

MANAGING DIGITAL WORK STRESS IN HIGHER EDUCATION INSTITUTIONS: EXAMINING PSYCHOLOGICAL SAFETY, EMPLOYEE ENGAGEMENT, AND INNOVATIVE WORK BEHAVIOR

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Abstract

Digital transformation and hybrid work systems have increased employees' dependence on digital communication technologies, particularly in higher education institutions. Excessive digital communication demands may create digital work stress that influences employee behavioral outcomes. This study aims to examine the effect of digital work stress on employee engagement and innovative work behavior, as well as the mediating role of employee engagement among young employees in higher education institutions in Indonesia. This study employed a quantitative approach using a cross-sectional survey design. Data were collected from 186 academic and administrative employees aged 20–40 years through an online questionnaire and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings reveal that digital work stress negatively affects employee engagement and innovative work behavior, while psychological safety positively strengthens employee engagement. Employee engagement also positively influences innovative work behavior and significantly mediates the relationship between digital work stress and innovative work behavior. The study confirms that excessive digital communication demands may reduce employees' emotional attachment and innovation capability, whereas psychological safety functions as an important organizational resource that helps employees maintain positive engagement in digitally intensive work environments. The findings extend Conservation of Resources Theory in explaining employee behavior within digital workplaces and provide practical implications for higher education institutions in developing healthier digital communication systems and supportive organizational climates.

Keywords: Digital Work Stress, Psychological Safety, Employee Engagement, Innovative Work Behavior, Higher Education Institutions

INTRODUCTION

Digital transformation has significantly reshaped modern work systems, particularly through the rapid adoption of hybrid and flexible work arrangements. Organizations increasingly depend on digital communication platforms such as Zoom, Microsoft Teams, Slack, WhatsApp, and email to maintain coordination and productivity across geographically dispersed employees (Subramanian Iyer & Iyer, 2025). Higher education institutions also experience similar transformation due to the increasing implementation of online administration systems, virtual meetings, digital learning platforms, and research collaboration technologies (Christen et al., 2022). Academic and administrative employees are now required to remain continuously connected through digital communication systems to support teaching, academic services, publication targets, and institutional performance. Continuous digital connectivity has consequently created “always online” expectations that frequently blur personal and

professional boundaries. Young employees, especially Generation Z, are more vulnerable to this condition because they are highly integrated with digital technologies and communication systems (Widodo et al., 2024).

Digital communication overload has consequently emerged as a major organizational issue. Excessive messages, notifications, virtual meetings, and communication demands increase cognitive pressure and emotional exhaustion among employees (Iqbal Soomro et al., 2025). I. González Vázquez et al. (2024) found that digital communication burden negatively affects employee mental well-being, while Sharma (2024) reported that technostress and excessive digital interaction reduce employees' psychological recovery opportunities. Similar conditions also appear in higher education institutions in Indonesia, where academic and administrative employees frequently experience communication overload through institutional WhatsApp groups, online meetings, learning management systems, and digital reporting activities. Marsh et al. (2024) revealed that digital communication overload decreases job satisfaction among young workers, whereas Mr. Shriyak Jain, Dr. Deepak Kumar, & Dr Megha Grover, and Dr. Mamta Rani (2025) identified that digital fatigue weakens employee productivity in hybrid work systems. Dudiya & Apriliansyah (2024) additionally found that work flexibility among Generation Z employees often creates psychological strain due to unstable work boundaries and continuous online interaction. These conditions indicate that excessive digital communication may reduce employees' emotional attachment and innovative capability in modern organizations, including educational institutions.

This study employs the Conservation of Resources Theory proposed by Stevan E. Hobfoll as the primary theoretical foundation. Conservation of Resources (COR) Theory explains that individuals continuously attempt to obtain, maintain, and protect valuable psychological resources, while stress occurs when those resources are threatened or depleted (Hobfoll et al., 2017). Digital work stress reflects resource depletion caused by excessive communication demands and continuous interruptions. Psychological safety acts as an important organizational resource that helps employees maintain emotional stability, engagement, and innovative capability despite experiencing digital pressure. Employees who feel psychologically safe tend to communicate openly, express ideas confidently, and participate actively in organizational activities (Bagis et al., 2021; Kyambade et al., 2024). COR Theory, therefore, provides a strong explanation regarding the relationships among digital work stress, psychological safety, employee engagement, and innovative work behavior.

Previous studies examining digital work stress and employee engagement still demonstrate inconsistent findings. Widodo et al. (2024) and Zhang et al. (2025) reported that digital work stress negatively influences employee engagement and increases burnout. Different findings were identified by Chenhui et al. (2023), who found that digitally intensive workplaces may stimulate adaptive engagement when organizations provide adequate support systems. Inconsistencies also appear in studies related to psychological safety and employee engagement. Kyambade et al. (2024) and J. Zhang et al. (2026) concluded that psychological safety strengthens employee engagement, whereas Timms et al. (2020) argued that flexible digital work systems may still create emotional isolation despite relatively high psychological safety. Contradictory findings are similarly evident in studies investigating employee engagement and innovative work behavior. Chenhui et al. (2023) and He et al. (2019) demonstrated that engaged employees tend to exhibit stronger innovative behavior, while Ma Lu (2025) found that stress and fear in technology-enabled organizations reduce employees' willingness to innovate.

Methodological limitations also remain visible in previous research. Existing studies generally examine digital stress, engagement, or innovative behavior separately, while limited research integrates these variables within a single behavioral framework. Research focusing specifically on young employees

in higher education institutions in emerging economies such as Indonesia also remains limited despite the increasing dominance of digital communication systems and hybrid work practices in universities.

This study offers several novelties. First, this research integrates digital work stress, psychological safety, employee engagement, and innovative work behavior into a single framework grounded in COR Theory. Second, psychological safety is positioned as a buffering psychological resource that protects employees from the negative consequences of digital work stress. Third, this study specifically focuses on young academic and administrative employees in higher education institutions who experience intensive exposure to hybrid work systems and digital communication overload.

The study contributes theoretically by extending the application of the Conservation of Resources Theory in explaining employee behavior within digital work environments. Practical contributions are also expected because the findings may help higher education institutions develop healthier digital communication systems and psychological support mechanisms to maintain employee engagement and innovative work behavior. Therefore, this study aims to examine the effect of digital work stress on employee engagement and innovative work behavior, as well as the role of psychological safety among young employees in higher education institutions.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Conservation of Resources Theory

This study employs the Conservation of Resources Theory proposed by Stevan E. Hobfoll as the primary theoretical foundation. Conservation of Resources (COR) Theory explains that individuals continuously attempt to acquire, maintain, and protect valuable psychological resources, while stress emerges when those resources are threatened, lost, or insufficiently restored (Hobfoll et al., 2017). Psychological resources include emotional energy, social support, self-confidence, and psychological security that enable employees to perform effectively in organizational environments.

Digital work systems frequently expose employees to excessive communication demands, continuous online interaction, and multitasking pressures that consume cognitive and emotional resources (Sharma, 2024). Prolonged digital communication overload may consequently create psychological exhaustion and reduce employees' motivation and innovation capability. COR Theory suggests that supportive organizational resources are necessary to minimize resource depletion caused by workplace stressors. Psychological safety, therefore, becomes an important protective mechanism because employees who feel safe and supported tend to maintain higher emotional attachment and behavioral involvement despite facing digital work pressure (Kyambade et al., 2024; Zuhaena & Sumatri, 2022). COR Theory provides a relevant explanation regarding how digital work stress influences employee engagement and innovative work behavior through psychological resource mechanisms.

Digital Work Stress and Employee Engagement

Digital work stress refers to psychological pressure resulting from excessive digital communication demands, continuous online interaction, and technology-related workload (Iqbal Soomro et al., 2025). Employee engagement represents employees' emotional attachment, enthusiasm, and active involvement in organizational activities (Chenhui et al., 2023). Employees experiencing high digital pressure frequently encounter emotional exhaustion, reduced concentration, and declining psychological attachment to their work activities. Conservation of Resources Theory explains that excessive digital demands continuously consume employees' psychological resources and reduce their ability to maintain positive emotional energy (Hobfoll et al., 2017). Resource depletion caused by digital stress may decrease employees' motivation, enthusiasm, and willingness to invest effort in organizational responsibilities.

Employees experiencing communication overload also tend to demonstrate lower emotional involvement because they struggle to recover psychologically from continuous digital interruptions. Several previous studies support this relationship. Widodo et al. (2024) found that digital work stress negatively affects employee engagement among Generation Z employees. Q. Zhang et al. (2025) also reported that technostress and excessive digitalization reduce work engagement and increase burnout. Similar findings were identified by Nuraeni et al. (2021), who revealed that digital work stress weakens employee engagement among Indonesian employees. These studies consistently indicate that excessive digital pressure may reduce employees' emotional attachment and involvement in organizational activities. Therefore, this study proposes the following hypothesis:

H1: Digital work stress negatively affects employee engagement.

Digital Work Stress and Innovative Work Behavior

Digital work stress may also influence innovative work behavior. Innovative work behavior refers to employees' ability and willingness to generate, promote, and implement new ideas that support organizational improvement (Ma Lu, 2025). Innovation requires psychological energy, creativity, and cognitive flexibility, whereas excessive digital communication demands may reduce employees' mental capacity to think creatively and explore innovative solutions. According to the Conservation of Resources Theory, stress resulting from resource depletion decreases individuals' ability to allocate energy toward proactive and non-routine activities such as innovation (Hobfoll et al., 2017). Employees facing continuous digital interruptions and communication overload tend to prioritize task completion rather than creative experimentation.

Limited psychological recovery opportunities may consequently weaken innovative work behavior in digitally intensive workplaces. Several studies provide empirical support for this relationship. Ma Lu (2025) demonstrated that stress and fear in technology-enabled organizations reduce employees' willingness to innovate. Bullini Orlandi et al. (2024) found that employee stress negatively influences innovation capability in remote work systems. Z. Zhang et al. (2026) similarly revealed that technostress decreases innovative work behavior among Indonesian employees. These findings consistently suggest that excessive digital pressure may weaken employees' innovative capability. Hence, the following hypothesis is formulated:

H2: Digital work stress negatively affects innovative work behavior.

Psychological Safety and Employee Engagement

Psychological safety refers to employees' beliefs that they can express ideas, communicate openly, and participate in organizational activities without fear of punishment or embarrassment (Edmondson, 1999). Employee engagement reflects employees' emotional involvement and positive attachment to their work roles (J. Zhang et al., 2026). Employees who feel psychologically safe generally demonstrate stronger emotional connection and participation because they perceive organizational support and interpersonal trust.

Conservation of Resources Theory explains that psychological safety functions as an important organizational resource capable of protecting employees from emotional exhaustion and resource loss (Hobfoll et al., 2017). Supportive work environments help employees preserve emotional stability and maintain positive psychological energy. Employees consequently become more enthusiastic, motivated, and engaged in organizational activities.

Several previous studies strengthen this argument. Zhang et al. (2026) found that psychological safety significantly enhances employee engagement in digitally intensive workplaces. Kyambade et al. (2024) also confirmed that psychologically safe environments strengthen employees' emotional

attachment and involvement. Similar findings were reported by J. Zhang et al. (2026), who demonstrated that psychological safety improves employee participation and performance in digital workplaces. These findings consistently indicate that psychological safety plays an important role in strengthening employee engagement. Accordingly, this study proposes the following hypothesis:

H3: Psychological safety positively affects employee engagement.

Employee Engagement and Innovative Work Behavior

Employee engagement represents a positive psychological condition characterized by enthusiasm, dedication, and active involvement in work activities (Chenhui et al., 2023). Innovative work behavior reflects employees' efforts to generate and implement new ideas that contribute to organizational effectiveness (He et al., 2019). Employees with high engagement tend to invest greater emotional and cognitive energy in their work, which may encourage proactive and innovative behavior. Conservation of Resources Theory explains that employees possessing sufficient psychological resources are more likely to allocate additional energy toward creative and proactive activities (Hobfoll et al., 2017). High engagement indicates the availability of positive emotional resources that encourage employees to explore new ideas, participate in innovation processes, and contribute actively to organizational improvement.

Employees with strong engagement also tend to demonstrate greater persistence and initiative in solving organizational problems creatively. Several previous studies support this relationship. He et al. (2019) found that engaged employees exhibit stronger innovative behavior in modern workplaces. Chenhui et al. (2023) similarly demonstrated that employee engagement positively influences workplace innovation in digitally disrupted organizations. Dr. J. Nithya (2025) also identified that employee engagement enhances innovative behavior in hybrid work systems. These findings consistently indicate that employee engagement contributes positively to innovative work behavior. Therefore, the following hypothesis is advanced:

H4: Employee engagement positively affects innovative work behavior.

Employee Engagement as a Mediating Variable

Employee engagement may function as an important psychological mechanism linking digital work stress and innovative work behavior. Employees experiencing excessive digital pressure often demonstrate lower enthusiasm, emotional attachment, and psychological involvement in work activities, which may eventually reduce their willingness to engage in innovative behavior. Conversely, employees with strong engagement tend to allocate greater emotional and cognitive energy toward creativity and organizational improvement efforts. According to the Conservation of Resources Theory, resource depletion caused by digital work stress may weaken employees' positive psychological states, including engagement, thereby reducing proactive and innovative behavior (Hobfoll et al., 2017). Employee engagement, therefore, acts as a psychological pathway explaining how digital work stress influences employees' innovative capability. Several previous studies support this argument. Widodo et al. (2024) found that digital work stress negatively influences employee engagement, while Chenhui et al. (2023) demonstrated that employee engagement positively affects innovative work behavior. Dr. J. Nithya (2025) also revealed that engagement strengthens innovative behavior in hybrid work systems. These findings indicate that employee engagement may mediate the relationship between digital work stress and innovative work behavior.

H5: Employee engagement mediates the relationship between digital work stress and innovative work behavior.

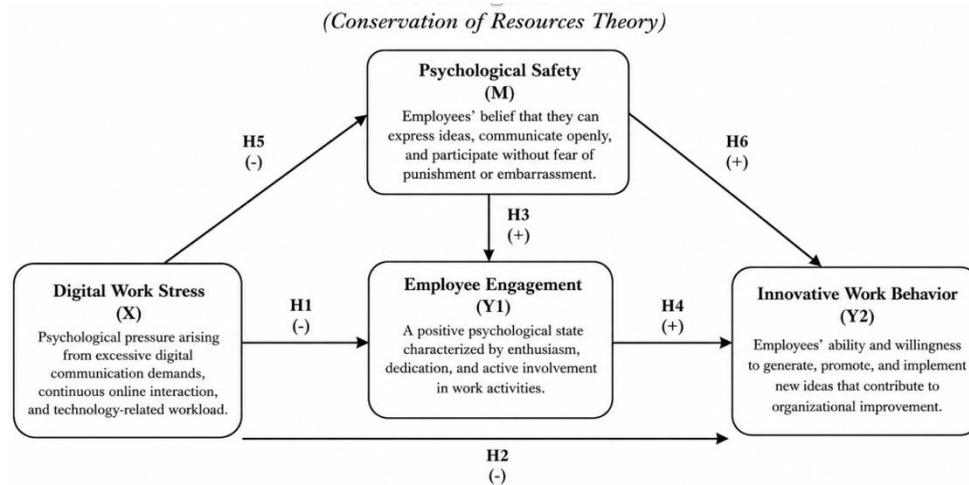


Figure 1. Conceptual Framework

RESEARCH METHOD

This study employed a quantitative approach using a cross-sectional survey design to examine the relationships among digital work stress, psychological safety, employee engagement, and innovative work behavior among young employees in higher education institutions in Indonesia. The study focused on academic and administrative employees aged 20–40 years who actively used digital communication platforms such as WhatsApp, Zoom, Microsoft Teams, email, and learning management systems in their daily work activities. Respondents were also required to have a minimum of one year of working experience to ensure adequate understanding of organizational work systems.

This study used purposive sampling because respondents were selected based on specific criteria relevant to the research objectives. Data were collected through an online questionnaire distributed to several universities in Indonesia. A total of 186 valid responses were successfully analyzed. (Hair & Alamer, 2022) explained that a sample size above 150 is considered adequate for Partial Least Squares Structural Equation Modeling (PLS-SEM).

All variables were measured using previously validated instruments adapted from earlier studies and assessed using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Digital work stress indicators were adapted from Molino et al. (2024) and Chen and Eyoun (2024). Psychological safety indicators were adapted from Edmondson (1999) and J. Zhang et al. (2026). Employee engagement indicators were adapted from Schaufeli et al. (2006) and Riaz et al. (2025), while innovative work behavior indicators were adapted from Darvishmotevali et al. (2024).

Data were analyzed using SmartPLS version 4.0 through Partial Least Squares Structural Equation Modeling (PLS-SEM). The analysis included measurement model evaluation and structural model evaluation. Convergent validity was assessed using outer loading and Average Variance Extracted (AVE), while reliability was evaluated using Cronbach's alpha and composite reliability. Discriminant validity was examined using the Heterotrait-Monotrait Ratio (HTMT). Hypothesis testing was conducted using the bootstrapping procedure with 5,000 subsamples. Hypotheses were considered significant when the t-statistic exceeded 1.96, and the p-value was below 0.05. Common method bias was assessed using the full collinearity test. All VIF values were below 3.3, indicating that common method bias was not a serious issue in this study (Kock, 2015).

RESULTS AND DISCUSSION

Respondent Characteristics

A total of 186 valid responses were analyzed in this study. Based on gender, 58.1% of respondents were female, and 41.9% were male. Most respondents were between 25-30 years old (46.2%), followed by 31–35 years old (28.5%), 20–24 years old (15.1%), and 36–40 years old (10.2%). Regarding occupation, 55.4% were academic staff and lecturers, while 44.6% were administrative employees. Most respondents had working experience between 1-5 years (52.7%), indicating that the respondents were relatively familiar with digital work systems and organizational communication practices.

Measurement Model Evaluation

Convergent Validity and Reliability

Convergent validity was evaluated using outer loading and Average Variance Extracted (AVE). All indicator loading values exceeded 0.70, indicating satisfactory convergent validity. AVE values for all constructs were also above 0.50, demonstrating that the constructs adequately explained the variance of their indicators. Reliability assessment showed that Cronbach's alpha and composite reliability values for all variables exceeded 0.70, indicating strong internal consistency reliability (Hair & Alamer, 2022).

Table 1. Convergent Validity and Reliability Results

Variable	Cronbach's Alpha	Composite Reliability	AVE
Digital Work Stress	0.887	0.918	0.692
Psychological Safety	0.901	0.926	0.714
Employee Engagement	0.893	0.920	0.699
Innovative Work Behavior	0.908	0.932	0.732

The results indicate that all constructs fulfilled the recommended thresholds for validity and reliability.

Discriminant Validity

Discriminant validity was assessed using the Heterotrait-Monotrait Ratio (HTMT). All HTMT values were below the threshold of 0.90, indicating adequate discriminant validity among constructs.

Structural Model Evaluation

Coefficient of Determination (R^2)

The coefficient of determination analysis showed that digital work stress and psychological safety explained 54.3% of the variance in employee engagement. Meanwhile, digital work stress and employee engagement explained 61.8% of the variance in innovative work behavior. These results indicate moderate to substantial predictive capability of the proposed model.

Table 2. R^2 Results

Endogenous Variable	R^2
Employee Engagement	0.543
Innovative Work Behavior	0.618

Hypothesis Testing

Hypothesis testing was conducted using the bootstrapping procedure with 5,000 subsamples. The results are presented in Table 3.

Table 3. Hypothesis Testing Results

Hypothesis	Relationship	Beta	t-value	p-value	Result
H1	Digital Work Stress → Employee Engagement	-0.341	4.928	0.000	Supported
H2	Digital Work Stress → Innovative Work Behavior	-0.276	3.874	0.000	Supported
H3	Psychological Safety → Employee Engagement	0.472	6.215	0.000	Supported
H4	Employee Engagement → Innovative Work Behavior	0.531	7.104	0.000	Supported
H5	Digital Work Stress → Employee Engagement → Innovative Work Behavior	-0.181	3.892	< 0.001	Supported

The results indicate that digital work stress negatively affects employee engagement and innovative work behavior. Psychological safety positively influences employee engagement, while employee engagement positively affects innovative work behavior. Among all relationships, employee engagement demonstrated the strongest effect on innovative work behavior ($\beta = 0.531$).

Overall, the findings suggest that excessive digital communication demands may reduce employees' emotional attachment and innovation capability. However, psychological safety functions as an important organizational resource that helps employees maintain positive engagement despite experiencing digital work pressure. The mediation test shows that employee engagement significantly mediates the relationship between digital work stress and innovative work behavior. This finding indicates that digital work stress reduces employee engagement, which subsequently weakens innovative work behavior. Thus, employee engagement serves as an important psychological mechanism explaining how digital work stress influences innovative work behavior.

DISCUSSION

The findings demonstrate that digital work stress negatively influences employee engagement among young employees in higher education institutions. Excessive digital communication demands, continuous online interaction, multitasking pressure, and blurred work boundaries gradually reduce employees' emotional energy and psychological attachment to their work. Academic and administrative employees increasingly rely on digital platforms such as WhatsApp, Zoom, Microsoft Teams, email, and learning management systems to support teaching, coordination, reporting, and institutional communication activities (Subramanian Iyer & Iyer, 2025). Continuous exposure to digital interaction frequently creates "always connected" expectations that limit employees' opportunities for psychological recovery and emotional detachment from work responsibilities (Sharma, 2024).

These findings strengthen the Conservation of Resources Theory proposed by Stevan E. Hobfoll, which explains that stress emerges when individuals continuously lose valuable psychological resources without sufficient restoration mechanisms (Hobfoll et al., 2017). Digital work stress reflects a condition in which employees experience cognitive and emotional depletion caused by excessive communication demands and continuous technological interruptions. Resource depletion consequently reduces employees' enthusiasm, dedication, and emotional attachment to organizational activities.

The findings are consistent with several previous studies reporting that excessive digital work demands weaken employee engagement and increase emotional fatigue. Widodo et al. (2024) found that digital work stress negatively affects engagement among Generation Z employees working in flexible work systems. Q. Zhang et al. (2025) also reported that technostress and excessive digitalization increase burnout while reducing work engagement. Similar evidence was identified by Nuraeni et al. (2021), who found that digital communication overload weakens employee engagement among Indonesian employees. These findings indicate that digital transformation does not always generate positive organizational outcomes because employees may simultaneously experience communication burden, cognitive overload, and emotional exhaustion.

The results also indicate that digital work stress negatively affects innovative work behavior. Innovation requires creativity, cognitive flexibility, reflective thinking, and psychological energy, whereas excessive communication overload forces employees to prioritize routine task completion rather than idea exploration. Academic and administrative employees in higher education institutions frequently face simultaneous digital demands related to teaching activities, online coordination, administrative reporting, research responsibilities, and institutional performance systems. Such conditions reduce employees' opportunities to engage in creative experimentation and proactive problem solving (Bagis, 2022).

This finding confirms that digital work systems not only influence employee well-being but also affect organizational adaptability and innovation capability. (Bagis et al., 2025) demonstrated that stress and fear in technology-enabled organizations reduce employees' willingness to generate innovative ideas. Bullini Orlandi et al. (2024) similarly found that employee stress weakens innovation capability in remote work systems. (Z. Zhang et al., 2026) also reported that technostress negatively influences innovative work behavior among Indonesian employees. These findings suggest that excessive digital communication may unintentionally suppress employees' innovative potential despite organizational expectations for creativity and adaptability.

The findings further imply that organizations should not assume that digitalization automatically increases productivity and innovation. Although digital systems improve communication speed and work flexibility, excessive digital interaction may simultaneously create psychological strain that weakens employees' cognitive and emotional capacity for innovation. Employees experiencing continuous digital interruptions often attempt to preserve their remaining psychological energy for essential work responsibilities rather than for proactive and innovative activities. This condition strongly supports the argument of the Conservation of Resources Theory that individuals naturally attempt to conserve limited resources when facing stressful situations (Hobfoll et al., 2017).

Another important finding shows that psychological safety positively strengthens employee engagement. Employees who feel psychologically safe tend to communicate openly, express ideas confidently, ask questions freely, and participate more actively in organizational activities because they perceive interpersonal trust and organizational support. Supportive work environments help employees preserve emotional stability despite experiencing digital pressure and communication overload. Psychological safety therefore, functions as an important organizational resource capable of protecting employees from emotional exhaustion and disengagement.

These findings align with previous studies emphasizing the importance of psychological safety in digitally intensive workplaces. J. Zhang et al. (2026) found that psychological safety significantly enhances employee engagement because employees feel more comfortable participating in organizational activities and communication processes. Kyambade et al. (2024) similarly demonstrated that psychologically safe environments strengthen employees' emotional attachment and involvement. J. Zhang et al. (2026) also revealed that psychological safety improves employee participation and work performance in digital workplaces. Such findings indicate that employees who perceive supportive interpersonal relationships

are more capable of maintaining positive emotional attachment even when facing high digital work demands.

The importance of psychological safety becomes increasingly relevant in higher education institutions, where academic and administrative employees frequently interact through formal and informal digital communication systems. Institutions characterized by rigid supervision, excessive hierarchical communication, and constant monitoring may unintentionally increase employee anxiety and emotional strain. Conversely, organizations encouraging openness, collaboration, and mutual respect are more capable of maintaining employee engagement and psychological well-being. Psychological safety consequently becomes an essential organizational mechanism for helping employees adapt to hybrid and digitally intensive work environments.

The study further reveals that employee engagement positively influences innovative work behavior. Engaged employees tend to demonstrate stronger enthusiasm, dedication, initiative, and proactive behavior, encouraging them to generate and implement new ideas. Employees possessing strong emotional attachment to their work generally allocate greater cognitive and emotional energy toward innovation activities and organizational improvement efforts. Engaged employees are also more willing to collaborate with colleagues, explore alternative solutions, and participate actively in institutional development processes.

The findings are consistent with several previous studies. Ma Lu (2025) found that employee engagement significantly enhances innovative work behavior because engaged employees possess stronger motivation and psychological energy to contribute creatively. Chenhui et al. (2023) similarly demonstrated that engaged employees are more likely to participate in innovation activities in digitally disrupted workplaces. Dr. J. Nithya (2025) also identified that employee engagement positively influences innovative behavior in hybrid work systems. These findings indicate that engagement functions not only as an emotional condition but also as an important organizational driver for creativity, adaptability, and innovation capability.

This study provides several theoretical contributions. First, this research extends the application of the Conservation of Resources Theory in explaining employee behavior within digitally intensive work systems. Previous studies primarily emphasized burnout and well-being outcomes, whereas this study demonstrates that digital work stress also affects employee engagement and innovative behavior among young employees in higher education institutions. Second, this study positions psychological safety as a protective organizational resource capable of reducing the negative consequences of digital work stress. Third, integrating digital work stress, psychological safety, employee engagement, and innovative work behavior within a single framework enriches the behavioral human resource management literature related to digital and hybrid workplaces.

The study also contributes practically to higher education institutions. Universities increasingly depend on digital systems to support teaching, administration, research coordination, and institutional communication. However, excessive digital communication may unintentionally create psychological pressure among employees. Institutions, therefore, need to develop healthier digital communication practices, including clearer communication boundaries, balanced online workloads, supportive leadership approaches, and healthier digital interaction cultures. Organizational efforts to strengthen psychological safety are equally important because employees who feel safe and supported are more likely to remain engaged, adaptive, and innovative despite experiencing digital work demands.

Several limitations should also be acknowledged. This study focused only on young employees in higher education institutions, limiting the generalizability of the findings to other organizational sectors. The cross-sectional design also restricts the ability to observe behavioral changes over time. Future studies are therefore encouraged to involve broader sectors, longitudinal approaches, and additional behavioral

variables such as digital fatigue, work-life balance, organizational support, leadership style, or employee well-being to provide a deeper understanding regarding employee adaptation within digital workplaces.

CONCLUSION

This study concludes that digital work stress negatively affects employee engagement and innovative work behavior among young employees in higher education institutions. Excessive digital communication demands, continuous online interaction, and blurred work boundaries gradually reduce employees' emotional attachment, psychological energy, and innovation capability. Conversely, psychological safety plays an important role in strengthening employee engagement because supportive and trust-based work environments help employees maintain emotional stability despite experiencing digital pressure. The findings also confirm that engaged employees are more likely to demonstrate proactive and innovative behavior that contributes to organizational adaptability and institutional development.

The study strengthens Conservation of Resources Theory by demonstrating that digital work stress represents a form of psychological resource depletion capable of influencing employee behavioral outcomes in digitally intensive workplaces. Psychological safety functions as an important organizational resource that helps employees preserve positive emotional conditions and maintain productive behavior. The integration of digital work stress, psychological safety, employee engagement, and innovative work behavior also enriches the behavioral human resource management literature related to hybrid and digital work systems.

Practically, the findings imply that higher education institutions should not only prioritize digital transformation and work flexibility but also pay attention to employees' psychological conditions. Universities need to develop healthier digital communication practices, clearer work boundaries, supportive leadership approaches, and organizational climates that encourage openness and interpersonal trust. Such efforts are important to maintain employee engagement, creativity, and innovation capability in increasingly digitalized work environments.

Several limitations should also be acknowledged. This study focused only on young employees in higher education institutions and employed a cross-sectional design, limiting the generalizability and dynamic interpretation of the findings. Future studies are therefore encouraged to involve broader organizational sectors, longitudinal approaches, and additional behavioral variables such as digital fatigue, work-life balance, organizational support, or leadership style to provide a deeper understanding regarding employee adaptation and well-being in digital workplaces.

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