

AKSU Journal of Social Sciences
(AKSUJOSS)
ISSN: 2504 – 933X
Vol.7,No.2 (June) 2026,pp. 233-250
DOI: https://doi.org/10.61090/aksujoss.7.2.233-250
URL: htpp://www.aksujournal.com/vol.7.2

Received: February 16, 2026
Accepted: April 13, 2026
Published Online: June 1, 2026

Effect of Non-Monetary Incentives on Employee Engagement among Selected Tertiary Institutions in Gombe Metropolis, Nigeria

Tijjani Zainab
Department of Business Administration
Gombe State University, Nigeria.
tijjanizainab@gsu.edu.ng / 2348063659069

Abstract
This study examines the effect of non-monetary incentives on employee engagement among selected tertiary institutions in Gombe Metropolis. The study adopted a quantitative cross-sectional research design with a sample size of 264. Data were collected using a structured questionnaire administered physically to managers/owners of SMEs, and data gathered were analyzed using structural equation modeling via SmartPLS version 4.1.0. Findings from the study revealed that all four dimensions of non-monetary incentives (recognition, autonomy, training and development, and work-life balance support) have a positive and significant effect on employee engagement in selected tertiary institutions in the Gombe metropolis. The study concludes that non-monetary incentives have a significant effect on employee engagement and therefore recommends, among others, that institutions should conduct training needs assessments and offer job-relevant programs for both academic and non-academic staff in their institutions.

Keywords: Autonomy, employee engagement, recognition, training and development, work-life balance.

1.1 Introduction

Employee engagement is recognised as a pivotal construct within organisational behaviour and human resource management, particularly in tertiary education institutions, where human capital is a critical determinant of institutional effectiveness and national development (Schaufeli & Bakker, 2004). Defined as a positive, fulfilling, work-related state of mind characterised by vigour, dedication, and absorption, employee engagement stands in contrast to burnout and is widely regarded as a core indicator of organisational performance (Schaufeli & Bakker, 2004). In knowledge-intensive sectors such as tertiary education, engagement encapsulates emotional, cognitive, and behavioural investment in work, making it essential for understanding institutional success. Despite facing global challenges, employee engagement remains crucial, with recent surveys highlighting high workloads and insufficient staffing in higher education (CUPA-HR, 2025). In Nigeria, studies attribute low engagement levels among tertiary staff to inadequate motivation, poor working conditions, and limited career opportunities, jeopardising teaching quality and research output (Anyalor et al., 2018; Nwokeocha, 2023; Adamu, 2024; Omale et al.,

2024).

While some research emphasises monetary compensation as a determinant of engagement (Jeha et al., 2022; Zen, 2023; Owusu et al., 2023), recent findings suggest that non-monetary incentives are equally, if not more, influential, especially in resource-constrained environments (Mittal, 2023; Ramiz, 2024; Iman & Shaikh, 2025). Four main categories of non-monetary incentives have been identified: recognition, training and development, autonomy, and work-life balance. Recognition satisfies esteem needs and signals organisational value (Imran et al., 2025), while training and development foster competence and career progression (Rustam et al., 2024; Devi, 2025; Hryshchenko et al., 2025). Autonomy enhances self-determination by allowing input into work processes (Kusik et al., 2024; Ye & Zhang, 2025), and work-life balance support mitigates burnout and sustains engagement (Francies et al., 2025). Collectively, these factors constitute a motivational ecosystem that can substantially enhance engagement without significant financial investment.

Empirical evidence indicates that engaged employees demonstrate greater productivity, reduced turnover intentions, and improved organisational citizenship behaviours, yet the mechanisms through which non-monetary incentives shape engagement, particularly in resource-limited contexts, remain underexplored. This gap is especially relevant for Nigerian tertiary institutions contending with economic constraints while striving to uphold educational standards. Consequently, the present study positions employee engagement as the outcome variable and investigates the direct influence of recognition, training and development, autonomy, and work-life balance support as independent variables among staff of select tertiary institutions in Gombe Metropolis, Nigeria.

1.2. Statement of the Problem

Despite the crucial contribution of tertiary education to national development, employee engagement among academic and non-academic staff in Nigerian higher institutions remains distressingly low, primarily due to persistent motivational deficits (Anyalor et al., 2018; Nwokeocha, 2023; Adamu, 2024; Omale et al., 2024). This engagement crisis is evidenced by diminished teaching effectiveness, reduced research output, and increased turnover intentions, all of which undermine graduate quality and institutional competitiveness. While the CUPA-HR (2025) survey indicates that 51% of higher education employees globally work beyond full-time capacity, leading to burnout, Nigeria's fiscal constraints further restrict the effectiveness of monetary incentives as a sole engagement strategy. Particularly in Gombe Metropolis, reliance on salary enhancements faces limitations, despite notable revenue growth, as high debt servicing and recent staff layoffs hamper the adequacy of financial rewards in both state and federal institutions (Gombe State Budget Implementation Report, 2025).

Given these constraints, literature increasingly highlights non-monetary incentives—such as recognition, professional development, autonomy, and work-life balance support—as promising mechanisms for enhancing engagement. Empirical findings demonstrate that recognition programmes, leadership perception, and role clarity substantially foster engagement (Orujaliyev, 2024), while career development and recognition predict higher academic staff performance (Malami & Onen, 2023; Alsharji et al., 2025). Additionally, non-financial rewards have been validated as drivers of engagement across various sectors (Mdhlalose et al., 2026). However, existing research often aggregates monetary and non-monetary incentives or focuses on the private sector, leaving the direct effects of distinct non-monetary categories in public tertiary education insufficiently understood.

Four critical gaps persist in literature. First, the processes by which informal and formal recognition influence engagement among Nigerian tertiary staff remain unclear. Second, the practical impact of training and development is uncertain due to inconsistent implementation and low budget utilisation. Third, the relationship between autonomy and engagement in hierarchical Nigerian institutions requires empirical clarification in light of cultural norms around authority. Fourth, the specific impact of work-life balance support on academic staff, who face unique temporal pressures, is underexplored within Gombe Metropolis. Moreover, differences between federal and state institutions—such as access to TETFund and benefit structures, may moderate the effectiveness of non-monetary incentives (Alsharji et al., 2025). Consequently, this study seeks to determine the extent to which recognition, training and development, autonomy, and work-life balance support directly influence employee engagement among staff in selected tertiary institutions in Gombe Metropolis, Nigeria.

1.3. Objectives of the Study

The main objective of this study is to examine the impact of non-monetary incentives on employee engagement; its specific objectives are:

1. To examine the relationship between recognition and employee engagement among staff in selected tertiary institutions in Gombe Metropolis, Nigeria.
2. To examine the relationship between training and development opportunities and employee engagement among staff in selected tertiary institutions in Gombe Metropolis, Nigeria.
3. To assess the relationship between autonomy and employee engagement among staff in selected tertiary institutions in Gombe Metropolis, Nigeria.
4. To investigate the relationship between work-life balance support and employee engagement among staff in selected tertiary institutions in Gombe Metropolis, Nigeria.

1.4 Research Hypotheses

H_1: Recognition has a significant relationship with employee engagement among staff in selected tertiary institutions in Gombe Metropolis, Nigeria.

H_2: Training and development opportunities have a significant relationship with employee engagement among staff in selected tertiary institutions in Gombe Metropolis, Nigeria.

H_3: Autonomy has a significant relationship with employee engagement among staff in selected tertiary institutions in Gombe Metropolis, Nigeria.

H_4: Work-life balance support has a significant relationship with employee engagement among staff in selected tertiary institutions in Gombe Metropolis, Nigeria.

2. Literature Review

Employee engagement has evolved as a distinct construct within organisational psychology, differentiated from related notions such as job satisfaction, organisational commitment, and job involvement. Schaufeli and Bakker (2003) define work engagement as a positive, fulfilling work-related state of mind, characterised by vigour, dedication, and absorption. Vigour reflects high energy, mental resilience, and persistence at work; dedication encompasses a sense of significance, enthusiasm, pride, and inspiration; and absorption describes being fully concentrated, such that detachment from work becomes difficult and time passes rapidly (Schaufeli et al., 2002). This conceptualisation frames engagement not merely as the opposite of burnout but as a unique, multidimensional state, underscoring its importance for individual and organisational performance.

Non-monetary incentives comprise non-cash rewards and organisational practices designed to motivate employees, enhance satisfaction, and improve performance. These incentives, including recognition,

training and development, autonomy, and work-life balance support, contrast with monetary rewards and are intimately linked to intrinsic motivation (Deci & Ryan, 1985; Herzberg et al., 1959). Herzberg's Two-Factor Theory posits that while financial rewards prevent dissatisfaction, true motivation stems from factors such as achievement, recognition, and responsibility. Non-monetary incentives address higher-order psychological needs, driving sustained engagement by fostering an environment that supports competence, autonomy, and relatedness.

Recognition, training and development, autonomy, and work-life balance support each function as key non-monetary motivators within institutions. Recognition, both formal (awards, promotions) and informal (praise, gratitude), fulfils the human need for esteem and affirms employees' value (Herzberg et al., 1959; Noah et al., 2023). Training and development initiatives—ranging from workshops to structured mentoring—are critical for satisfying the need for competence, signalling institutional investment in staff and fostering reciprocal loyalty (Deci & Ryan, 2000; Mdhlalose et al., 2026). Autonomy, defined by discretion in work methods and participation in decision-making, underpins intrinsic motivation and well-being (Hackman & Oldham, 1976; Deci & Ryan, 1985). Work-life balance support, through flexible policies and respect for boundaries, helps staff manage professional and personal obligations, recognising the holistic nature of employees' lives (Francies et al., 2025).

2.2 Theoretical Review

Self-Determination Theory (SDT), developed by Deci and Ryan (1985, 2000), posits that autonomy, competence, and relatedness are fundamental psychological needs vital for intrinsic motivation, well-being, and optimal functioning. SDT distinguishes between autonomous motivation, which is self-endorsed and driven by personal interest or values, and controlled motivation, which arises from external or internal pressures (Deci & Ryan, 2000). Fulfilment of these basic needs enhances autonomous motivation, resulting in positive work outcomes. Within the workplace, autonomy is demonstrated through discretion over task execution, scheduling, and decision-making. Institutions that support staff autonomy facilitate employees' sense of ownership and internalisation of organisational goals, whereas controlling environments undermine intrinsic motivation and engagement. In this study, autonomy and decision-making participation operationalise the autonomy need.

SDT underpins the theoretical justification for why recognition, professional development, autonomy, and work-life balance support enhance employee engagement—each variable fulfils one or more basic needs, thus fostering autonomous motivation and the positive, fulfilling psychological state that characterises engagement. In parallel, Job Demands-Resources (JD-R) Theory, proposed by Bakker and Demerouti (2001), elucidates employee well-being and engagement through the dynamic interaction between job demands and job resources. Job demands, such as workload and resource scarcity, are prevalent in Nigerian tertiary institutions and can lead to strain and burnout if excessive. Conversely, job resources—including recognition, training, autonomy, and work-life balance, buffer the negative effects of job demands and have intrinsic motivational value.

The JD-R Theory articulates a dual-process model: the health impairment process, wherein excessive job demands result in exhaustion and potential health issues, and the motivational process, wherein job resources satisfy basic human needs and promote engagement (Bakker & Demerouti, 2001). In this context, the four non-monetary incentives are conceptualised as job resources: recognition fosters relatedness and feedback; training and development stimulate competence; autonomy enables goal attainment; and work-life balance mitigates job demands. The integration of SDT and JD-R provides a comprehensive framework, elucidating why and how non-monetary incentives serve as resources that satisfy psychological needs and promote employee

engagement. This theoretical synthesis informs the empirical exploration of the direct effects of recognition, training and development, autonomy, and work-life balance on engagement among staff in tertiary institutions in Gombe Metropolis, Nigeria.

2.3 Empirical Review

Isyaka *et al.* (2025) partially addressed this gap in Gombe State, by examining recognition and work environment effects on academic staff performance across universities with a sample size of 326. Using PLS-SEM, they confirmed recognition's positive and significant effect. The study recommends structured programs like awards, public commendations, and personalized feedback. The geographical proximity to the present study is advantageous, yet their focus on performance and exclusion of engagement as an outcome maintains the gap this study addresses. Furthermore, their limitation to universities, excluding colleges of education reduces generalizability across tertiary institution types.

Mather and Bam (2025) synthesized global evidence through an integrative review of 21 studies across 13 countries (2014–2024), identifying recognition as a consistent factor in academic staff satisfaction and retention. While not primary empirical research, their review confirms recognition's cross-cultural relevance, though it cannot establish effect sizes or causal directions. The predominance of Western and Asian studies in their review highlights the underrepresentation of African contexts. Across these studies, recognition consistently demonstrates positive effects on staff outcomes, though effect sizes vary dramatically. Methodologically, most studies employ regression or correlation rather than SEM, limiting causal inference. Most importantly, none isolate engagement as the dependent variable in Nigerian tertiary institutions combining universities and colleges of education. The present study addresses this by examining recognition's direct effect on employee engagement specifically, using SEM with a relatively larger sample across institution types in Gombe Metropolis.

In Nigeria, Nasidi *et al.* (2020) examined training and career development effects on engagement among non-academic staff at a Nigerian university with a sample size of 150. Their SEM-PLS analysis confirmed significant influence, thereby extending Social Exchange Theory to university support staff. The exclusive focus on non-academic staff, however, leaves academic staff dynamics unexplored, a limitation the present study addresses by including both categories.

Noah *et al.* (2023) provided complementary evidence for academic staff, finding career development significantly affected performance in Kogi State universities. The modest coefficient relative to recognition suggests professional development may operate more gradually or require longer gestation periods to manifest in performance outcomes. Their recommendation for training and retraining programs aligns with institutional policy implications, though engagement remains unexamined as an intermediary practice.

Luthra *et al.* (2024) examined faculty development programs in Indian B-Schools with sample size of 267. The study found that professional development mediated the relationship between development programs and engagement. This mediation finding is theoretically significant, suggesting that the provision of opportunities alone is insufficient; employees must actually experience developmental growth for engagement to result. Their PLS-SEM approach and semi-structured interviews provide methodological rigor, though the Indian private education differs from Nigerian public institutions.

Nikisi *et al.* (2025) examined autonomy and decision-making among TVET college lecturers in the Eastern Cape with sample size of 40. The study found that autonomy negatively affected

morale and motivation due to participation prohibition, leadership restrictions, and reduced self-reliance. This counterintuitive finding suggests that autonomy's effects may be context-dependent, with poorly implemented autonomy generating frustration rather than engagement. The tiny sample and mixed-methods design limit statistical confidence, though the qualitative insights are valuable.

Mahade *et al.* (2025) investigated job autonomy effects on faculty performance in private universities with a sample size of 225. The study found significant positive impacts using SPSS and Smart-PLS. Faculty experience moderated these relationships, suggesting autonomy's effects strengthen with career progression. The private sector context and Gulf region cultural dynamics limit direct applicability to Nigerian public institutions, though the moderation finding is theoretically informative.

Uwannah *et al.* (2022) provided rare Nigerian evidence from Ogun State universities with sample size of 200 women, where job autonomy contributed to job satisfaction alongside workload and home-work conflict. The female-only sample introduces gender specificity that may not generalize to male staff, while the satisfaction outcome (rather than engagement) maintains the gap this study addresses. Their multiple regression approach also precludes examination of complex structural relationships.

Opoku *et al.* (2023) provided the most direct evidence, examining HR policies and work-life balance at the College of Distance Education with a sample size of 232. Their SEM analysis revealed employee engagement as a partial mediator between HR policies and work-life balance, with flexible work arrangements, leave policy, and caretaking policies specifically enhancing employee engagement. The mediation finding is theoretically significant, though the present study examines work-life balance as an independent variable predicting engagement directly, rather than as an outcome mediated by engagement.

Tiwari *et al.* (2024) examined work-life benefits among 270 teaching professionals in higher education institutes, finding that perceived benefits strongly influenced organizational commitment with job satisfaction mediating. The organizational commitment outcome, while related to employee engagement, is distinct in its organizational rather than work-role focus. Their hierarchical regression approach provides methodological guidance, though the Northern Indian environment may differ from Nigerian dynamics.

2.5. *Conceptual Framework*

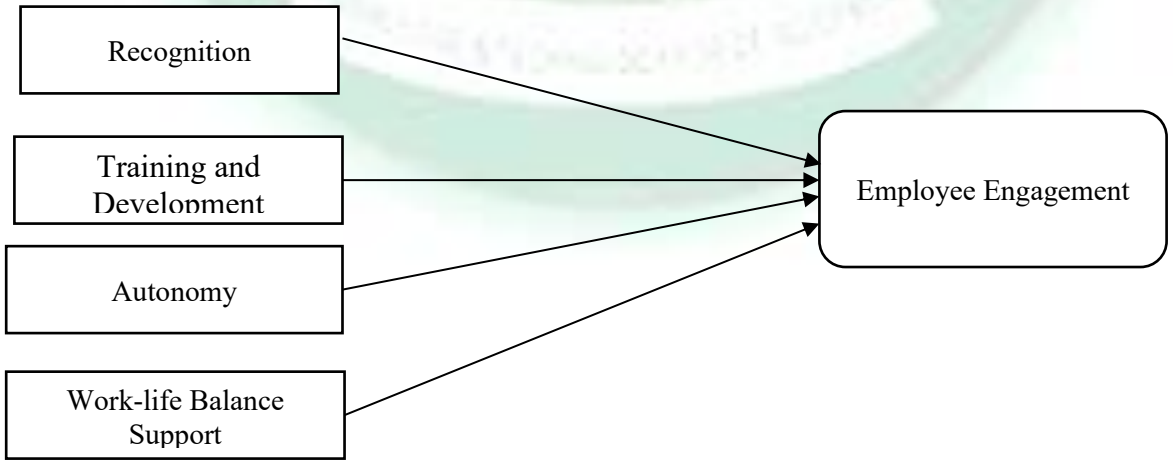


Figure 1: Research Framework

3.1 METHODOLOGY

This study utilised a quantitative cross-sectional survey design to investigate the relationship between non-monetary incentives and employee engagement among staff of Gombe State University and Federal College of Education (Technical), Gombe, representing State and Federal tertiary institutions with differing incentive structures. The target population comprised 2,806 academic and non-academic staff, with a sample size of 350 determined using Yamane's (1967) formula at a 5% margin of error and 95% confidence level; an additional 10% accounted for non-response, yielding a final sample of 385. Stratified random sampling was employed to ensure proportional and representative selection across institution types and staff categories. Data were collected through a structured questionnaire, incorporating demographic items, measures of non-monetary incentives, and the UWES-9 employee engagement scale (Schaufeli & Bakker, 2004). Validity and reliability were established via expert review and pilot testing. Data analysis utilised Structural Equation Modelling (PLS-SEM) through Smart-PLS version 4.0.

The analysis was carried out in two stages: measurement model assessment and structural model evaluation. Reliability and validity were established using factor loadings, composite reliability, Average Variance Extracted (AVE), Fornell-Larcker criterion, and Heterotrait-Monotrait ratio thresholds recommended by Joseph Hair *et al.* (2019). The structural model was assessed using variance inflation factor (VIF), bootstrapping with 5,000 subsamples, path coefficients, coefficient of determination (R^2), effect sizes (f^2), and predictive relevance (Q^2). Hypotheses were tested at a 0.05 significance level. The study regression model is presented below:

$$EE = \beta 0 + \beta 1R + \beta 2PD + \beta 3A + \beta 4WLB + \beta 5IT + \varepsilon$$

Where: EE= Employee Engagement;

$\beta 0$ = Constant Term;

$\beta 1$, $\beta 2$, $\beta 3$, $\beta 4$ and $\beta 5$ = Beta coefficients

R= Recognition;

PD= Professional Development;

A= Autonomy;

WLB= Work-Life Balance Support;

IT = Institution Type;

ε = Error term

The structural model specifies employee engagement as a function of the four non-monetary incentives and the control variable. The constant term represents the baseline engagement level when all predictors are at zero. The path coefficients for recognition, professional development, autonomy, and work-life balance capture the direct effects of each non-monetary incentive on engagement, holding other variables constant. The four research hypotheses were tested by examining the corresponding path coefficients and their significance levels.

4. Data Analysis and Result.

This study administered a total of three hundred and eighty-five (385) questionnaires to both teaching and non-teaching staff of Gombe State University and Federal College of Education (Technical), Gombe. The questionnaires were physically administered to respondents by the researcher with the help of two research assistants but only three hundred and seventy-four (374) which represent 97.1% was returned. While 09 questionnaires representing 2.3% of the total

questionnaire administered were not return and 10 representing 2.6% were not filled correctly. This study uses the exact sample size figure of 350 for the study. Data collected from the respondents were screened for missing values, outliers and it was also tested for multi-collinearity. Findings from the data screening revealed that, no missing value was recorded. Outliers' assessment carried out using the *Mahalanobis* distance (D^2) test. Hair *et al.* (2019) recommend a *0.001* significance level as the criterion for identifying outliers. The results showed that all data points were above the 0.001 threshold, indicating the absence of outliers. Therefore, the full dataset of 350 cases was considered valid for further analysis.

4.1. Measurement Model

The fitness of the measurement model was determined through convergent and discriminant validity tests. In this study, convergent validity was verified by examining factor loadings, AVE, Cronbach's Alpha, and Composite Reliability against the cut-off values of *0.70, 0.50, 0.65,* and *0.65,* respectively, as shown in Table 1.

Table 1: Reliability and Validity

Constructs	Items	Loadings	CA	CR	AVE
Autonomy	A1	0.819	**0.929**	**0.941**	**0.667**
	A2	0.804			
	A3	0.858			
	A4	0.827			
	A5	0.828			
	A6	0.820			
	A7	0.787			
	A8	0.788			
Employee Engagement	UWES1	0.822	**0.919**	**0.919**	**0.634**
	UWES2	0.826			
	UWES3	0.764			
	UWES4	0.791			
	UWES5	0.824			
	UWES6	0.779			
	UWES7	0.794			
	UWES8	0.766			
Recognition	R1	0.811`	**0.874**	**0.907**	**0.662**
	R2	0.804			
	R3	0.872			
	R4	0.825			
	R5	0.753			
Training and Development	PD1	0.817	**0.846**	**0.849**	**0.684**
	PD2	0.833			
	PD3	0.805			
	PD4	0.853			
Work-Life-Balance Support	WLB1	0.851	**0.883**	**0.919**	**0.739**
	WLB2	0.861			
	WLB3	0.878			

Constructs	Items	Loadings	CA	CR	AVE
	WLB4	0.848			
Institution Type	ITY	-	-	-	-

Source: Field Survey, (2026).

Table 1 presents the reliability and convergent validity results of the measurement model. All constructs exhibited satisfactory internal consistency, with Cronbach's Alpha values ranging from 0.846 to 0.929 and composite reliability values ranging from 0.849 to 0.941, both exceeding the 0.70 threshold recommended by Hair *et al.* (2019) and Nunnally and Bernstein (1994). The average variance extracted values ranged from 0.634 to 0.739, surpassing the 0.50 benchmark established by Fornell and Larcker (1981), thus confirming convergent validity. Factor loadings for all retained items were above 0.753, indicating that the indicators adequately represent their respective constructs. These findings demonstrate that the measurement model is reliable and valid for further structural analysis.

The study also assessed how uncorrelated the exogenous variables of the model were with other variables in the study using HTMT ratio criterion. Table 2 shows the results.

Table 2: Discriminant Validity using HTMT Ratio Criterion

Constructs	Autonomy	Employee Engagement	Institution Type	Recognition	Training and Development	Work-Life-Balance
Autonomy						
Employee Engagement	0.801					
Institution Type	0.043	0.036				
Recognition	0.855	0.817	0.039			
Training and Development	0.864	0.793	0.032	0.853		
Work-Life-Balance	0.869	0.819	0.028	0.871	0.881	

Source: Field Survey (2026)

Table 2 presents the discriminant validity assessment using the *HTMT* ratio criterion. The results show that most *HTMT* values among the non-monetary incentive constructs range from *0.853* to *0.881*, exceeding the conservative *0.85* threshold proposed by Henseler *et al.* (2016). This indicates that respondents perceive recognition, autonomy, training and development, and work-life balance as conceptually related rather than fully distinct. However, all values remain below the 0.90 liberal threshold, which Henseler *et al.* (2016) and Franke and Sarstedt (2019) consider acceptable for theoretically related constructs in organizational research. The low *HTMT* values for institution type (<0.05) confirm its empirical independence from the other constructs. To strengthen discriminant validity, future studies may consider refining the measurement items or modeling these constructs as a higher-order 'non-monetary incentives' construct.

4.2. Structural Model

Upon confirming the adequacy of the measurement model in terms of reliability and validity, the study advanced to the structural model assessment. Key metrics including R^2, f^2, and *VIF* were analyzed to determine the model's explanatory power, the magnitude of effects, and the absence

of multicollinearity. The structural model represents the hypothesized linkages between the four non-monetary incentive constructs and employee engagement, as shown in Figure 2.

Figure 2: Structural Model Showing the Path Relationships Between the Exogenous Variables and the endogenous variable



Source: Field Survey (2026)

Figure 2 presents the structural model with the path coefficients and R^2 *value*. The R^2 *value* of *0.648* suggests that recognition, autonomy, training and development, and work-life balance jointly explain 64.8% of the variance in employee engagement, which Hair *et al.* (2019) classify as substantial. All the four constructs show positive and significant relationships with employee engagement. Specifically, recognition ($\beta = 0.266$) had the strongest effect, followed by autonomy ($\beta = 0.235$), work-life balance ($\beta = 0.226$), and training and development ($\beta = 0.157$). This implies that for every one-unit standard deviation increase in recognition, employee engagement is expected to increase by 0.266 standard deviations, controlling for the other predictors in the model.

4.3. Multi-collinearity Test

To ensure the soundness of the structural model, multicollinearity was examined using the variance inflation factor (VIF). The VIF values for all constructs are reported in Table 3.

Table 3: Multicollinearity Statistics: VIF Values

Variable	VIF

Autonomy	3.851
Institution Type	1.003
Recognition	3.033
Training and Development	3.039
Work-Life Balance	3.718

Source: Field Survey (2026)

Table 3 presents the multicollinearity assessment using the variance inflation factor (VIF). All VIF values ranged from *1.003* to *3.851,* which are below the recommended threshold of *5.0* proposed by Hair *et al.* (2019), indicating that multicollinearity is not a concern in this study. This confirms that there is no substantial linear interdependence among the independent constructs, and the estimated path coefficients in the structural model are reliable and unbiased. The effect size of the exogenous variables on the endogenous variable is presented in Table 4.

Table 4: *Effects Size* *(F^2)*

Variable	**f-square**	**Effect Size**
Autonomy -> Employee Engagement	0.041	Small Effect
Institution Type -> Employee Engagement	0.000	No Effect
Recognition -> Employee Engagement	0.066	Small Effect
Training & Development ->Employee Engagement	0.023	Small Effect
Work-Life ->Employee Engagement	0.039	Small Effect

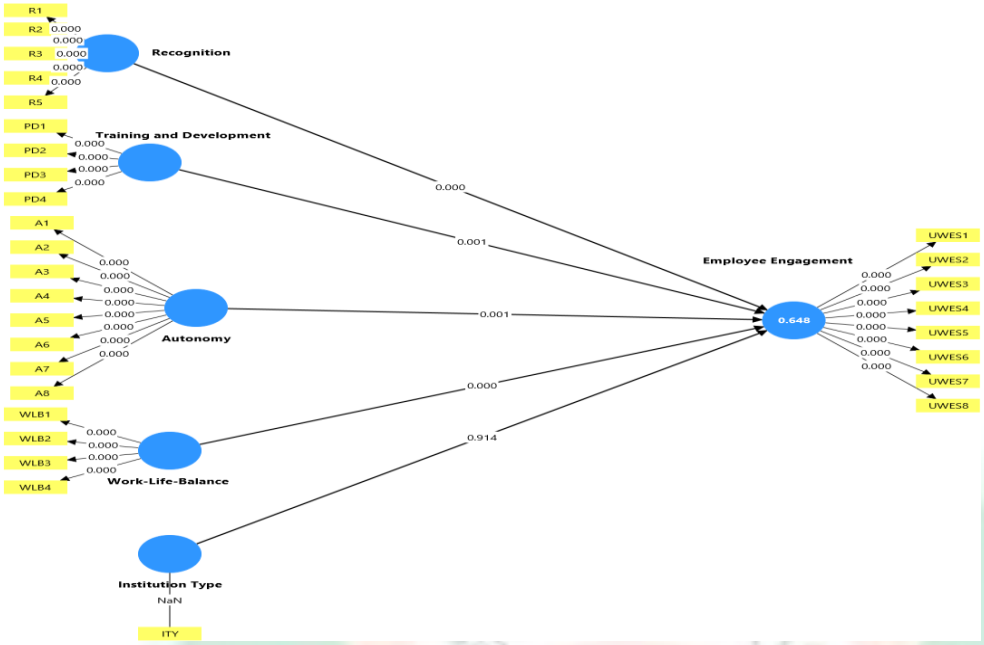
Source: Field Survey (2026)

Following Cohen's (1988) guidelines, Recognition ($f^2 = 0.066$) had the largest effect size among the independent variable, but remains within the ranges of small effect. Autonomy ($f^2 = 0.041$), Work-Life Balance ($f^2 = 0.039$), and Training and Development ($f^2 = 0.023$) also show small effects. But Institution Type ($f^2 = 0.000$) had no effect. While these results are statistically significant, it indicates that each construct makes a modest individual contribution to explaining employee engagement. These findings reveal that while all non-monetary incentive constructs contribute positively to employee engagement, recognition is the most practically significant motivator. The small effect sizes for the all the constructs suggest that their individual contributions are modest, although their combined explanatory power accounts for 64.8% of the variance in employee engagement.

4. 4. Bootstrapping Analysis

To test the significance of the hypothesized direct relationships, a bootstrapping analysis with 5,000 subsamples was carried out in line with Hair *et al*. (2019). The structural model representing the direct effects of recognition, autonomy, training and development, and work-life balance on employee engagement is depicted in Figure 2, with the bootstrapping output shown in Figure 3.

Figure: 3: Bootstrapping Model Showing the Path Relationships Between the Constructs.



Source: Field Survey, (2024)

4. Hypotheses Results

The study examines the relationship between employee engagement and non-monetary (autonomy, recognition, training and development, and work-Life) and Table 5 presents the results.

Table 5: Path Coefficient

Hypotheses Testing	Beta	(STDEV)	T-values	P-Value	Decision
H1: R -> EE	0.266	0.063	4.201	0.000	Accepted
H2: PD -> EE	0.157	0.049	3.210	0.001	Accepted
H3: A -> EE	0.235	0.069	3.426	0.001	Accepted
H4: WLB-> EE	0.226	0.064	3.553	0.000	Accepted

Source: Field Survey (2026)

Table 5 presents the path coefficients and hypothesis testing results. The results indicate that Autonomy ($\beta = 0.235$, $t = 3.426$, $p = 0.001$), Recognition ($\beta = 0.266$, $t = 4.201$, $p = 0.000$), Training and Development ($\beta = 0.157$, $t = 3.210$, $p = 0.001$), and Work-Life Balance ($\beta = 0.226$, $t = 3.553$, $p = 0.000$) have positive and statistically significant effects on employee engagement. Thus, H1, H2, H3, H4, and H5 are accepted. These findings suggest that non-monetary incentives are significant predictors of employee engagement, with recognition having the strongest influence in this study. Table 6 presents the predictive relevance of the structural model.

Table 6. Predictive Relevance

Construct	Q²predict	RMSE	MAE
Employee Engagement	0.633	0.608	0.449

Source: Field Survey (2026)

Table 6 presents the predictive relevance of the structural model using the PLS-predict procedure.

The Q^2 value for employee engagement was *0.633,* which is substantially above the threshold of *0*, indicating that the model has strong predictive relevance for the construct. Following Hair *et al.* (2019), this finding suggests that the independent variables collectively have the ability to predict employee engagement in out-of-sample data. The *RMSE* and *MAE* values of *0.608* and *0.449*, respectively, further support the model's predictive performance.

4.6 Discussions of Findings

The main objective of this study is to examine the impact of non-monetary incentives on employee engagement in selected tertiary institutions in the Gombe metropolis. In line with this, there are four specific objectives and four (4) alternative hypotheses formulated and tested using structural equation modeling. Below are the findings of the study:

The analysis revealed that recognition significantly predicted employee engagement (β = 0.266, t = 4.201, p = 0.000). This aligns closely with Self-Determination Theory, which suggests that satisfying the need for competence and relatedness through recognition fosters intrinsic motivation and engagement (Deci & Ryan, 2000). Similarly, Job Demands-Resources Theory recognises recognition as a key job resource supporting motivational processes. Empirical support for these findings is evident in studies such as Noah et al. (2023) and Isyaka et al. (2025), who reported positive effects of recognition in Nigerian universities, and Akanmu and Duh (2025) in Malaysia. The consistency across diverse settings indicates that recognition is a highly effective non-monetary motivator in public tertiary institutions where financial incentives are limited. Therefore, structured recognition initiatives, such as awards and commendations, may serve as cost-effective interventions to enhance engagement in Gombe Metropolis.

Training and development also showed a positive and significant effect on employee engagement (β = 0.157, t = 3.210, p = 0.001). Within the Job Demands-Resources framework, training functions as a job resource that equips staff with the skills necessary to manage job demands, thereby promoting engagement. Self-Determination Theory also links competence development with psychological need satisfaction. This result is consistent with Nasidi et al. (2020), who found significant positive effects of training on engagement among non-academic staff in Nigeria, and Luthra et al. (2024), who identified training as a mediating factor in Indian B-schools. Although the effect size is modest relative to recognition, training remains a vital resource. For institutions in Gombe Metropolis, investment in targeted, relevant professional development programmes can bolster employees' sense of competence and future orientation, supporting sustained engagement.

Autonomy exerted a positive and significant influence on employee engagement (β = 0.235, t = 3.426, p = 0.001), supporting self-determination theory's assertion that autonomy is central to intrinsic motivation and engagement. This finding is echoed by Sung et al. (2022) in the United States and Jung and Kim (2025) in Korea, who both observed positive effects of job autonomy on engagement, though Nikisi et al. (2025) reported contrary results in South African TVET colleges with poorly implemented autonomy. In Gombe Metropolis, where bureaucratic constraints often limit staff discretion, enhancing autonomy in work methods and decision-making offers a practical, low-cost approach to improving engagement. These results suggest that decentralising operational authority and promoting participative decision-making could significantly increase staff motivation and engagement within tertiary institutions.

Work-life balance support was also found to significantly predict employee engagement (β = 0.226, t = 3.553, p = 0.000), in line with Job Demands-Resources Theory, which highlights work-life balance as a key job resource that helps manage work and personal demands. This finding corroborates the work of Opoku et al. (2023) in Ghana and Fong et al. (2023) in Malaysia, both of

whom reported that flexible work arrangements and supportive leave policies enhance engagement. In the Nigerian context, where infrastructural and cultural factors often challenge work-life balance, such support emerges as especially critical. The study extends the literature by demonstrating that flexible scheduling, leave provisions, and caretaking support can directly strengthen employee engagement in public tertiary institutions in Gombe Metropolis. Collectively, the study affirms that recognition, training and development, autonomy, and work-life balance support are robust non-monetary predictors of engagement.

5.1. Conclusion

Based on the findings of this study, it is concluded that non-monetary incentives are significant predictors of employee engagement among staff of tertiary institutions in the Gombe metropolis. Specifically, recognition, training and development, autonomy, and work-life balance support each exert a positive and statistically significant influence on employee engagement. The study confirms that when employees perceive adequate recognition for their contributions, access to relevant training and development opportunities, sufficient autonomy in performing their tasks, and institutional support for balancing work and personal life, their level of engagement increases. The non-significant effect of Institution Type further indicates that these relationships are consistent across universities and colleges of education within the study area.

5.2. Recommendations

The results provide empirical support for self-determination theory and job demands-resources theory in explaining employee engagement in the Nigerian public tertiary education environment. This study recommendation was based on the study's objectives, and it state that: tertiary institutions in the Gombe metropolis should implement structured recognition systems. This includes:

1. Formal awards, public commendations, and timely feedback from supervisors. Low-cost, non-monetary recognition is especially viable for resource-constrained public institutions.
2. Institutions should conduct training needs assessments and offer job-relevant programs for both academic and non-academic staff. Linking training to career progression will increase perceived value and sustain engagement.
3. Management should reduce bureaucratic control and allow staff discretion in work methods and scheduling where feasible. Clear boundaries and accountability measures should accompany increased autonomy to prevent misuse.
4. Work-life balance support significantly predicted employee engagement ($\beta = 0.226$, $p = 0.000$). Institutions should adopt flexible work arrangements, clear leave policies, and support systems for staff managing work and family responsibilities. These policies are critical in environment with commuting challenges and high family obligations.

REFERENCES

Adanu, K. (2024). Staff development and commitment in Nigerian colleges of education: a pathway to institutional success. *Bulletin of Islamic Research*, *2*(4), 653-676.

Akanmu, M. D., & Duh, H. I. (2025). Performance appraisal practices and employee engagement towards academic staff performance in higher education institution. *Journal of Business Psychology,* 33(2), 101-112.

Akhter, N., Bandhu, A., Birwal, N., & Kumar, S. (2022). Examine the effect of employee engagement and work autonomy on innovative work behaviours in organizations. NeuroQuantology, 20(16), 168. https://doi.org/10.14704/nq.2022.20.16.NQ88034

Alsharji, A. S., Al-Tamimi, A. N. A., & Khudari, M. (2025). Employees' perceptions of the impact

of monetary and non-monetary incentives on performance and job satisfaction: A case study from Oman College of Health Sciences. *International Journal of Environmental Sciences*, *11*(17s).

Anyalor, M., Nwali, A. C., & Agbionu, U. C. (2018). Employee engagement and performance of lecturers in Nigerian tertiary institutions. *Journal of Education and Entrepreneurship,* 5(2), 69-87.

Bakker, A. B., & Demerouti, E. (2001). The Job Demands-Resources model of burnout. Journal of Applied Psychology, 86(3), 499–512. https://doi.org/10.1037/0021-9010.86.3.499

Bakker, A. B., & Demerouti, E. (2017). Job demands–resources theory: Taking stock and looking forward. Journal of Occupational Health Psychology, 22(3), 273–285. https://doi.org/10.1037/ocp0000056

Batse, S. A. (2025). Performing an analysis on the impact of job recognition on employee performance*. Project Management and Scientific Journal*,8(2),20-25.

Ce, Z., Ab-Rahim, R., Siali, F., & Mokhtar, N. (2025). Employee Motivation and Job Performance of Non-Academic Staff in Chinese *Universities. Societies,* 15(8), 227.

CUPA-HR. (2025). The College and University Professional Association for Human Resources 2025 Higher Education Employee Retention Survey. https://www.cupahr.org

Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human behavior. Plenum Press.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry,* 11(4), 227–268.

Deci, E. L., Koestner, R., & Ryan, R. M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin,* 125(6), 627–668.

Devi, K. (2025). The role of training and development in bridging skill gaps for employee career growth. *European Economics Letters*, 15(3).

Enwezor, C. H., & Obi, E. (2022). Academic Staff Work Environment and Work Orientation as Correlates of their Job Satisfaction in Colleges of Education in South East, Nigeria. *Unizik Journal of Educational Research and Policy Studies,* 11, 81-93.

Fong, Y. L., Loh, C. K., Loh, Z. Y., & Tan, J. L. (2023). Factors Affecting the Job Performance of Academic Staff in Private Universities in Malaysia. *(Bachelor of Business Administration Universiti Tunku Abdul Rahman, Malaysia)*

Francies, S., Arumugam, T., & Basri, M. (2025). Analyzing the influence of monetary and non-monetary rewards on employees' engagement: A study among employees of private service-based companies in Malaysia. *International Journal of Emerging Issues in Management, Accounting and Technology*, 1(1), 33-44.

Franke, G., & Sarstedt, M. (2019). Heuristics versus statistics in discriminant validity testing: A comparison of traditional criteria and the Heterotrait-Monotrait (HTMT) approach. *Journal of Product Innovation Management,* 36(4), 431–452.

Gombe State Government. (2025). *Budget Implementation Report, Fourth Quarter 2025. Ministry of Finance and Economic Development*. https://www.mof.gm.gov.ng/

Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance*, 16(2), 250–279.

Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. Organizational Behavior and Human Performance, 16(2), 250–279. https://doi.org/10.1016/0030-5073(76)90016-7

Henseler, J., Ringle, C. M., & Sarstedt, M. (2016). A new criterion for assessing discriminant

validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science,* 43(1), 115–135.

Herzberg, F. (1959). The motivation to work. John Wiley & Sons.

Herzberg, F., Mausner, B., & Snyderman, B. B. (1959). The Motivation to Work (2nd ed.). John Wiley & Sons.

Hryshchenko, M., Artemchuk, M., Zavhorodnya, L., Tymoshenko, Y., & Purhani, S. (2025). The role of mentoring in the employee professional development and career growth. *Sapienza: International Journal of Interdisciplinary Studies,* 6(1), e25004-e25004.

Hussaini, A. M., Waziri, A. U., & Bukar, K. (2024). Effect of job satisfaction on the performance of academic staff of the university of Maiduguri, Borno State. *International Journal of Social Sciences and Humanities,*11(1),400-412.

Iman, A., & Shaikh, O. A. (2025). Influence of monetary and non-monetary rewards on employee performance. *Journal of Social Signs Review,* 3(12), 204-224.

Imran, U. D., Ghazwan, M. F., & Firmansyah, F. (2025). The effect of recognition and appreciation on employee motivation and performance. *Economics and Digital Business Review,* 6(1), 1-18.

Isyaka, S. M., Musa, B. M., & Muhammed U. Y. (2025). Non-financial motivational factors as determinants of academic staff performance of universities in Gombe State. *POLAC International Journal of Econ. & Mgt. Science (PIJEMS)*, 11(30),298-312.

Jeha, H., Knio, M., & Bellos, G. (2022). The impact of compensation practices on employees' engagement and motivation in times of COVID-19. *Covid-19: Tackling global pandemics through scientific and Social Tools*, 131-149.

Keltu, T. T. (2024). The effect of human resource development practice on employee performance with the mediating role of job satisfaction among Mizan Tepi University's academic staff in Southwestern Ethiopia. *Heliyon,* 10(8),1-20.

Kusik, D., Tokarz, A., Garlak, M., & Kałwak, W. (2024). We need autonomy! The role of job autonomy and autonomous motivation in employees' work engagement in the outsourcing sector: A systematic mixed-method illustrative case study. *Journal of general management,* 0(0)

Kwarteng, S., Frimpong, S. O., Asare, R., & Wiredu, T. J. N. (2024). Effect of employee recognition, employee engagement on their productivity: The role of transformational leadership style at Ghana Health Service. Current Psychology, 43(6), 5502–5513. https://doi.org/10.1007/s12144-022-04107-9

Kyumana, V., & Ponera, J. M. (2025). Job Burnout and Performance: A Study of Academic Staff at Tanzania's Institute of Finance Management and Moshi Co-operative University. *Papers in Education and Development,* 1(2), 1-21.

Leadership Newspaper. (2026, February 12). Gombe COE dismissals. https://leadership.ng

Lebo, M. P., Ukaidi, E. U., Arikpo, N. N., Enya, M. N., Eja-Osang, J. (2023). Conducive work environment and lecturers' academic performance in tertiary institutions: an econometric approach. *Nigerian Journal of Management Scienc*es 24(2b). 65-72.

Luthra, A., Dixit, S., & Arya, V. (2024). Evaluating the impact of faculty development on employee engagement practices in higher education: Analysing the mediating role of professional development. *The Learning Organization*, 31(4), 565–584.

Mahade, A., Elmahi, A., Abdalla, A. A., Said, R. A., & Alomari, K. M. (2025). Investigating the association between human resource management practices and job autonomy on faculty job performance: Evidence from UAE higher education sector. *Journal of Public Affairs,*25(1),1-15.

Mampuru, M. P., Mokoena, B. A., & Isabirye, A. K. (2024). Training and development impact on job satisfaction, loyalty and retention among academics. *SA Journal of Human Resource Management,* 22, 2420.

Mather, M. F., & Bam, N. E. (2025). Factors influencing academic staff satisfaction and retention in higher education: A literature review. *European Journal of Education*, 3(2), 1-15.

Mdhlalose, D., Hlungwana, J., & Mtshali, T. (2026). Employee engagement as a bridge between non-financial rewards and innovation: a cross-cultural perspective. *Veredas do Direito,* 23(2).

Mdhlalose, D., Hlungwana, J., & Mtshali, T. (2026). Employee engagement as a bridge between non-financial rewards and innovation: An intercultural perspective. *Journal of Innovation and Entrepreneurship,* 15(1).

Mittal, K. I. R. T. I. (2023). Role of non-monetary motivation of employees: A quantitative study. *Psychology and Education,* 55(1), 139-145.

Mohammed, B., & Cai, Y. (2025). Effect of institutional autonomy on academic freedom in higher education institutions in Ghana. *Policy Reviews in Higher Education,* 9(1), 141-159.

Nasidi, Y., Waziri, A. G., Sunday, A. A., & Halim, B. Y. (2020). Influence of training and career development on employee engagement among non-academic staff of university. *International Journal of Intellectual Discourse*, 3(2), 383–395.

Ngbeken, C., & Ateik, A. (2025) Factors that influence employee engagement amongst teaching staff in higher education institutions. *EPRA International Journal of Economics, Business and Management Studies (EBMS)*, 12(7), 186-172.

Nikisi, E., Mashologu, M. W., Bwowe, P. W., & Masha, A. K. (2025). The Impact of Autonomy and Decision-Making on the Morale and Motivation of Technical Vocational Education.

Noah, M., Alabi, J., & Muhammed, U. (2023). Non-monetary incentive and academic staff performance in selected universities in Kogi state. *Journal of Business Management, Innovation, and Creativity*,2(1),152-165.

Nwokeocha, S. M. O. (2023). *Academic Staff Working Conditions, Organizational Commitment and Performance of Nigerian Universities* (Doctoral Dissertation, Anglia Ruskin Research Online (ARRO)).

Ogbuagu, A. R., Ifeanyichukwu, O. P., Nwiboko, I. U., & Agu, G. C. (2025). Beyond money: Behavioral and relationship influences on academic outcomes among female economics students in Ebonyi State, Nigeria. *Journal of Research and Innovation in Education*. 17.

Omale, S. A., Ojo, S. S., Ibrahim, M. G., & Yusufu, S. O. (2023). Factors affecting motivation and employee performance among Nigerian universities academic staff. Eurasian *Journal of Management & Social Sciences*, 4(1), 28-55.

Opoku, F. K., Kwao, I. T., & Johnson, A.-P. (2023). Human resource policies and work–life balance in higher education: Employee engagement as mediator. *SA Journal of Human Resource Management,* 21, a1939.

Orujaliyev, R. (2024). The effect of non-financial incentives on employee engagement and employee retention. *European Journal of Humanities & Social Sciences*, 4(2), 112–128.

Owoeye, I., Kiiru, D., & Muli, J. (2020). Recognition practices and employee performance: Understanding work engagement as a mediating pathway in Kenyan context. *Journal of Human Resource Management,* 8(3), 163–171.

Owusu, A. E., Esther, G., Ebenezer, T. W., & Kyei, A. A. (2023). Effect of fringe benefits and remuneration on employee engagement: The moderating role of perceived organizational support. *Journal of HRM,* 26(2).

Rahmah, L., & Setianingsih, N. R. (2025). To what extent training programs can enhance

employee engagement: A case study. ISPsy 2025: Proceedings of the 7th *International Seminar on Psychology Universitas Muhammadiyah Purwokerto,* 357–364.

Ramiz, O. (2024). The effect of non-financial incentives on employee engagement and employee retention. *European Journal of Humanities & Social Sciences*, (2), 2414-2344.

Ramya, S. R., & Vanithamani, M. R. (2023). The power of employee recognition: Building a culture of appreciation in the workplace. *Journal of Technical Education*, 109(45), 109–114.

Rashmi, K., & Kataria, A. (2022). Work–life balance: a systematic literature review and bibliometric analysis. *International Journal of Sociology and Social Policy,* 42(11-12), 1028-1065.

Robertson, O. (2022). *Autonomy of Choice in the Work Environment and the Effects Observed on Employee Engagement, Employee Motivation, and Team Effectiveness* (Doctoral Dissertation*,* Adler University).

Rustam, A., Astuti, I. Y., & Safitri, U. R. (2024). Strategies for improving employee competencies in the digitalization era through training and human resource development. *The Journal of Academic Science*, 1(7), 849-857.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78.

Schaufeli, W. B., & Bakker, A. B. (2003). Utrecht work engagement scale: Preliminary manual. *Occupational Health Psychology Unit, Utrecht University, Utrecht*, *26*(1), 64-100.

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior,* 25(3), 293–315.

Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two-sample confirmatory factor analytic approach. *Journal of Happiness Studies*, 3(1), 71–92.

Setyawati, N. W., Woelandari, PG, D. S., & Rianto, M. R. (2022). Career development, motivation and promotion on employee performance. *East Asian Journal of Multidisciplinary Research*, 1(9), 1957-1970.

Sikira, R., Madaba, R., & Filbert, R. (2024). Impact of recognition on employees' performance in the manufacturing industries in Tanzania: A case of Tanga Cement Company. *Valley International Journal Digital Library,* 12(03), 6059-6073

Sung, M., Yoon, D.-Y., & Han, C. S.-H. (2022). Does job autonomy affect job engagement? Psychological meaningfulness as a mediator. Social Behavior and Personality: *An International Journal,* 50(5), 1–10

Tiwari, M., Srivastava, M. K., Suresh, A. S., Sharma, V., & Mahajan, Y. (2024). Balancing work and life in academia: Unraveling the employee engagement mystery. *International Journal of Educational Management,* 38(7), 1884–1902.

Uwannah, N. C., Egwuonwu, C. O. K., & James, N. C. (2022). Job autonomy, workload and home-work conflict as predictors of job satisfaction among employed women in academia. *European Journal of Educational Management,* 5(1), 35-48.

Wibowo, T. S., Suprayitno, D., Winarti, T., & Iswanto, J. (2024). The Effect of Career Development on Employee Performance with Incentives as a Moderating Variable. *Jurnal Ilmiah Edunomika,* 8(2).

Wutthilaohapun, K., Sermsri, N., & Pahasing, B. (2025). The motivation in work that affects the performance of academic staff in the Faculty of Fine and Applied Arts, Suan Sunandha Rajabhat University. *International Academic Multidisciplinary Research Conference*

Icbtshokkaido, 329-333.

Ye, L., Li, Y., & Zhang, N. (2025). The impact of autonomy-supportive organizational environments on employees' emotions and creative performance: A self-determination theory perspective. *Plos one*, *20*(5), e0322184.

Zen, A. (2023). Determinants of employee engagement and productivity: An analysis of work motivation, competence, compensation and transactional leadership. *East Asian Journal of Multidisciplinary Research,* 2(2), 863-892.

Zhenjing, G., Chupradit, S., Ku, K. Y., Nassani, A. A., & Haffar, M. (2022). Impact of employees' workplace environment on employees' performance: a multi-mediation model. *Frontiers in public health,* 10, 890400

Zulfikar, I., Efendi, S., Suheri, H., Pulubuhu, D. A., Kadir, R., & Parenta, T. (2021). The influence of work environment, motivation and competence to work performance and the impact on lecturer performance in Higher Education. *Psychology and Education Journal*, 58(1), 221-235.