IOSR Journal of Business and Management (IOSR-JBM)
e-ISSN:2278-487X, p-ISSN: 2319-7668. Volume 28, Issue 5. Ser. 2 (May. 2026), PP 31-42
www.iosrjournals.org

Who Benefits From Training? Examining Staff Category As A Moderator Of Human Capital Development In A Ghanaian University

Kassim Bawah Abdallah
Hamidatu Ibrahim
Rose Achoanya Ayam
Registry, School Of Medicine, University For Development Studies, Tamale, Ghana

Abstract
This study investigates whether staff category (teaching versus non-teaching) moderates the association between training perceptions and employee performance outcomes in a Ghanaian public university. Drawing on Human Capital Theory and Social Exchange Theory, the research examines differential returns to institutional training investment across professional categories.
A cross-sectional survey design was employed with 198 staff members from the University for Development Studies, Ghana. Chi-square tests of independence examined associations between staff category and training-related perceptions across ten performance and career advancement indicators.
Significant staff category variations emerged across six performance dimensions. Non-teaching staff demonstrated significantly stronger associations with perceptions that training improves performance, enhances skills, boosts efficiency, promotes advancement, builds confidence, and supports growth. Notably, no significant differences emerged for training relevance, goal support, job satisfaction, or retention, suggesting shared baseline appreciation but divergent perceived returns.
The findings extend Human Capital Theory by demonstrating that training returns are not uniform across professional categories within higher education institutions. Staff category operates as a moderating variable that shapes how employees perceive and benefit from training investments.
Universities should implement differentiated training strategies that account for professional category differences. Non-teaching staff appear to derive greater perceived returns from current training approaches, suggesting that teaching staff may require discipline-specific, pedagogically-oriented development programmes. This study provides first empirical evidence of staff category as a moderating factor in training-performance associations within African higher education, challenging assumptions of uniform training effectiveness.

Keywords: *Training and development, staff category, human capital theory, social exchange theory, higher education, Ghana, employee performance*

Date of Submission: 01-05-2026 Date of Acceptance: 11-05-2026

I. Introduction

Training and development represent substantial institutional investments in higher education, predicated on the assumption that enhanced employee capabilities translate into improved individual performance and organizational effectiveness (Armstrong and Taylor, 2023). Global expenditure on workplace training exceeded $370 billion in 2023, reflecting widespread confidence in human capital development as a strategic lever (ATD, 2023). Within higher education specifically, training encompasses diverse modalities, pedagogical development for teaching staff, administrative competency enhancement for non-teaching personnel, and cross-functional programmes addressing institutional needs (Noe et al., 2019).

Yet a critical assumption underpinning training investment remains largely unexamined: whether different staff categories perceive and benefit from training equally. Higher education institutions employ professionally diverse workforces spanning academic staff engaged in teaching and research, and non-teaching staff responsible for administrative, technical, and support functions. These categories differ fundamentally in professional identity, career structures, performance metrics, and daily work activities (Whitchurch, 2008). Whether such categorical differences translate into differential training returns, distinct patterns of association between training exposure and performance perceptions, constitutes a theoretically significant and practically consequential question that existing scholarship has inadequately addressed.

These categories differ fundamentally in professional identity formation, career structure trajectories, performance evaluation metrics, daily work activities, and disciplinary socialization processes (Becher and Trowler, 2001; Henkel, 2005). Whether such categorical differences translate into differential training returns,

distinct patterns of association between training exposure and performance perceptions, constitutes a theoretically significant and practically consequential question that existing scholarship has inadequately addressed.

Human Capital Theory, the dominant framework guiding organizational training investment, assumes that education and skill development enhance individual productive capacity, generating returns for both employees through enhanced earnings and career advancement, and organizations through improved performance outcomes (Becker, 1964; Schultz, 1961). However, contemporary scholarship increasingly recognizes that human capital returns are neither automatic nor uniform but contingent on alignment between training content and job requirements, opportunities for skill application, organizational systems reinforcing new behaviours, and individual characteristics shaping learning transfer (Blume et al., 2010; Grossman and Salas, 2011). Professional category represents a potentially significant but underexplored contingency that may shape how employees perceive, process, and benefit from organizational training investments.

This theoretical gap is particularly pronounced in African higher education contexts. While Western scholarship has extensively theorized training effectiveness mechanisms, the applicability of these frameworks to resource-constrained institutions serving different stakeholder configurations and operating within distinct cultural contexts remains uncertain (Teferra and Altbach, 2021; Materu, 2007). African universities face distinctive challenges including limited training budgets constraining programme scope and frequency, heavy workloads limiting transfer opportunities, weak institutional linkages between professional development and career advancement, colonial legacies shaping administrative structures, and dual mandates balancing academic excellence with community development engagement (Cloete et al., 2015; Mohamedbhai, 2014). Understanding how these contextual factors interact with staff category to shape training outcomes requires empirical investigation grounded in African institutional realities rather than uncritical application of Western-derived models.

This study addresses these theoretical and contextual gaps by examining staff category variations in training-performance associations at the University for Development Studies (UDS) in Ghana. UDS provides a compelling research context for investigating differential training returns: as Ghana's first developmental university established in 1992 with explicit mandates integrating academic excellence with community engagement and rural development, it requires both teaching and non-teaching staff to develop distinctive competencies that may not align with generic training approaches derived from conventional university models (Kaburise, 2003). The institution's tri-semester system, community-based programming requirements, and multi-campus structure create unique operational demands shaping professional development needs across staff categories.

The study addresses two interrelated research questions. First, what is the nature of the association between training perceptions and employee performance across different staff categories at UDS? This question examines whether staff category is associated with differential patterns of training-performance perceptions. Second, do teaching and non-teaching staff demonstrate significantly different patterns of training-performance association, and if so, along which specific performance dimensions? This question investigates the specific domains where staff category variations emerge, providing insight into mechanisms underlying differential returns.

By investigating these questions, this study makes three contributions to scholarship and practice. First, it extends Human Capital Theory by identifying staff category as a previously unexamined boundary condition moderating training-performance relationships. Second, it contributes to theorizing training effectiveness in African higher education contexts, responding to calls for scholarship grounded in institutional realities beyond Western settings. Third, it provides evidence-based guidance for university human resource development practice, informing differentiated training strategies responsive to professional category differences.

II. Theoretical Framework And Literature Review

Human Capital Theory and the Logic of Training Investment

Human Capital Theory provides the foundational theoretical logic for organizational training investment. Originating with the seminal work of Schultz (1961) and formalized by Becker (1964), the theory reconceptualized education and training as investment in human productive capacity rather than mere consumption. Just as physical capital investment enhances organizational productive capacity through machinery and infrastructure, human capital investment enhances productive capacity through knowledge, skills, and abilities embedded in employees. Training represents deliberate organizational investment in employee human capital, generating expected returns through enhanced individual performance that aggregates to organizational effectiveness.

Becker's (1964) influential distinction between general and specific human capital carries implications for training investment decisions. General human capital encompasses transferable knowledge and skills applicable across employers, while specific human capital comprises capabilities valuable primarily within a particular organizational context. Organizations face appropriability concerns with general training investment,

employees may capture returns by seeking employment elsewhere, while specific training binds employees more closely to the investing organization. Higher education training often blends both forms: pedagogical skills transfer across institutions while knowledge of specific institutional systems and procedures constitutes firm-specific capital.

Contemporary applications of Human Capital Theory recognize that training returns are neither automatic nor uniform across individuals and contexts. The training transfer literature demonstrates that learning acquired in development programmes frequently fails to translate into workplace performance improvement (Baldwin and Ford, 1988; Blume et al., 2010). Grossman and Salas (2011) identify trainee characteristics, training design, and work environment as primary determinants of transfer success. Trainee characteristics include cognitive ability, motivation, and self-efficacy; training design encompasses content relevance, practice opportunities, and feedback mechanisms; work environment factors include supervisor support, peer support, and opportunity to perform. These moderating variables suggest that human capital returns depend on alignment between training programmes and individual and contextual characteristics.

Within higher education, Human Capital Theory implies that institutional training investment should enhance staff capabilities, improving teaching quality and research productivity for academic staff while boosting administrative efficiency and service quality for non-teaching personnel. However, the theory's conventional formulation inadequately addresses whether professional category characteristics shape the magnitude or pattern of training returns. Teaching and non-teaching staff differ along multiple dimensions that may influence how training translates into performance perceptions: professional identity, career structure, performance metrics, work activities, and socialization processes. These differences suggest that staff category may constitute a boundary condition qualifying human capital prediction about training effectiveness.

Social Exchange Theory and Perceived Organizational Support

Social Exchange Theory complements Human Capital Theory by explaining the psychological mechanisms through which training affects employee outcomes beyond direct capability enhancement. Blau's (1964) foundational work established that social relationships operate through reciprocal exchange: when one party provides resources or benefits, the receiving party experiences obligation to reciprocate through behaviours beneficial to the provider. Unlike economic exchange governed by explicit contracts specifying obligations, social exchange involves diffuse obligations emerging from relationship dynamics, generating stronger relational bonds and more extensive reciprocity.

Organizational investment in employee training exemplifies social exchange dynamics. Training represents tangible manifestation of organizational support—visible investment in employee development that signals organizational commitment to staff welfare and career growth (Wayne et al., 1997). Employees interpret training provision as evidence that the organization values their contributions and cares about their professional development, triggering reciprocity norms that motivate enhanced effort, commitment, and performance. This mechanism operates independently of direct capability enhancement: even training that produces minimal skill acquisition may generate positive performance effects through social exchange dynamics.

The construct of Perceived Organizational Support (POS) operationalizes this exchange dynamic. Eisenberger et al. (1986) define POS as employee beliefs concerning the extent to which the organization values their contributions and cares about their well-being. Training participation enhances POS by demonstrating organizational investment in employee development. Employees experiencing high POS exhibit stronger reciprocity responses including increased job satisfaction, organizational commitment, organizational citizenship behaviour, and discretionary performance effort (Rhoades and Eisenberger, 2002). The social exchange mechanism explains why training effects extend beyond direct capability enhancement to encompass broader attitudinal and behavioural outcomes.

Critically, POS formation depends on employee attributions about organizational motives and intentions—interpretive processes potentially shaped by professional category. Teaching staff may evaluate training through academic quality and disciplinary relevance lenses, assessing whether programmes address pedagogical challenges and align with scholarly career advancement criteria. Non-teaching staff may apply administrative effectiveness and career progression criteria, evaluating whether training enhances job competencies and supports advancement within administrative hierarchies. These differential interpretive frameworks suggest that identical training programmes may generate different POS responses across staff categories, moderating the social exchange mechanism through which training affects performance perceptions.

Professional Identity and Staff Categories in Higher Education

Professional identity theory provides additional conceptual resources for understanding why staff category may moderate training-performance relationships. Professional identity encompasses the values, beliefs, motives, and experiences through which individuals define themselves in professional roles (Ibarra, 1999; Pratt et al., 2006). In higher education, teaching and non-teaching staff develop distinctive professional identities shaped by different socialization processes, reference groups, career structures, and performance expectations.

Academic staff professional identity centres on disciplinary expertise, scholarly contribution, and pedagogical practice (Becher and Trowler, 2001; Henkel, 2005). Faculty members are socialized through doctoral training into disciplinary communities that provide reference standards, validate expertise, and confer professional status. Academic identity formation emphasizes autonomy, intellectual contribution, and peer recognition rather than organizational loyalty. Career advancement depends primarily on research productivity evaluated through disciplinary rather than institutional criteria—publications, citations, and external reputation carry greater weight than institutional service or administrative competence.

Non-teaching staff professional identities reflect different formation processes and reference points. Administrative, technical, and support personnel are socialized into institutional rather than disciplinary communities, developing organizational identification and expertise in university-specific systems and procedures (Whitchurch, 2008). Career advancement occurs within institutional hierarchies based on administrative performance, competency demonstration, and organizational contribution rather than external disciplinary recognition. These identity differences suggest that teaching and non-teaching staff may evaluate training through fundamentally different interpretive frameworks, potentially generating differential patterns of training-performance association.

Whitchurch's (2008) concept of 'third space' professionals highlights increasing boundary-crossing between academic and administrative domains, with some staff occupying hybrid roles combining elements of both categories. However, the fundamental distinction between teaching-focused and administrative-focused roles persists in most higher education institutions, including Ghanaian universities where traditional categorical boundaries remain institutionally salient. Understanding how these categorical differences shape training perceptions carries practical significance for human resource development strategies.

Training Effectiveness in Higher Education Contexts

Scholarship on training effectiveness in higher education has predominantly focused on faculty development programmes addressing teaching quality improvement. Systematic reviews demonstrate that well-designed pedagogical development programmes can enhance teaching practices, student learning outcomes, and instructor confidence (Steinert et al., 2006; Stes et al., 2010). However, effect sizes vary substantially across studies, and transfer to classroom practice remains inconsistent. Gibbs and Coffey (2004) found that faculty development programme participation improved teaching skills and student ratings, but effects depended on programme duration, content focus, and institutional support for transfer.

Research on non-teaching staff training in higher education is comparatively limited, reflecting scholarly attention concentrated on academic functions. Available evidence suggests that administrative training programmes can enhance competencies in areas including financial management, human resources, information technology, and student services (Szekeres, 2004). However, systematic investigation of training-performance relationships for non-teaching staff remains underdeveloped, and comparative studies examining training effectiveness across staff categories are virtually absent from the literature.

The African higher education context introduces additional considerations shaping training effectiveness. Resource constraints limit training programme scope, duration, and frequency compared to well-resourced Western institutions (Materu, 2007). Heavy workloads compress time available for training participation and subsequent transfer activities. Weak linkages between professional development and career advancement may undermine motivation for training engagement. Colonial administrative legacies have shaped institutional structures in ways that may privilege Western management models poorly aligned with African cultural contexts (Teferra and Altbach, 2021). These contextual factors may interact with staff category to produce distinctive patterns of training-performance association requiring empirical investigation.

Hypotheses Development

The theoretical frameworks reviewed generate competing predictions about staff category effects on training-performance associations. Human Capital Theory's capability enhancement mechanism predicts uniform returns if training programmes effectively develop job-relevant competencies across staff categories. However, if training-job alignment differs between categories—for example, if generic training programmes better address administrative than academic role requirements—differential returns would emerge favouring the better-aligned category.

Social Exchange Theory's reciprocity mechanism predicts that training effects depend on POS formation, which may vary by staff category. If non-teaching staff experience stronger POS from training because alternative recognition mechanisms are limited—academic reward systems emphasizing research metrics inaccessible to administrative personnel—they may exhibit stronger reciprocity responses. Conversely, if teaching staff value training less because it competes with research time or misaligns with academic advancement criteria, attenuated associations would emerge.

Professional identity perspectives suggest that categorical differences in interpretive frameworks may generate differential training evaluations. Teaching staff applying disciplinary relevance criteria may perceive generic training as less valuable than non-teaching staff applying administrative effectiveness criteria. Based on these theoretical considerations and the limited empirical evidence suggesting administrative training programmes may better align with job requirements than generic faculty development offerings, we hypothesize:

H₁: *Staff category is significantly associated with training-performance perceptions, with non-teaching staff demonstrating stronger positive associations than teaching staff.*
H₂: *Staff category effects will be more pronounced for performance dimensions directly linked to capability enhancement (skill development, efficiency improvement) than for attitudinal outcomes (job satisfaction, retention intentions).*
H₃: *Staff category effects will be stronger for career advancement perceptions given differential alignment between training and career structures across categories.*

III. Methodology

Research Design and Philosophical Orientation

This study employed a cross-sectional survey design grounded in post-positivist philosophical assumptions. Post-positivism acknowledges that while objective reality exists independently of human perception, our understanding of it remains probabilistic and subject to revision (Creswell and Creswell, 2018). This orientation is appropriate for examining associations between training perceptions and performance outcomes while recognizing that self-reported perceptions provide imperfect but meaningful indicators of underlying constructs.

The cross-sectional design enables efficient examination of associations across staff categories at a single time point, though it precludes causal inference about training effects on performance. The design is well-suited for the study's exploratory purpose of identifying whether staff category variations exist in training-performance associations, providing foundation for subsequent longitudinal or experimental research investigating causal mechanisms.

Research Context

The study was conducted at the University for Development Studies (UDS), Ghana. Established in 1992 as Ghana's third public university, UDS was founded with explicit developmental mandates distinguishing it from traditional academic institutions. The university's mission emphasizes blending academic work with community engagement, requiring both teaching and non-teaching staff to develop competencies supporting this dual orientation.

Several institutional characteristics make UDS particularly suitable for investigating staff category effects on training perceptions. First, its developmental orientation creates distinctive training needs potentially misaligned with generic programme offerings. Second, its multi-campus structure spanning northern Ghana introduces operational complexities affecting training delivery and participation. Third, its relatively young institutional age (compared to Ghana's older universities) means training systems are still evolving, potentially revealing category-based variations masked in more institutionalized settings. Fourth, its location in Ghana's less-resourced northern region introduces resource constraints shaping training investment patterns.

Population and Sampling

The target population comprised all teaching and non-teaching staff within the Faculty of Educational Development at UDS, totaling 391 employees at the time of data collection. This population includes academic staff at various ranks (lecturers, senior lecturers, associate professors, professors) and non-teaching staff across administrative, technical, and support functions. Sample size was determined using Yamane's (1967) formula for finite populations: $n = N / (1 + N(e^2))$, where N represents population size and e represents acceptable margin of error. With N = 391 and e = 0.05 (95% confidence level), the required sample size was calculated as 198 respondents. This sample size provides adequate statistical power for chi-square tests of independence while ensuring manageable data collection logistics.

Stratified random sampling ensured adequate representation across staff categories. The population was first stratified by staff category (teaching versus non-teaching), then random selection was conducted within each stratum proportionate to category representation in the population. The final sample comprised 134 non-teaching staff (67.7%) and 64 teaching staff (32.3%), reflecting the actual distribution of staff categories within the faculty.

Instrumentation and Measurement

Data were collected through structured questionnaires administered to sampled staff members. The questionnaire comprised two main sections: demographic characteristics including staff category, tenure,

educational qualifications, and position level; and training-performance perceptions measured through ten items addressing different dimensions of training effectiveness.

The training-performance perception scale was developed through systematic item generation informed by training effectiveness literature (Kirkpatrick and Kirkpatrick, 2016; Noe et al., 2019). Items addressed multiple dimensions of training effectiveness including direct capability enhancement (skill improvement, efficiency gains), performance outcomes (job performance improvement, goal attainment support), career implications (advancement opportunities, professional growth), and attitudinal responses (job satisfaction, confidence, retention intentions). Respondents indicated agreement with each statement on 5-point Likert scales anchored from 1 (strongly disagree) to 5 (strongly agree).

The ten items measured the following constructs: (1) Training improves my job performance; (2) Training enhances my skills and competencies; (3) Training increases my work efficiency; (4) Training promotes my career advancement; (5) Training builds my professional confidence; (6) Training supports my professional growth; (7) Training is relevant to my job requirements; (8) Training helps me achieve work goals; (9) Training increases my job satisfaction; and (10) Training influences my intention to remain with the university. For analysis, responses were dichotomized into agreement (strongly agree/agree) versus non-agreement (neutral/disagree/strongly disagree) categories.

Validity and Reliability

Content validity was established through expert review and pilot testing. Three subject matter experts with research expertise in human resource development and higher education management reviewed the instrument for content coverage, item clarity, and cultural appropriateness. Based on expert feedback, items were refined for clarity and contextual relevance to the Ghanaian higher education setting. Subsequently, the instrument was pilot tested with 20 staff members (10 teaching, 10 non-teaching) not included in the main study sample. Pilot testing assessed item comprehension, response consistency, and administration logistics, leading to minor wording adjustments.

Internal consistency reliability was assessed using Cronbach's alpha coefficient. The ten-item training-performance perception scale demonstrated acceptable reliability ($\alpha = 0.87$), exceeding the 0.70 threshold conventionally recommended for research instruments (Nunnally and Bernstein, 1994). Item-total correlations ranged from 0.54 to 0.78, indicating that all items contributed meaningfully to the scale while measuring a coherent underlying construct.

Face validity was assessed through pilot participant feedback regarding whether items appeared to measure intended constructs. Participants confirmed that items addressed recognizable dimensions of training effectiveness relevant to their work experiences. Construct validity evidence was limited by the cross-sectional design; convergent and discriminant validity assessment would require additional measures beyond the study scope.

Data Collection Procedures

Data collection occurred over a four-week period following institutional ethics approval. Sampled staff members were contacted through official university email addresses explaining the study purpose, voluntary participation, and confidentiality protections. Questionnaires were distributed through a combination of online administration (using institutional survey platform) and paper-based distribution for staff with limited internet access.

Of 250 questionnaires distributed to account for potential non-response, 213 were returned (85.2% response rate). After excluding 15 responses with substantial missing data (more than 20% of items incomplete), 198 valid responses remained for analysis. The high response rate suggests adequate representativeness, though non-response bias cannot be definitively ruled out.

Analytical Approach

Data analysis employed chi-square tests of independence to examine associations between staff category and training-performance perceptions. Chi-square tests assess whether observed frequencies in contingency tables differ significantly from frequencies expected under the null hypothesis of independence between categorical variables. This analytical approach is appropriate given the categorical nature of both the independent variable (staff category) and the dependent variables (dichotomized agreement/non-agreement responses).

For each training-performance item, a 2×2 contingency table was constructed crossing staff category (teaching versus non-teaching) with agreement status (agree versus non-agree). Chi-square statistics were calculated using the formula $\chi^2 = \Sigma[(O-E)^2/E]$, where O represents observed frequencies and E represents expected frequencies under independence. Statistical significance was evaluated at $\alpha = .05$.

Effect sizes were calculated using Cramér's V coefficient, which adjusts chi-square for sample size and table dimensions: $V = \sqrt{(\chi^2/n(k-1))}$, where n is sample size and k is the minimum of rows or columns. Cramér's V

ranges from 0 to 1, with values around .10 indicating small effects, .30 indicating medium effects, and .50 indicating large effects (Cohen, 1988). Effect size assessment enables evaluation of practical significance beyond statistical significance.

Common Method Bias Considerations

Common method variance (CMV) represents a potential limitation in studies relying on self-reported measures from single sources (Podsakoff et al., 2003). When independent and dependent variables are obtained from the same respondents using the same method at the same time, spurious relationships may emerge from method factors rather than substantive relationships between constructs.

Several procedural remedies were implemented to mitigate CMV concerns. First, respondent anonymity was assured to reduce social desirability bias. Second, item ordering mixed training perception items with other questionnaire content to reduce hypothesis guessing. Third, scale anchors and formats were varied where possible to reduce response pattern carryover. Fourth, clear instructions emphasized that there were no right or wrong answers to reduce evaluation apprehension.

Post-hoc statistical assessment of CMV employed Harman's single-factor test. Exploratory factor analysis of all items revealed that the first unrotated factor accounted for 34.2% of total variance—below the 50% threshold suggesting problematic common method effects. While Harman's test has limitations (Podsakoff et al., 2003), results provide preliminary evidence that CMV does not fully account for observed relationships.

Ethical Considerations

Informed consent was obtained from all participants, who were assured that participation was voluntary with no consequences for declining. Respondent anonymity was maintained through numeric coding with no identifying information collected. Data were stored securely with access restricted to research team members.

IV. Results

Sample Characteristics

The final sample comprised 198 staff members, including 134 non-teaching staff (67.7%) and 64 teaching staff (32.3%). This distribution reflects the actual staffing composition within the study context, where administrative and support personnel outnumber academic staff. Among teaching staff, ranks included lecturers (45.3%), senior lecturers (32.8%), and associate professors/professors (21.9%). Non-teaching staff spanned administrative officers (38.1%), technical staff (28.4%), and support personnel (33.5%).

Educational qualifications varied by staff category. Among teaching staff, 78.1% held doctoral degrees and 21.9% held master's degrees—reflecting academic appointment requirements. Among non-teaching staff, 12.7% held doctoral degrees, 45.5% held master's degrees, 31.3% held bachelor's degrees, and 10.5% held sub-degree qualifications. Organizational tenure averaged 8.4 years (SD = 5.2) for teaching staff and 11.2 years (SD = 6.8) for non-teaching staff, reflecting different career entry patterns and turnover rates.

Descriptive Statistics for Training Perception Items

Overall, respondents demonstrated positive perceptions of training effectiveness, with agreement rates exceeding 70% for most items. However, substantial variation emerged across items and staff categories. Table 1 presents agreement frequencies by staff category for all ten training-performance perception items.

Table 1: Training-Performance Perception Frequencies by Staff Category

Training Perception Item	Non-Teaching (%)	Teaching (%)	χ^2	p	Cramér's V
Training improves job performance	76.5	23.5	10.61	.001**	.23
Training enhances skills/competencies	77.0	23.0	10.09	<.001***	.23
Training increases work efficiency	75.1	24.9	10.05	.021*	.23
Training promotes career advancement	76.6	23.4	10.41	.001**	.23
Training builds professional confidence	75.5	24.5	10.41	.023*	.23
Training supports professional growth	76.0	24.0	10.53	.021*	.23
Training is relevant to job requirements	69.3	30.7	1.39	.237	.08
Training helps achieve work goals	70.1	29.9	1.74	.186	.09
Training increases job satisfaction	72.9	27.1	2.14	.143	.10
Training influences retention intention	73.7	26.3	0.21	.644	.03

*Note: *p < .05, **p < .01, ***p < .001. Percentages represent proportion of agreeing respondents within each category.*

Hypothesis Testing

Hypothesis 1 predicted that staff category would be significantly associated with training-performance perceptions, with non-teaching staff demonstrating stronger positive associations. Results provide substantial support for this hypothesis. Six of ten items showed statistically significant associations between staff category and training perceptions, with non-teaching staff consistently demonstrating higher agreement rates than teaching staff among those expressing positive perceptions.

For the item assessing whether training improves job performance, non-teaching staff comprised 76.5% of agreeing respondents compared to 23.5% for teaching staff ($\chi^2 = 10.61$, $p = .001$). Similar patterns emerged for training enhancing skills and competencies (77.0% vs. 23.0%, $\chi^2 = 10.09$, $p < .001$), increasing work efficiency (75.1% vs. 24.9%, $\chi^2 = 10.05$, $p = .021$), promoting career advancement (76.6% vs. 23.4%, $\chi^2 = 10.41$, $p = .001$), building professional confidence (75.5% vs. 24.5%, $\chi^2 = 10.41$, $p = .023$), and supporting professional growth (76.0% vs. 24.0%, $\chi^2 = 10.53$, $p = .021$). Effect sizes (Cramér's V = .23 for all significant associations) indicate medium practical significance.

Hypothesis 2 predicted that staff category effects would be more pronounced for capability enhancement dimensions than for attitudinal outcomes. Results partially support this hypothesis. Among capability-focused items (performance improvement, skill enhancement, efficiency gains), all three showed significant staff category associations. Among attitudinal items (job satisfaction, retention intentions), neither showed significant associations. This pattern suggests that staff category primarily moderates perceptions of training's direct capability benefits rather than its effects on work attitudes.

Hypothesis 3 predicted stronger staff category effects for career advancement perceptions. Results support this hypothesis. The career advancement item showed one of the strongest associations ($\chi^2 = 10.41$, $p = .001$), with non-teaching staff comprising 76.6% of agreeing respondents. Related items addressing professional growth and confidence building also showed significant associations, suggesting that staff category substantially moderates perceptions of training's career-related benefits.

Non-Significant Associations

Four items showed non-significant associations between staff category and training perceptions: training relevance to job requirements ($\chi^2 = 1.39$, $p = .237$), training helping achieve work goals ($\chi^2 = 1.74$, $p = .186$), training increasing job satisfaction ($\chi^2 = 2.14$, $p = .143$), and training influencing retention intentions ($\chi^2 = 0.21$, $p = .644$). Effect sizes for these items were small (Cramér's V = .03 to .10).

The non-significant association for training relevance is particularly noteworthy. Both staff categories showed similar distributions of agreement regarding whether training addresses job requirements, suggesting shared recognition of training content relevance. Similarly, the absence of staff category effects on retention intentions suggests that training's influence on organizational attachment operates similarly across professional categories. These null findings provide boundary conditions for staff category moderation effects, indicating that differential returns emerge for capability and career dimensions rather than relevance assessments or retention attitudes.

Summary of Findings

Table 2 summarizes hypothesis testing results. Overall, the pattern of findings supports the theoretical proposition that staff category constitutes a boundary condition moderating training-performance association. Non-teaching staff demonstrate consistently stronger positive associations between training and performance perceptions, particularly for capability enhancement and career advancement dimensions. Staff category effects are attenuated for training relevance assessments and attitudinal outcomes, suggesting domain-specific rather than global moderation effects.

Table 2: Summary of Hypothesis Testing Results

Hypothesis	Prediction	Result	Support
H1	Staff category associated with training perceptions; non-teaching > teaching	6 of 10 items significant; non-teaching staff showed stronger associations across all significant dimensions	Supported
H2	Stronger effects for capability dimensions than attitudinal outcomes	All capability items significant (3/3); no attitudinal items significant (0/2)	Supported
H3	Strong effects for career advancement perceptions	Career advancement item highly significant ($p = .001$); related items (growth, confidence) also significant	Supported

V. Discussion

Staff Category as a Boundary Condition for Human Capital Theory

The findings demonstrate that staff category significantly moderates training-performance associations in higher education settings. Non-teaching staff showed consistently stronger positive associations between training and performance outcomes across six dimensions, while teaching staff demonstrated attenuated associations despite similar training exposure and shared recognition of training relevance. This differential pattern carries important implications for Human Capital Theory and its application to diverse professional contexts.

Human Capital Theory's conventional formulation assumes that training investment generates capability returns through knowledge and skill development, enhancing individual productive capacity (Becker, 1964). The theory implicitly treats human capital as a homogeneous construct—investment in employee development yields proportionate returns regardless of professional category or role characteristics. Our findings challenge this undifferentiated assumption by demonstrating that training returns vary systematically with professional category. Staff category operates as a boundary condition qualifying human capital prediction: the relationship between training investment and perceived performance outcomes depends on the professional category of training recipients.

This finding extends recent scholarship identifying contingencies that moderate training effectiveness (Blume et al., 2010; Grossman and Salas, 2011). While prior research has identified trainee characteristics (motivation, self-efficacy, cognitive ability), training design features, and work environment factors as moderators, professional category has received limited attention. Our results suggest that categorical differences in professional identity, career structure, and performance evaluation criteria create systematic variations in how employees perceive, process, and benefit from training investments. Human Capital Theory should be refined to incorporate professional category as a contingency shaping training-performance relationship.

The pattern of significant and non-significant associations provides insight into mechanisms underlying differential returns. Staff category effects emerged for capability enhancement items (performance improvement, skill development, efficiency gains) and career advancement items (promotion, growth, confidence), but not for training relevance assessments or attitudinal outcomes (satisfaction, retention). This domain-specific pattern suggests that differential returns operate through capability and career mechanisms rather than generalized positive affect. Both categories recognize training as relevant and valuable—evidenced by non-significant relevance associations—but differ in perceptions of capability and career benefits.

Explaining Differential Returns: Training-Role Alignment and Professional Identity

Why do non-teaching staff demonstrate stronger training-performance associations? Two complementary explanations emerge from our theoretical framework. First, training-role alignment appears stronger for non-teaching staff. Contemporary university administration has professionalized substantially, generating specialized training programmes addressing administrative competencies including financial management, human resources, information systems, student services, and quality assurance (Szekeres, 2004). These programmes directly address job requirements and performance criteria for non-teaching personnel, facilitating clear connections between training content and work outcomes.

Teaching staff, by contrast, often receive generic pedagogical training that may inadequately address discipline-specific instructional challenges. Effective teaching in chemistry differs substantially from effective teaching in philosophy—disciplinary knowledge structures, student backgrounds, and appropriate pedagogical approaches vary across fields (Becher and Trowler, 2001). Generic teaching workshops addressing presentation skills or assessment design may generate limited perceived benefits for faculty members facing discipline-specific pedagogical challenges. Moreover, research-focused career advancement criteria may devalue teaching development relative to publication productivity, reducing motivation for engagement with pedagogical training.

Second, professional identity differences shape training evaluation criteria. Non-teaching staff develop organizational identification through institutional rather than disciplinary socialization (Whitchurch, 2008). Training participation represents visible institutional support for career development within organizational hierarchies—a particularly meaningful signal given limited alternative recognition mechanisms for administrative personnel. Teaching staff, conversely, derive professional identity from disciplinary communities that provide external reference standards for expertise validation. Institutional training may carry less identity significance when disciplinary recognition constitutes the primary source of professional status.

Social Exchange Dynamics and Career Advancement

Non-teaching staff demonstrated particularly strong associations between training and career advancement indicators (76.6% vs. 23.4% agreement). Social Exchange Theory illuminates this pattern through Perceived Organizational Support (POS) mechanisms (Eisenberger et al., 1986). Training participation may generate stronger POS for non-teaching staff because alternative recognition mechanisms are limited compared to teaching staff.

Academic reward systems typically emphasize research output—publications, citations, grants, and external reputation—as primary advancement criteria. These metrics are largely inaccessible to non-teaching personnel regardless of administrative performance excellence. Training participation may therefore constitute particularly meaningful organizational recognition for non-teaching staff, signaling institutional investment in their development and career progression. Stronger POS generates stronger reciprocity responses, manifesting as enhanced perceptions that training benefits performance and advancement.

Teaching staff experience different social exchange dynamics. Training competes with research time for academics facing publish-or-perish pressures. If training participation is perceived as diverting effort from career-advancing research activities, the exchange calculation shifts: training represents cost rather than benefit from a career advancement perspective. Even high-quality pedagogical development may generate limited POS if academic reward systems prioritize research metrics over teaching excellence. These structural factors may account for attenuated training-career advancement associations among teaching staff.

Contextual Considerations: Training Effectiveness in African Higher Education

The study context introduces considerations shaping interpretation and generalizability. African higher education institutions face resource constraints limiting training programme scope and sophistication (Materu, 2007). Training budgets are typically modest relative to institutional needs, requiring prioritization that may favour generic programmes over specialized offerings addressing diverse staff requirements. Under resource constraints, administrative training addressing efficiency improvements may receive priority over pedagogical development with less direct operational impact.

The developmental university model exemplified by UDS creates distinctive training requirements. Staff members are expected to integrate academic work with community engagement, requiring competencies beyond conventional university roles. Non-teaching staff supporting community-based programmes may find institutional training more directly relevant to their distinctive functions than teaching staff whose pedagogical challenges resemble those in traditional universities. These contextual factors may amplify staff category differences observed in the study.

Colonial legacies have shaped administrative structures in African universities, introducing Western management models that may align more closely with administrative professionalization than with indigenous academic traditions (Teferra and Altbach, 2021). Training programmes derived from Western management frameworks may generate stronger resonance with non-teaching staff socialized into internationalized administrative practices than with teaching staff whose academic traditions reflect more complex hybridization of Western and indigenous knowledge systems.

Practical Implications for Higher Education Human Resource Development

These findings carry substantial practical implications for human resource development in higher education institutions. The differential returns pattern fundamentally challenges one-size-fits-all training approaches that deploy identical programmes across staff categories. If training generates stronger perceived benefits for non-teaching than teaching staff, differentiated strategies are required to maximize institutional returns from training investment.

Several actionable recommendations emerge from our findings. First, universities should implement differentiated training design addressing distinctive professional requirements of teaching and non-teaching staff. For teaching staff, this means moving beyond generic pedagogical workshops toward discipline-specific development addressing subject matter pedagogical content knowledge. Effective physics teaching requires different pedagogical competencies than effective history teaching; training programmes should reflect these disciplinary distinctions.

Second, career system alignment should strengthen training-promotion linkages for teaching staff. If academic advancement criteria emphasize research over teaching, pedagogical development will remain undervalued regardless of programme quality. Integrating teaching effectiveness evidence into promotion decisions creates structural incentives for engaging with pedagogical development. This systemic intervention addresses root causes of differential training engagement rather than symptoms.

Third, training strategies should integrate with alternative development pathways available to academic personnel. Teaching staff access disciplinary conferences, research workshops, sabbaticals, and scholarly networks that constitute legitimate professional development. Institutional training programmes should complement rather than compete with these disciplinary development opportunities, positioning institutional offerings as addressing competencies not accessible through disciplinary channels.

Fourth, targeted support should address the teaching staff gap. Given evidence that current approaches generate weaker returns for teaching staff, institutions should invest in understanding barriers to effective faculty development. This may involve needs assessment research, programme evaluation studies, and pilot testing alternative delivery modalities. The goal is evidence-based programme design rather than assumption-driven training investment.

VI. Limitations And Future Research Directions

Several limitations qualify interpretation of these findings and suggest directions for future research. First, the cross-sectional design precludes causal inference about training effects on performance. Observed associations between staff category and training perceptions may reflect pre-existing differences in attitudes, experiences, or institutional treatment rather than differential training effectiveness. Longitudinal designs tracking changes in performance perceptions following training participation would strengthen causal claims.

Second, self-reported perceptions constitute imperfect indicators of actual training effectiveness. Employees may misperceive training benefits due to social desirability, attribution biases, or limited self-awareness. Multi-source data incorporating supervisor ratings, objective performance metrics, or observational assessments would provide convergent validity evidence strengthening conclusions. Future research should triangulate perceptual measures with behavioural and outcome indicators.

Third, the single-institution design limits generalizability. UDS represents a distinctive institutional type—developmental university—operating in a specific national context. Whether staff category effects generalize to traditional research universities, private institutions, or higher education systems in other African countries requires empirical investigation. Multi-institution comparative studies would clarify boundary conditions for observed effects.

Fourth, the study did not measure intervening mechanisms that might explain staff category effects. Theoretical arguments invoked training-role alignment, professional identity, and social exchange processes, but these constructs were not directly measured. Future research should incorporate measures of these mediating variables to test proposed mechanisms directly. Path analysis or structural equation modeling could examine complex causal pathways linking staff category to training perceptions through multiple mechanisms.

Fifth, the dichotomization of Likert responses for chi-square analysis reduced measurement precision. Alternative analytical approaches preserving ordinal information—such as ordinal logistic regression or rank-based methods—might reveal nuances obscured by dichotomization. Future research should consider analytical strategies that optimize use of available measurement precision.

Several promising research directions emerge from this study. Investigation of training design features moderating staff category effects would inform programme development. Do discipline-specific programmes attenuate teaching staff differentials? Does training format (workshops, coaching, communities of practice) interact with staff category? Understanding design contingencies would enable evidence-based programme optimization.

Cross-cultural research examining staff category effects in different national and institutional contexts would clarify generalizability. Do differential returns emerge in Western higher education systems with different training traditions and career structures? How do colonial legacies and institutional histories shape category-specific training experiences in diverse African settings? Comparative research would advance theoretical understanding while informing context-appropriate practice.

Longitudinal studies tracking career trajectories following training participation would illuminate long-term consequences of differential returns. If non-teaching staff derive greater benefits from training, do they experience more rapid career advancement? Do differential returns compound over time, amplifying category-based inequalities? Understanding longitudinal dynamics would inform equity-oriented human resource policies.

VII. Conclusion

This study examined staff category variations in training-performance associations at a Ghanaian developmental university, demonstrating that professional category significantly moderates how employees perceive and benefit from institutional training investment. Non-teaching staff showed consistently stronger associations between training and performance outcomes across capability enhancement and career advancement dimensions, while teaching staff demonstrated attenuated associations despite recognizing training's relevance and organizational value. These findings carry important theoretical and practical implications.

Theoretically, the study extends Human Capital Theory by identifying staff category as a previously unexamined boundary condition shaping training-performance relationships. Training returns are not uniform across professional categories but contingent on alignment between training content and job requirements, professional identity dynamics, and career structure characteristics. Human capital formulations should incorporate professional category as a contingency moderating predicted returns from training investment.

Practically, the findings challenge one-size-fits-all training approaches in higher education. Universities should implement differentiated strategies recognizing that teaching and non-teaching staff experience training through different interpretive frameworks and derive different patterns of benefit. For developmental universities operating under resource constraints, these findings suggest prioritizing targeted interventions addressing teaching staff development gaps while maintaining effective administrative training programmes.

The study contributes to growing scholarship on training effectiveness in African higher education, responding to calls for research grounded in institutional realities beyond Western settings. By demonstrating that

staff category constitutes a boundary condition for human capital development, the research advances theoretical understanding while providing evidence-based guidance for human resource practice. Future research should investigate mechanisms underlying differential returns, examine generalizability across institutional types and national contexts, and explore training design features that might attenuate category-based differentials.

References

[1]. Armstrong, M. And Taylor, S. (2023), Armstrong's Handbook Of Human Resource Management Practice, 16th Ed., Kogan Page, London.
[2]. ATD (Association For Talent Development) (2023), State Of The Industry Report, ATD Press, Alexandria, VA.
[3]. Baldwin, T.T. And Ford, J.K. (1988), "Transfer Of Training: A Review And Directions For Future Research", Personnel Psychology, Vol. 41 No. 1, Pp. 63-105.
[4]. Becher, T. And Trowler, P.R. (2001), Academic Tribes And Territories, 2nd Ed., Open University Press, Buckingham.
[5]. Becker, G.S. (1964), Human Capital: A Theoretical And Empirical Analysis, Columbia University Press, New York, NY.
[6]. Blau, P.M. (1964), Exchange And Power In Social Life, Wiley, New York, NY.
[7]. Blume, B.D., Ford, J.K., Baldwin, T.T. And Huang, J.L. (2010), "Transfer Of Training: A Meta-Analytic Review", Journal Of Management, Vol. 36 No. 4, Pp. 1065-1105.
[8]. Cloete, N., Maassen, P. And Bailey, T. (Eds.) (2015), Knowledge Production And Contradictory Functions In African Higher Education, African Minds, Cape Town.
[9]. Cohen, J. (1988), Statistical Power Analysis For The Behavioral Sciences, 2nd Ed., Lawrence Erlbaum, Hillsdale, NJ.
[10]. Creswell, J.W. And Creswell, J.D. (2018), Research Design: Qualitative, Quantitative, And Mixed Methods Approaches, 5th Ed., SAGE Publications, Thousand Oaks, CA.
[11]. Eisenberger, R., Huntington, R., Hutchison, S. And Sowa, D. (1986), "Perceived Organizational Support", Journal Of Applied Psychology, Vol. 71 No. 3, Pp. 500-507.
[12]. Gibbs, G. And Coffey, M. (2004), "The Impact Of Training Of University Teachers On Their Teaching Skills", Active Learning In Higher Education, Vol. 5 No. 1, Pp. 87-100.
[13]. Grossman, R. And Salas, E. (2011), "The Transfer Of Training: What Really Matters", International Journal Of Training And Development, Vol. 15 No. 2, Pp. 103-120.
[14]. Henkel, M. (2005), "Academic Identity And Autonomy In A Changing Policy Environment", Higher Education, Vol. 49 No. 1-2, Pp. 155-176.
[15]. Ibarra, H. (1999), "Provisional Selves: Experimenting With Image And Identity In Professional Adaptation", Administrative Science Quarterly, Vol. 44 No. 4, Pp. 764-791.
[16]. Kaburise, J.B.K. (2003), "New Variations On The African Development University: The UDS Experience With Its Affiliates", Regional Institute For Population Studies, Legon.
[17]. Kirkpatrick, J.D. And Kirkpatrick, W.K. (2016), Kirkpatrick's Four Levels Of Training Evaluation, ATD Press, Alexandria, VA.
[18]. Knight, P.T., Tait, J. And Yorke, M. (2006), "The Professional Learning Of Teachers In Higher Education", Studies In Higher Education, Vol. 31 No. 3, Pp. 319-339.
[19]. Materu, P. (2007), Higher Education Quality Assurance In Sub-Saharan Africa, World Bank Working Paper No. 124, World Bank, Washington, DC.
[20]. Mohamedbhai, G. (2014), "Massification In Higher Education Institutions In Africa: Causes, Consequences And Responses", International Journal Of African Higher Education, Vol. 1 No. 1, Pp. 59-83.
[21]. Nafukho, F.M., Hairston, N. And Brooks, K. (2004), "Human Capital Theory: Implications For Human Resource Development", Human Resource Development International, Vol. 7 No. 4, Pp. 545-551.
[22]. Noe, R.A., Hollenbeck, J.R., Gerhart, B. And Wright, P.M. (2019), Human Resource Management, 11th Ed., Mcgraw-Hill, New York, NY.
[23]. Nunnally, J.C. And Bernstein, I.H. (1994), Psychometric Theory, 3rd Ed., Mcgraw-Hill, New York, NY.
[24]. Podsakoff, P.M., Mackenzie, S.B., Lee, J.Y. And Podsakoff, N.P. (2003), "Common Method Biases In Behavioral Research", Journal Of Applied Psychology, Vol. 88 No. 5, Pp. 879-903.
[25]. Pratt, M.G., Rockmann, K.W. And Kaufmann, J.B. (2006), "Constructing Professional Identity", Academy Of Management Journal, Vol. 49 No. 2, Pp. 235-262.
[26]. Rhoades, L. And Eisenberger, R. (2002), "Perceived Organizational Support: A Review Of The Literature", Journal Of Applied Psychology, Vol. 87 No. 4, Pp. 698-714.
[27]. Schultz, T.W. (1961), "Investment In Human Capital", American Economic Review, Vol. 51 No. 1, Pp. 1-17.
[28]. Steinert, Y., Mann, K., Centeno, A., Dolmans, D., Spencer, J., Gelula, M. And Prideaux, D. (2006), "A Systematic Review Of Faculty Development Initiatives Designed To Improve Teaching Effectiveness In Medical Education", Medical Teacher, Vol. 28 No. 6, Pp. 497-526.
[29]. Stes, A., Min-Leliveld, M., Gijbels, D. And Van Petegem, P. (2010), "The Impact Of Instructional Development In Higher Education", Educational Research Review, Vol. 5 No. 1, Pp. 25-49.
[30]. Szekeres, J. (2004), "The Invisible Workers", Journal Of Higher Education Policy And Management, Vol. 26 No. 1, Pp. 7-22.
[31]. Teferra, D. And Altbach, P.G. (2021), "Trends In African Higher Education Development", In Teferra, D. (Ed.), Flagship Universities In Africa, Springer, Cham, Pp. 25-48.
[32]. Wayne, S.J., Shore, L.M. And Liden, R.C. (1997), "Perceived Organizational Support And Leader-Member Exchange", Academy Of Management Journal, Vol. 40 No. 1, Pp. 82-111.
[33]. Whitchurch, C. (2008), "Shifting Identities And Blurring Boundaries", Higher Education Quarterly, Vol. 62 No. 4, Pp. 377-396.
[34]. Yamane, T. (1967), Statistics: An Introductory Analysis, 2nd Ed., Harper And Row, New York, NY.