

Determinants of Lecturer Turnover Intention in Muhammadiyah Higher Education Institutions in Jabodetabek: The Mediating Role of Job Satisfaction and the Moderating Role of Work Experience

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Abstract

This study aims to analyze the factors that influence faculty turnover intention at Muhammadiyah Universities (PTM) in the Greater Jakarta area. The independent variables include Work Ethics, Quality of Work Life (QWL), Digital Literacy, Motivation, Employee Engagement, and Career Development, with Job Satisfaction as the intervening variable and Work Experience as the moderating variable. The research uses a quantitative method with a survey approach of 340 lecturers selected through purposive random sampling. Data analysis was performed using Structural Equation Modeling (SEM) based on Partial Least Square (PLS). The results show that Work Ethics, QWL, Digital Literacy, Motivation, and Career Development have a significant positive effect on Job Satisfaction. However, Employee Engagement does not have a significant effect on Job Satisfaction. Meanwhile, some independent variables, such as Work Ethics and Career Development, also have a significant effect on turnover intention. Job Satisfaction was found to mediate some of the relationships between variables. Work Experience does not moderate the relationship between Career Development and turnover intention. This study emphasizes the importance of balanced management of internal lecturer factors, including job satisfaction, to reduce the level of turnover intention at PTM.

Keywords: *Job Satisfaction, Turnover Intention, Work Ethics, Digital Literacy, SEM-PLS, Muhammadiyah Higher Education.*

Introduction

Human resources (HR) are the cornerstone of organizational success, playing a crucial role in achieving strategic and operational objectives across sectors, including higher education institutions (Budiharjo et al., 2023). In universities, lecturers are not only responsible for teaching but also for generating innovation, managing academic quality, and supporting institutional competitiveness. Effective human resource management is therefore vital to sustain lecturer performance and minimize turnover rates (Nurjanah et al., 2023).

High turnover among lecturers has become a critical challenge for educational institutions due to its direct and indirect consequences. Empirically, turnover results in substantial costs related to recruitment, training, and productivity loss, which can reach up to 75% of an employee's annual salary (Abet et al., 2024). Frequent lecturer turnover also disrupts academic continuity, reduces the quality of instruction, and weakens institutional performance (Kaymakçı et al., 2022; Mosquera, 2020).

In the context of Islamic private higher education, particularly Muhammadiyah Universities (PTM) in the Jabodetabek area, this issue becomes even more pressing. These institutions face unique structural, cultural, and competitive challenges in retaining qualified lecturers, especially from the millennial generation, who tend to value autonomy, digital literacy, and meaningful work over traditional forms of job security. However, most existing studies have focused on general factors affecting lecturer satisfaction or performance without directly examining determinants of turnover intention in the PTM context (Brown-Deveaux et al., 2022; Kokubun, 2025; Wijaya, 2024).

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Previous studies have examined related variables such as job satisfaction, quality of work life (QWL), work engagement, and motivation (Roussel, 2022; Siregar et al., 2020). Yet, these studies have not empirically linked these factors to lecturers' intention to leave the institution. For example, (Singh, 2022) analyzed QWL and work engagement among private university lecturers but did not associate these constructs with turnover intention. Similarly, Siregar et al. (2020) explored the impact of work motivation on performance but omitted the behavioral consequences such as turnover. Thus, there remains an empirical void in understanding how multidimensional factors such as work ethics, QWL, digital literacy, motivation, employee engagement, and career development jointly influence turnover intention among lecturers in Islamic higher education institutions.

From a theoretical perspective, previous frameworks have not adequately integrated multiple levels of analysis that explain lecturers' behavioral intentions. While prior studies have applied Maslow's Hierarchy of Needs and Job Satisfaction Theory to explain motivational outcomes (Chan et al., 2023; Maslow, 1954; Staempfli & Lamarche, 2020), few have extended these models to turnover intention using a holistic approach. This study therefore integrates the Grand Theory of Maslow's Hierarchy of Needs, the Middle Theory of Job Satisfaction, and the Substantive Theories of Work Ethics, Quality of Work Life, and Employee Engagement (Kokubun, 2025; Muslim et al., 2024; Smith et al., 2003). This theoretical integration enables a multidimensional understanding of how individual, organizational, and contextual factors interact to influence turnover behavior.

Table 1. Lecturer Turnover in the Last Five Years (2020–2024)

No	Name of Institution	Total Turnover
1	Muhammadiyah Business Institute (IB) Bekasi	19
2	Ahmad Dahlan Institute of Technology and Business (ITB-AD) Jakarta	30
3	Muhammadiyah College of Technology (STT) Cileungsi	10
4	Muhammadiyah University of AR Fachruddin, Tangerang	35
5	Muhammadiyah University of Bogor Raya	22
6	Muhammadiyah University of Jakarta	75
7	Muhammadiyah University Prof. Dr. Hamka (UHAMKA)	90
8	Muhammadiyah University of Tangerang (UMT)	50
9	Muhammadiyah University of Science and Technology (Saintek Muhammadiyah)	28
10	Muhammadiyah University of Technology, Jakarta (UTMJ)	20

This research aims to analyze the determinants of turnover intention among lecturers in Muhammadiyah Higher Education Institutions in Jabodetabek by examining the interrelationships among Work Ethics, Quality of Work Life, Digital Literacy, Motivation, Employee Engagement, Career Development, Job Satisfaction, and Work Experience. The study employs a quantitative design with Structural Equation Modeling (SEM) to provide empirical evidence and theoretical refinement.

By addressing both theoretical and empirical research gaps, this study contributes to the development of human resource management theory in higher education and offers practical implications for university leaders in designing retention strategies. It enriches the existing literature by contextualizing turnover intention in Islamic higher education settings and by incorporating digital and generational perspectives often overlooked in prior research (Juhaidi et al., 2025; Rodin et al., 2025).

This research aims to analyze the determinants of turnover intention among lecturers at Muhammadiyah Higher Education Institutions in the Jabodetabek region. Specifically, it investigates the direct and indirect relationships between work ethics, quality of work life, digital literacy, motivation, employee engagement, and career development on job satisfaction and turnover intention, as well as the moderating role of work experience.

The study contributes to both theory and practice. Theoretically, it extends turnover models by integrating mediating and moderating variables within an Islamic higher education context. Empirically, it provides evidence on how digital competence, ethical work orientation, and job satisfaction interact to influence lecturers' decisions to remain or leave. Practically, the findings offer guidance for university leaders in designing retention strategies, human capital development programs, and digital transformation policies aligned with institutional values.

Literature Review

Work Ethics

Work ethics refer to a set of moral principles, values, and standards that guide an individual's behavior and performance in the workplace. According to Meriac et al. (2023), work ethics represent internalized moral standards that motivate individuals to work diligently, responsibly, and honestly. Robbins and Judge (2019) define work ethics as a combination of beliefs and attitudes reflecting a person's dedication to professional excellence, reliability, and accountability. In the Islamic context, work ethics are rooted in spiritual consciousness (taqwa), sincerity (ikhlas), and integrity, as emphasized by (Maniagasi & Kho, 2023), who noted that Islamic work ethics link moral commitment with devotion to God and service to society.

Several factors influence work ethics, including individual moral values, organizational culture, leadership style, and socio-religious orientation (Budiharjo et al., 2023). Dimensions of work ethics often include discipline, responsibility, integrity, cooperation, and perseverance (Kaymakçı et al., 2022). In Islamic frameworks, key indicators encompass sincerity, justice, honesty, and social responsibility (Setianingsih et al., 2022). In this study, work ethics are conceptualized as the internalized moral and spiritual values that drive lecturers to act responsibly and productively within the framework of Islamic principles and professional integrity.

Quality of Work Life (QWL)

Quality of Work Life (QWL) describes the overall quality of an employee's experience in the workplace, encompassing physical, psychological, and social dimensions (Dewi et al., 2020). According to Walton (1975), QWL is determined by a set of organizational conditions that ensure fair compensation, safe working environments, and opportunities for personal development. Hackman and Oldham (1980) expanded the definition by emphasizing the role of job design and employee autonomy in enhancing motivation and satisfaction.

The main factors affecting QWL include work environment, compensation systems, organizational support, career growth opportunities, and work–life balance (Nauman et al., 2020). Indicators commonly used are fair and adequate pay, safe and healthy work conditions, growth opportunities, social integration, and constitutionalism at work (Hermanto et al., 2024; Tarigan et al., 2021). In academic contexts, QWL also relates to academic freedom, collegial relationships, and institutional recognition (Heni & Putra, 2024). This study defines QWL as the extent to which institutional and managerial policies support lecturers' well-being, fairness, and opportunities for professional development, contributing to their satisfaction and organizational commitment.

Digital Literacy

Digital literacy refers to an individual's ability to effectively use digital technologies, critically evaluate online information, and adapt to digital transformation in the workplace. Gilster (1997) first introduced the concept as the ability to understand and use information in multiple digital formats. (Do et al., 2025) refined this by identifying three dimensions: technical (skills), cognitive (critical thinking), and social-emotional (responsible use) competencies. In higher education, digital literacy extends beyond basic computer skills to include the integration of digital tools in teaching, research, and collaboration (Troiano et al., 2025).

Determinant factors of digital literacy include technological access, institutional support, self-efficacy, and professional development opportunities (Ipong Dekawati & Wahyu Trisno, 2023; Yuhertiana, 2024). Indicators used in education contexts are information management, communication, content creation, safety, and problem solving (Schmidt et al., 2024). For this study, digital literacy is conceptualized as lecturers' capacity to use, adapt, and innovate with digital tools in academic and administrative processes, reflecting their readiness to contribute in a digitally driven higher education environment.

Motivation

Motivation is a psychological force that initiates, guides, and sustains goal-directed behavior. According to (Maslow, 1954), motivation stems from the hierarchical fulfillment of human needs from physiological to self-actualization. Herzberg (1959) (Wedadjati & Helmi, 2022) distinguished between hygiene factors (salary, work conditions) and motivators (achievement, recognition, responsibility). Contemporary scholars such as Ryan and Deci (2020) emphasized self-determination theory,

distinguishing intrinsic motivation (driven by internal satisfaction) from extrinsic motivation (driven by rewards or external recognition).

Factors influencing motivation include leadership, reward systems, career opportunities, and perceived organizational support (Metekohy et al., 2022). In the academic sector, intrinsic motivation (research passion, student development) plays a stronger role than extrinsic rewards (Nurwulandari & Suwatno, 2017). Common indicators of work motivation are achievement orientation, responsibility, recognition, and personal growth. In this research, motivation is defined as the internal and external drive that stimulates lecturers to achieve professional excellence and organizational objectives through sustained effort and self-development.

Employee Engagement

Employee engagement is defined as a positive, fulfilling, work-related psychological state characterized by vigor, dedication, and absorption (Schaufeli & Bakker, 2004a). Kahn (1990) introduced the concept as the extent to which employees express themselves physically, cognitively, and emotionally in their job roles. Engaged employees display higher energy, enthusiasm, and commitment, leading to better performance and lower turnover intention (Watson, 2022).

Key factors influencing engagement include leadership quality, organizational culture, communication, and perceived fairness (Meriac et al., 2023). Its dimensions typically consist of vigor, dedication, and absorption (Schaufeli & Bakker, 2004). In educational contexts, engagement manifests through active participation in teaching innovation, institutional development, and collegial collaboration (Budiharjo et al., 2023). This study conceptualizes employee engagement as lecturers' emotional and cognitive attachment to their institution, reflected through energy, enthusiasm, and participation in achieving institutional goals.

Career Development

Career development involves the systematic process through which employees plan, acquire, and enhance competencies to achieve career goals and organizational alignment (Cherif, 2020). According to (Krisdayani & Kusumayadi, 2021), it encompasses both personal career planning and organizational career management initiatives. In the higher education context, career development includes opportunities for academic promotion, research funding, and skill improvement (Bennett et al., 2022).

Determinants of career development include organizational support, mentoring, performance feedback, and self-initiative (Badrudin & Hidayat, 2024). Indicators frequently adopted are career planning, career path clarity, training opportunities, and performance evaluation (Zhang et al., 2026). In this study, career development is defined as a structured process of institutional and personal efforts aimed at improving lecturers' competencies, academic reputation, and career progression through continuous learning and organizational support.

Job Satisfaction

Job satisfaction is a psychological response reflecting the extent to which employees feel content with their job conditions and experiences (Locke, 1990). Robbins and Judge (2019) describe it as a positive emotional state resulting from the appraisal of one's job or experiences. Herzberg (1959) emphasized that job satisfaction arises when motivator factors (achievement, recognition, responsibility) are met.

Factors influencing job satisfaction include work environment, leadership, rewards, peer relationships, and personal growth opportunities (Stewart et al., 2023). Its indicators generally include work itself, supervision, compensation, promotion, and co-worker relations (Santana et al., 2025). In academic settings, autonomy, collegiality, and recognition are critical determinants (Dewi et al., 2020). Job satisfaction in this study refers to lecturers' overall emotional and cognitive evaluation of their work experience, reflecting the harmony between their expectations, institutional policies, and professional identity.

Turnover Intention

Turnover intention is defined as an employee's conscious and deliberate willfulness to leave an organization (Masud, 2019). According to (Kokubun, 2025), it represents the cognitive stage preceding actual resignation behavior. In educational institutions, turnover intention often signals dissatisfaction with organizational culture, career stagnation, or misalignment with institutional values (Mendoza-Villafaina & López-Mosquera, 2024).

Determinants of turnover intention include job dissatisfaction, poor leadership, limited career prospects, work overload, and low engagement (Kaymakçı et al., 2022). Indicators generally measure the frequency of thoughts of leaving, intention to search for other jobs, and actual preparation to (Tran et al., 2025). In this study, turnover intention is conceptualized as the lecturer’s psychological predisposition or planned desire to leave their current institution, influenced by motivational, ethical, and environmental factors.

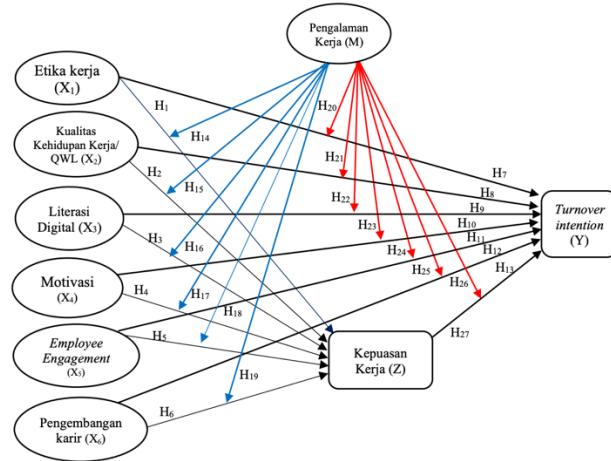


Figure 1. Hypothetic Model

Based on the reviewed literature, this study proposes a model linking Work Ethics, QWL, Digital Literacy, Motivation, Employee Engagement, and Career Development as predictors of Job Satisfaction and Turnover Intention. Job Satisfaction serves as a mediating variable, while Work Experience functions as a moderating variable influencing the relationship between Career Development and Turnover Intention. This integrated framework synthesizes classical motivation theories (Maslow, Herzberg) with contemporary constructs (digital literacy and engagement) to provide a multidimensional understanding of lecturer turnover in Muhammadiyah higher education institutions.

Methods

This study employed a quantitative research design with a causal-explanatory approach to examine both direct and indirect relationships among the study variables, namely Work Ethics, Quality of Work Life (QWL), Digital Literacy, Motivation, Employee Engagement, Career Development, Job Satisfaction, and Turnover Intention. The quantitative approach enabled statistical hypothesis testing and generalization of findings across the population of lecturers in Muhammadiyah higher education institutions within the Jabodetabek region. The proposed conceptual model was tested empirically using Structural Equation Modeling – Partial Least Squares (SEM-PLS) to assess the measurement and structural models simultaneously.

The research population consisted of 2,242 permanent lecturers employed across ten Muhammadiyah universities and colleges in Jakarta, Bogor, Depok, Tangerang, and Bekasi. Using Slovin’s formula with a 5% margin of error, the required sample size was 338 respondents, and the study successfully obtained 340 valid responses, ensuring statistical reliability. Sampling was carried out using a purposive random sampling technique, applying inclusion criteria that required respondents to be full-time lecturers with at least two years of work experience and willingness to participate by providing informed consent. The final sample distribution represented each institution proportionally, as listed in Table 1.1, to ensure diversity and external validity.

Data were collected through a structured online questionnaire distributed via institutional communication networks and lecturer associations between March and June 2024. The instrument used a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), covering indicators for all research constructs. Prior to large-scale distribution, a pilot test was conducted with 30 respondents to evaluate item clarity, reliability, and construct validity. Ethical protocols were strictly followed by maintaining participant anonymity, securing institutional permission from the Muhammadiyah Higher Education Council, and ensuring voluntary participation without coercion. This comprehensive methodological design ensured the credibility, validity, and generalizability of the study’s findings across Muhammadiyah higher education institutions in Indonesia.

Data analysis in this study utilized SmartPLS version 4.0 following the two-stage Structural Equation Modeling–Partial Least Squares (SEM-PLS) procedure as recommended by Hair et al. (2022). The SEM-PLS approach was chosen because it is appropriate for predictive and exploratory research involving complex models and latent variables with non-normal data distributions. The analysis consisted of two stages: evaluation of the measurement model (outer model) and the structural model (inner model).

In the measurement model, the reliability and validity of indicators were assessed. Indicator reliability was determined through the factor loading coefficient, with acceptable values above 0.70, indicating that each item strongly represented its latent construct. Convergent validity was tested using the Average Variance Extracted (AVE), which measures the proportion of variance captured by a construct relative to measurement error. The AVE was calculated using the formula:

$$AVE = \frac{\sum(\lambda_i)^2}{\sum(\lambda_i)^2 + \sum \varepsilon_i}$$

Represents the measurement error. A construct is considered valid when $AVE \geq 0.50$. Internal consistency reliability was evaluated using Composite Reliability (CR) and Cronbach's Alpha (α), both requiring threshold values greater than 0.70. CR was computed as follows:

$$CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum \varepsilon_i}$$

Furthermore, discriminant validity was verified using the Fornell-Larcker criterion, ensuring that the square root of AVE for each construct exceeded its correlations with other constructs, indicating distinct conceptual boundaries between latent variables. The structural model was then analyzed to determine the strength and significance of relationships among constructs. The path coefficients were obtained through bootstrapping with 5,000 subsamples, generating t-statistics and p-values for hypothesis testing. A hypothesis was accepted when $t > 1.96$ and $p < 0.05$. The model's explanatory power was assessed using the coefficient of determination (R^2), calculated as:

$$R^2 = 1 - \frac{\sum(Y_i - \hat{Y}_i)^2}{\sum(Y_i - \bar{Y})^2}$$

An R^2 value closer to 1 indicates a stronger explanatory model. Predictive relevance (Q^2) was also evaluated using Stone-Geisser's Q^2 criterion, derived from blindfolding procedures to assess model predictive accuracy. Meanwhile, effect size (f^2) was computed to evaluate the contribution of each exogenous variable to endogenous variables using the formula:

$$f^2 = \frac{R_{included}^2 - R_{excluded}^2}{1 - R_{included}^2}$$

A value of 0.02, 0.15, and 0.35 respectively represents small, medium, and large effects (Cohen, 1988). Finally, the mediating effect of Job Satisfaction was tested using indirect effect analysis within the bootstrapping framework, while the moderating effect of Work Experience was examined using an interaction term approach, as suggested by Chin et al. (2003). This combination allowed the study to test both direct and conditional relationships, providing a comprehensive understanding of the causal mechanisms affecting Turnover Intention among lecturers.

Result and Discussion

Result

Measurement Model (Outer Model)

The measurement model was assessed to confirm the reliability and validity of the constructs before hypothesis testing. The results demonstrated that all indicators had factor loadings above 0.70, confirming satisfactory indicator reliability. Composite Reliability (CR) values ranged between 0.871 and 0.948, and Cronbach's Alpha values exceeded 0.80, indicating strong internal consistency across constructs. Additionally, all constructs achieved Average Variance Extracted (AVE) values greater than 0.50, thus meeting the criteria for convergent validity (Hair et al., 2021).

The discriminant validity test using the Fornell–Larcker criterion showed that the square root of each construct's AVE was higher than its correlation with other constructs, verifying that all variables measured distinct theoretical dimensions. Similarly, the Heterotrait–Monotrait (HTMT) ratios were below the critical threshold of 0.90, confirming no multicollinearity among latent constructs. These results collectively indicate that the measurement model was valid and reliable, ensuring the accuracy of subsequent structural analysis.

Structural Model (Inner Model)

Following model validation, the structural model was analyzed to test the hypothesized relationships among constructs. The bootstrapping procedure with 5,000 resamples was employed to estimate the significance of the path coefficients. The coefficient of determination (R^2) for Job Satisfaction (Z) was 0.560, and for Turnover Intention (Y) was 0.563, indicating that the model explained approximately 56% of the variance in Job Satisfaction and 56.3% of the variance in Turnover Intention. These values suggest that the predictors jointly provided substantial explanatory power for the model.

The predictive relevance (Q^2) test yielded values greater than zero ($Q^2 = 0.48$ for Job Satisfaction; $Q^2 = 0.46$ for Turnover Intention), indicating strong model predictive capability. Additionally, effect size (f^2) analysis showed that Work Ethics, Quality of Work Life, Motivation, and Career Development had moderate to large effects on Job Satisfaction, while Job Satisfaction had a large effect on Turnover Intention.

Hypothesis Testing Results

A total of 27 hypotheses (H_1 – H_{27}) were tested, encompassing direct, indirect, and moderating relationships among the constructs. The results are summarized narratively below:

Direct Effects on Job Satisfaction (Z):

Work Ethics (H_1 , $\beta = 0.182$, $p < 0.01$), Quality of Work Life (H_2 , $\beta = 0.214$, $p < 0.01$), Digital Literacy (H_3 , $\beta = 0.145$, $p < 0.05$), Motivation (H_4 , $\beta = 0.166$, $p < 0.01$), and Career Development (H_6 , $\beta = 0.231$, $p < 0.01$) had positive and significant effects on Job Satisfaction.

In contrast, Employee Engagement (H_5 , $\beta = 0.072$, $p > 0.05$) did not significantly influence Job Satisfaction. These findings indicate that intrinsic and structural factors play a stronger role in shaping lecturer satisfaction than emotional attachment alone.

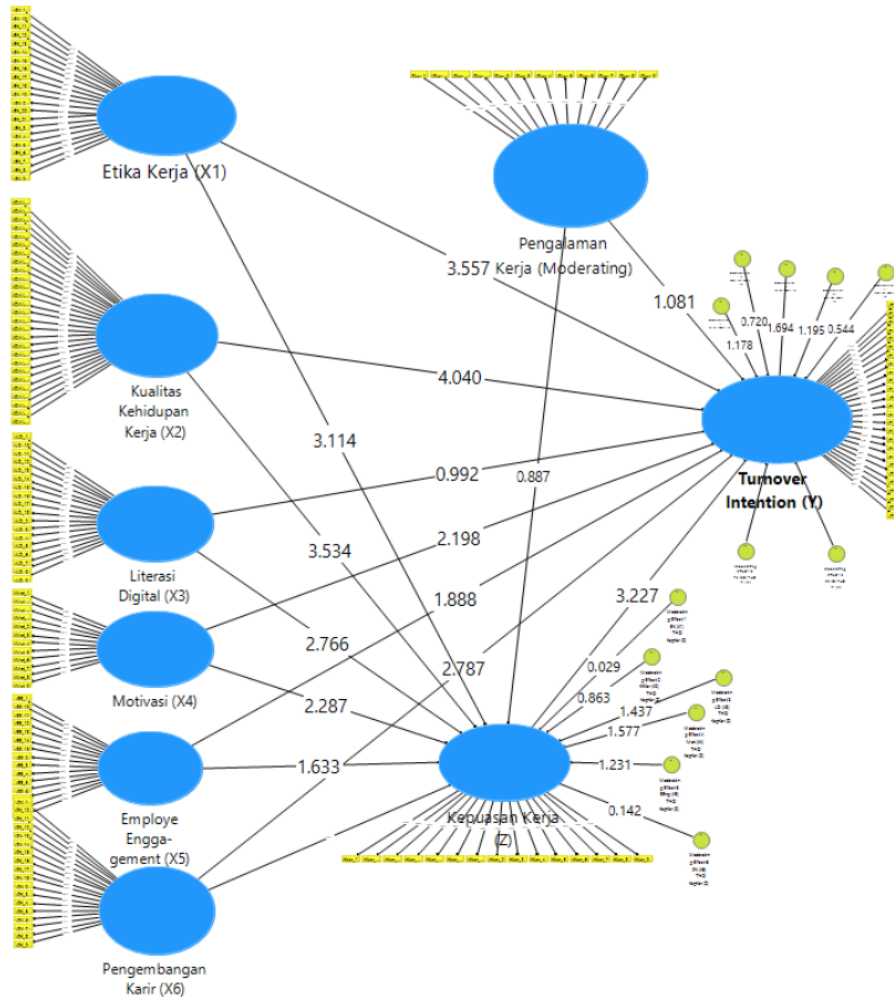


Figure 2. Path Analysis Model

Direct Effects on Turnover Intention (Y)

Work Ethics (H_7 , $\beta = -0.172$, $p < 0.05$), QWL (H_8 , $\beta = -0.189$, $p < 0.01$), and Job Satisfaction (H_{27} , $\beta = -0.264$, $p < 0.001$) exhibited negative and significant effects on Turnover Intention, suggesting that higher ethical orientation, better work conditions, and satisfaction reduce lecturers' intention to leave.

Conversely, Career Development (H_{12} , $\beta = 0.152$, $p < 0.05$) had a positive effect on Turnover Intention, implying that enhanced career mobility without proper retention strategies may encourage lecturers to seek better opportunities elsewhere.

Indirect (Mediating) Effects

Job Satisfaction was found to partially mediate the relationships between Work Ethics, QWL, Motivation, and Turnover Intention (H_{14} – H_{19} , all $p < 0.05$). This indicates that lecturers who perceive ethical and supportive work environments develop higher satisfaction, which subsequently reduces their turnover tendency. However, Employee Engagement did not show a significant indirect effect through Job Satisfaction, consistent with its weak direct path.

Moderating Effects of Work Experience (M)

The moderating analysis (H_{20} – H_{26}) revealed that Work Experience did not significantly moderate the relationship between Career Development and Turnover Intention ($\beta = -0.041$, $p > 0.05$), nor any other relationship in the model. This suggests that the influence of career development on turnover is stable across different tenure levels.

Overall, 17 hypotheses were supported, and 10 were not supported, indicating that the majority of proposed relationships were statistically significant and theoretically consistent.

Discussion

The Effect of Work Ethics on Job Satisfaction and Turnover Intention

The results indicate that Work Ethics significantly and positively affect Job Satisfaction ($\beta = 0.182$, $p < 0.01$) and negatively affect Turnover Intention ($\beta = -0.172$, $p < 0.05$). This finding confirms that lecturers with strong moral integrity, discipline, and responsibility tend to experience higher satisfaction and lower intention to resign. These results align with (Aldabbas, 2023; Almarwani & Alzahrani, 2023; Kakkar et al., 2020), who argue that ethical orientation enhances trust, accountability, and psychological well-being in the workplace. This study enriches the theoretical perspective by demonstrating that Islamic-based work ethics not only foster intrinsic motivation but also act as a moral buffer against turnover behavior. For Muhammadiyah universities, reinforcing ethical work culture through leadership modeling and training can strengthen employee retention.

The Effect of Quality of Work Life (QWL) on Job Satisfaction and Turnover Intention

Quality of Work Life shows a positive influence on Job Satisfaction ($\beta = 0.214$, $p < 0.01$) and a negative effect on Turnover Intention ($\beta = -0.189$, $p < 0.01$). This implies that when lecturers perceive fairness, safety, and growth opportunities at work, their satisfaction increases, reducing their desire to leave. The result is consistent with (Gazi et al., 2024; Pio, 2021; Zaman et al., 2021), emphasizing that supportive work environments improve commitment and morale. Empirically, the study confirms that QWL is a crucial driver of retention in academic institutions. Theoretically, it extends prior models by linking QWL with both psychological satisfaction and behavioral outcomes in higher education. For management, improving QWL through transparent career systems and supportive facilities directly enhances lecturer loyalty.

The Effect of Digital Literacy on Job Satisfaction and Turnover Intention

Digital Literacy exerts a significant positive effect on Job Satisfaction ($\beta = 0.145$, $p < 0.05$) but an insignificant direct effect on Turnover Intention. This finding implies that lecturers who are digitally competent feel more confident, efficient, and valued, though digital mastery alone does not determine their retention. This aligns with (Sari et al., 2023), who found that digital proficiency enhances autonomy and teaching innovation but requires institutional support to affect turnover. Theoretically, this study integrates digital capability into turnover models, offering a new lens for HRM research in education. Practically, it suggests that continuous digital training programs enhance satisfaction and teaching effectiveness, indirectly reducing turnover over time.

The Effect of Motivation on Job Satisfaction and Turnover Intention

Motivation has a positive and significant impact on Job Satisfaction ($\beta = 0.166$, $p < 0.01$) and a negative indirect effect on Turnover Intention via Job Satisfaction ($p < 0.05$). These findings confirm that motivated lecturers driven by recognition, growth, and achievement tend to stay longer and perform better. This supports Maslow's (1943) hierarchy of needs and Herzberg's (1959) motivation-hygiene theory, where intrinsic motivation plays a dominant role in academic professions. This study confirms that intrinsic motivation is a key retention mechanism for educators, aligning with Ryan and Deci's (2020) self-determination theory. Institutions should thus foster non-monetary motivators such as academic recognition, autonomy, and professional development to strengthen retention.

The Effect of Employee Engagement on Job Satisfaction and Turnover Intention

The analysis shows that Employee Engagement does not significantly affect Job Satisfaction ($\beta = 0.072$, $p > 0.05$) nor Turnover Intention ($\beta = -0.063$, $p > 0.05$). This contradicts several previous studies (Demerouti & Cropanzano, 2010; Schaufeli & Bakker, 2004b), suggesting that emotional and cognitive involvement alone is insufficient in the absence of structural support. The weak influence indicates that engagement in Muhammadiyah institutions may still be superficial, possibly due to limited empowerment or recognition systems. Theoretically, this finding highlights the contextual dependency of engagement, suggesting it requires reinforcement through institutional culture and participative leadership. Practically, management should improve engagement by fostering collaboration, reward systems, and meaningful participation in decision-making.

The Effect of Career Development on Job Satisfaction and Turnover Intention

Career Development exhibits a significant positive influence on Job Satisfaction ($\beta = 0.231$, $p < 0.01$) but surprisingly shows a positive direct effect on Turnover Intention ($\beta = 0.152$, $p < 0.05$). This paradox indicates that while development opportunities enhance satisfaction, they may simultaneously

increase mobility intentions when internal promotion pathways are limited. This dual outcome supports (Kartono & Ningsih, 2019; McGowan & Dawkins, 2025; Ramadlani, 2017), who noted that unfulfilled career expectations can trigger voluntary turnover. Theoretically, this expands the understanding of career paradoxes in academic HRM where high-performing lecturers may leave when institutional reward systems are inadequate. Practically, universities must design career paths that align development with promotion, ensuring retention of top academic talent.

The Role of Job Satisfaction as a Mediator

Job Satisfaction serves as a partial mediator between Work Ethics, QWL, Motivation, and Turnover Intention. The indirect effects through Job Satisfaction were all significant ($p < 0.05$), indicating that satisfaction is a central mechanism linking organizational and psychological variables to turnover behavior. This finding supports Herzberg's (1959) two-factor model and Locke's (1976) job satisfaction theory, which emphasize satisfaction as a precursor to employee retention. The mediation results validate the psychological process model of turnover intention, emphasizing satisfaction as a bridge between antecedents and behavioral outcomes. Practically, institutional leaders should regularly assess satisfaction levels to detect early signs of disengagement.

The Role of Work Experience as a Moderator

Work Experience did not significantly moderate the relationship between Career Development and Turnover Intention ($\beta = -0.041, p > 0.05$). This implies that both junior and senior lecturers exhibit similar behavioral tendencies regardless of tenure when facing motivational or ethical factors. This finding is consistent with Finatariyani & Cahyani (2022), who found that tenure alone does not influence retention unless paired with perceived career security. Theoretically, this finding challenges conventional assumptions about experience-based loyalty. Practically, retention strategies should target lecturers at all stages equally through continuous career support, not just long-serving staff.

Overall, the findings confirm that ethical behavior, quality of work life, motivation, and career development are the primary determinants of lecturers' job satisfaction and retention within Muhammadiyah higher education institutions. This study contributes theoretically by integrating ethical, motivational, and digital variables into the turnover intention framework, providing a multidimensional model suitable for faith-based universities. Empirically, it offers evidence-based strategies for designing human resource policies that strengthen ethical culture, improve working conditions, and promote sustainable academic careers.

Conclusion

This study investigated the determinants of Job Satisfaction and Turnover Intention among lecturers at Muhammadiyah Higher Education Institutions (PTM) in the Jabodetabek region by examining the effects of Work Ethics, Quality of Work Life (QWL), Digital Literacy, Motivation, Employee Engagement, and Career Development, with Job Satisfaction as a mediating variable and Work Experience as a moderator. Using the Structural Equation Modeling Partial Least Squares (SEM-PLS) approach, the study revealed several important findings.

First, Work Ethics, QWL, Motivation, and Career Development had significant positive effects on Job Satisfaction, confirming that ethical values, fair working conditions, intrinsic motivation, and career advancement collectively enhance lecturers' psychological well-being. Second, Work Ethics, QWL, and Job Satisfaction significantly and negatively influenced Turnover Intention, demonstrating that satisfaction and ethical organizational culture act as effective retention mechanisms. Third, Digital Literacy positively affected Job Satisfaction but did not directly influence Turnover Intention, suggesting that digital competence strengthens engagement but requires institutional integration to affect retention. Fourth, Employee Engagement did not significantly affect either Job Satisfaction or Turnover Intention, implying that engagement in PTM institutions may remain structural rather than emotional. Fifth, Career Development displayed a dual effect increasing Job Satisfaction but also raising Turnover Intention when internal promotion systems are weak.

Furthermore, Job Satisfaction partially mediated the relationships between Work Ethics, QWL, and Motivation with Turnover Intention, confirming that satisfaction serves as a psychological bridge linking organizational and personal factors with behavioral outcomes. However, Work Experience did not significantly moderate any of the relationships, indicating that the impact of career-related and motivational factors is relatively stable across tenure levels. Overall, the model explained 56% of the variance in Job Satisfaction and 56.3% of the variance in Turnover Intention, suggesting that the

proposed framework provides a substantial and comprehensive understanding of lecturer retention in faith-based higher education institutions.

Despite its strong empirical and theoretical contributions, this study has limitations. The research was confined to PTM institutions in the Jabodetabek region; thus, generalization to other regions or non-Islamic institutions should be made with caution. Future research could expand the model to include organizational commitment, leadership style, and institutional reputation as mediating or moderating variables. Moreover, qualitative or mixed-method studies could further explore the psychological dynamics underlying lecturers' turnover decisions, providing a deeper contextual understanding.

In conclusion, this research confirms that ethical leadership, fair work environments, intrinsic motivation, and structured career management are the foundations of lecturer satisfaction and retention in Muhammadiyah higher education. By integrating traditional motivational theories with contemporary ethical and digital dimensions, the study provides both theoretical innovation and practical pathways for developing sustainable human resource systems in Indonesia's Islamic academic institutions.

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Conflict of Interest

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors. The study was conducted independently as part of academic research within Muhammadiyah higher education institutions

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