The Mediating Role of Proactive Personality in the Relationship between New Ways of Working (NWOW) and Work Engagement

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Abstract
Employees who are proactive have become increasingly important as organizations adopt New Ways of Working (NWOW). In dynamic environments, employees' ability to anticipate and adapt to change is crucial for organisational success. Proactive employees not only respond effectively to new challenges but also drive innovation and continuous improvement. Their role is especially vital in settings where NWOW is implemented, as maintaining high levels of work engagement is essential for sustaining productivity and achieving organizational goals. This study investigates the role of proactive personality as a mediator in the relationship between NWOW and work engagement. Using a quantitative approach, data were collected through a cross-sectional survey of 158 employees from the real estate industry (REI) and the architecture, engineering, and construction (AEC) industry. The study's findings reveal positive and significant relationships between NWOW and proactive personality with work engagement, emphasizing the importance of proactive behavior in these sectors. Additionally, the results show that proactive personality partially mediates this relationship, suggesting that employees inclined to take initiative are more likely to remain engaged in a NWOW environment. The study also suggests human resource development approaches that may be considered to enhance employee proactiveness and engagement.
Keywords: New Ways of Working (NWOW), Work Engagement, Proactive Personality, Organisational Change, Human Resource Development

Introduction
Recently, researchers and practitioners have focused on proactive components in employees, driven by the need for organizations to adapt to a rapidly changing work environment (Huynh et al., 2019; Tuan, 2022; Zhu & Li, 2021). Individuals with proactive personalities tend to take the initiative to enact changes, pursue their goals, and seek out more effective ways to accomplish tasks at work (Li et al., 2020). The proactive personality has been identified as a precursor to positive work outcomes (Alikaj et al., 2021; Chong et al., 2021; Dai & Wang, 2023; McCormick et al., 2019).

After COVID-19, many organizations have adopted New Ways Of Working (NWOW) within their structures (Duque et al., 2020). The shift towards NWOW also stems from management's desire to maintain a competitive edge in the talent market (Attaran et al., 2019). Consequently, numerous companies are viewing NWOW as a key strategy for modernization and sustaining long-term success (Jemine et al., 2020). However, NWOW requires employees to adapt, take initiative, and find more effective ways to accomplish tasks, making proactive traits increasingly relevant in the modern workplace (Gerards et al., 2018; Li et al., 2020).

Despite growing interest in work engagement studies in Malaysia, Qualtrics (2024) reports that the Malaysia's work engagement score is 67%, lower than Indonesia (86%) and Thailand (76%). Work engagement is critical for organizational success (Chanana & Sangeeta, 2021; Oksa et al., 2020; Park et al., 2019; Wood et al., 2020). Researchers also explored to fully understand and the resources to achieve work engagement (Kwon & Kim, 2020; Lee et al., 2020). Therefore, this study aims to examine whether NWOW can enhance work engagement, with proactive personality as a mediator.

Studying work engagement in the real estate (REI) and architecture, engineering, and construction (AEC) is crucial due to stressful nature and the challenges they present (Cheung et al., 2023; Lakhani et al., 2024; Ayodele et al., 2020). Work engagement is also vital for retaining talent within the large workforce of the REI and AEC sectors (Aman-Ullah et al., 2020; Rodrigues da Costa & Maria Correia Loureiro, 2019), which are essential to the economy and require significant capital investments (Siniak et al., 2020) in these sectors. While NWOW applications in these sectors were limited before COVID-19 (Bryce et al., 2019; Jayantha & Oladinrin, 2019), the pandemic has heightened its relevance (Duque et al., 2020). As NWOW transforms these sectors, it encourages proactive traits (Gerards et al., 2018; Bleidorn et al., 2021). Additionally, proactive employees can autonomously address challenges and leverage resources to boost work engagement and contribute to organizational success (Wang et al., 2017; Bajaba et al., 2021).

Therefore, this study incorporates proactive personality as a mediator to examine the relationship between NWOW and work engagement in AEC industries and REI. This research could expand the literature and validate New Ways of Working (NWOW) as a precursor to work engagement in the AEC industries and REI, particularly in Malaysia.

Problem Statement

The implementation of NWOW has caused uncertainties among employees, disrupting traditional workplace settings (Diab-Bahman & Al-Enzi, 2020). However, individuals with proactive personalities, who actively seek to overcome uncertainties and challenges, can derive essential job-related motivation (Yi-Feng Chen et al., 2021). Both academics and practitioners emphasize the importance of proactive behaviour at work, which is characterized by self-initiated actions rather than mere conformity to rules, with employees actively taking charge of their roles (Parker et al., 2019). Proactive employees, known for their self-starting nature and drive, exhibit enthusiastic involvement in their work and a persistent pursuit of their goals, resulting in high levels of work engagement (Chong et al., 2021). Therefore, proactive personality is chosen as mediator to study the relationship between NWOW and work engagement, highlighting its significance for employees.

Prioritizing work engagement is essential due to its critical role in mitigating negative outcomes such as turnover intention (Memon et al., 2020) and counterproductive work behavior (Xiong & Wen, 2020). Most research on the antecedents of work engagement has focused on other countries (Bonaiuto et al., 2022; Decuypere & Schaufeli, 2020; Greenier et al., 2021; Monje Amor et al., 2020; Ree & Wiig, 2020) while previous studies of work engagement in Malaysia have primarily centered on academics (Arokiasamy & Tat, 2020), nurses (Khairuddin & Baputey, 2019; Othman & Nasurdin, 2019), and hospitality workers (Rabiul & Yean, 2021). This research extends the focus to the real estate and AEC industries, which face challenges such as irregular, long hours and hazardous conditions (Cheung et al., 2023; Lakhani et al., 2024). Given the increasing demand for skilled workers in these fields, fostering employee work engagement is crucial for talent retention, motivation, and overall productivity (Rodrigues da Costa & Maria Correia Loureiro, 2019). By addressing work engagement, organizations can enhance employee well-being and reduce turnover, contributing to long-term success (Antherthon & Fasano, 2023; Gupta, 2021). Thus, this study aims to broaden the literature on work engagement in the Asian context, with a specific focus on Malaysia.

The importance of NWOW is also often overlooked in the Asian context compared to Europe (Jemine et al., 2020; Kotera & Vione, 2020). Nonetheless, NWOW research can address various methodological gaps and involve diverse populations, particularly as the concept was rapidly adopted following the COVID-19 pandemic, frequently without adequate preparation and management (Kotera & Vione, 2020; Renard et al., 2021). Therefore, studying NWOW in Malaysia is pertinent, as the findings may differ due to the unique context, culture, and infrastructure compared to European countries. Furthermore, studies have shown that time and location flexibility, elements of NWOW causes workers to undertake more unpaid overtime and exhibit lower levels of engagement at work (Chung & van der Horst, 2020; Schaufeli, 2018). However, some studies suggested the active nature of individuals with proactive personalities enables them to harness essential job-related motivation in the face of uncertainties and challenges (Yi-Feng Chen et al., 2021) and fosters greater work engagement (Chong et al., 2021; Hu et al., 2021; Mubarak et al., 2021).

Thus, this study seeks to address existing gaps by investigating the role of proactive personality as a mediator between NWOW and work engagement.

Literature Review
Work Engagement

Work engagement is first theorised by Kahn (1990). He defines engagement as to describe a psychological state in which workers invest their full personal self into their jobs by investing physical, cognitive, and emotional resources, with the amount of energies expended resulting in significantly different outcomes (Kahn, 1990). Kahn's idea was expanded by Schaufeli and colleagues in 2006 in which they described engagement at work as "a positive, satisfying, work-related state of mind characterised by vigour, dedication, and absorption" (Schaufeli et al., 2006, p. 702). Utrecht Work Engagement Scale (UWES) was developed for measuring work engagement which includes the three components that make up work engagement which are vigour, dedication, and absorption (Schaufeli & Bakker, 2004).

Recent studies focus on personal resources as the predictors of work engagement (Contreras et al., 2020; Solms et al., 2019; Truong et al., 2021). Global studies on work

engagement have covered a diverse range of professions, including British and Iranian English language teachers (Greenier et al., 2021), information and communication technology professionals from Ethiopia and South Korea (Gemeda & Lee, 2020), and employees in the tourism sector in Spain (Monje Amor et al., 2020). In Malaysia, research on work engagement has primarily focused on academics (Arokiasamy & Tat, 2020), nurses (Khairuddin & Baputey, 2019; Othman & Nasurdin, 2019), and hospitality workers (Rabiul & Yean, 2021).

Focusing on work engagement is crucial right now because employees are more concerned with other benefits and working conditions than they are with pay (da Costa & Maria Correia Loureiro, 2019). Work engagement resulted in job satisfaction, job performance, wellbeing of employees and reduce turnover intention on individual level (Asghar et al., 2021; Radic et al., 2020; Rita Perangin-Angin et al., 2020). At the organisation level, work engagement brings internal communication satisfaction and higher team performance (Tkalac Verčič, 2021; Uddin et al., 2019).

New Ways of Working (NWOW)
The New Ways of Working (NWOW) concept emerged in the Netherlands in the 1990s and was further developed by the Dutch consulting firm Veldhoen & Company (V&C) (Kingma, 2019). NWOW is designed to give employees the flexibility to choose when and where they work, utilizing technology to support this flexibility (ten Brummelhuis et al., 2012). This approach aligns with management's goal to attract talent, as younger employees are drawn to environments that emphasize work-life balance and believe that access to information and communication technology (ICT) boosts their productivity (Attaran et al., 2019; Tlaiss et al., 2017).

Peters et al (2014), identify three key components of NWOW: teleworking, worker autonomy, and output management. Similarly, De Leede & Kraijenbrink (2014) highlight three components but focus on flexibility, home-based work, and remote collaboration. Baane et al (2011), expand te framework to four facets: time- and location-independent work, production control, access to organizational information, and flexible working relationships. However, Baane et al (2011), did not address the interaction between physical and mental work environments, which is central to NWOW, as organizations often shift from closed offices to open-plan layouts. Gerards et al (2018), build on these ideas by adding a fifth facet: readily available open-plan offices, alongside the other four components.

NWOW research has largely been concentrated in the Netherlands (Gerards, de Grip, et al., 2020; Gerards et al., 2018; Gerards, van Wetten, et al., 2020; Kingma, 2019). Compared to Europe, studies in Asia are relatively limited (Brunia et al., 2016; Kotera & Vione, 2020; Manca et al., 2018). However, the COVID-19 pandemic has accelerated the adoption of NWOW across organizations, making it essential to understand its relevance and impact on both organizations and individuals (Duque et al., 2020; Renard et al., 2021).

Current NWOW research faces methodological gaps and lacks diversity in study populations (Kotera & Vione, 2020; Renard et al., 2021). Even as the pandemic transitions to endemic status and many return to traditional office settings, organizations are still working to maintain NWOW practices (Adekoya et al., 2022; Ozimek, 2020). However, prior to the

pandemic, industries such as REI and AEC had minimal NWOW applications, particularly regarding flexibility in time and space (Bryce et al., 2019; Jayantha & Oladinrin, 2019).

Proactive Personality

A proactive personality is characterized by "an individual's tendency to influence and initiate environmental changes, largely independent of external factors" (Bateman & Crant, 1993, p. 105). Proactive individuals take the initiative to act and persist until they achieve improvements, whereas non-proactive individuals often fail to recognize problems, give up easily, and miss opportunities for improvement (Bateman & Crant, 1993). Bateman & Crant (1993) introduced the concept of proactive personality to measure how inclined individuals are to take action to affect their surroundings. Proactive personalities are particularly influential when dealing with uncertainty (Hu et al., 2020; Sari & Najmudin, 2021; Yi-Feng Chen et al., 2021). Furthermore, proactive personality is often associated with a strong sense of personal responsibility for driving positive change and a belief in personal responsibility for redefining performance (McCormick et al., 2019).

Globally, proactive personality has been studied across various sectors, including healthcare (Alikaj et al., 2021; Yi-Feng Chen et al., 2021), finance and information technology (Alikaj et al., 2021), manufacturing and service industries (Maan et al., 2020) as well as among architects (Nielsen et al., 2023) and students (Luo et al., 2022). Research also has explored proactive personality as a predictor of various outcomes, such as service performance (Yang et al., 2020), creative behavior (Alikaj et al., 2021), well-being (Wahab & Blackman, 2023), job performance (Johari & Subramaniam, 2020), and responses to challenge and hindrance stressors (Nielsen et al., 2023). Additionally, proactive personality has been studied in relation to coworker behaviors, including envy, helping, and undermining (Sun et al., 2020). It also serves as a moderator in workplace studies (Abid et al., 2021; Johari et al., 2022; Maan et al., 2020).

New Ways of Working (NWOW) and Work Engagement

Previous quantitative studies on the influence of NWOW on work engagement have been limited and predominantly conducted in western context (Duque et al., 2020; Gerards et al., 2018; Van Steenbergen et al., 2018). Some earlier research explored the relationship between specific facets of NWOW towards work engagement (Gerards et al., 2018; Nagata et al., 2021). It has been shown that independent working time and location, particularly when working from home, can enhance employee work engagement (Nagata et al., 2021). Additionally, Gerards et al (2018), found that flexibility in work arrangements positively correlated with employee engagement. Other factors, such as independent production management, access to organizational knowledge, and the presence of open-plan offices, which foster interpersonal communication, are also associated with higher levels of work engagement (Gerards et al., 2018).

In Malaysia, prior studies have primarily been limited to flexible work arrangements and employee engagement, rather than specifically focusing on NWOW (Che Malek, 2020). According to Che Malek (2020), flexible work arrangements can enhance employee engagement by promoting responsibility and autonomy, which helps workers manage their job duties more efficiently and balance work-life priorities. However, other studies suggest that the time and location flexibility offered by NWOW might lead to increased unpaid

overtime and lower levels of work engagement (Chung & van der Horst, 2020; Schaufeli, 2018).

Given that NWOW was rapidly adopted in Malaysia following the COVID-19 pandemic, often with limited planning and administration, it is crucial to investigate the relationship between NWOW and work engagement in this context.

Mediating Roles of Proactive Personality

The sudden shift to NWOW (has introduced significant changes in the traditional office setting, creating an environment of uncertainty for many employees (Diab-Bahman & Al-Enzi, 2020). Despite these disruptions, NWOW has also enhanced job control and autonomy (Gerards et al., 2018), which can positively impact employees with proactive personalities. These individuals are likely to seek out better ways to perform their tasks and adapt more easily to new work cultures (Hu et al., 2020; Li et al., 2020). Proactive individuals tend to thrive in flexible work environments that provide them with the autonomy and resources to address problems proactively (Urquijo et al., 2019; Wang et al., 2017). Conversely, a lack of flexibility and support may hinder their ability to leverage their proactive traits effectively (Wang et al., 2017).

Personality traits, including proactive personality, are consistently linked to work engagement (Anglim et al., 2019; Janssens et al., 2019; Tisu et al., 2020; Zhu & Li, 2021). A meta-analysis by Young et al (2018), found that personality accounts for 48.10 percent of the variance in work engagement, highlighting its importance in organizational selection processes. Although the Big Five personality traits are widely used in workplace literature (Mahmoud et al., 2020; Şahin et al., 2019; Yao & Li, 2021), proactive personality has been shown to be a stronger predictor of work engagement (Young et al., 2018). Proactive personality not only drives work engagement but also mediates its relationship with various job outcomes. Studies have demonstrated that work engagement acts as a mediator between proactive personality and job performance (Chong et al., 2021), innovative behavior (Mubarak et al., 2021), and job crafting. This suggests that proactive individuals, who are inherently engaged in their work, are likely to exhibit higher levels of job performance, innovation, and job crafting (Bajaba et al., 2021; Chong et al., 2021).
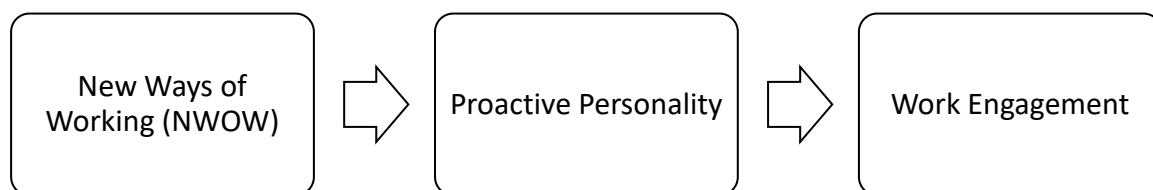Figure 1 shows the conceptual framework of this study.

Figure 1:   Conceptual Framework

Methodology

This study utilized a cross-sectional survey method to gather data from employees in the real estate (REI) and architecture, engineering, and construction (AEC) industries. Minimum sample size was determined using power analysis by G*Power which is 138 respondents. A convenience sampling technique was employed, resulting in 158 respondents.

Data collection was conducted through an online survey and direct outreach, including email communications and door-to-door visits in Kuching and Kota Samarahan, Malaysia. The survey was administered via Google Forms and used a 5-point Likert scale. Table 1 outlines the research instrument. The reliability of the scales used in the study was confirmed with Cronbach's alpha values: New Ways of Working (NWOW) at 0.874, work engagement at 0.873, and proactive personality at 0.836, all indicating good reliability.

Table 1
Research Instrument

Section	Number of items	Sources
A (Demographic)	7	-
B (New Ways of Working)	10	Gerards et al. (2018)
C (Work Engagement)	9	Schaufeli et al. (2006)
D (Proactive Personality)	7	Trifiletti et al. (2009)

Results and Discussion

The profile of the 158 respondents reveals that the majority are female employees, comprising 68.4% of the total, while male employees make up 31.6%. Most respondents are in the 20-29 age group (41.1%), followed by those aged 30-39 (32.9%), 40-49 (19.3%), and 50 years and above (7.0%). In terms of ethnicity, Chinese participants represent 38.6%, followed by Malay (32.9%), Bumiputera Sarawak (27.8%), and others (0.6%). Regarding educational attainment, the majority hold a bachelor's degree (51.3%), followed by diploma holders (24.1%), those with secondary school qualifications (10.8%), master's degree holders (7.0%), upper secondary school holders (5.7%), and others (1.3%).

Table 2
Mediation Analysis Summary

Relationship	Total Effect (NWOW→WE)	Direct Effect (NWOW→WE)	Indirect Effect	Confidence Interval		Conclusion
				Lower Bound	Upper Bound	
NWOW→PP→WE	b=0.572 SE=0.058 t=9.914 p<.001	b=0.175 SE=0.064 t=2.753 p=.007	B=0.197 SE=0.055	0.097	0.310	Partially mediated

A mediation analysis was conducted to examine whether proactive personality mediates the relationship between NWOW and work engagement. The analysis was performed using Hayes's PROCESS macro for SPSS (Model 4) with 5,000 bootstrap samples to estimate the indirect effect. The mediation analysis summary is shown in Table 2. The total effect of NWOW on work engagement was significant, b = 0.572, SE = 0.058, t = 9.914, p < .001, 95% CI [0.458, 0.686]. The direct effect of NWOW on work engagement, was also significant, b = 0.175, SE = 0.064, t = 2.753, p = .007, 95% CI [0.049, 0.301]. The indirect effect via proactive personality was b = 0.197, SE = 0.055, 95% CI [0.097, 0.310]. These findings suggest that proactive personality plays a partial mediating role in the relationship between NWOW and work engagement.

NWOW's flexibility in time, location, decision-making, and communication allows employees to balance their work with personal responsibilities, increasing motivation and engagement. In the REI and AEC industries, where collaboration and adaptability are key, NWOW practices prove especially effective, boosting engagement and commitment to quality. This is consistent with Gerards et al. (2018), who found that NWOW positively impacts work engagement. Furthermore, NWOW has significantly changed workplaces, affecting workspaces, management styles, and culture. These changes create a more flexible environment that positively influences employees' proactive personalities. NWOW gives employees the freedom to adjust their work to fit personal needs, such as balancing work with childcare or errands. This flexibility promotes autonomy, encouraging them to take initiative and find innovative solutions. For example, architects and engineers can manage project timelines more effectively, and real estate professionals can balance site visits with other tasks. This adaptability enhances both their effectiveness and innovation in their roles.

The findings demonstrate that proactive personality mediates the relationship between NWOW and work engagement, underscoring its key role in enhancing the positive impact of NWOW on employee engagement. As NWOW reshapes workplaces, it brings about substantial environmental changes that affect employee attitudes and behaviour (Gerards et al., 2018). Bleidorn et al. (2021) found that these changes can influence personality traits, potentially fostering proactive personality. When NWOW nurtures this proactivity, it creates a positive feedback loop that further strengthens work engagement. Employees with a proactive personality tend to take greater ownership of their work, which inspires similar behaviour among colleagues, fostering a culture of continuous improvement and high engagement. Organizations that recognize the value of a proactive personality and actively promote these behaviors can see gains work engagement. By utilizing NWOW to build a proactive workforce, companies can create environments where employees are more engaged and dedicated to organizational success. For instance, a proactive architect might foresee design challenges and resolve them early, while a proactive engineer might innovate to optimize construction processes. When NWOW practices provide flexibility and autonomy, such proactive behaviors are more likely to thrive, leading to increased work engagement in these industries.

Conclusion

The mediation analysis results demonstrate that proactive personality significantly mediates the relationship between NWOW and work engagement among employees in the REI and AEC industries. Specifically, the indirect effect of NWOW on work engagement through proactive personality was significant, indicating that employees with higher levels of proactive personality are more likely to engage in their work when exposed to NWOW. The findings suggest several implications for human resource development (HRD). Firstly, a focus on developing proactive personality traits among employees through training and development sessions. Secondly, HRD practitioners may tailor the implementation of NWOW strategies to support proactive behaviours through creating environments that encourage autonomy, flexibility and innovation.

However, this study has limitations. It focused exclusively on employees from Kuching and Kota Samarahan in Sarawak, Malaysia, which may affect the generalizability of the results. Future research should examine the effects of NWOW on other work outcomes, such as

career success, job performance, and work-life balance. Additionally, expanding studies to include industries like manufacturing, medical, and financial services, and employing diverse research methodologies, such as qualitative or mixed-method approaches, could provide further insights.

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