

TECHNOLOGY AND EMPLOYEES PERCEPTIONS OF WORK: A LITERATURE TREND ANALYSIS 2021–2025

Nor Shela Saleh^{1*}, Mohd Shafie Rosli², Suaibah Abu Bakar³, Azlah Md. Ali³

¹Department of Social Sciences, Centre for General Studies and Co-Curricular, Universiti Tun Hussein Onn Malaysia, Parit Raja, Batu Pahat, 86400, Johor, Malaysia

²Faculty of Educational Sciences and Technology,
Universiti Teknologi Malaysia, Johor Bahru, 81310, Johor, Malaysia

³Faculty Social Sciences and Humanities, Universiti Teknologi Malaysia, Johor Bahru, 81310, Johor, Malaysia

*Corresponding Author's Email : norshela@uthm.edu.my

©2026 Saleh et al. Published by Penerbit Universiti Teknikal Malaysia Melaka. This is an open article under the CC-BY license (<https://creativecommons.org/licenses/by-nc-nd/4.0/>).

Article History: Received 29 April 2025, Revised 11 June 2026, Accepted 27 June 2026, Published 30 June 2026

ABSTRACT

The rapid integration of technology significantly impacts workplace dynamics and career growth, yet employees' perceptions of these digital tools vary widely. The primary objective of this study is to analyze literature trends from 2021 to 2025 to understand how technological advancements shape employees' perceptions of their work. Employing a systematic review approach, this study analyzed 75 articles published over the past five years. The synthesis of the findings reveals that employee responses can be categorized into three main structural themes. First, positive perceptions are predominantly driven by technologies that simplify workflows and minimize stress, thereby enhancing employee motivation and job satisfaction. Second, negative perceptions emerge when digital tools are overly complex, difficult to navigate, or perceived as unsafe. These challenges frequently result in technostress, which significantly diminishes motivation. Third, ambivalent perspectives underscore those contextual factors such as the work environment, utilization methods, and the timing of implementation play a critical role in shaping overall opinions. Finally, this study contributes to human capital development and organizational practice by highlighting the dual-edged nature of technology adoption. These synthesized insights equip human resource professionals and organizational leaders with the foundational knowledge needed to design effective digital integration strategies, mitigate technostress, and cultivate a supportive workforce.

Keywords: Employee Perception; Technostress; Technology Acceptance Model; Work Motivation.

JEL classifications: O33, M15, J28, M54, J24

1.0 INTRODUCTION

New technologies have had a tremendous impact on global citizenship, forcing people to adopt new digital technologies to effectively accomplish their tasks (Anh, Whelan & Umair, 2022; Mir, 2021).

Many job fields have been significantly affected, with the onset of the pandemic resulting in rapid adoption of the telework as an effective way of maintaining high performance of labor force (Conger, Murimi & Blanke, 2024). It has turned into a norm in many companies and makes online collaboration possible (Abidi & Safi, 2023). This process leads to various social changes as well (O'Dea et al., 2018). Thus, there is a noticeable move in the commercial field to the online trading platforms, which represents a complete break with old-fashioned face-to-face interaction (Mir, 2021).

Education is another field where the impacts of this change have been realized, resulting in a call for stakeholders to embrace technology in learning and teaching. As Gabriella and Elizabeth (2023) note, however, the adoption of technology does not happen uniformly and creates notable differences in terms of usage. Pal and Patra (2021) cite various reasons for the differences in adoption of technology, which include job-related issues, institutional support, and availability of resources among others. In any case, the use of these digital technologies can prove to be highly effective in increasing efficiency and ensuring sustained productivity (Mohd Shafie et al., 2022). The problem is, however, that the capacity of an individual to benefit from these digital tools will largely depend on his or her previous experience with technology.

However, despite these recognized benefits, the need to continuously adapt to fast-paced changes may cause some stress for those who have trouble in keeping up with these changes (Yulianto, Setyaningsih & Sumardi, 2021). In this regard, one faces emotional stress, cognitive stress, and various physical health problems since technology seems to be more burdensome rather than helpful. Although many researchers have analyzed the overall effects of these transformations, there is a clear gap in the field of research. Namely, there is an evident lack of comprehensive mapping of the impact that these fast-paced digital transformations have on overall work perception of employees, focusing on the balance between productive effects of technology use and technostress (2021–2025). The main goal of the current study is to examine the most relevant trends in modern scientific literature about the effect of technology on employees' work perceptions.

2.0 PROBLEM OF TRANSFORMING CHALLENGES INTO OPPORTUNITIES FOR GROWTH

According to Jeffrey et al. (2008), technology has the potential to foster innovative ideas. The main goals of integrating technology are to enhance innovative capabilities and promote critical thinking. This is further supported by Ozsungur's (2020) findings, which suggest that organizational technology can serve as a catalyst for professional development and foster transformation within corporations. However, rapid technological changes often lead to increased stress levels. In an educational context, technological proficiency forms a foundation for advancing educational literacy. Nevertheless, the willingness of educators to implement technology can create stress, particularly when they encounter redundant tasks and complex technological requirements (Arslan et al., 2022; Nurasyikin, Syudah & Shazaitul Azreen, 2021). Educators must invest considerable effort, time, and energy to acquire new

skills, which can exacerbate their workload and stress levels. This may force educators to modify their instructional methods in challenging circumstances, further contributing to their stress. Hence, Liu and Hu (2021) have mentioned that the adoption of digital technologies in education can be hindered by insufficient device ownership among students. Too few students' accesses to devices constrains the overall teaching and learning experience. Oliver et al. (2010) highlighted that several factors obstruct educators from implementing digital learning comprehensively, including skill deficits, knowledge gaps, student interests, device limitations, and internet connectivity issues. As a result, this situation places additional pressure on educators. Students may also experience the negative impacts of diminished educational quality, which may not align with the institution's mission and vision (Gabriella & Elizabeth, 2021)

Stress can arise from various emotional and physical factors that contribute to resistance to organizational change. During the unprecedented pandemic, this resistance can become particularly pronounced as individuals are compelled to adjust to continuously evolving circumstances (Thurik et al., 2023). Consequently, Kieu Oanh, Thu Phuong Thao and Khoa (2022) said employees hesitant to embrace these essential transformations often feel overwhelmed. This sense of being overwhelmed is driven mainly by the demands to acquire new skills and enhance their technological capabilities to remain competitive and effective in their roles. Korzynski et al. (2016) and Meyer et al. (2022) emphasise the harmful effects of technostress, which refers to the stress resulting from an increasing reliance on technology in the workplace. This stress can manifest in various forms, including anxiety about mastering new software and frustration with the rapid pace of technological advancements. Additionally, Marchiori, Mainardes, and Rodrigues (2018) found that employees exhibiting a higher level of resistance to change are often older individuals. These employees frequently demonstrate a lack of enthusiasm for innovative ideas and show reluctance to acquire new skills, hindering their professional growth and adaptability.

Cromity and de Stricker (2011) emphasized a notable phenomenon known as the "silo mentality," which often surfaces during periods of organizational change and transformation. This mindset occurs when employees, feeling overwhelmed by uncertainty, become insular and resistant to new ideas. Such insularity can stifle collaboration and impede open communication among teams, resulting in a fragmented work environment (Osman & Maat, 2022; Lpez, 2023; Viannie Claire et al., 2023). Consequently, organizations struggling with this mentality may find it increasingly difficult to foster a culture that encourages agility and innovation. Lefrid et al. (2023) mention that this challenge is particularly exacerbated during external crises, such as a pandemic. The pressures of rapid change can intensify the effects of the silo mentality, making it even harder for organizations to adapt effectively and respond creatively to emerging challenges and opportunities. Therefore, dismantling these silos is critical for building resilience and adaptability in the face of external disruptions.

3.0 LITERATURE REVIEW

The literature review section explores several key themes, particularly those related to technostress. Technostress underscores the differing levels of technology acceptance and rejection among employees, which are shaped by their perceptions of technology adoption. Another crucial topic addressed is the technology acceptance model alongside work motivation theory. The integration of technology has the potential to enhance employee motivation, while its rejection can lead to diminished work motivation. A thorough understanding of motivational factors is essential, as these elements directly influence job satisfaction. Breugh, Ritz, and Alfes (2017) highlight that human work motivation significantly impacts job satisfaction. Similarly, Thanh et al. (2020) discovered that higher levels of work motivation are associated with increased productivity. These dimensions will be analysed in the context of dynamic technology acceptance and rejection dynamics.

3.1 Theory of the Acceptance Model (TAM)

The Technology Acceptance Model (TAM), first introduced by Davis et al. in 1989 and later refined by Venkatesh et al. in 2003, emphasizes two fundamental constructs: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). PU denotes the belief that technology enhances performance, while PEOU reflects that utilizing technology is straightforward and demands minimal effort (To et al., 2021). A study conducted by Mohd Sobhi (2014) revealed that educators perceive technology as a valuable and user-friendly resource. TAM has proven to be broadly applicable across various fields, effectively addressing the adoption of diverse technologies and highlighting the significance of context in technology acceptance (Li et al., 2024; Mohd Shafie et al., 2022). In summary, as society becomes increasingly technology-driven, organizations leverage technology to enhance human capital and boost profitability.

Stress significantly impacts an individual's cognitive, emotional, and physical well-being, ultimately affecting the quality of each area. Chung (2018) indicates that cognitive, emotional, and physical changes commonly emerge when individuals encounter stress, particularly in response to substantial threats and challenges. Engaging in digital learning entails financial costs and a considerable investment of time (Bhattacharya et al., 2024). When the demands of learning new technologies become excessive, it can lead to feelings of fatigue. As employees strive to develop new skills and knowledge, they may feel overwhelmed, especially when acquiring new information and skills simultaneously. Wei et al. (2024) further highlight that employees often favor familiar systems and procedures; therefore, when changes occur, productivity can suffer. These observations underscore that productivity may decline when employees resist adopting new technologies, influenced by their interests and the pressures they experience.

Previous research has shown that technostress often arises from inadequate technological support and employees' insufficient technological proficiency (Arino et al., 2024). This suggests that organizations play a pivotal role in enabling their workforce to develop essential technological skills. Cosnefroy and Buhot (2013) underscore the significant impact of comprehensive training programs

and consistent support on employees' overall job satisfaction. As a result, organizations must allocate resources and invest in targeted training initiatives to enhance employees' technological competencies (Zeman & Swanke, 2008; Bali et al., 2024). When employees are well-skilled in the latest technologies, they are better equipped to navigate and alleviate the challenges posed by technostress. Consequently, embracing technology not merely as a tool but as a powerful resource can lead to a more fulfilling and satisfying work environment.

Figure 1 presents a Technology Acceptance Model (TAM) diagram underpinning this study. The research examines how employees' acceptance or rejection of technology in organizations influences their work motivation. According to TAM, employee attitudes are shaped by two primary factors: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Before utilizing technology in the workplace, employees form perceptions based on these two dimensions. PU is evident when employees believe technology will enhance their work and streamline processes (Pal & Patra, 2021). In contrast, PEOU is present when employees feel that technology can be utilized efficiently, without encountering significant challenges or barriers (Kieu et al., 2022). These two perceptions are interrelated. Prior research by Alismaiel, Cifuentes, and Al-Rahmi (2022) demonstrated that PEOU positively influences PU. When employees view technology as a tool to alleviate their workload, their acceptance of PU increases. Ultimately, the essence of technology acceptance hinges on how PU and PEOU affect employees' intentions to adopt the technology. Both perceptions will shape their readiness to integrate technology into their work activities. The actual use of technology will be assessed based on whether employees experience outcomes that align with their initial evaluations of PU and PEOU.

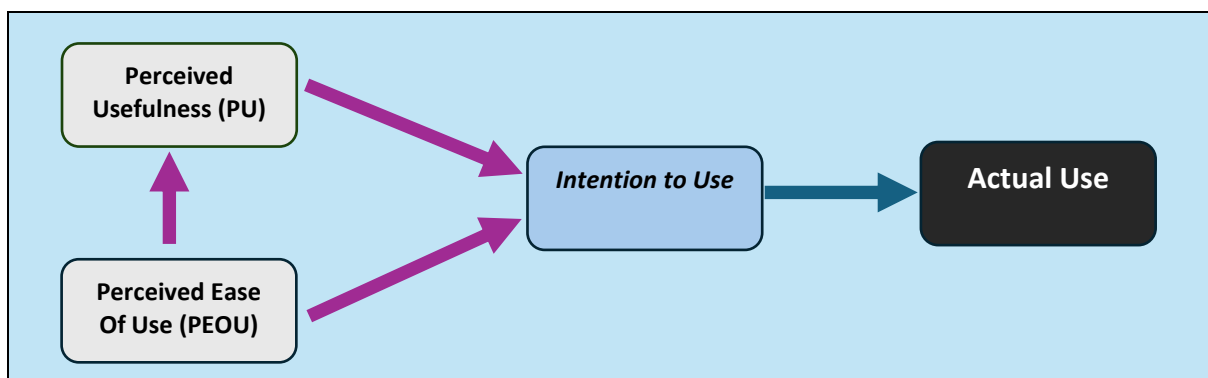


Figure 1: Technology Acceptance Model (TAM) (Source: Davis, 1989)

3.2 Work Satisfaction and Motivation

Breaugh, Ritz, and Alfes (2017) emphasize that work motivation is essential for individuals to excel in their roles. Noland (2014) identifies two potential employee responses regarding technology: one arising from their acceptance of it and the other from a reluctance to embrace it. Research by Prabowo, Pratama, and Arimbawa (2021) indicates that employees who are adaptable to changes in the work environment tend to view technology positively. In contrast, Bhatt and Shiva (2020) discovered that

employees' capacity to adopt new technology is closely tied to their existing knowledge and skills, subsequently shaping their perception of the work system as more efficient and expedient. This viewpoint is supported by the findings of Mohamad, Amron, and Md Noh (2021), who suggest that technology streamlines human tasks, enhancing operational speed. In summary, these studies collectively affirm the significant impact of technology on time management, making it substantially more efficient.

Linpei and Zhuang (2025) said employees believe that automated machinery and technology-driven tools can introduce various risks, potentially resulting in accidents in the workplace. Those not proficient with newly implemented machinery or instruments often feel intimidated and anxious, which can significantly disrupt overall workflow and productivity. This concern is supported by research conducted by Lindberg and Ove (2006), which indicates that numerous workplace accidents can often be traced back to a fundamental lack of knowledge and skills in properly operating equipment. Additionally, employees who have had negative experiences with technology, such as facing malfunctions or feeling overwhelmed by complex interfaces, may develop a strong reluctance to adopt these tools in their daily tasks (Wei & Zheng, 2025; Simba et al., 2025; Abidi, Dzenopoljac & Safi, 2023). This hesitation impacts on their performance and can impede the organisation's ability to capitalise on the benefits of technological advancements fully.

The growing incidence of workplace hazards and accidents has emerged as a significant concern, making many employees feel disheartened about using technology. According to Sofia, Ericka and Tom (2023), employees often perceive technology as introducing additional risks and potential accidents, which can indirectly undermine their motivation. To enhance employee motivation, improving their knowledge and physical capabilities in performing tasks is crucial. As Schneberger, Amoroso, and Durfee (2008) highlighted, employees are more inclined to embrace technology when they understand it sufficiently. Interest and knowledge are interrelated; previous studies have demonstrated that a heightened interest in technology positively influences knowledge acquisition. Furthermore, an increase in interest typically leads to enhanced knowledge. These two elements are connected to the concepts of application and practice, which can strengthen both interest and knowledge in the workplace.

In their research, Andrea and Timea (2023) discovered that when employees reject technology, it frequently results in psychological and physiological stress. This stress can contribute to job dissatisfaction, as highlighted by Hernandez (2021). Such dissatisfaction can significantly strain cognitive processes, emotions, and overall physical well-being. Persistent anxiety can have detrimental effects on heart health; for instance, employees may experience cardiovascular issues stemming from continual worry. Additionally, other health problems, including high blood pressure and migraines, may emerge as a result of the anxiety linked to technology use (Tim, Ingo, & Stefan, 2023). When examining the concept of technostress, employees must assess their readiness and ability to engage with technology. According to Shi et al. (2020), three primary domains should be considered:

emotional readiness, cognitive readiness, and behavioral readiness. Cognitive readiness refers to employees' understanding and knowledge of the technology they are using. Emotional factors significantly influence employee behavior and can decrease productivity (Ma, 2024; Koch & Lodefalk, 2025; Sinmaz et al., 2025). The stress experienced by employees can result in errors, which affect both the quality of their work and overall productivity levels.

The selection of consultants is a critical process that must follow specific criteria (Cosnefroy & Buhot, 2013). These consultants are not merely professionals but specialists skilled at highlighting technology's vital role in the workplace. Their mission is to educate and inspire employees, encouraging them to embrace technological advancements wholeheartedly. Moreover, it is essential to integrate counselling support into this framework to ensure employees enjoy a fulfilling and joyful work environment, free from unnecessary stress (Athanasiaades, Winthrop & Gough, 2008). Stress in the workplace is widely acknowledged as an occupational hazard due to its harmful long-term effects on both mental and physical health. Understanding work motivation involves three interconnected dimensions: cognitive development, behavioural growth, and emotional well-being. Motivation related to cognitive development focuses on enhancing conceptual skills, which are essential for professional advancement. Bacotic (2016) and also Shaban et al. (2025) explain that job satisfaction, viewed through a cognitive lens, embodies a transformative process of intellectual growth that enables individuals to gain new knowledge and more profound insights pertinent to their roles. This journey toward job satisfaction manifests in various ways, including identifying and analysing problems, the fulfilment derived from understanding and overcoming challenges, and the capacity to critically evaluate one's work from an informed and fresh perspective (Stephanie & Alia, 2024; Aziz et al., 2024).

Technology is vital for job satisfaction within organizations, as it empowers employees to enhance their work processes (Siddiqi & Rahman, 2025; Rahman, Malik & Nazir, 2025). Employees lacking technological skills may encounter errors and experience reduced productivity. Organizations can uplift novice and experienced team members by providing learning and training programs, fostering an environment rich in growth and opportunity. Skilled employees can shine by taking on mentoring roles, incentivized for their contributions (Kim & Lee, 2024). Moreover, a positive workplace atmosphere, driven by supportive interactions among coworkers, is essential for fueling employee motivation and emotional development. Motivational theories and models guide employees in understanding the transformative journey of assessing changes in thought and behavior. In embracing technology, employees can engage with both needs-based and process-based approaches. Technology serves as a tool for fulfilling work requirements, while employees can reflect on how it enriches their cognitive development and behavior. This recognition shapes their openness to technology. Goldman's study (1983) revealed that those resistant to change often struggle with responsibility, adapting to new technologies, challenging, especially when tied to outdated systems. Nastjuk et al. (2024) found that pressure from superiors can lead employees to engage with technology reluctantly, potentially diminishing productivity and quality and hindering organizational goals.

Research conducted by Andrea and Timea (2023) reveals that some individuals resist embracing technology, often due to a reluctance to change, which is particularly common among senior employees who favor traditional methods. Ultimately, integrating technology can uncover new opportunities and enhance career paths. Similarly, Anh, Whelan, and Umair (2022) examine the attitudes of employees hesitant to acquire new skills. Technological advancements within organizations necessitate employee adaptability, fostering innovation and dynamism. However, if an organization's technological strategy is overly complex, it may hinder employee engagement. Moreover, presenting technology adoption as an occasional practice can diminish employee motivation. This decline in motivation and job satisfaction may lead to increased workplace stress. Supporting this, Alismaiel et al. (2022) found that coercive technology adoption can negatively impact employee motivation. In these situations, technology may feel burdensome due to its unfamiliarity. Nevertheless, boosting motivation and fostering technology acceptance can be effectively measured during the implementation phase.

4.0 IMPLEMENTATION OF RESEARCH METHODOLOGY

This research uses the Systematic Literature Review (SLR) methodology in place of primary data collection techniques such as surveys and interviews to analyse secondary data to provide deeper understanding of employees' perception of technology integration. The researcher has conducted a thorough five-year study, including literature published from 2021 to 2025, which analyzes the effect of different technologies and innovations on the overall dynamics of the working environment. To do this, a thorough library search was undertaken in leading academic databases such as Scopus, Web of Science, and Google Scholar. Academic keywords and Boolean operators were used for the search. The main search strings include "Technology Integration" OR "Technological Advancements" AND "Employee Perception" OR "Work Motivation" OR "Job Satisfaction" AND "Technostress" OR "Employee Anxiety."

To ensure an in-depth understanding of the topic under review and ensure the quality of the study, strict inclusion and exclusion criteria were set for the retrieved papers. Inclusion criteria were restricted to peer-reviewed papers written in English in the period of 2021-2025 which directly addressed workplace dynamics and technology adoption. On the contrary, exclusion criteria allowed for filtering out non-peer-reviewed sources, sources published before 2021, and sources which discussed only technical aspects of software engineering and not human experience. Selection of the final 75 articles included a systematic screening procedure, starting from elimination of duplications from the initial search through databases. Further screening involved preliminary examination of titles and abstracts of the sources as well as in-depth eligibility examination, resulting in identification of 75 articles to be used in the synthesis.

These synthesized results obtained from these 75 studies have been first contextualised into different significant economic sectors identified within the literature review. After that, to prove the

classification technique used in assessing the employees' experiences in relation to the use of technology, these studies have been further categorized into two different themes depending upon the findings provided. These studies have been included into the positive perception category if the technology has been seen as reducing task complexity, improving communication, and increasing motivation and job satisfaction in the workplace. On the other hand, if the studies have stressed employee anxiety and cognitive load or difficulties in adapting themselves to new technology, these studies have been classified as negative perceptions. Ultimately, this classification has proven an important concept of technostress through which the effects of technological developments have been assessed on the employees.

5.0 RESEARCH FINDINGS (FIVE-YEAR TREND ANALYSIS)

This review focuses on critically analyzing 75 research papers published from 2021 to 2025 in a selected number of 15 journals per year, thus ensuring equal time coverage. The majority of the literature points out that employees have a positive perception towards technology insofar as technology serves as a facilitator for work. The analysis reveals that such papers (for example, Mohd Shafie et al., 2022; Mir, 2021) mention increased efficiency and productivity. Nonetheless, the critical approach shows that what makes people feel satisfied about the job is not the technology itself, but the autonomy it brings about. The more difficult processes are automated and simplified by digital technologies, the less effort employees need to put into completing administrative tasks and the more freedom they get to think strategically and solve problems. However, in the case of the analysis of the literature on studies showing negative perceptions, one can notice a serious psychological burden linked to the process of digitalization. This theme includes studies such as (Yulianto, Setyaningsih & Sumardi, 2021), and the general idea presented there is related to fear of changes and resistance. The synthesis of this literature shows that the problem with negative perceptions does not come from the incompetence of an employee or his or her unwillingness to work; it appears because of cognitive load. When the speed of changes is higher than the ability of an employee to adapt or when changes are not supported by an organization, a condition called technostress occurs.

Table 1: Thematic Synthesis and Interpretation of Employee Perceptions of Technology

Year of Publication	Author(s)	Synthesis	
		Thematic category	Key interpretation (Synthesis)
2021	Mir	Operational Empowerment	Self-escapism is the motivation that drives one to use technology digitally, thus transferring one's real-world behavior to digital space.
2021	Pal & Patra	Operational Empowerment	Both TAM and TTF views validate the positive attitudes towards video-based operational tools.
2021	Yulianto, Setyaningsih & Sumardi	Operational Empowerment	Through the extension of TAM, structured technology use gets positive attitudes.
2021	Nurasyikin	Organizational	Job characteristics are important in the extent

Year of Publication	Author(s)	Synthesis	
		Thematic category	Key interpretation (Synthesis)
	Syudah & Shazaitul Azreen	Readiness	of technostress that is experienced by employees.
2021	Liu & Hu	Technostress & Overload	The quest for "technologically free" spaces arises because of too much technostress.
2021	Gabriella & Elizabeth	Technostress & Overload	There are unique experiences of technostress for social workers as they adjust to new digital technologies.
2021	Christoph et al.	Technostress & Overload	Health practitioners encounter technostress because of complicated systems requirements.
2021	Mohd Fahusli, Kamsuriah & Mohannad	Technostress & Overload	Technostress variables serve as a barrier to the success of the information system.
2021	Alfadda & Mahdi	Operational Empowerment	The TAM model proves that usage of digital applications enhances participation in language courses.
2021	Hernandez	Operational Empowerment	The TAM model affirms the fast acceptance of online learning systems during times of crisis.
2021	Mohamad, Amron & Md Noh	Operational Empowerment	Reiterates that perceived ease of use in TAM highly determines technology acceptance.
2021	To, Trinh & Gomez	Operational Empowerment	TAM extended by "enjoyment and trust" strengthens the intention to use mobile systems.
2021	Fillingim et al.	Operational Empowerment	Virtual Reality Technology serves as an enabler to boost physical activities and creative designs.
2021	Gaube et al.	Organizational Readiness	Organizational factors play a crucial role in determining health IT perceptions among employees.
2021	Haluca & Hanne	Organizational Readiness	Technostress from ICT involves deep sociological aspects and not just technology issues.
2022	Mohd Shafie et al.	Operational Empowerment	A systematic review affirms the validity of TAM to ensure the sustainability of digital integration.
2022	Nur Azira, Noor Aslinda & Mohd Nazir	Technostress & Overload	Technostress greatly affects performance and quality of output in high-stress digital environments.
2022	Shafinaz Lyana et al.	Technostress & Overload	Highlights of the specific environmental triggers of technostress necessitating immediate organizational action.
2022	Syarifah Hanum, Sharifah Rahama & Oscar	Technostress & Overload	Psychological stress is due to technological pressures because of the emergence of new work trends.
2022	Arslan, Sahin, Ferhan & Okur	Technostress & Overload	The sudden transition to online platforms greatly increased technostress levels for teachers.
2022	Anh, Whelan, & Umair	Technostress & Overload	"Zoom fatigue" is one of the major causes of technostress during the pandemic period.

Year of Publication	Author(s)	Synthesis	
		Thematic category	Key interpretation (Synthesis)
2022	Michalik & Schermuly	Technostress & Overload	Technostress is of immense relevance in relation to emotional exhaustion and system failures.
2022	Reginald & Cedric	Technostress & Overload	University employees experienced high technostress because of the inadequately prepared digital platform.
2022	Alismaiel, Cifuentes-Faura & Al-Rahmi	Operational Empowerment	The acceptance of social media use during the pandemic showed great acceptance via TAM.
2022	Kieu Oanh, Thi Phuong Thao & Khoa	Operational Empowerment	TAM and Task-Technology Fit guarantee the continuous intention to use digital platforms.
2022	Meyer et al.	Operational Empowerment	Use-phase data analysis facilitates effective product design and the manufacturing process.
2022	Osman & Maat	Organizational Readiness	Self-efficacy and positive attitudes form the basis of ICT acceptance.
2022	Munirah & Kamariah	Operational Empowerment	Skill preparation and motivation lead to efficient utilization of communication applications.
2022	Abu Bakar et al.	Organizational Readiness	Perceptions of employees about working from home showcase the need for a flexible organizational policy.
2022	Abu Talib et al.	Technostress & Overload	Highlights particular technostress creators that cause stress in the accounting education organization.
2023	Andrea & Timea	Technostress & Overload	Technostress causes severe disruption in the work-life balance, resulting in psychological stress.
2023	Lopez	Operational Empowerment	The integration of IT plays a significant role in determining productivity based on workplace organization.
2023	Viannie Claire, et al.	Technostress & Overload	Technostress creators negatively affect employees' well-being in the telecommunications industry.
2023	Muhammad Hakimi et al.	Technostress & Overload	Teachers experience severe technostress during mandatory digital transformation processes, and their productivity is limited.
2023	Zainil Hanim, Siti Haslina & Muhammad Firdaus	Organizational Readiness	Too much technostress affects the efficiency of conventional leadership techniques.
2023	Velverthi, Prybutok & Hong	Operational Empowerment	Combining Perceived Risk Theory with TAM helps in developing a model of secure technology behavior.
2023	Khaldoun et al.	Operational Empowerment	Knowledge sharing acts as an intermediary in achieving successful digital marketing and technological innovation.
2023	Sofia, Ericka & Tom	Technostress & Overload	Introduction of welfare technology in care settings inadvertently leads to technostress among workers.
2023	Tim, Ingo &	Organizational	Leadership style becomes the moderating

Year of Publication	Author(s)	Synthesis	
		Thematic category	Key interpretation (Synthesis)
	Stefan	Readiness	factor for technostress to occur.
2023	Thurik et al.	Technostress & Overload	"Techno-overload" highlights the negative side of using technology, with detrimental effects on well-being.
2023	Pham et al.	Operational Empowerment	Theory of Planned Behavior and TAM can explain the intentional use of technology.
2023	LeRoy, Kaufmann & Lane	Technostress & Overload	Increased use of a webcam during online activities results in visual technostress.
2023	Abidi, Dzenopoljac & Safi	Operational Empowerment	Online collaboration tools facilitate the sharing of tacit knowledge and entrepreneurship.
2023	Lefrid et al.	Operational Empowerment	TAM extension into simulation models aids in improving learning acceptance and readiness.
2024	Nastjuk et al.	Technostress & Overload	A combination of technostress creators and outcomes establishes that it adversely affects system usage.
2024	Stephanie Kok & Alia Azalea	Organizational Readiness	A comfortable physical and virtual working environment becomes very important for ensuring high productivity levels.
2024	Ly & Ly	Organizational Readiness	Leadership styles become very crucial in revealing and controlling technostress in periods of change.
2024	Conger, Murimi & Blanke	Organizational Readiness	Discusses various organization-related factors that affect the effectiveness of the work-from-home approach.
2024	Li et al.	Operational Empowerment	Rational and emotional factors of the TAM model motivate good behavioral intentions toward using AI.
2024	Ma	Operational Empowerment	Extensions of TAM models indicate positive social experiences in adopting smart technologies.
2024	Bhattacharya et al.	Operational Empowerment	Creating formal representations of the system increases understanding and efficiency in performing tasks.
2024	Arino et al.	Organizational Readiness	Conscientiousness becomes a moderating factor in personality types in controlling technostress.
2024	Bali et al.	Organizational Readiness	Confidence in ICT learning is essential in mediating the role of executive functions in the reduction of technostress.
2024	Ye et al.	Operational Empowerment	An effective digital transformation strategy leads to an increase in work engagement among employees.
2024	Kim & Lee	Organizational Readiness	Self-efficacy is an essential variable in the handling of mental health issues in AI implementation.
2024	Trillo et al.	Organizational Readiness	Positive meaning at work helps protect against work exhaustion and psycho-emotional distress in the digital era.
2024	Hesselbarth, Alfes &	Organizational Readiness	A complexity approach is needed to manage technology-enabled work arrangements.

Year of Publication	Author(s)	Synthesis	
		Thematic category	Key interpretation (Synthesis)
	Festing		
2024	Aziz et al.	Technostress & Overload	High and unnecessary technology use is associated with increased physical and mental exhaustion.
2024	Sharma et al.	Technostress & Overload	There is a direct relationship between technostress and intention to leave jobs among employees.
2025	Rahman, Malik & Nazir	Operational Empowerment	Technology-based programs provide efficient solutions based on peer experience.
2025	Duong et al.	Technostress & Overload	Introduction of technological tools such as ChatGPT brings out the "dark side" of technology and technostress.
2025	Linpei & Zhuang	Organizational Readiness	Creative performance is strongly affected by knowledge exchange and learning objectives even under technology-induced pressure.
2025	Shaban et al.	Organizational Readiness	Emotional intelligence works as a key mediator which prevents burnout due to technostress.
2025	Linpei & Zhuang	Organizational Readiness	Knowledge exchange and goal setting reduce technostress in order to improve creative performance.
2025	Wei & Zheng	Technostress & Overload	Digital technostress compels employees to resort to undesirable behaviour like knowledge hiding.
2025	Simba et al.	Technostress & Overload	Technostress in entrepreneurship is a significant barrier for innovation in emerging economies.
2025	Keshavarz, Saeidnia & Wang	Technostress & Overload	Health professionals suffer greatly from technological problems that cause profound technostress in hospitals.
2025	Sinmaz et al.	Technostress & Overload	High technology, such as robot surgery, causes technostress to medical professionals.
2025	Siddiqi & Rahman	Organizational Readiness	Supervisor and coworker perceptions of support act as good buffers against turnover intentions resulting from technostress.
2025	Wang & Yao	Technostress & Overload	Workplace technology use in excess tends to dictate the future well-being of employees.
2025	Wurtenberger, Groneberg & Mache	Technostress & Overload	Stress from digital technology has a very bad correlation with health work outcomes.
2025	Nascimento, Correia & Califf	Operational Empowerment	Telecommuting may generate techno-eustress, which will enhance engagement.
2025	Kwala et al.	Technostress & Overload	Cyberloafing is used as a coping strategy by the employees' facing issues related to resource depletion and digital exhaustion.
2025	Kaur & Chauhan	Organizational Readiness	Emotional intelligence is an important non-technical skill required to maintain performance in a hybrid IT environment.
2025	Koch & Lodefalk	Technostress & Overload	It has been empirically proven that Artificial Intelligence leads to job stress.

6.0 RESULTS AND DISCUSSION

The experience of collaboration among employees in different nations leads to an analysis of positive reviews about technology adoption under the framework of Technology Acceptance Model (TAM). Employees tend to express their joy regarding technological innovation which facilitates their work process, creates teamwork opportunities and increases productivity (Kaur & Chauhan, 2025; Keshavarz, Saeidnia & Wang, 2025; Trillo et al., 2024). As per TAM, such an expression is a result of high level of PU and PEOU. In case when technological innovations are perceived as useful instruments and not hindrances in the operation, they contribute greatly to intrinsic motivation. Such a connection with the theory of work motivation helps to understand the role of certain technological innovations which increase employees' happiness and empowerment. By meeting psychological needs for competence and autonomy, the integration of technology serves as a tool of increasing job satisfaction and contributes to innovations which meet the global community.

Nevertheless, a certain portion of the workforce sees technology as a two-sided tool, in terms of which its effect on employee motivation becomes inconsistent. Although useful tools help motivate the staff, dysfunctional technologies cause frustration and demotivation (Li et al., 2024; Ye et al., 2024; Duong et al., 2025). Considering the matter from the perspective of motivation theory, technology may become an obstacle to the achievement of self-determination of the employee due to learning difficulties and digital restrictions. Such situations create a spectrum for employees, who find themselves ready to use technology, becoming motivated, while those who have difficulties with adaptation lose their enthusiasm.

There is ample research evidence suggesting that the negative dimensions of the above-listed perceptions are inherently based on the technostress theory. While some view the technology as an opportunity for enhancing communication and professional development, others have justified apprehensions regarding job replacement and isolation due to reduced human contact (Kwala et al., 2025; Wang & Yao, 2025; Raluca & Hanne, 2021; Muhammad Hakimi et al., 2023). Within the scope of technostress theory, these apprehensions are classical symptoms of techno-insecurity and techno-uncertainty. The apprehension that technology can make one redundant or excessively isolated represents the key psychological obstacle that goes against TAM principles of positive perception.

In conclusion, employee feedback provides a more holistic perspective that requires a theoretical compromise between TAM and technostress. Although the employees appreciate the convenience and the collaborative nature of the advanced systems, they often feel stressed by the constant pressure to always be available (Alfadda & Mahdi, 2021; Shafinaz Lyana et al., 2022; Andrea & Timea, 2023). This demonstrates the existence of techno-invasion and techno-overload technostress types. The former refers to the invasion of the work-related activity into the personal time of individuals. The latter refers to the overload of people with numerous online tasks. Additionally, fears

related to privacy and security contribute to techno-complexity which undermines the "ease of use" aspect of TAM.

7.0 CONCLUSION

The incorporation of technology in organizational settings brings about many changes, offering benefits like cost savings, energy efficiency, and better use of human resources. The effective incorporation of technology depends on many aspects like inputs, transformation, production methods, feedback processes, and environment. It is vital to identify the different tools, people implementing the technology and the money available for the creation of goods and services (Abu Bakar et al., 2022). The use of technology leads to the transformation of inputs into more valuable output. Many studies have shown that the effective use of technology lowers cost and improves the quality of service (To, Trinh & Gomez, 2021; Mohamad, Amron & Md Noh, 2021; Li et al., 2024). The production process increases product quality and adds value to service delivery, especially as far as human capital is concerned. The level of acceptance of technology by the human capital determines the value (Nascimento, Correia & Califf, 2025). Success will also depend on the evaluation of organizational work system performances, specifically by assessing whether such systems are open or closed. Open systems need to focus on the improvement of sustainability; otherwise, organizations will have to move towards closed systems, leading to low workflows and high organizational entropy. Organizational entropy represents the disorder present in a failing organization (Wurtenberger, Groneberg & Mache, 2025). Technology driven organizational work systems, when facing problems, not only expose problems in organizations but also the problems related to implementing the technology itself. Overall, the application of TAM to organizational behaviors, such as Theory X and Theory Y, represents an exciting area to explore. Combination of both theories will help to create flexible and sustainable approaches to technology implementations, which will contribute to innovation.

8.0 FUTURE RESEARCH

Even though this systematic literature review offers an exhaustive view regarding employees' opinions about technology, there are several disadvantages associated with it. First, this systematic literature review is based on 75 peer-reviewed papers released during the period of 2021-2025. This criterion guarantees academic relevance and rigour of the papers reviewed; however, it might miss valuable data from grey literature or foundational research conducted prior to that period. Another disadvantage lies in the inclusion of different economic sectors for the purpose of offering a general picture, which might make the researchers miss some important peculiarities of separate industries. To compensate for these drawbacks and further enhance the existing research, the future research should move away from a secondary literature review and focus on a primary empirical study. In this case, using quantitative surveys or longitudinal analysis could lead to specific validations of the development of

technostress and motivation in specific industries. Additionally, future research should consider the implementation of TAM in combination with Theory X and Theory Y. The role of innovative technologies, such as AI, in affecting different age groups on the international labor market should be considered.

ACKNOWLEDGEMENT

This research was supported by Universiti Tun Hussein Onn Malaysia (UTHM) through Tier 1 (Vot Q862).

CONFLICT OF INTEREST

The authors declare no conflict of interest.

FUNDING

This research was supported by Universiti Tun Hussein Onn Malaysia (UTHM) through Tier 1 (Vot Q862).

ETHICAL APPROVAL

There is no ethical approval because this study involves only a literature review analysis.

DATA AVAILABILITY

This study does not have numerical data analysis. The study only involves a synthesis of literature review analysis.

ARTIFICIAL INTELLIGENCE (AI) DECLARATION

The authors declare that artificial intelligence tools (such as ChatGPT or similar technologies) were used to assist in language editing and improve the readability of the manuscript. The authors take full responsibility for the content, accuracy, and integrity of the manuscript

AUTHOR CONTRIBUTIONS STATEMENT

N.S.S.: Conceptualization, Methodology, Investigation, Project administration; M.S.R.: Software, Formal analysis, Resources, Visualization; S.A.B.: Data curation, Writing – original draft, Validation; A.M.A.: Writing – review & editing, Validation. All authors have read and agreed to the published version of the manuscript.

REFERENCES :

Abidi, O., Dzenopoljac, V., & Safi, M. (2023). Online Meeting Tools, Tacit Knowledge Sharing and Entrepreneurial Behaviours Among Knowledge Workers during COVID-19. *Knowledge*

- Management Research & Practice*, 21(6), 1137–1149.
<https://doi.org/10.1080/14778238.2023.2261885>
- Abu Bakar, M. B., Zakaria, N. S., Mohd Ariffin, N. A., Harahap, I., Muslat, M. W. & Salleh, M. A. (2022). The Perception of Employees on Work-From-Home During Movement Control Order in Malaysia. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 7(6), p. e001568. doi: 10.47405/mjssh.v7i6.1568.
- Abu Talib, S. L., Jusoh, M. A., Razali, F. A. & Awang, N. (2022). Technostress Creators in the Workplace: A Literature Review and Future Research Needs in Accounting Education. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 7(7), p. e001625. doi: 10.47405/mjssh.v7i7.1625.
- Alismaiel, O.A., Cifuentes-Faura, J., Al-Rahmi, W.M. (2022). Social Media Technologies Used for Education: An Empirical Study on TAM Model During the COVID-19 Pandemic. *Front. Educ*, 7, 882831.
- Alfadda, H.A., Mahdi, H.S. (2021). Measuring Students' Use of Zoom Application in Language Course Based on the Technology Acceptance Model (TAM). *J. Psycholinguist. Res*, 50, 883–900
- Andrea, B. & Timea, J. (2023). Impact of Technostress on Work-Life Balance. *Human Technology*, 19 (1), 41-61.
- Anh, L. E. T., Whelan, E., & Umair, A. (2022). 'You're Still on Mute'. A Study of Video Conferencing Fatigue during the COVID-19 Pandemic from a Technostress Perspective. *Behaviour & Information Technology*, 42(11), 1758–1772.
<https://doi.org/10.1080/0144929X.2022.2095304>
- Arino-Mateo, E., Venegas, M.A. & Mora-Luis, C. (2024). The Level of Conscientiousness Trait and Technostress: A Moderated Mediation Model. *Humanit Soc Sci Commun*, 11, 302.
<https://doi.org/10.1057/s41599-024-02766-3>
- Arslan, H., Sahin, Y. L., Ferhan Odabasi, H., & Okur, M. R. (2022). An Investigation of Change in Teachers' Technostress Levels Before and After the Covid-19 Outbreak. *Educational Media International*, 59(2), 95–111. <https://doi.org/10.1080/09523987.2022.2101202>
- Athanasiades, C., Winthrop, A., & Gough, B. (2008). Factors Affecting Self-Referral to Counselling Services in The Workplace: A Qualitative Study. *British Journal of Guidance & Counselling*, 36(3), 257–276. <https://doi.org/10.1080/03069880802088937>
- Aziz, M., Chemnad, K., Al-Harashsheh, S. (2024). The Influence of Adolescents Essential and Non-Essential Use of Technology and Internet Addiction on their Physical and Mental Fatigues. *Sci Rep*, 14, 1745. <https://doi.org/10.1038/s41598-024-51655-x>
- Bakotic, D. (2016). Relationship Between Job Satisfaction and Organisational Performance. *Economic Research-Ekonomska Istrazivanja*, 29(1), 118–130.
<https://doi.org/10.1080/1331677X.2016.1163946>
- Bali, C., Feher, Z. & Arato, N. (2024). The Mediating Role of ICT Learning Confidence and Technostress between Executive Functions and Digital Skills. *Sci Rep* 14, 12343.
<https://doi.org/10.1038/s41598-024-63120-w>
- Bhattacharya, K., Majumder, A., Bhatt, A. N., Keshwani, S., B.S.C. R., Venkataraman. S., & Chakrabarti. A. (2024). Developing a Method for Creating Structured Representations of Working of Systems from Natural Language Descriptions using the SAPPhIRE Model of Causality. *Artificial Intelligence for Engineering Design, Analysis and Manufacturing*, 38, e24, 1–13. <https://doi.org/10.1017/S0890060424000118>
- Bhatt, S. & Shiva, A. (2020). Empirical Examination of the Adoption of Zoom Software during COVID-19 Pandemic: Zoom. *J. Content, Community Commun*, 12, 70–88.
- Breaugh, J., Ritz, A., & Alfes, K. (2017). Work Motivation and Public Service Motivation: Disentangling Varieties of Motivation and Job Satisfaction. *Public Management Review*, 20(10), 1423–1443. <https://doi.org/10.1080/14719037.2017.1400580>
- Christoph Golz, Karin A. Peter, Sandra M.G. Zwakhalen & Sabine Hahn (2021).Technostress Among Health Professionals – A Multilevel Model and Group Comparisons between Settings and Professions, *Informatics for Health and Social Care*, 46:2, 137-149, DOI: 10.1080/17538157.2021.1872579

- Chung, Y. W. (2018). Workplace Ostracism and Workplace Behaviors: A Moderated Mediation Model of Perceived Stress and Psychological Empowerment. *Anxiety, Stress, & Coping*, 31(3), 304–317. <https://doi.org/10.1080/10615806.2018.1424835>
- Conger, S., Murimi, R., & Blanke, S. (2024). An Exploration of Factors Influencing Work from Home During Covid-19. *Information Systems Management*, 41(3), 319–338. <https://doi.org/10.1080/10580530.2024.2309586>
- Cosnefroy, L., & Buhot, E. (2013). Workplace Learning Impact: An Analysis of French-Secondary-Trainee Teachers' Perception of their Professional Development. *Teachers and Teaching*, 19(6), 679–694. <https://doi.org/10.1080/13540602.2013.827456>
- Cromity, J., & de Stricker, U. (2011). Silo Persistence: It's Not the Technology, it's the Culture! *New Review of Information Networking*, 16(2), 167–184. <https://doi.org/10.1080/13614576.2011.619924>
- Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319–340.
- Duong, C.D., Ngo, T.V.N., Khuc, T.A., Tran, N.M. & Nguyen, T.P.T. (2025). Unraveling the Dark Side of ChatGPT: A Moderated Mediation Model of Technology Anxiety and Technostress, *Information Technology & People*, 38(4), 2015–2040. <https://doi.org/10.1108/ITP-11-2023-1151>
- Fillingim, K.B., Shapiro, H., Reichling, C.J. & Fu, K. (2021). Effect of Physical Activity through Virtual Reality on Design Creativity. *Artificial Intelligence for Engineering Design, Analysis and Manufacturing*, 1–17. <https://doi.org/10.1017/S0890060420000529>
- Gabriella Scaramuzzino & Elizabeth Martinell Barfoed (2023). Swedish Social Workers' Experiences of Technostress, *Nordic Social Work Research*, 13:2, 231–244, DOI: 10.1080/2156857X.2021.1951335
- Goldman, J. J. (1983). The Supervisor's Beliefs about People and the Supervisory Plan: McGregor's "Theory X" and "Theory Y" in the Schools. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 56(7), 306–309. <https://doi.org/10.1080/00098655.1982.10118657>
- Gaube, S., Cecil, J. & Wagner, S. (2021). The Relationship between Health IT Characteristics and Organizational Variables among German Healthcare Workers. *Sci Rep* 11, 17752. <https://doi.org/10.1038/s41598-021-96851-1>
- Hernandez, R.M. (2021). Employing Technology Acceptance Model (TAM): An Analysis on Students' Reception on Online Learning Platforms during COVID-19 Pandemic. In Proceedings of the 2021 IEEE International Conference on Automatic Control and Intelligent Systems, I2CACIS 2021—Proceedings, Shah Alam, Malaysia, 26 June 2021; pp. 58–63.
- Hesselbarth, Y., Alfes, K., & Festing, M. (2024). Understanding Technology-Driven Work Arrangements from a Complexity Perspective: A Systematic Literature Review and an Agenda for Future Research. *The International Journal of Human Resource Management*, 35(5), 964–1006. DOI: [10.1080/09585192.2023.2298244](https://doi.org/10.1080/09585192.2023.2298244)
- Jeffrey Hill, E., Grzywacz, J. G., Allen, S., Blanchard, V. L., Matz-Costa, C., Shulkin, S., & Pitt-Catsoupes, M. (2008). Defining and Conceptualizing Workplace Flexibility. *Community, Work & Family*, 11(2), 149–163. <https://doi.org/10.1080/13668800802024678>
- Kaur, J. & Chauhan, A. (2025). Beyond Technical Skills: A Fuzzy DEMATEL Analysis of Emotional Intelligence and Its Impact on IT Professionals' Performance in Hybrid Work Settings. *Futur Bus J* 11, 77, <https://doi.org/10.1186/s43093-025-00506-w>
- Keshavarz, H., Saeidnia, H.R. & Wang, T. (2025). Navigating Technostress: A Deep Dive into Health Practitioners' Technological Challenges in Hospital Settings. *BMC Health Serv Res* 25, 18. <https://doi.org/10.1186/s12913-024-12196-1>
- Kieu Oanh, L.T.; Thi Phuong Thao, N.; Khoa, B.T. (2022). The Continuous Intention to E-learning System Adoption of Students in the COVID-19 Pandemic: The combination of TAM and TTF Theory. In Proceedings of the 2022 International Conference on Decision Aid Sciences and Applications (DASA), Chiangrai, Thailand, 23–25 March 2022; pp. 1202–1206.
- Kim, B.J. & Lee, J. (2024). The Mental Health Implications of Artificial Intelligence Adoption: The Crucial Role of Self-Efficacy. *Humanit Soc Sci Commun* 11, 1561. <https://doi.org/10.1057/s41599-024-04018-w>
- Khaldoun Kanaan, Mohammad Abuhjeeleh, Fakhrieh Darabseh, Omar Taha & Nader Mohammad Aljawarneh (2023). How digital Marketing and Innovative Performance Contribute to Hotel

- Restaurant Revenue Growth: The Mediating Role of Knowledge Sharing, *Cogent Social Sciences*, 9:1, 2209985, DOI: 10.1080/23311886.2023.2209985
- Koch, M. & Lodefalk, M. (2025). Artificial Intelligence and Worker Stress: Evidence from Germany. *Digit. Soc.* 4, 5. <https://doi-org.ezproxy.uthm.edu.my/10.1007/s44206-025-00160-3>
- Korzynski, P., Florent-Treacy, Elizabeth, Kets de Vries & Manfred F. R. (2016). You and Your Technostress: Relating Personality Dimensions to ICT-Related Stress. INSEAD Working Paper No. 2016/31/EFE.
- Kwala, A.F., Agoyi, M. & Oluwajana, D.I. (2025). Reevaluating Cyberloafing: How Resource Conservation Shapes Its Impact on Employee Well-being and Organizational Outcomes. *Employ Respons Rights J.* DOI: [10.1007/s10672-025-09533-9](https://doi.org/10.1007/s10672-025-09533-9)
- Lefrid, M., Cavusoglu, M., Richardson, S., & Donnelly, C. (2023). Simulation-Based Learning Acceptance Model (SBL-AM): Expanding the Technology Acceptance Model (TAM) into Hospitality Education. *Journal of Hospitality & Tourism Education*, 1–15. <https://doi.org/10.1080/10963758.2023.2188217>
- LeRoy, L. S., Kaufmann, R., & Lane, D. R. (2023). Webcams and Technostress: The Complicated Web of Amplified Online Learning, Webcam Use, and Technostress during COVID 19. *Interactive Learning Environments*, 1–12. <https://doi.org/10.1080/10494820.2023.2214815>
- Li, S., Han, R., Fu, T., Chen, M., & Zhang, Y. (2024). Tourists' Behavioural Intentions to Use ChatGPT for Tour Route Planning: An Extended TAM Model Including Rational and Emotional Factors. *Current Issues in Tourism*, 1–17. <https://doi.org/10.1080/13683500.2024.2355563>
- Linpei, S. & Zhuang, M. (2025). Enhancing Creative Performance among Experienced Newcomers: Exploring the Influence of Knowledge Exchange, Learning Goals, Personality Traits, and Technostress, *Humanities and Social Sciences Communications*, 12, 1: 206
- Liu, Y., & Hu, H. Fen. (2021). Digital-Free Tourism Intention: A Technostress Perspective. *Current Issues in Tourism*, 24(23), 3271–3274. <https://doi.org/10.1080/13683500.2021.1883560>
- Lindberg, A. K., & Ove Hansson, S. (2006). Evaluating the Effectiveness of an Investigation Board for Workplace Accidents. *Policy and Practice in Health and Safety*, 4(1), 63–79. <https://doi.org/10.1080/14774003.2006.11667676>
- Linpei Song & Zhuang Ma, (2025). Enhancing Creative Performance Among Experienced Newcomers: Exploring the Influence of Knowledge Exchange, Learning Goals, Personality Traits, And Technostress. *Humanities and Social Sciences Communications, Palgrave Macmillan*, 12(1), 1-14.
- Lopez, A. (2023). The Role of Information Technology and Workplace Organization in Firm Productivity: Evidence from Spanish Firms. *Economics of Innovation and New Technology*, 33(2), 282–298. <https://doi.org/10.1080/10438599.2023.2172000>
- Ly, B., & Ly, R. (2024). Technostress in Times of Change: Unveiling the Impact of Leadership Styles in Cambodia's Public Organizations in the Wake of COVID-19. *Cogent Business & Management*, 11(1). <https://doi.org/10.1080/23311975.2024.2331645>
- Ma, K. (2024). Development of an Extended TAM Model for Enabling Online Social Experience with Smart Home Displays for Older Adults. *The Design Journal*, 27(2), 368–379. <https://doi.org/10.1080/14606925.2024.2313290>
- Marchiori, D. M., Mainardes, E. W., & Rodrigues, R. G. (2018). Do Individual Characteristics Influence the Types of Technostress Reported by Workers? *International Journal of Human-Computer Interaction*, 35(3), 218–230. <https://doi.org/10.1080/10447318.2018.1449713>
- Meyer M, Fichtler T, Koldewey C, Dumitrescu R (2022). Potentials and Challenges of Analyzing use Phase Data in Product Planning of Manufacturing Companies. *Artificial Intelligence for Engineering Design, Analysis and Manufacturing*, 36, e14, 1–13. <https://doi.org/10.1017/S0890060421000408>
- Michalik, N. M., & Schermuly, C. C. (2022). Is Technostress Stressing Coaches Out? The Relevance of Technostress to Coaches' Emotional Exhaustion and Coaches' Perception of Coaching Success. *Coaching: An International Journal of Theory, Research and Practice*, 16(2), 155–172. <https://doi.org/10.1080/17521882.2022.2128386>
- Mir, I. A. (2021). Self-Escapism Motivated Online Shopping Engagement: A Determinant of Users' Online Shopping Cart Use and Buying Behavior. *Journal of Internet Commerce*, 22(1), 40–73. <https://doi.org/10.1080/15332861.2021.2021582>

- Mohamad, M.A., Amron, M.T. & Md Noh, N.H. (2021). Assessing the Acceptance of E-Learning via Technology Acceptance Model (TAM). In Proceedings of the 2021 6th IEEE International Conference on Recent Advances and Innovations in Engineering, ICRAIE 2021, Kedah, Malaysia, 1–3 December 2021.
- Mohd Fahusli Ali, Kamsuriah Ahmad & Mohannad Moufeed Ayyash (2021). The Influence of Technostress Factors on Information System Success. *Asia-Pacific Journal of Information Technology and Multimedia*, 10(2), 110-121.
- Mohd Shafie Rosli, Nor Shela Saleh, Azlah Md. Ali, Suaibah Abu Bakar & Lokman Mohd Tahir (2022). A Systematic Review of the Technology Acceptance Model for the Sustainability of Higher Education during the COVID-19 Pandemic and Identified Research Gaps. *Sustainability*, 14, 11389. <https://doi.org/10.3390/su141811389>
- Mohd Sobhi Ishak (2014). Pemodelan Penerimgunaan Maklumat Berkaitan Islam di Internet: Pengaplikasian Model Penerimaan Teknologi (TAM). *Journal of Techno Social*, 6(2), 49-61.
- Muhammad Hakimi Tew Abdullah, Norwati Roslim, Zakri Abdullah, Muhammad Nabihan Abu Bakar & Zainal Abidin Razak (2023). Technostress among Educators at the Institut Pendidikan Guru Kampus Raja Melewar during the COVID19 Pandemic). *e-Bangi: Journal of Social Sciences & Humanities*, 20(2), 127-140.
- Munirah Madzlan & Kamariah Abu Bakar. (2022). Kemahiran dan Motivasi Guru sertabKeberkesanan Terhadap Penggunaan Telegram dan WhatsApp dalam Pembelajaran dan Pemudahcaraan. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 7(9), e001761. <https://doi.org/10.47405/mjssh.v7i9.1761>
- Nascimento, L., Correia, M.F. & Califf, C.B. (2025). Techno-eustress under remote Work: A Longitudinal Study in Higher Education Teachers. *Educ Inf Technol*, <https://doi.org/10.1007/s10639-025-13459-y>
- Nastjuk, I., Trang, S., Grummeck-Braamt, J. V., Adam, M. T. P., & Tarafdar, M. (2024). Integrating and Synthesising Technostress Research: A Meta-Analysis on Technostress Creators, Outcomes, and IS Usage Contexts. *European Journal of Information Systems*, 33(3), 361–382. <https://doi.org/10.1080/0960085X.2022.2154712>
- Noland, C. (2014). Teaching Theory X and Theory Y in Organizational Communication. *Communication Teacher*, 28(3), 145–149. <https://doi.org/10.1080/17404622.2014.911333>
- Nur Azira Ismail, Noor Aslinda Abu Seman & Mohd Nazir Mohd Adi (2022). The Impact of Technostress on Malaysia Educator's Performance in the Age of Covid-19. *Research in Management of Technology and Business*, 3(1), 988-1002.
- Nurasyikin Syuhadah Latif & Shazaitul Azreen Rodzalan (2021). Hubungan di antara Ciri-Ciri Pekerjaan dan Faktor yang Mempengaruhi Teknostres dalam kalangan Guru Sekolah Menengah di Johor Bahru. *Research in Management of Technology and Business*, 2(1), 106–122.
- Oliver, K., Kellogg, S., Townsend, L., & Brady, K. (2010). Needs of Elementary and Middle School Teachers Developing Online Courses for a Virtual School. *Distance Education*, 31(1), 55–75. <https://doi.org/10.1080/01587911003725022>
- Osman, M. R. & Maat, S. M. (2022). Efikasi Kendiri dan Sikap Guru Matematik terhadap Pengintegrasian Teknologi Maklumat dan Komunikasi. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 7(12), doi: 10.47405/mjssh.v7i12.2017.
- Ozsungur, F. (2020). The Effects of Successful Aging in the Workplace on Technology Acceptance and Use Behaviour. *Activities, Adaptation & Aging*, 45(2), 159–178. <https://doi.org/10.1080/01924788.2020.1744826>
- Pal, D. & Patra, S. (2021). University Students' Perception of Video-Based Learning in Times of COVID-19: A TAM/TTF Perspective. *Int. J. Hum. Comput. Interact*, 37
- Pham Thi Phuong Dung, Ho Minh An, Pham Quoc Huy & Nguyen Le Dinh Quy (2023). Understanding The Startup's Intention of Digital Marketing's Learners: An Application of the Theory of Planned Behavior (TPB) and Technology Acceptance Method (TAM), *Cogent Business & Management*, 102, 2219415, <https://doi.org/10.1080/23311975.2023.2219415>
- Prabowo, R., Pratama, F., Arimbawa, P.A.P. & Shanti, M. (2021). Investigating Multi-Channel Learning Adoption on Higher Education Students. In Proceedings of the 2021 7th International Conference on Education and Technology, ICET 2021, Malang, Indonesia, 18-19 September 2021; pp. 282–287.

- O'Dea, B., Leach, C., Achilles, M., King, C., Subotic-Kerry, M., & O'Moore, K. (2018). Parental Attitudes Towards an Online, School-Based, Mental Health Service: Implications for Service Design and Delivery. *Advances in Mental Health*, 17(2), 146–160. <https://doi.org/10.1080/18387357.2018.1514269>
- Rahman, A., Malik, A., Nazir, H. (2025). Technology-Assisted Cognitive-Behavioral Therapy for Perinatal Depression Delivered by Lived-Experience Peers: A Cluster-Randomized Noninferiority Trial. *Nat Med*, <https://doi.org/10.1038/s41591-025-03655-1>
- Raluca Stana, & Hanne Westh Nicolajsen, (2021). Sociological Mechanisms Behind ICT-Related Technostress in the Workplace. *Information Technology in Organisations and Societies: Multidisciplinary Perspectives from AI to Technostress*, Zach W. Y. Lee, Tommy K. H. Chan, Christy M. K. Cheung, <https://doi.org/10.1108/978-1-83909-812-320211004>
- Reginald Govender & Cedric Mpungose (2022) Lecturers' Technostress at a South African University in the Context Of Coronavirus (COVID-19), *Cogent Education*, 9:1, 2125205, <https://doi.org/10.1080/2331186X.2022.2125205>
- Schneberger, S., Amoroso, D. L., & Durfee, A. (2008). Factors That Influence the Performance of Computer-Based Assessments: An Extension of the Technology Acceptance Model. *Journal of Computer Information Systems*, 48(2), 74–90. <https://doi.org/10.1080/08874417.2008.11646011>
- Shaban, M., Abdelgawad, M. E., Elsayed, S. M. & Mohamed Abdallah, H. M. (2025). The Mediating Role of Emotional Intelligence in the Relationship between Technostress and Burnout Prevention among Critical Care Nurses a Structural Equation Modelling Approach. *BMC Nursing*, 24, 255: 1-12.
- Shafinaz Lyana Binti Abu Talib, Mohd Abdullah Jusoh, Fatin Adilah Razali & Naqiah Binti Awang (2022). Technostress Creators in the Workplace: A Literature Review and Future Research Needs in Accounting Education. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 7 (7), 1-13.
- Sharma, I., Tiwari, V., Gupta, S. & Rana, N.P. (2025). Examining the Nexus Between Technostress and Turnover Intention: The Moderating Influence of PsyCap in Indian Information Management Contexts. *Journal of Enterprise Information Management*, 38, 2: 450-473. <https://doi.org/10.1108/JEIM-08-2023-0434>
- Shi, C. Rong, Ma, H. Qiao, Huang, C., Zhang, M. Hua, & Ren, Z. Hong. (2020). Cognitive Emotion Regulation Strategies and Depressive Symptoms among Nurses Exposed to Workplace Violence: A Person-Centered Approach. *Journal of Mental Health*, 30(4), 541–548. <https://doi.org/10.1080/09638237.2020.1818707>
- Siddiqi, K.O. & Rahman, M.H. (2025). Effect of Perceived Supervisor Support, Perceived Co-worker Support, and Technostress on Turnover Intention Among the Nurses in Bangladesh. *J Knowl Econ*. <https://doi.org/10.1007/s13132-025-02711-y>
- Simba, A., Tajeddin, M., Jones, P. & Rambe, P. (2025). Technostress in Entrepreneurship: Focus on Entrepreneurs in the Developing World. *Information Technology & People*. <https://doi.org/10.1108/ITP-01-2024-0073>
- Sinmaz, T., Kara, O., Seyhan Ak, E. (2025). Experiences of Robotic Surgery Nurses Regarding Technostress: A Qualitative Study. *J Robotic Surg* 19(1),54. doi: [10.1007/s11701-025-02320-6](https://doi.org/10.1007/s11701-025-02320-6)
- Sofia Thunberg, Ericka Johnson & Tom Ziemke (2023). Investigating Healthcare Workers' Technostress when Welfare Technology is Introduced in Long-Term Care Facilities, *Behaviour & Information Technology*, DOI: 10.1080/0144929X.2023.2276802
- Stephanie Kok Sook Munn & Alia Azalea (2024). Physical Work Environment Satisfaction and Productivity of Working Adults in Malaysia. *Jurnal Psikologi Malaysia*, 38 (1), 1-13.
- Syarifah Hanum Ali, Sharifah Rahama Amirul & Oscar Dousin (2022). Technological Pressures During the Covid-19 Pandemic Against New Norms of Working from Home. *Jurnal Dunia Pengurusan*, 4(2), 33-50.
- Thanh, N. D., Hung, P. T., My Anh, B. T., Anh, T. Q., Anh, P. Q., & Xiem, C. H. (2020). Developing a Job Motivation Scale: A Focus on Cross-Cultural Adaptation and Validation Among Hospital Staff. *International Journal of Healthcare Management*, 14(4), 1114–1119. <https://doi.org/10.1080/20479700.2020.1752985>
- Thurik, R., Benzari, A., Fisch, C., Mukerjee, J., & Torrès, O. (2023). Techno-overload and Well-Being of French Small Business Owners: Identifying the Flipside of Digital

- Technologies. *Entrepreneurship & Regional Development*, 36(1–2), 136–161. <https://doi.org/10.1080/08985626.2023.2165713>
- Tim Rademaker, Ingo Klingenberg & Stefan Sub (2023). Leadership and technostress: A Systematic Literature Review. *Management Review Quarterly*. <https://doi.org/10.1007/s11301-023-00385-x>
- To, A. T., Trinh, T. H. M., & Gomez Corona, C. (2021). Understanding Behavioral Intention to Use Mobile Wallets in Vietnam: Extending the TAM Model with Trust and Enjoyment. *Cogent Business & Management*, 8(1). <https://doi.org/10.1080/23311975.2021.1891661> Shafie
- Trillo, A., Bretones, F.D. & Giuliano, R. (2024). Beyond Occupational Exhaustion: Exploring the Influence of Positive Meaningful Work on Teachers' Psychoemotional Well-Being in the Digital Age. *Humanit Soc Sci Commun*, 11, 348. <https://doi.org/10.1057/s41599-024-02860-6>
- Velverthi, N., Prybutok, V., & Hong, L. (2023). An Emerging Adults' Patient Portal Behavioral Model: Integrating Perceived Risk Theory, Technology Acceptance Model, and Personal Innovativeness. *International Journal of Human-Computer Interaction*, 1–14. <https://doi.org/10.1080/10447318.2023.2254628>
- Venkatesh, V., Morris, M.G., Davis, G.B. & Davis, F.D. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Q*, 27, 425–478.
- Viannie Clairie Jimmy, Suhaila Mohamed, Norashikin Hussein, Nur Aizureen Anwar, Noor Azura Dahalan (2023). Technostress Creators and Employee's Well-Being at a Telecommunication Company in Sarawak, Malaysia. *Information Management and Business Review*, 15 (3), 329–343.
- Wang, Q. & Yao, N. (2025). Understanding the Impact of Technology Usage at Work on Academics' Psychological Well-Being: A Perspective of Technostress. *BMC Psychol*, 13, 130. <https://doi.org/10.1186/s40359-025-02461-1>
- Wei, J. & Zheng, Q. (2025). Understanding the Dark Side of Digital Technostress on Team Innovation: The Roles of Deceptive Knowledge Hiding and Team Climates. *Journal of Knowledge Management*, <https://doi.org/10.1108/JKM-07-2024-0826>
- Wei, X., Wei, X., Yu, X., & Ren, F. (2024). The Relationship Between Financial Stress and Job Performance in China: The Role of Work Engagement and Emotional Exhaustion. *Psychology Research and Behavior Management*, 17, 2905–2917. <https://doi.org/10.2147/PRBM.S446520>
- Wurtenberger, A., Groneberg, D.A. & Mache, S. (2025). Digital Stress Perception and Associations with Work- and Health-Related Outcomes among General Practitioners in Germany: A Quantitative Study. *BMC Health Serv Res* 25, 535. <https://doi.org/10.1186/s12913-025-12653-5>
- Ye, D., Xu, B. & Wei, B. (2024). Employee Work Engagement in the Digital Transformation of Enterprises: A Fuzzy-Set Qualitative Comparative Analysis. *Humanit Soc Sci Commun*, 11, 35, <https://doi.org/10.1057/s41599-023-02418-y>
- Yulianto, D., Setyaningsih, E. & Sumardi, S. (2021). Students' Interpretations of E-Learning during COVID-19 using GETAMEL: Indonesian Higher Education Context. *Regist. J.*, 14, 203–224
- Zainil Hanim Saidin, Siti Haslina Md Harizan & Muhammad Firdaus Mohd Hanip (2023). The Influence of Personality Factors and Excessive Technological Technostress on the Effectiveness of Technological Leadership Style). *e-Bangi: Journal of Social Sciences & Humanities*, 20(4), 38–53.
- Zeman, L. D., & Swanke, J. (2008). Integrating Social Work Practice and Technology Competencies: A Case Example. *Social Work Education*, 27(6), 601–612. <https://doi.org/10.1080/02615470802201630>