



REVIEW

## Psychological Well-being and Technostress: Challenges in Health and Job Performance Among English Teachers

### Bienestar Psicológico y Tecnoestrés: Desafíos en la Salud y desempeño laboral en Docentes de Inglés

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#### ABSTRACT

**Introduction:** this literature review article adopts a deductive method, a socio-critical paradigm, and a qualitative descriptive approach, using a thematic prose framework. Its objective is to provide a theoretical exposition on technostress and its impact on the work effectiveness of university teachers in Peru, especially in the post-pandemic context.

**Objectives:** through a comprehensive examination of the literature, the study explores the various facets of technostress, analyzes its consequences, and examines its impact on the emotional well-being of Peruvian educators. Furthermore, it analyzes its outcomes and examines its influence on the emotional well-being of Peruvian educators.

**Method:** the research is based on a literature review and qualitative analysis of relevant sources.

**Results:** factors such as information overload, frequent interruptions, deficiencies in technological competence, technological dependence, and technical issues contribute to technostress among university teachers. The phenomenon intensified in the post-pandemic context, with the shift to online education and associated technological challenges.

**Conclusions:** the technostress experienced by university educators negatively affects their emotional well-being, manifesting as anxiety, fatigue, impaired interpersonal relationships, sleep disorders, and decreased job performance. To mitigate its impact, specific interventions and support measures are required for these teachers, promoting their emotional well-being and prudent technology use in the post-pandemic context.

**Keywords:** Technostress; University Teachers; Psychological Well-Being; Post-Pandemic.

#### RESUMEN

**Introducción:** este artículo de revisión bibliográfica adopta un método deductivo, un paradigma socio-crítico y de enfoque cualitativo con orientación descriptiva, empleando un marco temático en prosa. Su objetivo es proporcionar una exposición teórica sobre el tecnoestrés y su impacto en la eficacia laboral de docentes universitarios en Perú, especialmente en el contexto postpandemia.

**Objetivos:** mediante un examen exhaustivo de la literatura, el estudio explora las diversas facetas del tecnoestrés, analiza su consecuencia y examina su impacto en el bienestar emocional de los educadores

peruanos. Además, analiza su resultado y examina su influencia en el bienestar emocional de los educadores peruanos.

**Método:** la investigación se basa en revisión bibliográfica y análisis cualitativo de fuentes relevantes.

**Resultados:** factores como la sobrecarga de información, interrupciones frecuentes, deficiencias en competencia tecnológica, dependencia de la tecnología y problemas técnicos contribuyen al tecnoestrés entre docentes universitarios. El fenómeno se agravó en el contexto postpandemia, con la transición a la educación en línea y los desafíos tecnológicos.

**Conclusiones:** el tecnoestrés experimentado por educadores universitarios afecta negativamente su bienestar emocional, manifestándose en ansiedad, fatiga, relaciones interpersonales afectadas, trastornos del sueño y disminución del desempeño laboral. Para mitigar su impacto, se requieren intervenciones específicas y medidas de apoyo destinadas a estos docentes, promoviendo su bienestar emocional y un uso prudente de la tecnología en el contexto postpandemia.

**Palabras clave:** Tecnoestrés; Docentes Universitarios; Bienestar Psicológico; Postpandemia.

## INTRODUCTION

The health-related challenges that arose as a result of the spread of COVID-19 have impacted the field of education,<sup>(1)</sup> specifically addressing the psychological stress induced by the adoption of educational technologies and its unforeseen consequences on work performance.<sup>(2,3)</sup> In response to this situation, rapid adjustments were introduced in the realm of teaching and learning, particularly within virtual and remote environments.<sup>(4)</sup> This pedagogical metamorphosis presented numerous hurdles for educators, necessitating their adaptation to novel methodologies and technological tools with a focus on mental health.

The primary objective is to investigate the incorporation of Information and Communication Technologies (ICT) as a strategy for adapting educational processes during crisis periods, with a particular emphasis on the mental well-being of teachers. The advantages and challenges associated with this transition help to explore the impact on teachers' mental health in the Peruvian context. In light of its contemporary relevance, the global impact of the COVID-19 health emergency on education underscores the significance of comprehending the specific difficulties encountered by Peruvian educators in implementing virtual education and the resulting technostress.<sup>(5)</sup>

The approach consists of analyzing the challenges that educators face when managing resources and activities in semi-presential classroom environments, evaluating how these obstacles impact their mental and emotional well-being. Factors related to time management and didactic and methodological limitations inherent in such contexts were deeply examined, highlighting their effect on teachers' well-being.

Regarding the methodological approach, the research was based on a comprehensive review of academic literature and previous studies related to the integration of ICT in virtual education and its effects on teachers' mental health. In this framework, the phenomenon of technostress, conceptually articulated as emotional, physical, and cognitive tension resulting from the inappropriate use of technology, becomes relevant, emphasizing its psychological impact on educators. Various approaches and experiences were analyzed to identify best practices and provide recommendations to educators and students for managing technostress and promoting their mental health.<sup>(6,7)</sup> This literature review adopts a deductive method, adhering to the socio-critical paradigm, employing a qualitative approach characterized by its descriptive nature, and adopting a thematic prose structure with a focus on health-related aspects. Based on the information presented above, this research literature review outlines its objectives: to explore the various facets of technostress, analyze its triggers, and examine its impact on the emotional well-being of Peruvian educators.

## DEVELOPMENT

It is essential to highlight the imperative need to investigate this issue in the new social context that society is going through, especially concerning the mental and emotional health of university teachers. In addition to this, some university institutions have incorporated the Blended Learning methodology into their curriculum, which provides them with a specialized platform to carry out activities and achieve cumulative learning. A notable example is the San Ignacio de Loyola University in Peru. In undergraduate English courses, the Zoom platform is used in conjunction with National Geographic Learning's MyELT for foreign language sessions. Educators have repeatedly expressed their stress and anxiety from spending most of the day in front of a computer. Others believe that the virtual modality greatly hinders the teaching process and find it difficult to relax after several hours of using video calling platforms and educational tools.<sup>(8,9,10)</sup>

This literature review is justified on several levels.<sup>(11)</sup> First, there is the theoretical justification, which is based on current and relevant scientific literature in the psychopedagogical field, with a particular emphasis

on mental health. After the pandemic, fundamental changes have been observed in the behavior of teachers regarding the use of technological devices and virtual platforms, resulting in depressive attitudes that cause disorders in the human mind, leading to feelings of sadness, low self-esteem, and lack of interest".<sup>(12)</sup> The aim is to understand the level of stress associated with the frequent use of educational technologies. Second, there is the practical justification, as it seeks to benefit the participants by providing knowledge on attitudinal, affective, and cognitive aspects that can be improved upon, all contributing to better mental well-being. Additionally, the intention is for teachers to incorporate various active strategies to implement them in class sessions that are interesting and motivating for students, thereby promoting a healthy teaching environment. Furthermore, this literature review aims to be a relevant precedent for the San Ignacio de Loyola University in Peru to implement training related to stress and anxiety management for the benefit of the student community and the overall well-being of the academic community.

The aim is for teachers to be able to manage their efforts to learn under personal and academic pressure without neglecting their emotional stability and mental health. Third, there is the methodological justification, where the Active Research Diagram (DIA) strategy is used to construct the theoretical foundations in a systemic and heuristic manner,<sup>(13)</sup> ensuring that the research approach prioritizes the psychological health of educators. Lastly, there is the epistemological justification, which is useful for analyzing the research problem by applying the scientific method. It focuses on digital transformation and promotes autonomous learning,<sup>(14)</sup> all while considering the impact on the mental health of teachers.

In response to the COVID-19 pandemic, educational institutions have had to adapt their teaching methods and transition to online learning<sup>(15,16)</sup>. This sudden migration has brought about significant changes in how teachers adapt and face new challenges, including technostress and its effects on mental health. Technostress refers to the negative reactions associated with the excessive use of technology and can impact the psychological well-being of teachers. With the aim of better understanding this phenomenon and proposing effective intervention strategies, this research will focus on examining the factors that contribute to technostress in Peruvian university teachers in the post-pandemic context. The goal is to identify the dimensions of technostress, as well as indicators such as information overload, constant interruptions, insufficient technological competence, technological dependence, and technical difficulties that can trigger technostress in teachers, all with a view to supporting their mental health.

### Analysis of the Topic

#### *Technostress: Definition and Contributing Factors*

Technostress refers to the negative response and adverse effects experienced by individuals due to the excessive use of technology.<sup>(17,18,19,20,21,22)</sup> This definition (see table 1) encompasses both the physical and psychological aspects associated with prolonged and problematic use of technological devices and digital tools. Technostress manifests in various symptoms, including anxiety, exhaustion, irritability, difficulty concentrating, sleep problems, and interpersonal conflicts associated with technology use. These symptoms can negatively affect the psychological and emotional well-being of individuals experiencing technostress, potentially leading to mental health challenges.

**Table 1.** Definitions of Technostress

#### **Conceptual definition**

Technostress<sup>(17)</sup> as a condition related to the difficulty of adequately adapting to new computer technologies. This adaptation challenge can lead to various psychological and emotional stressors for individuals, including anxiety and discomfort associated with technology use.

Technostress arises as a result of engaging with Information and Communication Technologies<sup>(18)</sup>, inducing a state of stress in individuals.

Is a negative psychological state<sup>(19)</sup> that arises from the utilization of Information and Communication Technologies (ICT). It is characterized by feelings of unease, fear, tension, and anxiety when interacting with technologies associated with direct or indirect computer use. This stress condition can result in a high level of non-pleasurable psychophysiological activation and the cultivation of negative attitudes towards ICT.

A state characterized by high cognitive demands and constant physiological activation.<sup>(20)</sup> Individuals experiencing technostress may encounter difficulties in comprehending information and maintaining an overview of complex technological systems and tools.

It can be considered an emerging psychological disorder experienced by individuals who extensively use technology in their daily lives.<sup>(21)</sup> While technostress is generally associated with negative effects, it is important to note that it can also have some positive effects on individuals. For example, it can drive increased individual performance by generating greater motivation and focus on tasks related to the use of Information and Communication Technologies (ICT).

Negative manifestations of technostress are reflected in psychological rejection and an unfavorable experience in the use of technologies.<sup>(22)</sup> This implies a negative perception of technostress with its corresponding consequences on individuals.

*Note:* Information compiled from various scientific articles and postgraduate theses.

### Contributing Factors to Technostress

In the specific case of Peruvian university teachers, it is crucial to emphasize several factors contributing to the development of technostress. These factors can be categorized into different dimensions of study, offering a more comprehensive grasp of their consequences:

**Information Overload:** Teachers often grapple with an overwhelming amount of information delivered through technological devices, leading to challenges in effectively processing and managing this data.<sup>(23)</sup> The constant demand to stay updated and proficient across multiple information sources adds pressure and hinders resource management.

**Constant Interruptions:** The persistent barrage of notifications from mobile devices and applications disrupts teachers' workflow and academic tasks, negatively impacting concentration and productivity.<sup>(24)</sup> These interruptions force attention shifts from primary responsibilities to digital distractions.

**Technological Competence and Dependency:** Teachers' limited digital skills and overreliance on technology can generate stress and insecurity.<sup>(25)</sup> Their inability to confidently navigate technology hinders performance in related activities, and excessive dependence on digital tools can lead to anxiety and discomfort when technology is unavailable.<sup>(26)</sup> Furthermore, such dependency can impede achieving a healthy work-life balance.

**Technical Challenges:** The occurrence of technical issues, including unreliable internet connections, device malfunctions, and malfunctioning applications, remains a significant source of stress and frustration for teachers during online academic tasks.<sup>(27)</sup> These challenges disrupt workflow, cause delays, and reduce overall efficiency in completing planned activities.

### Impact of Technostress on Psychological Well-being

The substantial impact of technostress on teachers' psychological well-being.<sup>(28)</sup> To mitigate these effects, promoting self-care and emotional well-being within the teaching profession is essential. Strategies include recognizing technology usage limits, incorporating regular breaks during the workday, encouraging digital disconnection outside of work hours, and offering psychological support and stress management training.

#### Psychological Consequences:

a. **Stress and Anxiety:** Excessive technology use can lead to stress and anxiety, manifesting as symptoms like insomnia, irritability, reduced concentration, and diminished motivation among teachers.

b. **Fatigue and Burnout:** Technostress often results in physical and mental exhaustion due to continuous screen exposure and the expectation of constant connectivity. This fatigue can diminish teachers' energy and vitality, impacting their work performance and ability to provide quality education.

c. **Impact on Interpersonal Relationships:** Overreliance on technology can distance teachers from in-person interactions, affecting communication with colleagues, students, and families. This digital dependence can create a sense of detachment and hinder the establishment of meaningful connections, which are crucial in the educational setting.

d. **Sleep Disruptions:** Prolonged use of electronic devices before bedtime disrupts sleep patterns, leading to difficulties falling asleep and interruptions in deep sleep. Such sleep disturbances hinder teachers' ability to recharge for the challenges ahead.

e. **Academic Performance Decline:** Technostress often results in persistent distractions and difficulties in effective time management, diminishing teachers' concentration and productivity. Consequently, their ability to plan and execute teaching activities declines, impacting the overall quality of the educational process.

### The Post-pandemic Context and Its Relationship with Technostress

The post-pandemic context has witnessed a substantial surge in the utilization of technology for academic and professional endeavors<sup>(6,17)</sup>. This shift has given rise to a situation in which university teachers have had to rapidly acclimate to online education and extensively rely on digital tools. Several noteworthy aspects encompass:

a. **Sudden shift to online learning:** The pandemic brought about an unexpected transition to online education, resulting in challenges and adjustments related to acquainting oneself with new platforms and teaching methods.

b. **Greater workload:** The shift to the digital environment results in an increased workload for teachers, who may contend with additional tasks and online activities demanding greater technology utilization.

c. **Access limitations and technology quality:** Disparities in digital access and constraints related to accessing devices and high-quality internet connections create inequalities in online education access, potentially elevating stress and discomfort levels.

d. Alterations in social interaction: The absence of in-person interactions and dependence on virtual communication can impact social bonds, potentially leading to feelings of isolation and loneliness.

### Job Performance in Teaching

In the realm of organizational psychology and human resource management, job performance is an extensively examined subject. Several pertinent theoretical concepts have been formulated, and distinguished authors have made significant contributions to its exploration.<sup>(29)</sup> The following are some of these theoretical concepts and notable authors in the field of job performance research.

#### Motivation-Hygiene Theory (Herzberg)

Herzberg's theory distinguishes between motivational and hygiene factors in the workplace.<sup>(30)</sup> Motivational factors, such as recognition and growth opportunities, positively correlate with job performance, while unmet hygiene factors, like salary and working conditions, lead to dissatisfaction and hinder performance. This theory offers a comprehensive understanding of job satisfaction but oversimplifies the complex nature of human motivation, with potential variations among different worker types.

Herzberg's theory, although valuable, may not be universally applicable, as it primarily focuses on professionals and office employees. Its insights may not fully capture the nuances of motivation and job satisfaction in roles that differ significantly from the studied context, such as operational or service roles.<sup>(31,32)</sup>

#### Expectancy Theory (Vroom)

Vroom's Expectancy Theory,<sup>(33)</sup> posits that an individual's job performance is influenced by their belief that increased effort will lead to improved performance, which, in turn, will result in desirable outcomes. This theory underscores the importance of aligning employee expectations with organizational goals and ensuring that they perceive a clear connection between their efforts, performance, and the rewards or recognition they value.

#### Organizational Behavior Theory (Luthans)

The Positive Psychological Capital (PsyCap) theory,<sup>(34)</sup> highlighting the significance of social and psychological factors in job performance. This theory emphasizes the impact of factors like self-efficacy, social support, and effective leadership on an individual's job performance. It underscores the importance of nurturing these aspects to enhance overall work performance.

Furthermore, is a highly regarded educator and author renowned for her development of the "Framework for Teaching,"<sup>(35)</sup> a widely adopted framework for evaluating teacher performance. Her work has been instrumental in improving teaching practices and providing a systematic approach to assess and enhance teacher effectiveness in educational settings.

Table 2. Conceptual and Operational Description of Danielson's Theory

Theory	Dimensions	Description
Systematic Approach for Evaluating and Developing Teacher Effectiveness" is grounded in the principle that effective teaching encompasses a blend of knowledge, skills, and practices that are identifiable, assessable, and amenable to enhancement. This approach provides a structured framework for evaluating and improving teacher effectiveness in educational contexts.	Planning and Preparation	Involves effective planning of lessons and learning experiences, including setting clear objectives, selecting appropriate resources, and designing assessments.
	Learning Environment	Refers to creating a positive and conducive classroom environment for learning, promoting active student engagement, effective time management, and establishing behavioral norms.
	Instruction	Addresses the teaching strategies and practices employed by the teacher, such as clear content presentation, use of diverse methodologies, fostering critical thinking, and providing effective feedback.
	Professional Responsibility	Involves reflection on teaching practice, commitment to continuous learning, collaboration with colleagues, and engagement in the educational community.

### Challenges in Health and Job Performance

The relationship between health and job performance becomes more relevant in a context where university teachers are facing technostress.<sup>(36)</sup> As mentioned earlier, the excess of technology and the pressure to adapt to new platforms and teaching methods can trigger significant levels of stress and anxiety. These factors, in



turn, can have a detrimental impact on the mental and emotional health of educators, resulting in a decrease in their psychological well-being. Fatigue, burnout, difficulty concentrating, and lack of sleep are just some of the manifestations of this phenomenon, and all these aspects can negatively affect teachers' job performance.

In addition to the challenges related to technostress, the post-pandemic context has introduced significant changes in the way teaching is conducted, leading to an increase in the workload of university teachers<sup>(37-40)</sup>. The transition to online education has required additional effort from educators, resulting in a greater demand for time and resources. This additional burden can lead to even greater exhaustion and ultimately negatively affect teachers' job performance. Therefore, it is essential to address these challenges in the health and job performance of university teachers to ensure an effective teaching environment and promote their overall well-being.

## CONCLUSIONS

The COVID-19 pandemic has introduced numerous challenges to the field of education in Perú,<sup>(6,7)</sup> particularly the rapid shift to online teaching. This transition has led to the emergence of techno-stress among teachers,<sup>(10)</sup> significantly impacting their psychological well-being. Techno-stress, characterized by factors such as information overload and technological dependence, has resulted in elevated levels of anxiety, chronic fatigue, strained interpersonal relationships, sleep disturbances, and a decline in academic performance among teachers.<sup>(31,32)</sup>

As the education system navigates the post-pandemic context, it becomes imperative to prioritize the health and well-being of teachers.<sup>(37)</sup> This includes providing them with the necessary support, training, and resources to enhance their digital competencies,<sup>(8,25)</sup> and effectively manage techno-stress. Educational institutions must implement strategies that promote a harmonious balance between technology use and personal well-being.

Furthermore, it is crucial to gain a deep understanding of the specific factors contributing to techno-stress among Peruvian university teachers in the post-pandemic landscape.<sup>(16)</sup> By developing tailored interventions that prioritize teachers' psychological health and facilitate their adaptation to virtual teaching environments, we can ensure a positive and sustainable educational atmosphere<sup>(9,10,22)</sup>. Collaboration among all stakeholders, continuous professional development, and the implementation of policies supporting mental health and work-life balance will be instrumental in creating an educational landscape that places health at its core.

Collaboration among all stakeholders will enable continuous professional development,<sup>(35)</sup> the implementation of educational policies that support the mental health of active teachers, and a balance between work and personal life will be essential to create an educational landscape focused on human well-being. Likewise, this research was planned to define teaching practice and brain health in various virtual environments.

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