

Innovations

Technostress: Its Effects to the Bachelor of Physical Education Major Students of Baguio Central University

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Abstract: *This search employed a descriptive research design under quantitative research. A total of 80 respondents from the Bachelor of Secondary Education major in Physical Education. This study investigates the impact of technostress on Bachelor of Physical Education (BPED) major students at Baguio Central University. Technostress refers to the stress experienced due to the use of technology, and this research specifically examines its effects on students' physical, emotional, and social wellbeing. Utilizing a descriptive survey design, data were collected from BPED students across different year levels through questionnaires. The findings indicate significant levels of technostress among students, attributed to prolonged computer use, which result in physical symptoms such as headaches, eye strain, and muscle tension. Additionally, the study reveals that excessive screen time before bedtime disrupts sleep patterns, and a preference for face-to-face interactions over virtual meetings highlights the social impact of technostress. The research under scores then ecessity for educational institutions to address technostress by promoting ergonomic practices, encouraging regular breaks, and fostering in-person communication skills to mitigate its negative effects on students' health and well-being.*

Keywords: *Technostress, technology, well-being, bachelor of physical education*

Introduction

In today's digital era, technology is being used in education on a large scale, which has drastically changed how students connect with teachers and peers as well as how they engage with course content. Many advantages have resulted from this technological change, including improved interactive learning resources, easier access to information, and the comfort of distance learning (Al-Fudail & Mellar, 2008).

Technostress refers to the stress experienced by individuals due to their use of information and communication technologies (ICTs). It encompasses a range of negative psychological responses resulting from the overuse, underuse, or misuse of technology. The term was first introduced by clinical psychologist Craig Brod in 1984, who described it as a modern disease of adaptation caused by an inability to cope with new computer technologies in a healthy manner. The symptoms of technostress can be both psychological and physical, including anxiety, irritability, mental fatigue, headaches, and insomnia. Factors such as constant connectivity, rapid technological changes, inadequate technical support, and insufficient training exacerbate technostress.

Recent European studies have begun to examine both the positive and negative impacts of technostress. Dwivedi et al. (2020) highlight its adverse effects on work-life balance, leading to stress and anxiety. Yildiz (2022) links excessive technology use to musculoskeletal problems, while McCole et al. (2021) investigate its association with sleep disturbances. In Asia, Lee and Kim (2021) focus on information overload and the pressure to adapt to rapid technological changes, while Çoklar et al. (2019) underscore the stress associated with learning and using new technologies, particularly for educators. In Australia, Smyth et al. (2019) describe technostress as a negative psychological state arising from modern technology use, with key factors including information overload, task demands, and a lack of control. Research by Burke et al. (2020) associates it with burnout, reduced productivity, and absenteeism, while Jackson and Dunn (2021) find links to anxiety and depression. Numerous pressures can lead to technostress, including the ongoing need to adjust to new technological tools, cognitive overload from processing large amounts of digital information, and physical strain from using devices for extended periods of time (Salanova et al., 2013). Studies reveal that the swift integration of digital learning resources can have a substantial impact on students' psychological well-being, resulting in elevated levels of anxiety and despair as well as lower academic achievement (Li & Wang, 2021). In addition, a lot of people experience the physical side effects of prolonged screen usage, which include headaches, eye strain, and irregular sleep patterns (Nimrod, 2018).

Consequently, Soriano (2020) examined the prevalence of technostress among university students across the Philippines. The study found that the widespread use of online learning platforms, especially during the COVID19 pandemic, significantly increased the stress levels of students. The research emphasized the need for educational institutions to develop strategies to reduce technostress, such as providing mental health support, ensuring reliable internet access, and offering training on effective technology use. The COVID-19 epidemic, which forced a switch to online instruction, has significantly hastened the adoption of technology into the Philippine educational system in recent years. To maintain educational continuity in the face of lockdowns and social distancing measures, the Commission on Higher Education (2020) and the Department of Education (DepEd) have supported digital learning

platforms. Although this shift has made learning possible without interruption, it has also made pupils more susceptible to the phenomena of technostress. In the context of Philippine education, technostress, the stress brought on by the use of information and communication technologies, is an important problem. Research has indicated that Filipino students face high levels of stress and anxiety since they must constantly adjust to new digital platforms and technology. This might have an impact on their emotional and academic well-being (Delos Santos, 2021). Torres, M. C., & Peralta, J. V. (2021) investigated technostress among employees in the Philippine business process outsourcing (BPO) industry. The study revealed that high levels of technostress were prevalent due to long working hours, high performance expectations, and constant technological updates. The researchers suggested implementing wellness programs and providing regular technology training to help employees manage technostress (Torres & Peralta, 2021).

Furthermore, the prevalence and correlates of technostress among college students are investigated in this cross-sectional study. A sample of five hundred undergraduate students answered questions about their usage of technology, perceived stress, technostress, and coping mechanisms. The findings show that a sizable percentage of students suffer from technostress, and that a high perceived stress level is linked to a higher incidence of technostress. Furthermore, there is a favorable correlation between technostress and excessive use of technology, especially social media and cellphones. Coping mechanisms including asking for help from others and addressing problems are inversely related to technostress. These results underline the necessity of interventions that support university students' healthy technology use and coping strategies in order to reduce technostress and its detrimental impacts on well-being (Park & Lee, 2019).

Moreover, Dela Cruz (2018) conducted a study on the impact of digital tools on student stress levels at universities in Northern Luzon, Philippines. The research highlighted that the rapid integration of technology in educational settings has led to increased levels of technostress among students. Factors such as inadequate technical support, lack of training, and the pressure to stay constantly connected were identified as major contributors to technostress. The study concluded that universities need to implement better support systems and training programs to mitigate the effects of technostress on students (Dela Cruz, 2018). Ramos, E. L., & Aquino, R. P. (2019) explored technostress among high school teachers in Central Visayas. Their research found that teachers experienced significant technostress due to the frequent changes in educational technologies and the expectation to use these technologies effectively without sufficient training. The study recommended continuous professional development programs to help teachers adapt to new technologies and reduce stress levels (Ramos & Aquino, 2019). This study aims to improve the usage of technology to address issues that frequently arise while using them as a tool for enhancing education. Through an examination of the impact of technostress on Baguio Central University

Bachelor of Physical Education majors, this study seeks to pinpoint certain issues and problems associated with the use of technology in the classroom. The results will be crucial in formulating plans to maximize technology utilization, tackle typical problems that students face, and eventually augment technology's efficacy as an instrument for bettering educational results. Researchers will gain a better knowledge of how technology affect numerous areas of education delivery. Specifically, this study will greatly benefit the following:

Researchers, the findings of this study can be used as significant empirical data for future research in the subject of education technology and its impact on student health, particularly among physical educationmajors. School administrators can use research findings on technology to make informed judgments about implementation tactics and resource allocation, teachers can use study findings to improve their teaching techniques and maximize the usage of technology in aiding student learning, students stand to benefit from improved learning experiences and outcomes as a result of the intentional incorporation of technology into their education, parents will obtain valuable insights on their children's educational experiences and be able to successfully assist their learning journeys and other stakeholders, such as legislators and educational technology developers, can use study findings to form policies and develop creative solutions to handle obstacles and maximize potential associated with technology in education and for those involved in education, including researchers, school administration, teachers, students, parents and other stakeholders, the research is helpful and advantageous. It will act as the foundation for enhancing the use of technology.

Review of Related Literature

The researchers utilized three key theories to construct a comprehensive frameworkforunderstanding technostress,whichinvolvesstress assessment, coping strategies, and technology acceptance. These are Person-Environment Fit Theory, Transactional Model of Stress and Coping, and Technology Acceptance Model (TAM).

Transactional Model of Stress and Coping

The Transactional Model of Stress and Coping, developed by Lazarus and Folkman (1984), provides a comprehensive framework for understanding the dynamic process of stress appraisal and coping. According to this model, stress is not merely a result of external stressors but also depends on an individual's perception of these stressors and their coping mechanisms. In the realm of technostress, individuals assess the challenges posed by technological changes and demands. If they perceive these changes as threats due to a lack of skills or support, they experience stress. Effective coping strategies, such as seeking social support, acquiring new skills, and utilizing available resources, can mitigate the negative impacts of technostress. This model

highlights the importance of cognitive appraisal and adaptive coping in managing technostress, suggesting that interventions should focus on enhancing individuals' coping abilities and resilience.

The Transactional Model of Stress and Coping offers a comprehensive framework for understanding stress appraisal and coping mechanisms. It implies that stress results from people's perceptions and coping mechanisms in addition to external stresses. This model is essential to the study of technostress among Baguio Central University physical education majors. It draws attention to how students' experiences of technostress are influenced by their coping strategies and views of technology advancements. Students are prone to feel stressed if they view technology obstacles as threats because they lack the necessary assistance or abilities. This model emphasizes how crucial it is to evaluate students' cognitive assessments of technostress and to support them in developing useful coping mechanisms in order to lessen its detrimental impacts (Lazarus & Folkman, 1984)

Person-Environment Fit Theory

The Person-Environment Fit Theory, proposed by French, Caplan, and Harrison (1982), is integral to understanding technostress. This theory posits that stress arises from the misfit between individuals and their environment. In the context of technostress, this misfit occurs when there is a disparity between an individual's technological skills and the demands placed on them by their technological environment. For instance, if an employee feels that their skills are inadequate to meet the requirements of new software or digital tools (techno-complexity), they may experience increased stress levels. Additionally, when technological demands exceed an individual's capacity to manage them effectively (techno-overload), it further exacerbates stress. This theory underscores the importance of aligning technological demands with the user's abilities and providing adequate support to minimize stress.

The P-E Fit Theory proposes that stress arises from a mismatch between an individual's technical aptitude and the expectations imposed by their technology surroundings in the context of technostress. For example, a student may get more stressed if they believe that their technological proficiency is insufficient to match the demands of new software or digital tools (techno-complexity). Similarly, stress is increased when demands from technology surpass a person's ability to handle them (technooverload) (Ragu-Nathan et al., 2008). This theory emphasizes how crucial it is to balance the demands of technology with the capabilities of the user and to offer sufficient assistance in order to reduce stress. The P-E Fit Theory can be used to analyze how students' technological proficiency and the demands of using mobile devices for learning interact to affect their levels of technostress in the study of technostress among Baguio Central University Bachelor of Physical Education majors (Cazan et al., 2016). The study will provide insight into how students' technical self-efficacy, familiarity with mobile devices, and attitudes toward technology use influence their technostress

levels. It can also investigate how the person-technology fit, specifically the alignment of students' technological skills with the demands of mobile devices, affects their technostress and academic performance (Tarafdar et al., 2011). Using the P-E Fit Theory, the study can shed knowledge about the elements that contribute to students' technostress and how these factors can be addressed to improve their learning experiences and general well-being (Califf et al., 2020).

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), introduced by Davis (1989), elucidates the factors that influence user acceptance of technology. TAM posits that perceived usefulness and perceived ease of use are the primary determinants of an individual's intention to use technology, which subsequently affects their actual usage behavior. In the context of technostress, negative perceptions regarding the complexity and usefulness of technology can contribute to higher stress levels. For example, if employees perceive a new system as difficult to use (technocomplexity) or question its usefulness, they may experience increased anxiety and reluctance to adopt the technology. TAM suggests that enhancing the perceived ease of use and usefulness of technological tools through training and user-friendly design can reduce technostress. This theory emphasizes the role of user perceptions in technology adoption and the importance of addressing these perceptions to mitigate stress. The use of technology improves students' academic achievement and enhances students' academic performance and cultivates a positive attitude toward in educational pursuits. Technology can also be used to identify learners who are academically at risk and create interventions to help them succeed (Al-Mamary, 2022).

Technology Acceptance Model (TAM) proposes that lowering students' perceived technostress levels can be achieved by improving the perceived utility and usability of mobile devices through design and training.

According to Davis (1989), this theory highlights how user perceptions influence the adoption of technology and how crucial it is to address these views in order to reduce stress. TAM can be used in the study on technostress among Baguio Central University's Bachelor of Physical Education majors to look into how students' opinions of using mobile devices for learning affect their levels of technostress. The study can look at things like how students perceive mobile devices to be beneficial and easy to use, and how these views connect to their actual usage patterns and degrees of technostress (Park, 2009). Using TAM, the study can provide insights into the function of user perceptions in the context of technostress and propose solutions to improve the perceived ease of use and usefulness of mobile devices in order to reduce technostress among students. This can involve giving proper training, creating user-friendly mobile learning interfaces, and showcasing the benefits of using mobile devices for learning in

order to increase students' academic performance and foster positive attitudes toward educational endeavors (Venkatesh & Bala, 2008).

Methodology

This chapter outlines the research design and methodology used in the study, detailing the locale, population, data gathering instrument, reliability and validity of the instrument, data collection procedure, and data treatment. This quantitative, descriptive research aimed to explore the impact of technology on the health of Physical Education students at Baguio Central University, utilizing surveys to gather statistical data and validate relationships. The study included 80 respondents from first to third year, excluding fourth-year students due to their teaching internships. Conducted at Baguio Central University, the research employed total enumeration. Approval was sought from the Dean of the College of Teacher and Liberal Arts, and a self-made survey questionnaire, validated by experts, was administered. The survey assessed technostress levels and their impact on learning, using a 4-point scale. Data were analyzed using descriptive statistics, particularly weighted means. Ethical considerations included informed consent, confidentiality, and adherence to the Data Privacy Act of 2012, ensuring the voluntary and respectful participation of respondents.

Results and Discussions

The table 1 reveals that the students major in Physical Education at Baguio Central University exhibit varying level of technostress. The overall weighted mean of 31.8 across all factors underscores a general consensus on the adverse effects of computer usage. These findings emphasize the need for a holistic approach to mitigate the negative impacts on learning, technical efficiency, social interactions, and health. By implementing targeted interventions and promoting healthy digital habits, stakeholders can significantly improve the well-being and productivity of computer users. This comprehensive approach is crucial for adapting to the increasing reliance on digital technologies in various aspects of life.

The overall weighted mean of 31.8 across all factors indicates a general consensus on the adverse effects of computer usage. These results emphasize the need for a holistic approach to address the challenges posed by digital technology. By implementing targeted interventions in learning, technical, social, and health domains, stakeholders can enhance the wellbeing and productivity of computer users. This comprehensive strategy is essential for adapting to the increasing reliance on digital technologies while mitigating their negative impacts on various aspects of life.

Learning Factor

The study reveals that a considerable number of respondents face difficulties concentrating while using computers, indicated by a weighted mean (WM) of 2.8. This suggests that prolonged computer use might be detrimental to focus, potentially impacting academic performance and productivity. Additionally, the challenge of

discontinuing social media use, with a WM of 2.7, underscores the addictive nature of these platforms. This finding implies that educators and parents need to implement strategies that promote healthy digital habits and effective time management to mitigate the negative impact on learning.

The findings indicate that concentration difficulties and the challenge of discontinuing social media

Table1. Level of Technostress Among BPED Students

	Indicators	S A (4)	A (3)	D (2)	S D $\frac{(1)}{11}$	T o t a l	W M	D E	R a n k
Le ar n i n g F a c t o r s	I feel that it's hard to concentrate while using computer.	1 0 8	7 2	3 6		2 2 7	2 .8	A	3
	I find it difficult/challenging to discontinue using any socialmedia platforms.	4 4	1 2 0	4 8	6	2 1 8	2 .7	A	4
Te c h n i c a l F a c t o r s	I experience unreliable internet connectivity and frequent software glitches	1 2 0	8 0	3 0	1 8	2 4 8	3 .2	A	1
So c i a l F a c t o r s	I prefer online meetings than face to face interactions.	1 2	1 5	1 0 6	1 8	1 5 1	1 .9	D	7

	I usually have face to face communication problems because of too much computer usage.	1 2	6 3	9 8	1 2	1 8 5	2 . 3	D	6
Health Factors	I experience headaches, eyestrain, muscle tension and/or repetitive strain injuries due to prolonged computer use.	1 1 2	1 1 4	1 6	6	2 4 8	3 . 1	A	2
	I spend too much time in front of screens before bed time which cause sleep disruptions and/or insomnia.	6 0	1 5 6	1 6	5	2 3 7	3 . 0	A	2 . 5
	I do not have active physical activity due to prolonged use of computer	2 4	3 3	1 0 2	1 2	2 3 8	3 . 0	A	2 . 5

	I feel more anxious, irritable or depressed while using computer.	5 2	1 0 2	4 4	1 1	2 0 9	2 . 6	A	5 . 5
	I feel disconnected, tired and burnout every after I use the computer.	3 6	1 2 0	4 4	9	2 0 9	2 . 6	A	5 . 5
	I overthink because of whatever/read in the internet.	4 0	9 9	6 0	7	2 0 6	2 . 6	A	5 . 5
	Overall weighted Mean						3 1 . 8		

use are significant issues among computer users. With a weighted mean (WM) of 2.8 and 2.7 respectively, these results suggest that prolonged computer use can impair focus and foster addictive behaviors. Educators should integrate digital literacy and time management skills into the curriculum to help students manage their screen time effectively. Schools and universities might also consider implementing digital detox programs or workshops to promote mindful use of technology, thereby enhancing academic performance and reducing distractions.

The findings of this study are corroborated by recent research highlighting the negative impacts of prolonged computer use on concentration and the addictive nature of social media. For instance, a study by Akbari et al. (2019) demonstrated that excessive screen time significantly impairs attention and cognitive function among students, leading to decreased academic performance. Similarly, Vogel et al. (2020) found that social media addiction is prevalent among young adults, often interfering with their ability to disengage from online platforms and focus on important tasks.

Technical Factor

The highest concern among respondents pertains to technical issues, particularly unreliable internet connectivity and frequent software glitches, with a WM of 3.2. This strong agreement highlights the critical need for improvements in technological infrastructure. For educational institutions and workplaces, ensuring reliable internet access and robust software support is essential for maintaining efficiency and productivity. Policymakers and technology providers must address these technical challenges to enhance user experiences and reduce frustration associated with digital tasks. The study highlights that unreliable internet connectivity and frequent software glitches are major concerns, with the highest WM of 3.2. This underscores the urgent need for improving technological infrastructure to ensure a seamless digital experience. Educational institutions and workplaces must invest in reliable internet services and robust software to enhance productivity and minimize disruptions. Policymakers should prioritize funding and support for technological advancements to address these issues, ensuring that users have access to efficient and dependable digital tools.

The technical challenges highlighted by the study, including unreliable internet connectivity and frequent software glitches, align with findings from recent literature. A comprehensive review by Alam and Ahmed (2020) reported that technical issues such as poor internet connectivity are major barriers to effective online learning and remote work. Additionally, research by Ferreira and Salgado (2021) emphasized the critical need for robust digital infrastructure to support the growing reliance on technology in both educational and professional settings.

Social Factor

In the social domain, respondents generally disagree with the preference for online meetings over face-to-face interactions, with a WM of 1.9. This suggests that while digital communication tools are useful, they do not fully replace the value of in-person interactions. The moderate disagreement regarding face-to-face communication problems due to excessive computer use, with a WM of 2.3, indicates some level of social impact. Organizations and educational institutions should strive to balance virtual and physical interactions to maintain effective communication and social skills among individuals.

In the social domain, the preference for face-to-face interactions over online meetings indicated by a WM of 1.9, suggests that digital communication cannot fully substitute for in-person interactions. The moderate disagreement regarding communication problems due to excessive computer use, with a WM of 2.3, points to some social impact but not overwhelmingly so. Organizations should create opportunities for physical interactions to complement digital communications, fostering better social connections and communication skills. Hybrid models that combine online and in-person meetings can provide a balanced approach, enhancing social

engagement and teamwork.

The preference for face-to-face interactions over online meetings is supported by recent studies emphasizing the importance of in-person communication. For example, a study by Williams et al. (2021) found that face-to-face interactions are more effective for building trust and fostering collaborative relationships compared to virtual meetings. Moreover, Rajab et al. (2022) highlighted that excessive use of digital communication tools can lead to social isolation and impair interpersonal skills, suggesting a balanced approach that includes physical interactions.

Health Factor

Health concerns are prominently highlighted, with physical discomforts such as headaches, eyestrain, and muscle tension due to prolonged computer use receiving a WM of 3.1. This strong agreement points to the need for ergonomic interventions and health guidelines to prevent physical strain. Similarly, sleep disruptions caused by excessive screen time before bed, with a WM of 3.0, indicate the necessity for raising awareness about healthy screen habits. The lack of physical activity due to prolonged computer use, also with a WM of 3.0, suggests a need for promoting active lifestyles and regular breaks to combat sedentary behavior.

Health-related issues such as physical discomforts (WM of 3.1) and sleep disruptions (WM of 3.0) due to prolonged computer use are significant concerns. These findings imply a critical need for ergonomic interventions and health guidelines to prevent physical strain. Workplaces and educational settings should promote ergonomic practices, such as proper seating arrangements, regular breaks, and exercises to reduce muscle tension and eyestrain. Additionally, raising awareness about the impact of screen time on sleep can help individuals adopt healthier habits, such as limiting screen use before bedtime to improve sleep quality.

Health-related issues such as physical discomforts and sleep disruptions due to prolonged computer use have been well-documented in recent research. A study by Gupta et al. (2019) showed that prolonged computer use is associated with increased incidence of musculoskeletal problems, eyestrain, and headaches. Furthermore, research by Li et al. (2020) confirmed that excessive screen time before bed significantly disrupts sleep patterns and contributes to insomnia, reinforcing the need for better ergonomic practices and screen time management.

Mental Health Implications

The mental health implications, including increased anxiety, irritability, and depression associated with computer use, are significant, with a WM of 2.6. This indicates a need for mental health support and resources for individuals who rely heavily on computers. Feelings of disconnection and burnout, also with a WM of 2.6, and the tendency to overthink due to internet content, similarly scored, underscore the psychological toll of extensive computer usage. Employers, educators, and health

professionals must provide comprehensive mental health resources and create supportive environments to address these issues.

The study reveals considerable mental health implications, with increased anxiety, irritability, and depression associated with computer use (WM of 2.6). Feelings of disconnection and burnout, also with a WM of 2.6, and overthinking due to internet content underscore the psychological toll of extensive computer usage. These findings highlight the necessity for comprehensive mental health support. Employers and educational institutions should provide access to mental health resources, including counseling services and stress management programs. Creating supportive environments that encourage regular breaks and mindfulness practices can also help mitigate the psychological impacts of prolonged computer use.

The mental health implications of prolonged computer use, including anxiety, irritability, and depression, are supported by recent studies. For instance, a study by Przybylski et al. (2021) found that high levels of screen time are correlated with increased levels of anxiety and depression among adolescents and young adults. Additionally, research by Elhai et al. (2022) highlighted that the constant exposure to online content can lead to overthinking and emotional distress, underscoring the psychological toll of extensive computer use.

The initial hypothesis of the study posited that there would be no significant difference in the impact of technostress across the various factors: learning, technical, social, and health. This means the researchers assumed that each factor would be affected similarly by computer usage, without any particular area experiencing more or less impact than others. However, the findings of the study rejected this hypothesis. The results showed distinct variations in how computer usage affected each factor, leading to the rejection of the hypothesis. For example, technical issues like unreliable internet connectivity were found to have the highest weighted mean (3.2), indicating a significant problem compared to other factors. Health-related issues also showed strong agreement with physical discomforts (WM of 3.1) and sleep disruptions (WM of 3.0), further demonstrating substantial impact. In contrast, social factors such as the preference for face-to-face interactions over online meetings had a lower weighted mean (1.9), indicating less agreement on these impacts. These differences suggest that the effects of computer usage are not uniform across all factors; instead, certain areas are more adversely affected than others. Consequently, the hypothesis that there is no significant difference along the different factors is rejected, underscoring the necessity for tailored interventions that address the specific challenges associated with each factor.

The comprehensive impacts of computer usage across learning, technical, social, and health factors underscore the need for a holistic approach to mitigate these effects. This perspective is supported by research from various domains. For example, a meta-analysis by Mheidly et al. (2020) emphasized the importance of integrating ergonomic, psychological, and technological interventions to improve overall well-being and

productivity in digital environments. Similarly, Cao et al. (2023) advocated for multi-faceted strategies to address the diverse challenges posed by increased digital dependency, highlighting the need for targeted interventions across different areas.

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Difference in Technostress According to Year Level

Table 2 presents the weighted mean scores of technostress levels among Bachelor of Physical Education (BPED) students at Baguio Central University, categorized by their academic year level. The data reveal a noticeable progression in technostress intensity as students advance through their academic journey. Freshmen students report a moderate level of technostress with a weighted mean of 2.7. This moderate level persists into the second year, with a slight increase to a weighted mean of 2.8. However, by the third year, the level of technostress escalates significantly, with a weighted mean of 3.3, classified as high. The overall weighted mean indicates the cumulative technostress experience across all year levels. This trend suggests that as students' progress academically, the demands and pressures associated with increased

technology use contribute to higher levels of technostress.

Table 3. Technostress According to Year Level

Year Level	Weighted Mean	Level of Technostress
First Year	2.7	Moderate
Second Year	2.8	Moderate
Third Year	3.3	High
Overall Weighted Mean	2.93	Moderate

The study published in JAMA Pediatrics (2019) titled "Association of Screen Time with Mental Health Outcomes in Adolescents" supports our research findings by demonstrating a significant association between increased screen time and higher levels of depressive symptoms, anxiety, and lower psychological wellbeing in adolescents. The meta-analysis published in JAMA Pediatrics (2020) titled "Digital Media Use and Sleep Disturbances in Children and Adolescents: A Meta-Analysis" further supports our research findings by confirming that increased screen time and digital media use are associated with poorer sleep quality, longer sleep onset latency, and shorter sleep duration in children and adolescents.

Additionally, the study published in JAMA Pediatrics (2022) titled "Association Between Screen Time and Physical Activity in Preschool Children" provides further support for our research findings, showing an inverse relationship between screen time and physical activity levels in preschool children.

A study by Lee and Kim (2020) titled "Technostress Among University Students: A Study of its Impact on Academic Performance and Well-being" examines the impact of technostress on university students' academic performance and well-being. It investigates the relationship between technostressors, such as excessive use of technology and digital overload, and students' levels of academic achievement and psychological well-being. The findings reveal a significant negative association between technostress and academic performance, as well as students' overall well-being. This research underscores the importance of addressing technostress among university students to promote better academic outcomes and psychological health.

The hypothesis that there are significant differences in technostress among BPED students according to year level, appears to be accepted. The study highlights various trends in how students view and deal with technology-related stress. For example, the research shows that BPED students frequently recognize the negative effects of prolonged computer use on one's body, relationships, and emotions. The students are aware of the possible harm to their emotional, mental, and physical well-being as well as their sleep and social lives. Furthermore, the majority of students indicate that they prefer in-person encounters over virtual ones, indicating an understanding of the value of in-person social engagement. These results emphasize the complexity of technostress among BPED students and the necessity of focused treatments to address its several facets and advance the general well-being of this population.

This longitudinal study investigates the relationship between technology use, including computer usage, and psychological well-being among college students over time. It finds a significant correlation between increased screen time and emotional symptoms such as anxiety, irritability, and depression, providing further support for your claim regarding the detrimental impact on emotional well-being among BPED students, according to Johnson and Brown (2022). This study challenges the notion that increased screen time, particularly before bedtime, consistently leads to poorer sleep quality among college students. It argues that individual differences, such as sleep hygiene practices and screen content, may moderate this relationship, suggesting that the impact of screen time on sleep patterns may vary among BPED students, according to Lee and Kim (2024). Furthermore, this meta-analysis examines the relationship between social media use, a specific aspect of screen time, and academic performance among college students. While some studies demonstrate a negative association between excessive social media use and grades, others find no significant impact or even positive effects on academic performance, challenging the assumption that screen time universally impairs academic outcomes among BPED students, according to Wang and Zhang (2023).

Findings, Conclusions and Recommendations

Findings

1. Varied technostress levels were found among BPED students at Baguio Central University, with unstable internet access and program errors being prominent issues. Physical discomforts like headaches and eyestrain, along with mental health concerns like detachment and heightened anxiety, were also notable.
2. The study showed that as students progressed academically, technostress levels increased, particularly among third-year students compared to freshmen. This underscores the need for a comprehensive approach to mitigate negative impacts on education, technical skills, social interaction, and health. Targeted interventions and promoting healthy digital habits are crucial.

Conclusions

Based on the findings and summary, the following conclusions were drawn:

1. The level of technostress of the BPED students based on the different factors is attributed to prolonged use of gadgets, computers or the excessive screen time and the inability to manipulate some technologies needed in learning.
2. The difference in the level of technostress of BPED students according to year level can be attributed to the academic demands or overload as students' progress to the higher level.

Recommendation

Based from the findings and conclusions, the following recommendations are respectfully presented:

1. Provide training or support to help students become more proficient with technology, reducing anxiety and improving their ability to control and utilize tools needed in the learning process.
2. Offer support systems and resources tailored to the needs of higher year-level students, including peer support groups, mentorship programs, and academic counseling. Techniques like task distribution and time management can help students manage technology-related stress and adjust to growing academic demands.

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