacked. Even though I take security measures, my worries do not end."

Data privacy and confidentiality issues are also a major concern for Students. Students stated that they were disturbed by the unauthorized sharing of their personal data and the use of personal information on social media platforms by malicious people. Student 9 said, "It bothers me a lot that applications collect and share my personal data without my permission." Student 6 said, "The thought that the information I share on social media can be used by malicious people makes me very uneasy."

Problems in online behaviors and interactions, especially online bullying and harassment, negatively affect Students' psychological health. Student 3 emphasized how disturbing such experiences are by saying, "I am constantly bullied in online games and social media. This affects my psychology negatively."

Regarding digital addiction and time management, it was observed that Students had difficulties in controlling their digital device usage time. Student 10 said, "I spend too much time in front of the screen and this negatively affects my studying." He stated that the inability to control screen time has negative effects on academic performance.

On social media and mental health, the anxiety caused by social media on Students and the pressure to look perfect on social media is a common source of concern. Student 12 expressed how intense this pressure is when he said, "Feeling like I have to constantly follow updates on social media makes me anxious."

In the use of digital technologies in education, there are mixed opinions about the integration of digital tools into educational processes. Student 8 expressed both the advantages and disadvantages of digital education tools by saying, "Online lessons are sometimes productive, but when there are technical problems, my motivation decreases."

In terms of psychological and physical health, the negative effects of digital devices on sleep patterns were frequently mentioned. Student 11 emphasized the negative effects of digital media on sleep by saying, "Using the phone until late at night disrupts my sleep pattern."

In the context of technological innovation and society, difficulties in adapting to new technologies were frequently mentioned. Student 1 expressed the difficulties of the process of adapting to technological changes by saying, "It is difficult to get used to new technologies, especially constant updates and learning new features takes time."

In conclusion, the analysis of Table 5 provides a comprehensive picture of the various challenges Students face in the digital world and how these challenges impact their daily lives and academic performance. These findings provide important guidance for educators, parents and digital platform providers. These concerns need to be addressed and solutions developed to ensure that Students have a safer and healthier experience in the digital world.

For a better understanding of the findings obtained from the focus group interviews, it would be useful to visually examine the frequency of repetition of the codes obtained from the focus group interviews. In this sense, Figure 6 was utilized for the frequency of repetition of the codes.

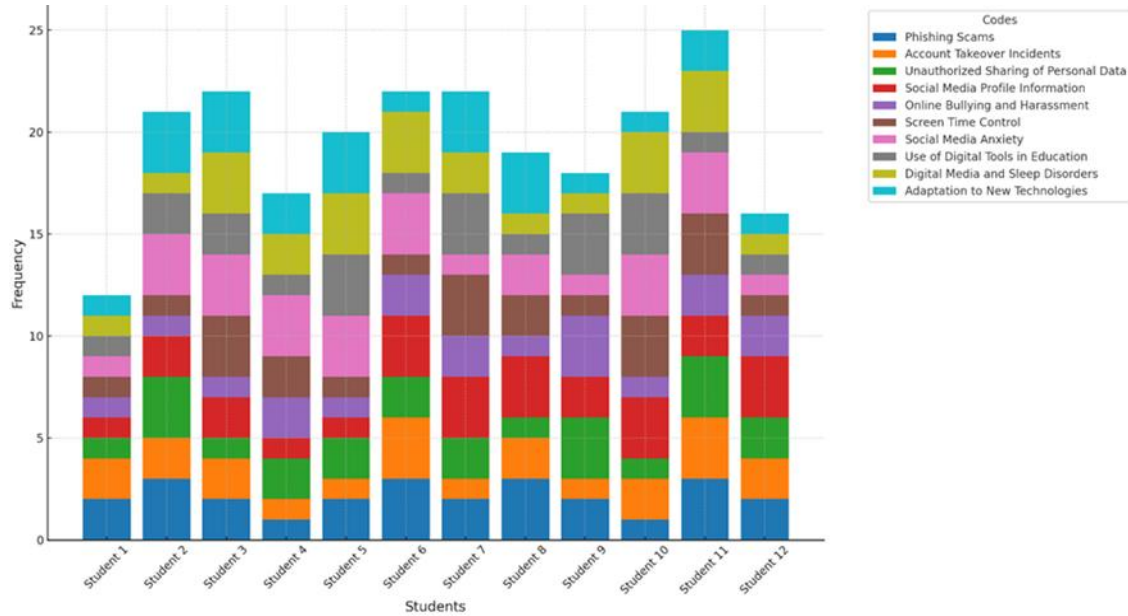


Figure 6. Frequency of Repetition of Codes Obtained From Focus Group Discussions

Figure 6 shows the frequency of repetition of various codes related to Students' subconscious fears in the digital world for 12 Students. This graph visually reveals the most common concerns and fears that Students face in the digital environment.

Overall, the graph provides important clues for understanding the main problems Students experience in the digital world and the frequency of these problems. The most prominent concerns include online bullying and harassment, social media anxiety, and the effects of digital media use on sleep patterns. This highlights the negative impacts of Students' social interactions and media consumption in the digital world on their psychological and physical health.

Digital identity and security issues are also a common concern among Students. Phishing scams and account hijacking incidents show that security risks in the digital environment occupy an important place in Students' subconscious. Similarly, unauthorized sharing of personal data and privacy of social media profile information reflect Students' concerns about data privacy and confidentiality.

Issues such as the use of digital tools in education and adaptation to new technologies reveal the difficulties Students experience in their interactions with digital technologies. This provides important insights into how Students perceive digital tools and their integration in educational processes.

CONCLUSION

The findings of this study provide important insights into the subconscious fears that Students face in the digital world. Issues such as cybersecurity, data privacy, online behavior and digital addiction were identified as the main areas of concern that shape Students' experiences in the digital world. Using Husserl's phenomenological approach, this study explored the psychological dimensions of Students' interactions in the digital world. Students' concerns about cybersecurity and digital identity are directly related to security threats in the digital world. Trimula et al. (2016)

highlighted the psychological effects of digital identity security on individuals and showed that these effects are more pronounced among young people. Students' fears when faced with threats such as phishing scams and account takeovers make it difficult for them to feel safe in the digital world. Data privacy and confidentiality concerns are another important factor that causes Students to feel insecure in the digital world. Bhatnagar and Pry (2020) examined how users' concerns about unauthorized sharing of personal information shake their trust in digital platforms. In this study, it was observed that Students feared that personal information on social media platforms could be used by malicious people.

Problems in online behaviors and interactions, especially online bullying and harassment, have been shown to have serious psychological effects on Students. Freis and Gurung (2014) stated that online bullying can create long-term psychological trauma on victims and negatively affect young people's social relationships. Digital addiction and time management issues show that Students have difficulty controlling their screen time, which negatively affects their academic achievement. In their study on digital addiction, Widyanto et al. (2011) analyzed in detail how excessive screen time negatively affects individuals' academic and social lives. On social media and mental health, the anxiety and pressure to look perfect created by social media on Students threaten the psychological health of young people. Braghieri et al. (2022), in their study on the effects of social media on young people, showed that depression and anxiety rates in young people increased with the increase in social media use.

DISCUSSION

In light of these findings, several recommendations can be made for educators, parents and digital platform providers. First, digital literacy trainings need to be increased. Educators should develop comprehensive educational programs on cybersecurity and data privacy to help Students cope with the challenges they face in the digital world. Students should be encouraged to learn and practice strategies to stay safe in the digital world. Educators' understanding of Students' subconscious fears about digital security and privacy can help them develop more effective and empathetic educational strategies. These strategies will enable Students to feel more secure and confident in interacting with digital technologies (Chowdhury et al., 2022).

Parents should support their children's activities in the digital world and make them aware of digital safety and privacy issues. Children should be guided to manage their digital device use in a healthy way and control screen time. Digital platform providers should take stronger measures to ensure the security of user data and organize awareness campaigns to increase users' safety (Livingstone et al., 2011). Finally, future research should be expanded to gain a deeper understanding of Students' subconscious fears in the digital world and develop more effective strategies to overcome these fears. Educational policies should include more inclusive and student-centered approaches to digital safety and privacy.

The results show that Students' interactions with digital technologies have not only technical but also emotional and psychological dimensions. Therefore, educational policies and practices should more comprehensively address Students' experiences in the digital world. Educators' understanding of Students' subconscious fears about digital safety and privacy can help them develop more effective and empathetic educational strategies. Thus, Students can act more confidently and confidently in the digital world (Ribble et al., 2004). These findings emphasize that important steps need to be taken for a safer and healthier experience in the digital world. In light of these findings, educators, parents, and digital platform providers should work collaboratively to ensure that Students have a safer and healthier experience in the digital world (Gleason & von Gillern, 2018).

REFERENCES

- Abramova, S. B., Antonova, N. L., Campa, R., & Popova, N. G. (2022). Digital fears experienced by young people in the age of technoscience. *Changing Societies & Personalities*. 2022. Vol. 6. Iss. 1, 6(1), 56-78. <https://doi.org/10.15826/csp.2022.6.1.163>
- Allcoat, D., Hatchard, T., Azmat, F., Stansfield, K., Watson, D., & von Mühlenen, A. (2021). Education in the digital age: Learning experience in virtual and mixed realities. *Journal of Educational Computing Research*, 59(5), 795-816. <https://doi.org/10.1177/0735633120985120>
- Bandara, I., Ioras, F., & Maher, K. (2014). Cyber security concerns in e-learning education. In *ICERI2014 Proceedings* (pp. 728-734). IATED. <https://library.iated.org/view/BANDARA2014CYB>
- Barmpouti, I., Vrettou, M., & Oungrinis, K. A. (2015). The role of phenomenology in education procedure. In *Proceedings of ADVED15 International Conference on Advances in Education and Social Sciences, Istanbul* (pp. 656-665). <https://d1wqtxts1xzle7.cloudfront.net/75451346/234-libre.pdf?>
- Bhatnagar, N., & Pry, M. (2020). Student Attitudes, Awareness, and Perceptions of Personal Privacy and Cybersecurity in the Use of Social Media: An Initial Study. *Information Systems Education Journal*, 18(1), 48-58. <https://eric.ed.gov/?id=EJ1246231>
- Borba, M. C., Gadanidis, G., & Llinares, S. (2018). *Digital technology in mathematics education: Research over the last four decades*. In M. T. Nguyen & H. Le (Eds.), *Handbook of Research on Teaching and Learning Mathematics in the Digital Age* (pp. 1-35). IGI Global.
- Braghieri, L., Levy, R. E., & Makarin, A. (2022). Social media and mental health. *American Economic Review*, 112(11), 3660-3693. <https://www.aeaweb.org/articles?id>
- Brites, M. J. (2019). " We don't know how to work with the media or develop it with Students": Discourses and fears from the teachers. In *edulearn19 Proceedings* (pp. 5153-5158). IATED. <https://library.iated.org/view/BRITES2019WED>
- Brown, T. D., & Payne, P. G. (2009). Conceptualizing the phenomenology of movement in physical education: Implications for pedagogical inquiry and development. *Quest*, 61(4), 418-441. <https://doi.org/10.1080/00336297.2009.10483624>
- Caplan, S. E., & High, A. C. (2007). Online social interaction, psychosocial well-being, and problematic Internet use. *Internet addiction: A handbook and guide to evaluation and treatment*, 35-53. <https://doi.org/10.1002/9781118013991.ch3>
- Chapman, J. (2019). How Safe is Your Data? Cyber-security in Higher Education. <https://www.hepi.ac.uk/wp-content/uploads/2019/03/>
- Chowdhury, N., Katsikas, S., & Gkioulos, V. (2022). Modeling effective cybersecurity training frameworks: A delphi method-based study. *Computers & Security*, 113, 102551. <https://doi.org/10.1016/j.cose.2021.102551>
- Creely, E. (2018). 'Understanding things from within'. A Husserlian phenomenological approach to doing educational research and inquiring about learning. *International Journal of Research & Method in Education*, 41(1), 104-122. <https://doi.org/10.1080/1743727X.2016.1182482>

- De Warren, N. (2009). Time and the Double-Life of Subjectivity: On Rudolf Bernet's "Introduction" to Husserl's Phenomenology of Inner Time-Consciousness. *Journal of the British Society for Phenomenology*, 40(2), 155-170. <https://www.tandfonline.com/doi/pdf/10.1080/00071773.2009.11006679?>
- De Warren, N. (2015). Eyes Wide Shut: Sartre's Phenomenology of Dreaming. In *Philosophy of Mind and Phenomenology* (pp. 224-244). Routledge. <https://www.taylorfrancis.com/chapters/edit/10.4324/9781315889634-16/>
- De Warren, N. (2019). Husserl's awakening to speech: Phenomenology as "Minor Philosophy". In *The New Yearbook for Phenomenology and Phenomenological Philosophy* (pp. 161-174). Routledge. <https://www.taylorfrancis.com/chapters/edit/10.4324/9780429061158-11/>
- De Warren, N. (2021). "If I am to call myself a philosopher": Husserl's critical phenomenology of reason in Ideas I. In *The Husserlian mind* (pp. 22-37). Routledge. <https://www.taylorfrancis.com/chapters/edit/10.4324/9780429243790-4/>
- Denton, D. E. (1974). Existentialism and phenomenology in education: Collected essays. <https://philpapers.org/rec/DENEAP>
- Dillard, T. E. (2011). *Privacy and security implications of undergraduate Students using Facebook: A quantitative examination* (Doctoral dissertation, Capella University). <https://www.proquest.com/docview/861343761?pq->
- Dowling, M. (2007). From Husserl to van Manen. A review of different phenomenological approaches. *International journal of nursing studies*, 44(1), 131-142. <https://doi.org/10.1016/j.ijnurstu.2005.11.026>
- Fisk, G., Ardi, C., Pickett, N., Heidemann, J., Fisk, M., & Papadopoulos, C. (2015). Privacy principles for sharing cyber security data. In 2015 IEEE Security and Privacy Workshops. *IEEE*, 193-197. <https://doi.org/10.1109/SPW.>
- Freis, S. D., & Gurung, R. A. (2013). A Facebook analysis of helping behavior in online bullying. *Psychology of popular media culture*, 2(1), 11. <https://doi.org/10.1037/a0030239>
- Fumudoh, S., & Viswanathan, U. (2014). Exploring the relationship between online privacy on cyber security. <https://www.diva-portal.org/smash/record.jsf?pid=diva2%3A1026488&dswid=8571>
- George, M. J., & Odgers, C. L. (2015). Seven fears and the science of how mobile technologies may be influencing adolescents in the digital age. *Perspectives on psychological science*, 10(6), 832-851. <https://doi.org/10.1177/1745691615596788>
- Gleason, B., & Von Gillern, S. (2018). Digital citizenship with social media: Participatory practices of teaching and learning in secondary education. *Journal of Educational Technology & Society*, 21(1), 200-212. <https://www.jstor.org/stable/26273880?>
- Groenewald, T. (2004). A phenomenological research design illustrated. *International journal of qualitative methods*, 3(1), 42-55. <https://doi.org/10.1177/160940690400300104>
- Grohol, J. M. (1999). Too much time online: Internet addiction or healthy social interactions? *CyberPsychology & Behavior*, 2(5), 395-401. <https://doi.org/10.1089/cpb.1999.2.395>
- Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable operations and computers*, 3, 275-285. <https://doi.org/10.1016/j.susoc.2022.05.004>

- Herbstreit, S., Gestmann, M., Szalai, C., & Diehl, A. (2021). Are medical Students equipped for digital studies? Have their hopes and fears been confirmed during Covid-19? What should we consider in the future? *Journal of European CME*, 10(1), 2014098. <https://doi.org/10.1080/21614083.2021.2014098>
- Howard, P., Tone, S., Andrew, F., & Biesta, G. (2020). *Phenomenology and educational theory in conversation*. Routledge. file:///C:/Users/User/Downloads/10.4324_9780429264696_previewpdf%20(1).pdf
- Husserl, E. (2012). *Ideas: General Introduction to Pure Phenomenology*. London: Routledge.
- Kim, J. H. (2012). Understanding the Lived Experience of a Sioux Indian Male Adolescent: Toward the pedagogy of hermeneutical phenomenology in education. *Educational Philosophy and Theory*, 44(6), 630-648. <https://doi.org/10.1111/j.1469-5812.2010.00733.x>
- Koopman, O., & Koopman, O. (2017). Phenomenology as a method in education research. *Science education and curriculum in South Africa*, 1-24. https://link.springer.com/chapter/10.1007/978-3-319-40766-1_1
- Ladis, H., & Zolkefli, Y. (2021). Healthcare Students' Views on Protecting Patients' Privacy and Confidentiality. *International Journal of Nursing Education*, 13(4). https://www.researchgate.net/profile/Yusrita-Zolkefli-2/publication/353463760_
- Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2011). Risks and safety on the internet: the perspective of European children: full findings and policy implications from the EU Kids Online survey of 9-16 year olds and their parents in 25 countries. [https://eprints.lse.ac.uk/33731/1/Risks%20and%20safety%20on%20the%20internet\(lsero\).pdf](https://eprints.lse.ac.uk/33731/1/Risks%20and%20safety%20on%20the%20internet(lsero).pdf)
- McMillan, J. H., & Schumacher, S. (2001). *Research in education: A conceptual introduction*. Longman. <https://thuvienso.hoasen.edu.vn/handle/123456789/9805>
- Merleau-Ponty, M. (1965). Phenomenology of perception. *Translated by Colin Smith*. <https://books.google.com.tr/books?hl=>
- Neisser, H. P. (1959). The phenomenological approach in social science. *Philosophy and Phenomenological Research*, 20(2), 198-212. <https://www.jstor.org/stable/2104356>
- O'Byrne, W. I., Houser, K., Stone, R., & White, M. (2018). Digital storytelling in early childhood: Student illustrations shaping social interactions. *Frontiers in psychology*, 9, 1800. <https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2018.01800/full>
- Østergaard, E., Dahlin, B., & Hugo, A. (2008). Doing phenomenology in science education: A research review. *Studies in science education*, 44(2), 93-121. <https://www.tandfonline.com/doi/full/10.1080/03057260802264081>
- Rahman, N. A. A., Sairi, I. H., Zizi, N. A. M., & Khalid, F. (2020). The importance of cybersecurity education in school. *International Journal of Information and Education Technology*, 10(5), 378-382. <https://www.semanticscholar.org/paper>
- Ribble, M. S., Bailey, G. D., & Ross, T. W. (2004). Digital citizenship: Addressing appropriate technology behavior. *Learning & Leading with technology*, 32(1), 6. <https://eric.ed.gov/?id=EJ695788>

- Rogerson, C., & Scott, E. (2010). The fear factor: How it affects Students learning to program in a tertiary environment. *Journal of Information Technology Education: Research*, 9(1), 147-171. <https://www.learntechlib.org/p/111361/>
- Ruthven, K. (2018). Instructional activity and student interaction with digital resources. *Research on mathematics textbooks and teachers' resources: advances and issues*, 261-275. https://link.springer.com/chapter/10.1007/978-3-319-73253-4_12
- Sadala, M. L. A., & Adorno, R. D. C. F. (2002). Phenomenology as a method to investigate the experience lived: a perspective from Husserl and Merleau Ponty's thought. *Journal of advanced nursing*, 37(3), 282-293. <https://doi.org/10.1046/j.1365-2648.2002.02071.x>
- Sathiyaseelan, S. (2023). Transformational leaders in higher education administration: understanding their profile through phenomenology. *Asia Pacific Journal of Education*, 43(4), 1091-1106. <https://doi.org/10.1080/02188791.2021.1987185>
- Saykılı, A. (2019). Higher education in the digital age: The impact of digital connective technologies. *Journal of Educational Technology and Online Learning*, 2(1), 1-15. <https://doi.org/10.31681/jetol.516971>
- Standal, O. (2016). *Phenomenology and pedagogy in physical education*. Routledge. <https://doi.org/10.4324/9781315775982>
- Sunderland, N., Robinson, K., & Burgess, A. (2021). Overcoming future professionals' fear of digital storytelling. *Australian Social Work*, 74(1), 13-28. <https://doi.org/10.1080/0312407X.2020.1762098>
- Swedan, S., Khabour, O. F., Alzoubi, K. H., & Aljabali, A. A. (2020). Graduate Students reported practices regarding the issue of informed consent and maintaining of data confidentiality in a developing country. *Heliyon*, 6(9). [https://www.cell.com/heliyon/fulltext/S2405-8440\(20\)31783-7](https://www.cell.com/heliyon/fulltext/S2405-8440(20)31783-7)
- Tirumala, S. S., Sarrafzadeh, A., & Pang, P. (2016, December). A survey on internet usage and cybersecurity awareness in Students. In *2016 14th annual conference on privacy, security and trust (PST)* (pp. 223-228). IEEE. <https://ieeexplore.ieee.org/abstract/document/7906931>
- Twining, P., Raffaghelli, J., Albion, P., & Knezek, D. (2013). Moving education into the digital age: the contribution of teachers' professional development. *Journal of computer assisted learning*, 29(5), 426-437. <https://doi.org/10.1111/jcal.12031>
- Ulven, J. B., & Wangen, G. (2021). A systematic review of cybersecurity risks in higher education. *Future Internet*, 13(2), 39. <https://doi.org/10.3390/fi13020039>
- Vejmelka, L., & Matković, R. (2021). Online interactions and problematic internet use of croatian Students during the covid-19 pandemic. *Information*, 12(10), 399.
- Wang, E. S. T., & Wang, M. C. H. (2013). Social support and social interaction ties on internet addiction: Integrating online and offline contexts. *Cyberpsychology, Behavior, and Social Networking*, 16(11), 843-849. <https://doi.org/10.1089/cyber.2012.0557>
- Widianto, L., Griffiths, M. D., & Brunson, V. (2011). A psychometric comparison of the Internet Addiction Test, the Internet-Related Problem Scale, and self-diagnosis. *Cyberpsychology, Behavior, and Social Networking*, 14(3), 141-149. <https://doi.org/10.1089/cyber.2010.0151>
- Wylde, V., Rawindaran, N., Lawrence, J., Balasubramanian, R., Prakash, E., Jayal, A., ... & Platts, J. (2022). Cybersecurity, data privacy and blockchain: A review. *SN computer science*, 3(2), 127. <https://link.springer.com/article/10.1007/s42979-022-01020-4>

- Yousaf, H. Q., Rehman, S., Ahmed, M., & Munawar, S. (2023). Investigating Students' satisfaction in online learning: the role of Students' interaction and engagement in universities. *Interactive Learning Environments*, 31(10), 7104-7121. <https://doi.org/10.1080/10494820.2022.2061009>
- Zhu, S., Saravanan, V., & Muthu, B. (2020). Achieving data security and privacy across healthcare applications using cyber security mechanisms. *The Electronic Library*, 38(5/6), 979-995. <https://doi.org/10.1108/EL-07-2020-0219/full/>

GENİŞLETİLMİŞ ÖZET

Giriş: Bu çalışma, dijital dünyada öğrencilerin siber güvenlik ve veri gizliliği ile ilgili bilinçaltı korkularını Edmund Husserl'in fenomenolojik yaklaşımıyla incelemeyi amaçlamaktadır. Günümüzde dijital teknolojiler eğitim sistemine hızla entegre edilmekte, öğrencilere birçok yeni öğrenme fırsatı sunulmaktadır. Bu teknolojilerle öğrenciler bilgiye daha hızlı ve kolay bir şekilde erişebilmekte, farklı kaynaklardan faydalanarak öğrenme süreçlerini zenginleştirebilmektedir. Ancak, dijital teknolojilerin sunduğu bu avantajlar, öğrencilerin karşılaştıkları siber güvenlik riskleri, veri ihlalleri ve kimlik güvenliği sorunları gibi ciddi tehditleri de beraberinde getirmektedir. Siber zorbalık, kimlik hırsızlığı ve dijital bağımlılık gibi sorunlar, öğrencilerin zihinsel ve duygusal sağlığı üzerinde uzun vadeli etkiler yaratabilecek ciddi sorunlardır. Bu çalışma, öğrencilerin dijital dünyada karşılaştıkları bu tehditler karşısında bilinçaltında oluşan korkuları ve bu korkuların onların dijital dünyadaki davranışlarını ve genel deneyimlerini nasıl şekillendirdiğini anlamayı hedeflemektedir. Husserl'in fenomenolojik bakış açısı, bu deneyimlerin derinlemesine analiz edilmesini sağlayan bir yöntem sunar ve bu yaklaşım, öğrencilerin dijital dünyadaki etkileşimlerini öznel deneyimlere dayalı olarak değerlendirir. Bu çalışma ile dijital dünyaya dair endişelerin, öğrencilerin bilinçaltında nasıl anlam bulduğu ortaya çıkarılmaktadır.

Yöntem: Bu araştırmada nitel bir araştırma tasarımı kullanılmış olup, veriler yarı yapılandırılmış görüşmeler, yansıtıcı günlükler ve odak grup tartışmaları aracılığıyla toplanmıştır. Katılımcı grubu, 35 öğrenci ve 12 eğitimciden oluşmaktadır. Katılımcılar, farklı sosyo-ekonomik ve kültürel geçmişlere sahip olup, bu çeşitlilik dijital dünyada karşılaşılan zorlukların geniş bir perspektifte ele alınmasını sağlamaktadır. Yarı yapılandırılmış görüşmeler, öğrencilerin siber güvenlik ve veri gizliliği ile ilgili deneyimlerini derinlemesine incelemek için düzenlenmiştir. Katılımcılara siber güvenlik ve gizlilik hakkında ne gibi endişeleri olduğu, çevrimiçi deneyimlerinin dijital dünyadaki korkularını nasıl etkilediği gibi sorular yöneltilmiştir. Bu sorular, öğrencilerin dijital platformlardaki deneyimlerini ve bu deneyimlerin onların bilinçaltı korkuları üzerindeki etkilerini anlamaya yardımcı olmuştur.

Yansıtıcı günlükler ise öğrencilerin günlük dijital deneyimlerini gözlemlemek için kullanılmıştır. Bu günlüklerde, öğrenciler dijital dünyada yaşadıkları sorunları ve bu sorunların onları nasıl etkilediğini ifade etmişlerdir. Ayrıca, grup dinamiği içinde yürütülen odak grup tartışmaları, öğrencilerin dijital dünyadaki sorunları birlikte tartışmalarını sağlamış ve kolektif bir perspektif geliştirmelerine olanak tanımıştır. Veriler, Husserl'in fenomenolojik indirgeme yöntemi kullanılarak analiz edilmiştir. Bu yöntem, katılımcıların deneyimlerini tüm önyargılardan arındırarak, dijital güvenlik ve gizlilik konularındaki korkularının özüne inmeyi amaçlamaktadır. Tematik kodlama yöntemi ile öğrencilerin siber güvenlik, veri gizliliği, dijital bağımlılık ve siber zorbalık gibi konular etrafında topladığı deneyimlerin sistematik bir analizi gerçekleştirilmiştir. Bu süreç, öğrencilerin dijital araçlar ve platformlarla olan ilişkilerini, öznel deneyimlere dayalı bir perspektifle değerlendirerek derinlemesine bir analiz sağlar.

Bulgular: Fenomenolojik analiz sonucunda, öğrencilerin dijital dünyadaki güvenlik ve gizlilik sorunlarına ilişkin bilinçaltı korkularının, yalnızca yüzeysel endişeler değil, oldukça derinlemesine kök salmış korkular olduğu ortaya çıkmıştır. Öğrenciler siber zorbalık, kimlik hırsızlığı ve veri ihlalleri gibi tehditlerden endişe duymaktadır. Bu durum, onların dijital teknolojilere karşı geliştirdikleri tutum ve davranışları doğrudan etkilemektedir. Özellikle birçok öğrenci, kişisel bilgilerinin çevrimiçi platformlarda güvende olmadığını hissederek sürekli bir belirsizlik duygusu yaşamaktadır. Bu belirsizlik hissi, öğrencilerin dijital dünyada daha temkinli ve sınırlı bir şekilde hareket etmelerine neden olmaktadır. Ayrıca, dijital bağımlılık, öğrencilerin fiziksel ve zihinsel sağlığı üzerinde olumsuz etkiler yaratmaktadır. Dijital bağımlılığın yaygınlaşmasıyla

öğrenciler sosyal ilişkilerini zayıflatabilmekte, uyku düzenleri bozulmakta ve akademik başarıları olumsuz etkilenmektedir.

Eğitimciler de öğrencilerin dijital dünyadaki sorunlarla ilgili endişelerini paylaşmışlardır. Öğretmenler, öğrencilerin siber güvenlik ve veri gizliliği ile ilgili korkularının sınıf ortamındaki öğrenme dinamiklerini de olumsuz etkilediğini ifade etmiştir. Bu korkular, öğrencilerin dijital araçlara karşı direnç göstermesine ve yeni teknolojilere adaptasyon sürecinde zorlanmasına yol açmaktadır. Eğitimciler, dijital araçların eğitim sürecinde daha etkili kullanılabilmesi için, bu korkuların da dikkate alınması gerektiğini belirtmişlerdir.

Tartışma: Bu çalışma, öğrencilerin dijital dünyada karşılaştıkları sorunların psikolojik boyutlarına ışık tutmaktadır. Öğrenciler, dijital güvenlik ve gizlilikle ilgili bilinçaltı korkularını yönetmekte zorlanmakta, bu durum da dijital dünyayla olan ilişkilerini karmaşıktırmaktadır. Bulgular, dijital okuryazarlık programlarının sadece teknik beceriler kazandırmakla kalmayıp, aynı zamanda öğrencilerin psikolojik ihtiyaçlarına da yanıt verecek şekilde yeniden tasarlanması gerektiğini ortaya koymaktadır. Dijital okuryazarlık eğitimleri, öğrencilerin dijital dünyada karşılaştıkları riskler karşısında güvenli bir şekilde hareket etmelerine olanak tanıyacak beceriler kazandırmalıdır. Eğitimcilerin bu konuda daha fazla farkındalık kazanmaları gerektiği de bulgulardan biridir. Eğitimciler, dijital teknolojilerin sunduğu fırsatlar kadar, öğrencilerin bu teknolojilerden kaynaklanan riskleri de tanımasını sağlamalıdır. Böylelikle, öğrenciler dijital dünyada karşılaştıkları sorunları daha etkin bir şekilde yönetebilir.

Sonuç: Sonuç olarak, bu çalışma dijital dünyada öğrencilerin karşılaştığı güvenlik ve gizlilik sorunlarının psikolojik boyutlarına dair önemli bulgular sunmaktadır. Dijital teknolojilerin eğitimde etkili bir şekilde kullanılabilmesi için, bu tür sorunların eğitim sürecine dahil edilmesi büyük önem taşımaktadır. Eğitim stratejileri, öğrencilerin dijital dünyadaki deneyimlerini daha güvenli ve sağlıklı hale getirmek amacıyla hem teknik hem de psikolojik destek sunacak mekanizmaları içermelidir. Bu çalışma, dijital okuryazarlık ve zihinsel sağlık üzerine artan literatüre katkı sağlamakta ve eğitimciler ile politika yapıcılar için öğrencilerin dijital dünyada güvenliğini artırmaya yönelik pratik öneriler sunmaktadır. Öğrencilerin dijital güvenlik ve gizlilik konularında farkındalık kazanmaları, onların dijital dünyada karşılaştıkları zorluklarla daha sağlıklı bir şekilde başa çıkabilmelerine yardımcı olabilir.