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The Relationship Between Big Five Personality Traits and Self-Regulated Learning in the Workplace: The Mediating Role of Goal Orientation

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Abstract ;
Shifts in work dynamics and the growing demand for self-directed learning in the workplace have made self-regulated learning increasingly important in organizational settings. However, research on internal factors that predict employees' self-regulated learning remains limited, particularly with respect to the psychological mechanisms linking personality to self-regulated learning. This study aims to examine the relationship between three Big Five personality traits (conscientiousness, openness, and neuroticism) and self-regulated learning in the workplace, and to evaluate the mediating role of goal orientation (learning goal orientation and performance-avoid goal orientation) in these relationships. Drawing on the Dual Processing Self-Regulation Model and Five Factor Theory, this study examined the relationship between three Big Five personality traits (conscientiousness, openness, and neuroticism) and self-regulated learning in the workplace, and evaluated goal orientation (learning goal orientation and performance-avoid goal orientation) as a mediator. Using a cross-sectional correlational design, data were collected from 139 professionals, most of whom resided in Indonesia. Results indicated that conscientiousness and openness were positively correlated with self-regulated learning, whereas neuroticism was negatively correlated. Mediation analyses showed that learning goal orientation partially mediated the relationships between conscientiousness and openness and self-regulated learning, while performance-avoid goal orientation partially mediated the relationship between neuroticism and self-regulated learning. These findings suggest that individual differences in employees' self-regulated learning are related to both personality and goal orientation, and highlight goal orientation as a motivational pathway that helps explain, in part, the relationship between personality and self-regulated learning in the workplace.

INTRODUCTION

Organizations invest substantial resources in assessing and developing employees' capabilities, yet the success of these efforts depends on the extent to which employees follow up on identified development needs (Church et al., 2017; Moses, 2011). At the same time, new work dynamics driven by technological advances and the rise of remote work have accelerated a shift toward more employee-driven development, increasing expectations for employees to be proactive and self-directed in their learning (Beier et al., 2025; Dachner et al., 2021). This shift is reflected in the growing use of asynchronous online learning across organizations (ATD Research, 2023). In parallel with these changes, the concept of self-regulated learning has received increasing attention in professional and organizational contexts (Cuyvers et al., 2020). Consistent with this trend, Sitzmann and Bauer (2025) emphasized that developing employees' self-regulated learning may be more effective than relying primarily on formal training, given that workplace learning often occurs informally and access to knowledge has become easier with advances in artificial intelligence.

Self-regulated learning refers to a proactive process of using metacognitive, motivational, and behavioral strategies to achieve learning goals (Zimmerman, 1990). The concept was first developed by Zimmerman (1986) in academic contexts, drawing on social cognitive theory (Bandura, 1986), which highlights the adjustment of thought patterns and actions to achieve socially situated goals. Over time, multiple models of self-regulated learning have been proposed, with the models developed by Zimmerman (2000) and Pintrich (2000) among the most frequently cited frameworks (Panadero, 2017; Puustinen & Pulkkinen, 2001). Building on these models, Kittel et al. (2021) identified several self-regulated learning strategies relevant to workplace settings: elaboration (linking new work-related information or knowledge to prior knowledge or experience), planning (prioritizing tasks and setting daily or weekly goals and deadlines), monitoring and regulation (tracking focus and work progress, evaluating the process, and adjusting work approaches when they are ineffective), help seeking (seeking support or information from supervisors, colleagues, or other sources when encountering difficulties), and effort regulation (sustaining effort and persisting when tasks are challenging). In line with this, recent research suggests that self-regulated learning models developed in educational settings can be adapted to workplace contexts (Cuyvers et al., 2020).

In professional settings, self-regulated learning has been shown to relate to a range of learning-related outcomes in organizations. A meta-analysis by Sitzmann and Ely (2011) found that most self-regulated learning strategies are positively correlated with training transfer. More recent studies have also highlighted self-regulated learning as a mediator linking individuals' perceptions of the learning environment to their learning engagement and effectiveness (Kumar, 2022; Lourenco & Ferreira, 2019; Milligan et al., 2015). In addition, Kittel and Seufert (2023) reported that self-regulated learning is related to informal learning behaviors. Together, these findings underscore self-regulated learning as a key element of effective employee development, indicating the importance of examining factors that predict the extent to which employees engage in self-regulated learning at work.

Research on predictors of workplace self-regulated learning has typically emphasized external factors, such as organizational support for collaboration, autonomy from supervisors, customer feedback, and a learning transfer climate, all of which are positively related to self-regulated learning (Elmadag et al., 2023; Lourenco & Ferreira, 2019). In addition, perceptions of learning opportunities (Milligan et al., 2015) and program quality (Kumar, 2022) have also been positively correlated with self-regulated learning. However, research on internal factors as predictors of self-regulated learning remains relatively limited. This is notable because Steinberg et al. (2025) showed that although situational (state) components account for a larger proportion of variance in workplace self-regulated learning (approximately 50%), stable individual differences (traits) remain substantial (approximately 28%). These findings highlight the importance of examining stable traits, such as personality traits, as internal factors that may help explain individual differences in workplace self-regulated learning.

Personality may predict self-regulated learning because it reflects relatively stable patterns of individual responses across situations (Passer & Smith, 2004), including learning situations. One widely studied personality framework in relation to learning characteristics similar to those included in self-regulated learning models is the Big Five personality traits (Bidjerano & Dai, 2007). The Big Five comprises five broad dimensions: openness (openness to new ideas and experiences), conscientiousness (discipline and responsibility), extraversion (social energy), agreeableness (prosociality and empathy), and neuroticism (a tendency toward negative emotions such as anxiety) (John, 2021). According to Five-Factor Theory (McCrae & Costa, 1996), personality can influence self-regulatory capacities and strategies, including those involved in learning (McCrae & Löckenhoff, 2010). Studies in educational settings have shown that openness, conscientiousness, extraversion, and agreeableness are positively related to self-regulated learning, whereas neuroticism is negatively related to self-regulated learning

(Bruso et al., 2020; Dörrenbächer & Perels, 2016; Kara et al., 2024; Mahama et al., 2022). Nevertheless, research on the relationship between the Big Five and self-regulated learning remains relatively limited in workplace contexts and has generally focused on direct relationships without considering mediating mechanisms.

Beyond personality, motivational beliefs such as goal orientation also play an important role in initiating self-regulated learning processes (Kittel et al., 2021; Panadero, 2017). Goal orientation refers to individuals' tendencies when selecting goals in achievement situations (Payne et al., 2007). Although it originated in educational psychology, the construct has been extended to organizational contexts (VandeWalle et al., 2019). Dweck (1986) distinguished two types of goal orientation: learning goal orientation (LGO), reflecting a desire to learn and develop competence, and performance goal orientation, which was later differentiated into performance-prove goal orientation (PPGO), reflecting a desire to demonstrate ability for recognition, and performance-avoid goal orientation (PAGO), reflecting a desire to avoid negative evaluation (Button et al., 1996). This three-factor model is widely used in empirical studies in organizational settings (Payne et al., 2007; Wang & Erdheim, 2007). Prior research indicates that goal orientation predicts self-regulatory constructs (Payne et al., 2007), including self-regulated learning. In general, LGO is positively correlated with self-regulated learning, PAGO is negatively correlated with self-regulated learning, whereas PPGO tends to show weak or nonsignificant positive correlations (Kittel et al., 2021; Payne et al., 2007; Tsai & Li, 2024; Vanthournout et al., 2015). However, studies examining goal orientation as a mediator between personality traits and self-regulated learning remain limited (Sorić et al., 2017).

The novelty of this study lies in three aspects. First, it extends the examination of Big Five personality traits (conscientiousness, openness, and neuroticism) and self-regulated learning from academic to workplace contexts, where empirical evidence remains scarce. Second, unlike prior studies that focused on direct relationships, this study tests goal orientation (learning goal orientation and performance-avoid goal orientation) as a mediating mechanism, thereby uncovering the motivational pathway linking personality to self-regulated learning. Third, it addresses the call for more integrative research on internal factors in workplace learning by simultaneously examining personality, goal orientation, and self-regulated learning within a single model, which has not been extensively investigated in organizational settings.

Accordingly, the present study aims to examine the relationships between Big Five personality dimensions and self-regulated learning in workplace contexts and to evaluate goal orientation as a mediator. Theoretically, this study is expected to extend understanding of the psychological mechanisms underlying workplace self-regulated learning by testing the contribution of internal factors, particularly personality and goal orientation. Emphasizing goal orientation as a mediator enables the examination of a model in which personality relates to learning behavior through motivational pathways. Practically, the findings may help organizations identify employees who are more prepared to manage self-directed learning based on personality profiles and may inform the design of more effective workplace interventions to develop self-regulated learning by taking individual differences into account.

METHOD

This study employed a quantitative correlational design with a cross-sectional approach. Based on an a priori power analysis conducted using G*Power 3.1.9.7 (F-test) with an effect size of 0.15, a significance level (α) of 0.05, and power ($1-\beta$) of 0.80, the minimum required sample size was 92 participants. A power level of 0.80 is commonly considered an acceptable minimum standard in social science research (Gefen & Rigdon, 2011).

To recruit respondents, the researchers partnered with an international assessment consultancy firm headquartered in Singapore. Following the procedure described by Iyer et al. (2020), the study initially targeted professionals who had completed a Big Five personality

assessment administered by the partner consultancy within the last three years (since 2022). At the time of the assessment, participants received written information indicating that their contact details would be stored for potential follow-up communication, and 932 individuals provided informed consent. For the present study, the consultancy sent email invitations to all targeted participants, as participant contact information was held exclusively by the consultancy. The email stated that participation was voluntary, and those who agreed were directed to a questionnaire link assessing self-regulated learning and goal orientation. Participants were also given the option to opt out of receiving similar emails in the future. Personality data were not re-administered because participants' assessment results were considered stable over the medium to long term (Iyer et al., 2020).

In practice, the email response rate fell below the target. One contributing factor was that some individuals had changed employers, rendering their recorded email addresses inactive. Follow-up invitations were sent several times, but the response rate remained low. Therefore, additional participants were recruited via social media using the criteria of being currently employed and having at least one year of work experience. These additional participants were asked to complete the same Big Five personality assessment via the partner consultancy's platform and to complete the self-regulated learning and goal orientation questionnaires. Prior to completing the questionnaires, participants provided informed consent acknowledging that the data were not fully anonymous because their responses needed to be matched with prior assessment results and used for report generation. As an incentive for the additional participants, they received a free Big Five personality report from the partner consultancy.

All recruitment was conducted using convenience sampling. From the partner consultancy's participant list (individuals who had previously completed the Big Five assessment), 43 participants responded to the email invitation and completed the additional questionnaire. Among participants recruited via social media, 137 started the Big Five assessment and the additional questionnaires; however, only 96 completed all questionnaires and met the participation criteria. Thus, the final analytic sample comprised 139 participants.

Participant characteristics for the final sample (N = 139) were as follows. The sample was 61.2% female and 37.4% male, while 1.4% did not report gender. Ages ranged from 22 to 74 years, with a mean age of 36.25 years (SD = 10.69). By country of residence, most participants lived in Indonesia (86.3%), followed by Malaysia, Thailand, the United Arab Emirates, and the United Kingdom (each 2.2%), and the Netherlands (1.4%); the remaining participants resided in Germany, Lesotho, the Philippines, Singapore, and the United States (each 0.7%). In terms of education, most participants held a bachelor's degree or equivalent (64.0%), followed by a master's degree (27.3%) and a doctoral degree (3.6%); other categories included diploma (0.7%) and high school or equivalent (0.7%). Most participants were employed full-time (73.4%), followed by self-employed participants (12.9%) and part-time employees (7.9%), with the remainder distributed across other categories in small proportions. Tenure in the current organization was primarily 1–3 years (48.9%) and 4–6 years (25.2%), followed by 7–10 years (13.7%) and more than 10 years (12.2%). Participants represented diverse sectors, most commonly HR services (21.6%), consulting and management (10.8%), education (10.1%), engineering and manufacturing (8.6%), healthcare (6.5%), finance and banking (5.8%), marketing/advertising/public relations (5.0%), and information technology (5.0%). In terms of role level, the largest categories were individual contributors (34.5%) and managers/team leaders (26.6%), followed by senior managers/directors (10.1%), executives (5.8%), and founders/owners (5.8%); 6.5% did not report role level and 2.9% reported working as consultants.

Measures

Big Five personality traits (conscientiousness, openness, neuroticism). Conscientiousness, openness, and neuroticism were measured using the partner consultancy's personality assessment. This self-report questionnaire assesses the Big Five using items drawn from the International Personality Item Pool (IPIP) (https://ipip.ori.org/), a public-domain personality item bank. The IPIP was first proposed by Goldberg (1999) as a collaborative initiative to provide broadly accessible personality items for research use, and it has since been widely used in personality research across contexts (Goldberg et al., 2006). The assessment has been used with more than 1,000 participants and has demonstrated high internal consistency, with Cronbach's alpha coefficients of approximately 0.90 for conscientiousness, openness, and neuroticism.

Self-regulated learning was measured using the self-report questionnaire developed by Kittel et al. (2021), which assesses the use of self-regulated learning strategies in the workplace. The instrument is grounded in self-regulated learning models (Panadero, 2017), Pintrich's (1999) taxonomy of learning strategies, and adaptations of the Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich et al., 1991). Items were adapted to professional contexts (e.g., replacing "other students" with "coworkers" and reflecting work situations such as meetings or learning new systems). The scale comprises five subscales: elaboration (four items), planning (five items), monitoring and regulation (five items), help seeking (three items), and effort regulation (two items). All items were rated on a 1–5 Likert scale. The instrument has an overall reliability of $\alpha = 0.77$, with subscale reliabilities ranging from $\alpha = 0.51$ to 0.71 (Kittel et al., 2021).

Goal orientation was measured using VandeWalle's (1997) Work Domain Goal Orientation Instrument, which assesses goal orientation in workplace contexts. This study measured two factors only: Learning Goal Orientation (LGO) and Performance-Avoid Goal Orientation (PAGO). The LGO scale comprises five items, and the PAGO scale comprises four items. Items were rated on a 1–7 Likert scale. Reported internal consistencies were $\alpha = 0.85$ for LGO and $\alpha = 0.88$ for PAGO, indicating good measurement consistency.

Data were analyzed using jamovi version 2.5.6.0. Internal consistency reliability for all instruments was examined using the Reliability Analysis function in the Factor module. Correlations among variables were examined using Correlation Matrix in the Regression module. Mediation hypotheses were tested using mediation analysis in the medmod module to evaluate goal orientation as a mediator in the relationships between personality dimensions (conscientiousness, openness, and neuroticism) and self-regulated learning. Three simple mediation models were tested separately in accordance with the study model.

RESULTS AND DISCUSSION

Reliability Testing of Measures

The following section reports the internal consistency results for the measures used in this study, based on data from the 139 participants included in the analysis. In these reliability analyses, Cronbach's alpha was evaluated against a minimum criterion of 0.70 (Nunnally & Bernstein, 1994), and item–rest correlations were evaluated against a minimum criterion of 0.30 (Boateng et al., 2018). Items with item–rest correlations < 0.30 were removed, and scale scores were recalculated using the retained items. Removed items were therefore not included in the scores used for descriptive or inferential analyses.

Big Five Personality Traits (Conscientiousness, Openness, Neuroticism)

Overall, the initial internal consistency was already high (Cronbach's alpha approximately 0.93–0.94), but several items had item–rest correlations below 0.30. These items were removed iteratively until all remaining items met the criterion of item–rest correlation ≥ 0.30. After item reduction, Cronbach's alpha improved further ($\alpha = 0.942$–0.948). The final

item counts also remained adequate, as the number of items per dimension still exceeded those in commonly used IPIP-based measures such as the IPIP-NEO-120 (Johnson, 2014), which contains 24 items per dimension.

Table 1. Summary of reliability for conscientiousness, openness, and neuroticism.

Scale	Initial α	Initial items	Items removed (item–rest < 0.30)	Final items	Final α	Item–rest correlation range
Openness	0.935	77	22	55	0.946	0.317–0.664
Conscientiousness	0.937	69	21	48	0.948	0.373–0.726
Neuroticism	0.929	65	23	42	0.942	0.301–0.730

Source: Primary research data (self-report personality assessment), processed by the author, 2025

Self-Regulated Learning

Reliability testing for self-regulated learning (SRL) was conducted at the subscale level following Kittel et al. (2021). In general, several subscales in the initial version showed relatively low Cronbach's alpha values and included items with item–rest correlations < 0.30; therefore, item reduction was applied. After item removal, reliability increased for the revised subscales. For some subscales, alpha values remained below 0.70; however, these values were still within the range reported and used in the original study by Kittel et al. (2021) (α = 0.51–0.71). In addition, the alpha for the overall SRL scale remained above 0.70 (α = 0.740). The number of items per subscale after reduction also remained adequate, falling within the same range used by Kittel et al. (2021) (2–5 items).

Table 2. Summary of reliability for self-regulated learning.

SRL subscale	Initial α	Initial items	Items removed (item–rest < 0.30)	Final items	Final α	Item–rest correlation range
Elaboration	0.592	4	1	3	0.782	0.508–0.696
Planning	0.593	5	2	3	0.672	0.476–0.502
Monitoring and regulation	0.748	5	0	5	0.748	0.423–0.617
Help seeking	0.592	3	1	2	0.656	0.488
Effort regulation	0.536	2	0	2	0.536	0.367
SRL total	0.726	19	4	15	0.740	—

Source: Primary research data (self-report questionnaire), processed by the author, 2025

Goal Orientation (LGO and PAGO)

Overall, both the LGO and PAGO scales showed good internal consistency, with Cronbach's alpha values above 0.80. These values were close to those reported for the original VandeWalle (1997) instrument (α = 0.85 for LGO; α = 0.88 for PAGO). All items also had item–rest correlations above 0.30; therefore, no items were removed from either scale.

Table 3. Summary of reliability for goal orientation.

Scale	Items	α	Item–rest correlation range
Learning Goal Orientation (LGO)	5	0.831	0.489–0.785
Performance-Avoid Goal Orientation (PAGO)	4	0.861	0.628–0.787

Source: Primary research data (self-report questionnaire), processed by the author, 2025

Descriptive Statistics

Table 4. Descriptive statistics for study variables (N = 139).

Variable	M	SD	Min	Max	Shapiro–Wilk p	Skewness	Kurtosis
Conscientiousness	3.66	0.51	1.96	4.88	.259	-0.05	0.30
Openness	3.74	0.44	2.96	4.85	.039	0.25	-0.52
Neuroticism	2.70	0.55	1.24	4.33	.199	-0.02	0.52
Self-Regulated Learning (SRL)	4.03	0.41	2.67	5.00	.407	-0.06	0.37
Learning Goal Orientation (LGO)	5.72	0.87	1.80	7.00	< .001	-0.91	2.02
Performance-Avoid Goal Orientation (PAGO)	3.30	1.40	1.00	7.00	.002	0.39	-0.62

Source: Primary research data (combined assessments), processed by the author, 2025

Table 4 presents descriptive statistics for all key variables. The Shapiro–Wilk test indicated that the distributions of openness, LGO, and PAGO differed from normality ($p < .05$), whereas the other variables did not show significant deviations. Based on distribution shape indices, skewness values ranged from −0.91 to 0.39 and kurtosis values ranged from −0.62 to 2.02, suggesting generally mild departures from normality. Specifically, LGO showed the largest negative skew (skewness = −0.91) and the highest kurtosis (2.02). However, these values remained well below commonly used thresholds for substantial non-normality (e.g., |skewness| > 2 and |kurtosis| > 7; Hair et al., 2010).

Table 5. Multicollinearity test results (VIF and tolerance).

Predictor	VIF	Tolerance
Conscientiousness	1.70	0.589
Openness	1.62	0.619
Neuroticism	1.92	0.520
Learning Goal Orientation (LGO)	1.35	0.740
Performance-Avoid Goal Orientation (PAGO)	1.32	0.757

Source: Primary research data, processed using jamovi, 2025

Multicollinearity was evaluated using the variance inflation factor (VIF) and tolerance. In general, VIF values greater than 10 suggest multicollinearity requiring attention, whereas tolerance values below 0.10 indicate serious multicollinearity concerns (Kline, 2023). As shown in Table 5, all predictors had VIF values ranging from 1.32 to 1.92 and tolerance values ranging from 0.520 to 0.757. Thus, there was no meaningful indication of multicollinearity. Given the relatively mild deviations from normality and the absence of multicollinearity concerns, correlation and mediation analyses were conducted.

Correlation Analysis

Table 6. Pearson correlation matrix among study variables (N = 139).

Variable	1	2	3	4	5	6
1. Conscientiousness	—					
2. Openness	0.469***	—				
3. Neuroticism	−0.613***	−0.498***	—			
4. Self-Regulated Learning (SRL)	0.583***	0.434***	−0.494***	—		
5. Learning Goal Orientation (LGO)	0.304***	0.457***	−0.387***	0.536***	—	
6. Performance-Avoid Goal Orientation (PAGO)	−0.296***	−0.392***	0.428***	−0.394***	−0.344***	—

Source: Primary research data, processed using jamovi, 2025

***p < .001.

The Pearson correlation matrix in Table 6 shows that conscientiousness and openness were positively correlated with SRL (r = 0.583, p < .001; r = 0.434, p < .001), whereas neuroticism was negatively correlated with SRL (r = −0.494, p < .001). In addition, LGO was positively correlated with SRL (r = 0.536, p < .001), whereas PAGO was negatively correlated with SRL (r = −0.394, p < .001).

The correlation pattern also showed that personality dimensions were correlated with goal orientation in the expected theoretical directions. Conscientiousness and openness were positively correlated with LGO (r = 0.304 and r = 0.457; p < .001), while neuroticism was negatively correlated with LGO (r = −0.387, p < .001). Furthermore, conscientiousness and openness were negatively correlated with PAGO (r = −0.296 and r = −0.392; p < .001), whereas neuroticism was positively correlated with PAGO (r = 0.428, p < .001). All correlations among the main variables were significant at p < .001.

Using Cohen's guidelines for interpreting correlation effect sizes (small ≈ 0.10; medium ≈ 0.30; large ≈ 0.50) (Cohen, 1992), several relationships in this study fell within the medium-to-large range. The conscientiousness–SRL correlation (r = 0.583) and the LGO–SRL correlation (r = 0.536) were large. The openness–SRL (r = 0.434), neuroticism–SRL (r = −0.494), neuroticism–PAGO (r = 0.428), and openness–LGO (r = 0.457) correlations were medium and approached large. Other correlations were generally medium, including conscientiousness–LGO (r = 0.304) and the relationship between PAGO and SRL (r = −0.394).

Given that the correlations among variables were significant, subsequent analyses tested mediation effects, specifically whether LGO and PAGO mediated the relationships between personality dimensions (conscientiousness, openness, and neuroticism) and SRL. Accordingly, simple mediation models were tested in line with the proposed paths.

Mediation Analysis

Mediation analyses used 5,000 bootstrap resamples (Hayes, 2022) to estimate indirect effects (a×b) and 95% confidence intervals (CIs). Bootstrapping was used because the sampling distribution of the indirect effect (the product a×b) is generally not assumed to be normal and is often asymmetric, making normality-based inference less optimal (Hayes, 2022; Shrout & Bolger, 2002). Mediation effects were considered significant when the 95% bootstrap CI for a×b did not include zero (Hayes, 2022; Shrout & Bolger, 2002). Consistent with this criterion, none of the indirect effects across the three models (Table 7) crossed zero; therefore, all three mediation effects were significant.

Table 7. Summary of mediation effects (5,000 bootstrap resamples; N = 139). Note. C = conscientiousness; O = openness; N = neuroticism; SRL = self-regulated learning; LGO = learning goal orientation; PAGO = performance-avoid goal orientation.

Model	Effect	Estimate	SE	95% CI (Lower–Upper)	Z	p	% mediated
C → LGO → SRL	Indirect (a×b)	0.095	0.038	0.027–0.173	2.49	.013	20.6
	Direct (c′)	0.367	0.051	0.264–0.465	7.13	< .001	79.4
	Total (c)	0.462	0.058	0.341–0.571	7.91	< .001	100.0
O → LGO → SRL	Indirect (a×b)	0.179	0.054	0.090–0.301	3.33	< .001	45.0
	Direct (c′)	0.219	0.080	0.060–0.365	2.75	.006	55.0

	Total (c)	0.398	0.080	0.235–0.548	4.96	< .001	100.0
N → PAGO → SRL	Indirect (a×b)	−0.070	0.026	−0.122–−0.022	−2.73	.006	19.4
	Direct (c′)	−0.292	0.062	−0.410–−0.174	−4.74	< .001	80.6
	Total (c)	−0.362	0.059	−0.477–−0.239	−6.10	< .001	100.0

Source: Primary research data, processed using jamovi, 2025

In the conscientiousness → LGO → SRL model, the indirect effect (a×b) was significant, as the 95% bootstrap CI did not include zero (estimate = 0.095, 95% CI [0.027, 0.173]; Table 7). Path a (C → LGO) was significant (a = 0.514, p = .005) and path b (LGO → SRL) was significant (b = 0.185, p < .001). The direct effect of conscientiousness on SRL remained significant (c′ = 0.367, p < .001), indicating partial mediation, with 20.6% of the total effect mediated.

In the openness → LGO → SRL model, the indirect effect was significant (estimate = 0.179, 95% CI [0.090, 0.301]; Table 7). Path a (O → LGO) was significant (a = 0.894, p < .001) and path b (LGO → SRL) was significant (b = 0.200, p < .001). The direct effect of openness on SRL remained significant (c′ = 0.219, p = .006), indicating partial mediation, with 45.0% of the total effect mediated.

In the neuroticism → PAGO → SRL model, the indirect effect was significant and negative (estimate = −0.070, 95% CI [−0.122, −0.022]; Table 7). Path a indicated that neuroticism was positively related to PAGO (a = 1.081, p < .001), whereas path b indicated that PAGO was negatively related to SRL (b = −0.065, p = .005). The direct effect of neuroticism on SRL remained significant (c′ = −0.292, p < .001), indicating partial mediation, with 19.4% of the total effect mediated.

Overall, all three models showed partial mediation, because the indirect effects were significant while the direct effects (c′) remained significant. These findings indicate that goal orientation explains part, but not all, of the relationship between personality dimensions and self-regulated learning.

This study examined the relationships between three Big Five personality dimensions (conscientiousness, openness, and neuroticism) and self-regulated learning (SRL) in workplace contexts, and evaluated goal orientation as a mediating mechanism through three simple mediation models tested separately. Overall, the correlation results showed a pattern consistent with the proposed theoretical directions, and the bootstrap-based mediation analyses indicated that all three indirect effects were significant. Findings for each hypothesis are discussed below.

Direct relationships between personality and self-regulated learning (H1a–H1c)

The findings supported the hypothesized direct relationships between personality and self-regulated learning. Conscientiousness and openness were positively correlated with self-regulated learning (r = 0.583 and r = 0.434, respectively; p < .001), whereas neuroticism was negatively correlated with self-regulated learning (r = −0.494; p < .001), supporting H1a, H1b, and H1c. This indicates that employees with higher conscientiousness and openness tended to report higher self-regulated learning at work, whereas those with higher neuroticism tended to report lower self-regulated learning. These results are consistent with prior research in academic contexts (Bruso et al., 2020; Dörrenbächer & Perels, 2016; Kara et al., 2024; Mahama et al., 2022).

Table 8. Pearson correlations between personality traits and SRL subscales

Personality dimension	Elaboration	Planning	Monitoring & regulation	Help seeking	Effort regulation
Conscientiousness	0.040	0.440***	0.533***	0.177*	0.396***
Openness	0.247**	0.161	0.340***	0.206*	0.316***
Neuroticism	−0.158	−0.193*	−0.427***	−0.270**	−0.385***

Source: Primary research data, processed using jamovi, 2025

*p < .05, ** p < .01, *** p < .001.

Subscale-level Pearson correlations (Table 8) suggest that personality traits show different patterns of relationships with specific types of self-regulated learning strategies. Consistent with earlier findings that student personality traits are related to the use of particular self-regulated learning strategies (Bidjerano & Dai, 2007; Dörrenbächer & Perels, 2016), this study identified a comparable pattern among employees. These results suggest that variation in how employees regulate learning in organizations is also related to stable personality differences.

Conscientiousness was positively correlated with most self-regulated learning subscales, especially monitoring and regulation ($r = 0.533$, $p < .001$) and planning ($r = 0.440$, $p < .001$), as well as effort regulation ($r = 0.396$, $p < .001$). The correlation between conscientiousness and help seeking was smaller but significant ($r = 0.177$, $p = .037$), whereas the correlation with elaboration was not significant ($r = 0.040$, $p = .636$). In line with Kara et al. (2024), who found that students higher in conscientiousness tend to use self-regulated learning strategies more extensively than those lower in conscientiousness, the present study found a similar pattern in employees. Individuals higher in conscientiousness are typically more planned, organized, responsible, and goal-directed, which makes them more likely to engage in planning, monitoring, effort regulation, and help seeking when pursuing learning goals at work.

Openness was also positively correlated with most self-regulated learning subscales, with the strongest relationships observed for monitoring and regulation ($r = 0.340$, $p < .001$) and effort regulation ($r = 0.316$, $p < .001$). Openness was also significantly positively correlated with elaboration ($r = 0.247$, $p = .003$) and help seeking ($r = 0.206$, $p = .015$). However, the relationship between openness and planning was not significant ($r = 0.161$, $p = .058$). This pattern aligns with prior work suggesting that openness, alongside conscientiousness, is positively related to the broadest range of self-regulated learning strategies compared with the other Big Five dimensions (Bidjerano & Dai, 2007). Individuals higher in openness tend to be more curious and reflective, making them more likely to connect new information to prior knowledge (elaboration), monitor work processes and progress, seek help, and sustain effort to deepen learning at work. The non-significant relationship between openness and planning is consistent with Kara et al. (2024), who reported that openness tends not to show a significant relationship with strategies related to time management. This suggests that although individuals higher in openness often show stronger exploratory motivation and interest in learning, this does not necessarily translate into systematic planning behaviours or structured time management (Ghazi et al., 2013; Kara et al., 2024). Moreover, planning tendencies are generally more closely tied to conscientiousness than to openness (John, 2021).

In contrast, neuroticism was negatively correlated with several self-regulated learning subscales, especially monitoring and regulation ($r = −0.427$, $p < .001$) and effort regulation ($r = −0.385$, $p < .001$). Neuroticism was also negatively correlated with help seeking ($r = −0.270$, $p = .001$) and planning ($r = −0.193$, $p = .023$). Its relationship with elaboration was not significant ($r = −0.158$, $p = .064$). Consistent with prior research in academic contexts, neuroticism tends to show negative or non-significant relationships with various self-regulated learning strategies (Bidjerano & Dai, 2007; Kara et al., 2024). Individuals higher in neuroticism

are typically more prone to anxiety, worry, and nervousness; such affective states can reduce cognitive capacity and self-confidence when facing learning demands, thereby inhibiting the use of self-regulated learning strategies at work (Bidjerano & Dai, 2007; Matthews & Zeidner, 2004).

Taken together, these findings reinforce the view that workplace self-regulated learning is not only shaped by environmental factors, but is also related to relatively stable individual characteristics. The results also support Five Factor Theory's proposition that personality influences self-regulatory capacity and strategy use, including in workplace learning situations.

Relationships between personality and goal orientation (H2a–H2c)

The hypotheses regarding the relationships between personality and goal orientation were also supported. Conscientiousness and openness were positively correlated with LGO ($r = 0.304$ and $r = 0.457$, respectively; $p < .001$), whereas neuroticism was positively correlated with PAGO ($r = 0.428$; $p < .001$), supporting H2a, H2b, and H2c. In other words, individuals higher in conscientiousness and openness tended to be more oriented toward competence development (LGO), whereas individuals higher in neuroticism tended to be more oriented toward avoiding negative evaluation (PAGO). These findings are consistent with prior research in academic and work contexts (Asanjarani et al., 2022; Bipp et al., 2008; Brown & O'Donnell, 2011; Lamm et al., 2019; Payne et al., 2007; Sorić et al., 2017; Steinmayr et al., 2011).

This pattern aligns with Five Factor Theory, which emphasizes that personality dimensions influence self-regulation through how individuals interpret situations and set goals (McCrae & Löckenhoff, 2010). From an adaptive perspective, personality traits can be understood as reflecting individuals' typical response "choices" under demands: conscientiousness reflects a tendency to persist in sustained effort for long-term benefits (rather than pursuing short-term opportunities), openness reflects a tendency toward independent intellectual analysis and exploration of new ideas (rather than reliance on tradition or authority), and neuroticism reflects a tendency to anticipate threat and prefer avoidance over confrontation (Matthews & Zeidner, 2004). In workplace learning contexts, these tendencies are reflected in goal orientations: individuals higher in conscientiousness and openness may be more accustomed to interpreting learning demands as opportunities to enhance competence, increasing the likelihood of adopting LGO, whereas individuals higher in neuroticism may be more sensitive to the risk of failure or negative evaluation, increasing the likelihood of adopting PAGO.

Relationships between goal orientation and self-regulated learning (H4–H5)

The results also supported the hypotheses that goal orientation is related to SRL. LGO was positively correlated with SRL ($r = 0.536$; $p < .001$), whereas PAGO was negatively correlated with SRL ($r = -0.394$; $p < .001$), supporting H4 and H5. This indicates that individuals with stronger learning goal orientation tended to report higher workplace self-regulated learning, whereas individuals with stronger performance-avoid goal orientation tended to report lower workplace self-regulated learning. These findings are consistent with prior research (Kittel et al., 2021; Payne et al., 2007; Tsai & Li, 2024; Vanthournout et al., 2015).

These findings are also consistent with Boekaerts' framework, which emphasizes that goals guide the selection of self-regulatory strategies. A competence-development orientation (LGO) is aligned with activation of the mastery pathway, thereby encouraging the use of SRL strategies to build competence and complete tasks. In contrast, an avoidance orientation (PAGO) is more aligned with the coping pathway, which may reduce the tendency to use SRL strategies because individuals prioritize self-protection strategies such as avoidance or disengagement. In line with this, employees with learning goal orientation tend to select deeper

learning strategies, whereas employees with performance-avoid goal orientation tend to selectively discontinue learning processes or use fewer learning strategies (Tsai & Li, 2024).

Mediation effects of goal orientation (H3a–H3c)

The mediation findings supported all proposed mediation hypotheses. For the conscientiousness → LGO → SRL pathway, the indirect effect was significant ($a \times b = 0.095$, 95% CI [0.027, 0.173]), supporting H3a. For the openness → LGO → SRL pathway, the indirect effect was also significant ($a \times b = 0.179$, 95% CI [0.090, 0.301]), supporting H3b. Finally, for the neuroticism → PAGO → SRL pathway, the indirect effect was significant and negative ($a \times b = -0.070$, 95% CI [−0.122, −0.022]), supporting H3c. All models showed partial mediation because the direct effects (c') remained significant after including the mediator. This pattern suggests that goal orientation is one meaningful motivational mechanism linking personality and self-regulated learning, but it is not the only mechanism underlying these relationships.

Overall, these findings support an integration of Five Factor Theory and Boekaerts' model by showing that goal orientation can function as a motivational bridge between personality and self-regulated learning. When facing workplace learning demands, conscientiousness, openness, and neuroticism appear to relate to how individuals interpret the situation and the goals they are inclined to adopt, whether oriented toward competence development via the mastery pathway (through LGO) or oriented toward avoiding the threat of negative evaluation via the coping pathway (through PAGO). These goal orientations are then related to the extent to which employees use self-regulated learning strategies while learning and completing tasks.

The mediation pattern is also consistent with the qualitative study by Brydges et al. (2020) in a clinical context. That study suggested that personal factors or resident characteristics influenced whether they pursued ICU practice opportunities (e.g., driven by learning and competence development) or avoided them (e.g., due to concerns about insufficient competence), which ultimately shaped how extensively they applied self-regulated learning strategies as they navigated subsequent learning opportunities. Brydges et al. (2020) also emphasized that workplace self-regulated learning is socially influenced through interactions with peers and supervisors, which may help explain why the mediation effects of goal orientation in the present study were partial rather than full.

Theoretical and Practical Contributions

This study contributes to the literature by extending findings on the relationship between personality and self-regulated learning from academic to workplace contexts. The results show that conscientiousness, openness, and neuroticism are significantly related to employees' self-regulated learning, supporting the view that stable individual differences contribute to workplace learning beyond situational or organizational factors (Steinberg et al., 2025). The findings also support an integrated perspective between Five Factor Theory and Boekaerts' self-regulation framework by showing that goal orientation serves as a motivational pathway linking personality to self-regulated learning (Boekaerts, 2011; McCrae & Löckenhoff, 2010). Specifically, learning goal orientation helps explain the positive relationships of conscientiousness and openness with self-regulated learning, whereas performance-avoid goal orientation helps explain the negative relationship between neuroticism and self-regulated learning.

Practically, these findings suggest that organizations may benefit from a person-centered approach when designing interventions to foster self-regulated learning, as individuals with different personality and SRL profiles may respond differently to training (Dörrenbächer & Perels, 2016; Niemivirta, 2002). Rather than applying the same intervention to all employees or attempting to change relatively stable personality traits directly, organizations may consider

strengthening learning goal orientation through goal-setting exercises and mastery-oriented framing, while reducing performance-avoid goal orientation through psychological safety and constructive feedback; this is consistent with evidence that goal orientation can be influenced through situational goal manipulations and development programs (Van Yperen et al., 2015; Wang et al., 2018). In addition, personality assessment may be used not only for selection but also as a diagnostic tool to tailor development support for employees who may need additional guidance in managing self-directed learning (Paraskevi & Michael, 2023).

Limitations

Several limitations should be considered when interpreting the findings of this study. First, the cross-sectional design limits causal conclusions regarding the direction of the relationships among personality, goal orientation, and self-regulated learning. Although the mediation models were tested based on theoretical reasoning, the observed relationships remain correlational, and the causality or directionality of effects should be examined using longitudinal or experimental designs. In addition, mediation was tested using three separate simple mediation models rather than a single integrated model using a more comprehensive approach such as structural equation modelling (Kline, 2023).

Second, all variables were measured using self-report methods, which raises the possibility of common method bias and response biases such as social desirability or a tendency to respond consistently across measures. Moreover, the self-regulated learning and goal orientation measures were perception- and recall-based, meaning that participants' responses may not fully capture the self-regulated learning behaviours that actually occur in everyday work activities. Future research may therefore consider designs such as daily diary studies to assess the use of self-regulated learning strategies in a more contextualized and dynamic manner in real work situations.

Third, this study used convenience sampling. As a result, the sample characteristics may not fully represent the broader professional population, and the generalizability of the findings should be interpreted with caution. Future studies could focus on more specific professional populations (e.g., particular job types or role levels) or use more representative sampling techniques to examine whether the observed patterns are consistent.

Fourth, there were limitations related to the measurement instruments. For personality, this study used the partner consultancy's assessment. Although the items were drawn from the IPIP and demonstrated high internal consistency (Cronbach's alpha, $\alpha > 0{,}9$)), evidence for validity and psychometric properties is not as extensive as that available for Big Five measures more commonly used in academic research. For the self-regulated learning measure, the reliabilities of several subscales remained below 0.70 after item screening. Although these values were still within the subscale reliability range used in the original study, lower reliability can increase measurement uncertainty and may attenuate estimates of relationships among variables, particularly in subscale-level analyses. Accordingly, future research may consider using alternative instruments, such as the IPIP-NEO-120 for personality (Johnson, 2014) and the Self-Regulated Learning at Work Questionnaire by Fontana et al. (2015) for self-regulated learning, to examine whether the observed relationship patterns remain consistent.

Directions for Future Research

Future research could extend the present model by including the Big Five dimensions not examined in this study, namely extraversion and agreeableness, as well as performance-approach goal orientation. This would allow a more complete test of how different personality traits relate to the three components of goal orientation and, in turn, to self-regulated learning. Future studies could also examine specific SRL strategies, rather than only overall SRL, and

broaden the range of strategies by including motivational regulation or social learning processes relevant to workplace contexts (Panadero, 2017; Kittel et al., 2021).

Because the mediation effects were partial and the present study used a cross-sectional design, future research should employ longitudinal or experimental designs to test causality and examine additional mediators, such as self-efficacy, initiative, motivation, perceived control, or perceived autonomy in learning (van der Baan et al., 2024). These variables may help clarify other psychological pathways through which personality is linked to workplace self-regulated learning.

Finally, future studies should examine situational cues that activate self-regulated learning behaviours in the workplace. Drawing on Trait Activation Theory, task, social, and organizational cues may shape when personality traits are expressed in learning behaviour (Christiansen & Tett, 2013; Paraskevi & Michael, 2023; Tett & Burnett, 2003). Qualitative or longitudinal studies could explore how interactions with supervisors, colleagues, tasks, and organizational systems encourage or inhibit SRL among employees with different personality and goal-orientation profiles.

CONCLUSION

This study found that conscientiousness and openness were positively related to self-regulated learning in the workplace, whereas neuroticism was negatively related. The mediation analyses showed that learning goal orientation partially mediated the effects of conscientiousness and openness, and performance-avoid goal orientation partially mediated the effect of neuroticism. These results indicate that stable personality traits, together with motivational beliefs about learning goals, contribute to individual differences in employees' self-regulated learning. The study extends previous findings from academic to workplace contexts and provides support for an integrated model in which goal orientation serves as a motivational pathway linking personality to self-regulated learning. Based on these findings, organizations should consider a person-centered approach when designing interventions to foster self-regulated learning. For example, training programs that explicitly target learning goal orientation (e.g., through goal-setting exercises or fostering a mastery climate) may be particularly beneficial for employees with lower conscientiousness or openness, whereas efforts to reduce performance-avoid goal orientation (e.g., by providing psychological safety and constructive feedback) could help employees with higher neuroticism. In addition, personality assessments can be used not only for selection but also as a diagnostic tool to tailor development support. Future research should employ longitudinal or experimental designs to test causality, include additional mediators such as self-efficacy or perceived autonomy, and examine situational cues (e.g., task, social, or organizational factors) that activate trait-consistent self-regulated learning behaviours in the workplace.

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