



Effect of Training and Development Programs on Employee Retention in Rwamagana District

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Abstract: This study examined the effect of training and development programs on employee retention in Rwamagana District. The study focused on onboarding and induction training, leadership and management development, and professional development and compliance, and assessed their joint predictive effect on employee retention. Expectancy Theory, Human Capital Theory, and Social Exchange Theory guided the study. A descriptive and explanatory quantitative research design was used. The target population comprised 409 employees, from which a sample of 202 respondents was determined using Yamane's formula. Quantitative data were analyzed using frequencies, percentages, means, item-level standard deviations, Pearson correlation, and multiple linear regression. Documentary sources were reviewed to provide institutional and contextual background for the study. The regression model was statistically significant, $F(3, 183) = 5915.848$, $p < 0.001$, and explained 99.0% of the variation in employee retention ($R^2 = 0.990$). Onboarding and induction training ($B = 0.114$, $p = 0.008$), leadership and management development ($B = 0.754$, $p < 0.001$), and professional development and compliance ($B = 0.118$, $p = 0.030$) each had a positive statistically significant coefficient. Because the predictors were exceptionally highly correlated, the relative size of the individual coefficients should be interpreted cautiously. The study concluded that coordinated training and development programs are important for strengthening employee retention in Rwamagana District. It recommends structured onboarding, continuous leadership and management development, sustained professional development and compliance training, and continued evaluation of the three measured training and development dimensions.

Keywords: Training and Development Programs, Onboarding and Induction Training, Leadership and Management Development, Professional Development and Compliance, Employee Retention

How to cite this work (APA):

Nshemire, J. & Odengo, R. (2026). Effect of Training and Development Programs on Employee Retention in Rwamagana District. *Journal of Research Innovation and Implications in Education*, 10(4), 287 – 300. <https://doi.org/10.59765/mkg6d4>

1. Introduction

Employee retention has become a critical concern for organizations worldwide because it contributes to operational continuity, the preservation of institutional knowledge, and organizational performance. High employee turnover imposes high financial and operational costs on organizations through recruitment, selection, onboarding, and training of replacement staff. Consequently, many organizations have adopted strategic human resource management practices to improve employee satisfaction, commitment, and retention. Among these practices, training and

development programs have emerged as important tools for enhancing employee competencies and strengthening employees' attachment to their organizations (Kumari et al., 2022). Research indicates that employees who perceive opportunities for learning and career growth are more likely to remain with their organizations than those who perceive limited development opportunities (Dietz & Zwick, 2020).

In Africa, employee retention remains a major challenge, particularly within public sector institutions that frequently experience shortages of skilled personnel and increasing competition from the private sector. Human Capital Theory suggests that investment in employee

development enhances employee value and organizational performance while increasing commitment to the employer. Studies conducted across various African countries have shown that structured training and development programs positively contribute to employee satisfaction, organizational commitment, and retention (Nzimande, 2025). However, the effectiveness of these programs depends on factors such as the relevance of training, the availability of career progression opportunities, and organizational support following training interventions.

In Rwanda, the Government has emphasized capacity building and human resource development as important components of public sector performance improvement. Through the Ministry of Public Service and Labor (MIFOTRA), public institutions are encouraged to invest in employee training, professional development, and career management initiatives. Previous studies have shown that training opportunities, leadership development programs, and career advancement prospects positively influence employee commitment and reduce turnover intentions among public sector employees (Harorimana, 2023). Nevertheless, retaining skilled employees remains challenging due to increasing opportunities in other sectors and changing workforce expectations.

Rwamagana District, like many public institutions in Rwanda, has invested in various training and development initiatives to improve employee competence, performance, and organizational commitment. These initiatives include onboarding and induction programs, leadership and management development, and professional development opportunities. Despite these efforts, concerns regarding employee retention persist. Understanding the extent to which training and development programs influence employee retention is therefore important for strengthening human resource management practices and improving organizational performance within the District. This study examined the effect of training and development programs on employee retention in Rwamagana District.

Despite the efforts made by local government institutions in Rwanda, including Rwamagana District, to invest in employee training and development, employee retention remains a significant challenge. According to the Rwamagana District Annual Report (2026), six employees who received professional training resigned in 2020, followed by thirteen in 2022. These departures occurred despite continued investment in capacity building, suggesting that the relationship between employee development and retention requires closer empirical examination.

Training and development are recognized strategies for strengthening employee competencies, organizational commitment, and workforce stability (Padma, 2024).

However, previous studies have reported differing results regarding the extent to which training improves employee retention, and many studies have focused on organizational performance rather than employees' decisions to remain with an organization (Monday & Omosomi, 2025).

A further gap is that training and development is often examined as a broad practice without distinguishing the effects of onboarding and induction training, leadership and management development, and professional development and compliance. In addition, limited empirical evidence exists on these relationships within Rwandan decentralized local government institutions, particularly Rwamagana District (Kravariti & Johnston, 2020).

Therefore, this study examined the direct and joint effects of onboarding and induction training, leadership and management development, and professional development and compliance on employee retention in Rwamagana District.

1.1 General Objective

To examine the effect of training and development programs on employee retention in Rwamagana District.

1.2 Specific Objectives

1. To assess the effect of onboarding and induction training on employee retention in Rwamagana District.
2. To assess the effect of leadership and management development on employee retention in Rwamagana District.
3. To assess the effect of professional development and compliance on employee retention in Rwamagana District.
4. To determine the extent to which onboarding and induction training, leadership and management development, and professional development and compliance jointly predict employee retention in the Rwamagana District.

2. Literature Review

This chapter reviews relevant literature on the effect of training and development programs on employee retention.

2.1 Theoretical Review

The theoretical review presents the theories that explain the relationships between training and development programs and employee retention within organizational settings.

2.1.1 Expectancy Theory

Expectancy Theory was developed by Victor Vroom in 1964 in his work *Work and Motivation*. The theory explains that employee motivation is influenced by an individual's expectation that effort will lead to good performance and that good performance will result in desirable outcomes. According to Vroom, motivation is determined by three key components: expectancy, instrumentality, and valence. Expectancy refers to an employee's belief that effort will lead to improved performance; instrumentality refers to the belief that performance will lead to rewards; and valence refers to the value an employee attaches to those rewards (Vroom, 1964).

The theory is important in understanding employee behavior because it explains how employees make decisions regarding effort, performance, and commitment to an organization. Employees are more likely to be motivated when they believe that their efforts will be recognized and rewarded appropriately. Conversely, when employees perceive little connection between effort, performance, and rewards, their motivation and commitment are likely to decline.

In the context of this study, Expectancy Theory helps explain how training and development programs may influence employee retention in the Rwamagana District. Employees who receive onboarding and induction training, leadership and management development opportunities, and professional development programs are likely to perceive that the organization is investing in their growth and future career success. When employees believe that improved performance and skill development will lead to valued outcomes such as promotion opportunities, recognition, career advancement, and professional growth, they are more likely to remain committed to the organization. Therefore, Expectancy Theory provides a useful framework for understanding the relationship between training and development programs and employee retention in the Rwamagana District.

2.1.2 Human Capital Theory

Theodore Schultz and Gary Becker developed Human Capital Theory in the mid-twentieth century, and Becker later formalized it in his book *Human Capital* (1964) (Becker, 1964). The theory argues that employees possess knowledge, skills, competencies, and experience that constitute valuable forms of capital. According to the theory, investments in education, training, health, and professional development enhance employees' productivity and performance, thereby generating benefits for both individuals and organizations (Deming & Silliman, 2024). Human Capital Theory views expenditure on employee development not as a cost but as an investment that yields long-term returns through

improved efficiency, effectiveness, and organizational performance.

The theory is important because it emphasizes the role of employee development in enhancing organizational capacity and competitiveness. Organizations that invest in training and development programs improve employees' knowledge and skills, enabling them to perform their duties more effectively and adapt to changing workplace demands (Sultana, 2022). In the public sector, investment in human capital contributes to improved service delivery, institutional effectiveness, and the successful implementation of organizational objectives.

In the context of this study, Human Capital Theory provides a useful framework for understanding the relationship between training and development programs and employee retention in the Rwamagana District. Through onboarding and induction training, leadership and management development, and professional development and compliance programs, employees acquire valuable skills and competencies that enhance their professional growth and career prospects. When employees perceive that the organization is investing in their development and future success, they are more likely to develop organizational commitment and remain with the institution. Therefore, Human Capital Theory supports the view that investing in employee development improves employee retention and organizational performance.

2.1.3 Social Exchange Theory

Social Exchange Theory (SET) was introduced by George Homans in 1958 and explains social relationships as a process of exchange in which individuals seek to maximize benefits and minimize costs (Homans, 1958). The theory is based on the principle of reciprocity, which suggests that when individuals receive valued benefits from another party, they feel an obligation to reciprocate with positive attitudes and behaviors. In organizational settings, employees are likely to respond positively when they perceive that their organization values their contributions and supports their well-being.

In the context of this study, Social Exchange Theory provides a useful explanation for how training and development programs influence employee retention in the Rwamagana District. When employees receive onboarding and induction training, leadership and management development opportunities, and professional development programs, they may perceive these initiatives as evidence that the organization values and supports their professional growth. This perception encourages employees to reciprocate by increasing their commitment, improving their performance, and strengthening their intention to remain with the organization. Therefore, Social Exchange Theory

supports the argument that investment in employee development contributes positively to employee retention in the Rwamagana District.

2.2 Empirical Review

The empirical review examines findings from previous studies concerning onboarding and induction training, leadership and management development, professional development and compliance, and employee retention.

2.2.1 Effect of Onboarding and Induction Training on Employee Retention

Ibrahim et al. (2022) reviewed existing literature on onboarding training programs and developed a framework to explain how effective onboarding programs influence employee behavior and organizational outcomes. Drawing on Social Exchange Theory, the study proposed that onboarding programs, including employee socialization, induction training, and employee orientation, contribute positively to employee attitudes and reduce negative workplace behaviors. The study further suggested that job satisfaction mediates the relationship between onboarding practices and employee outcomes. The findings emphasized the importance of comprehensive onboarding programs in enhancing employee adjustment, commitment, and retention within organizations.

Another study by Mosquera and Soares (2025) examined the relationship between onboarding and employee turnover intention using the Socialization of Resources Theory. The study focused on three dimensions of onboarding: corporate welcome, managers' welcome, and coworkers' welcome. Data were collected from 114 employees working primarily in private sector organizations in Portugal and analyzed using Structural Equation Modeling with Partial Least Squares. The findings revealed that onboarding positively influences employee well-being and organizational identification. Furthermore, workplace well-being was found to mediate the relationship between onboarding and turnover intention. The study concluded that effective onboarding programs strengthen employees' attachment to the organization and reduce their intention to leave. The model explained 65.4% of the variation in turnover intention. However, the study was conducted in a private sector setting outside Rwanda, creating a contextual gap that the current study seeks to address within the Rwamagana District.

2.2.2 Effect of Leadership and Management Development on Employee Retention

A study by Cerutti et al. (2020) examined the relationship between leadership styles, decision-making styles, and employees' intention to remain in an organization. The study was conducted among employees of private companies in southern Brazil using a survey research

design and a sample of 324 respondents. Data were analyzed using factor analysis, linear regression analysis, and mean difference tests. The findings revealed that transformational leadership, combined with strategic and rational decision-making, had the strongest influence on employees' intention to remain with their organizations. The study concluded that effective leadership practices play a significant role in enhancing employee commitment and retention. However, the study was conducted in private-sector organizations and focused on leadership styles rather than leadership development programs, creating a contextual gap that the current study seeks to address in the Rwamagana District.

A study by Bhakuni (2023) investigated the impact of employee training and development on employee engagement, organizational performance, and workforce stability using a systematic review approach. The study employed a qualitative research design using secondary data and found that training and development initiatives contribute significantly to employee growth, organizational performance, and employee engagement. The findings revealed that 66% of employees demonstrated high levels of engagement, suggesting that development opportunities positively influence employees' commitment to their organizations. The study further indicated that training helps employees manage workplace stress, resolve conflicts effectively, and improve job satisfaction. Although the study highlighted the importance of employee development in fostering engagement and organizational success, it did not specifically examine the influence of leadership and management development on employee retention, thereby creating a knowledge gap that the current study seeks to fill.

2.2.3 Effect of Professional Development and Compliance on Employee Retention

Dogbe et al. (2025) examined the mediating role of employee development in the relationship between talent management and employee retention among small and medium-sized enterprises (SMEs) in Ghana. The study adopted a cross-sectional survey design and collected data from 289 employees using structured questionnaires. Data were analyzed using Structural Equation Modeling (SEM) with AMOS version 23. The findings revealed that talent management has a significant positive effect on employee retention and employee development. Furthermore, employee development was found to positively and significantly influence employee retention and partially mediate the relationship between talent management and employee retention. The study concluded that organizations that invest in employee development are more likely to retain skilled employees. However, the study was conducted within private SMEs in Ghana. It did not specifically examine professional development and compliance within public sector institutions, creating a contextual

gap that the current study seeks to address in the Rwamagana District.

A study by Yuniana and Hanafia (2024) investigated the effect of job training, career development, and compensation on employee retention at PT Seiwa Indonesia using a quantitative research design. Data were collected through observation and questionnaires from a sample of 87 employees selected through simple random sampling. The study employed validity and reliability tests, multiple regression analysis, and t- and F-tests in SPSS. The findings revealed that compensation had a positive and significant effect on employee retention, while job training and career development did not have a significant individual effect on employee retention. However, job training, career development, and compensation jointly had a significant positive influence on employee retention. The study further reported that the independent variables explained 61.5% of the variation in employee retention. Although the study contributes to understanding factors affecting employee retention, it was conducted in a private-sector setting. It did not specifically examine the role of professional development and compliance in public institutions. Therefore, a gap remains regarding how these factors influence employee retention in local government institutions such as the Rwamagana District.

3. Methodology

This chapter presents the methodology used to collect and analyze data on the effect of training and development programs on employee retention in Rwamagana District. It covers the research design, target population, sample size, sampling techniques, data sources, data collection instruments, validity and reliability, data collection procedures, data analysis techniques, limitations, and ethical considerations.

3.1 Research Design

Research design refers to the overall plan that guides the collection, measurement, and analysis of data in a study (Creswell & Creswell, 2023). This study adopted descriptive and explanatory research designs. The descriptive design summarized respondents' characteristics and perceptions regarding training and development programs and employee retention in Rwamagana District.

The explanatory design was used to examine the relationships between onboarding and induction training, leadership and management development, professional development and compliance, and employee retention. The study used a quantitative approach because the empirical analysis was based on structured questionnaire responses and statistical testing.

3.2 Study Population

A population refers to the entire group of individuals, events, or objects that possess characteristics relevant to a study and from which a sample may be drawn (Otzen & Manterola, 2017). The target population comprised 409 employees of Rwamagana District drawn from various departments and administrative units. These employees were relevant because they were directly involved in the implementation, management, or experience of training and development programs within the District.

The inclusion of employees from different departments and organizational levels was intended to provide diverse perspectives regarding training and development programs and employee retention. This approach enhanced the study's representativeness and enabled a broad assessment of the research variables.

3.3 Sampling Design

The target population consisted of 409 employees of Rwamagana District. Because it was not practical to collect data from the entire population within the available time and resources, a representative sample was determined using Yamane's (1967) formula:

Where:

n = Required sample size

N = Population size (409)

e = Margin of error (0.05 at 95% confidence level)

Substituting the values into the formula:

n = 202 respondents (rounded to the nearest whole number)

The calculation produced a sample size of 202.225, which was rounded to 202 respondents. Accordingly, 202 questionnaires were distributed to employees selected from different departments and organizational levels.

The study employed probability sampling. Employees were first grouped into strata based on department or administrative unit, after which simple random sampling was used to select respondents within the strata. This approach was intended to promote broad representation of employee categories in the questionnaire survey.

3.4 Data Collection Instrument

Two data collection instruments were used: a structured questionnaire for the quantitative survey and a

documentary-review guide for contextual and institutional information.

Structured questionnaires were administered to employees of Rwamagana District to collect quantitative data. The questionnaire contained closed-ended demographic questions and Likert-scale items measuring onboarding and induction training, leadership and management development, professional development and compliance, and employee retention. The instrument facilitated coding, quantification, and comparison of responses.

A documentary review was conducted to provide institutional and historical context. Human resource reports, training records, staff-retention reports, annual reports, policy documents, and performance-appraisal records were reviewed. The documentary material supported background interpretation but was not analyzed as a separate qualitative dataset.

3.5 Pilot Study, Validity and Reliability

A pilot study was conducted at Nyarugenge District headquarters in Kigali City using approximately 20 to 22 respondents who possessed characteristics similar to those of the target population but were not included in the final study sample. The pilot participants completed the draft questionnaire to assess the clarity, relevance, and appropriateness of the items.

Following the pilot study, participant feedback was reviewed to identify ambiguous or unclear items, and Cronbach's Alpha was used to assess internal consistency. The pilot exercise informed revisions to the wording and presentation of the questionnaire before the main survey was conducted in Rwamagana District.

Validity refers to the extent to which a research instrument measures what it is intended to measure. To establish content validity, the questionnaire was submitted to experts in research and human resource management. The experts assessed the relevance, clarity, and adequacy of the items in relation to the study objectives and variables.

The Content Validity Index (CVI) was used to assess the content validity of the instrument using the following formula:

$$CVI = \text{Number of items rated as relevant} / \text{Total number of items evaluated}$$

Reliability refers to the extent to which a research instrument consistently measures the variables under investigation and produces stable and dependable results. Reliability was assessed using pilot-test data analyzed in the Statistical Package for the Social Sciences (SPSS).

The internal consistency of the questionnaire items was assessed using Cronbach's Alpha. Reliability coefficients were computed for onboarding and induction training, leadership and management development, professional development and compliance, and employee retention.

A Cronbach's Alpha coefficient of 0.70 or above was treated as acceptable.

3.6 Data Analysis

Questionnaire data were coded, entered, cleaned, and analyzed using the Statistical Package for the Social Sciences (SPSS). Frequencies and percentages summarized respondents' demographic characteristics, while means and item-level standard deviations summarized responses to the Likert-scale items.

Pearson correlation analysis was used to establish the strength and direction of the relationships among the study variables. Multiple linear regression was used to assess the direct coefficients and joint predictive effect of onboarding and induction training, leadership and management development, and professional development and compliance on employee retention.

The following multiple regression model was applied:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y = Employee retention in Rwamagana District

X_1 = Onboarding and induction training

X_2 = Leadership and management development

X_3 = Professional development and compliance

β_0 = Constant (intercept)

$\beta_1, \beta_2, \beta_3$ = Regression coefficients

ε = Error term

The regression model estimated the coefficients of the three training and development dimensions and their joint prediction of employee retention. Statistical significance was tested at the 5% level ($p \leq 0.05$).

3.7 Ethical Considerations

Ethical principles were observed throughout the research process. Informed consent was obtained before data collection, and each respondent was informed about the study's purpose, objectives, expected outcomes, and participant rights. Participation was voluntary, and respondents could withdraw without penalty.

Confidentiality and anonymity were maintained to protect participants' privacy. No names or personal identifiers were reported, and the data were securely stored and used solely for academic purposes.

Research integrity was maintained throughout the study. Data were collected, analyzed, and reported honestly and objectively, without fabrication, falsification, or manipulation.

Permission to conduct the study was obtained from the University of Kigali, Rwamagana District, and other relevant authorities before data collection. These procedures ensured compliance with institutional and academic ethical requirements and protected participants' rights.

This chapter presents, analyzes, and interprets the study's findings on the effects of training and development programs on employee retention in the Rwamagana District.

4.1 Response Rate

The response rate is the proportion of questionnaires completed and returned by the selected respondents. It is an important indicator of the quality and adequacy of survey data because it reflects the level of participation among the target population. A high response rate minimizes non-response bias, enhances the credibility of the findings, and provides a stronger basis for valid conclusions. Table 1 presents the response rate achieved during data collection.

4. Results and Discussions

Table 1: Response Rate

Response Category	Frequency	Percentage (%)
Questionnaires Distributed	202	100.0
Questionnaires Returned	190	94.1
Questionnaires Not Returned	12	5.9
Invalid Questionnaires	3	1.5
Valid Questionnaires Analyzed	187	92.6

Source: Field data (2026).

Table 1 shows that 202 questionnaires were distributed to employees of Rwamagana District. Of these, 190 questionnaires were returned, representing a response rate of 94.1%, while 12 questionnaires (5.9%) were not returned. Among the 190 returned questionnaires, 3 were incomplete or invalid, representing 1.6% of returned questionnaires and 1.5% of all questionnaires distributed. Consequently, 187 valid questionnaires, representing 98.4% of returned questionnaires and 92.6% of all questionnaires distributed, were used for data analysis.

The response rate achieved in this study is considered highly satisfactory for survey research and provides an adequate basis for statistical analysis. A valid response rate of 92.6% exceeds the minimum threshold generally recommended for social science research, thereby reducing the likelihood of non-response bias and enhancing the reliability and representativeness of the findings. Excluding only three invalid questionnaires had a negligible effect on the overall sample size. Therefore, the 187 valid responses provided sufficient data for both descriptive and inferential statistical analyses, allowing the findings to be interpreted with confidence regarding the effect of training and development programs on employee retention in Rwamagana District.

4.2 Inferential Statistics

Finally, inferential statistical analyses are presented. Pearson's Product-Moment Correlation is used to examine the strength and direction of the relationships among the study variables. At the same time, multiple linear regression analysis is employed to determine the individual and combined effects of the training and development dimensions on employee retention in Rwamagana District.

4.2.1 Correlation Analysis

Correlation analysis was conducted to determine the direction and strength of the relationships between the independent variables, namely onboarding and induction training, leadership and management development, and professional development and compliance, and the dependent variable, employee retention. Pearson's Product-Moment Correlation Coefficient (r) was employed because it measures the degree of linear association between variables. Correlation coefficients range from -1 to $+1$, where values closer to $+1$ indicate a strong positive relationship, values closer to -1 indicate a strong negative relationship, and values close to 0 indicate little or no linear relationship.

Table 2: Pearson Correlation Matrix

		Onboarding & Induction	Leadership & Management	Professional Development	Employee Retention
Onboarding Induction	&	1.000	.983	.982	.983
Leadership Management	&	.983	1.000	.989	.994
Professional Development		.982	.989	1.000	.987
Employee Retention		.983	.994	.987	1.000

Table 2 presents the Pearson Product-Moment correlation coefficients among the study variables. The findings reveal very strong positive relationships between all the independent variables and employee retention, indicating that improvements in training and development programs are associated with higher levels of employee retention in Rwamagana District.

Onboarding and induction training exhibited a very strong positive relationship with employee retention ($r = 0.983$). This finding suggests that effective onboarding and induction practices are closely associated with employees' willingness to remain in the organization. Employees who receive structured orientation and induction are more likely to adapt successfully to the work environment and develop stronger organizational commitment.

Leadership and management development recorded the largest bivariate correlation with employee retention ($r = 0.994$). However, all three predictors were also exceptionally highly correlated with one another ($r = 0.982$ to 0.989). This pattern indicates serious multicollinearity, so the apparent ranking of the predictors and the individual regression coefficients should be interpreted cautiously.

Professional development and compliance also demonstrated a very strong positive relationship with employee retention ($r = 0.987$). This result indicates that continuous professional development and compliance training play an important role in strengthening employees' commitment to the organization and encouraging long-term retention.

The analysis further revealed very strong positive relationships among the independent variables

themselves. Onboarding and induction training were strongly correlated with leadership and management development ($r = 0.983$) and with professional development and compliance ($r = 0.982$). Likewise, leadership and management development exhibited a very strong positive relationship with professional development and compliance ($r = 0.989$). These findings suggest that the various dimensions of training and development complement one another in promoting employee development and organizational effectiveness.

Overall, all three dimensions of training and development were positively associated with employee retention. Leadership and management development had the largest bivariate correlation ($r = 0.994$), followed by professional development and compliance ($r = 0.987$) and onboarding and induction training ($r = 0.983$). However, the independent variables were themselves correlated at 0.982 to 0.989 , indicating serious multicollinearity. The results therefore support a strong joint association but do not establish a stable ranking of unique predictor effects.

4.2.2 Regression Analysis

Multiple regression analysis was conducted to determine the extent to which onboarding and induction training, leadership and management development, and professional development and compliance collectively predict employee retention in Rwamagana District. Unlike correlation analysis, which establishes the strength and direction of relationships between variables, multiple regression analysis determines the individual contribution of each independent variable to the dependent variable while controlling for the effects of the other predictors. The results are presented through the model summary, analysis of variance (ANOVA), and regression coefficients.

Table 3: Model Summary

Statistic	Value
R	.995
R Square	.990
Adjusted R Square	.990
Root Mean Square Error	.096

Source: Field data (2026).

Table 3 presents the model summary of the multiple regression analysis. The multiple correlation coefficient ($R = 0.995$) indicates an exceptionally strong positive relationship between the combined independent variables and employee retention. This suggests that onboarding and induction training, leadership and management development, and professional development and compliance collectively have a very strong association with employee retention in the Rwamagana District.

The coefficient of determination ($R^2 = 0.990$) indicates that 99.0% of the variation in employee retention is explained by the three independent variables included in the regression model. This finding demonstrates that the model has excellent explanatory power, with only 1.0% of the variation in employee retention being attributable to factors not included in the study.

The Adjusted R^2 value of 0.990 is identical to the R^2 value, indicating that the model's explanatory power remains stable after adjusting for the number of

predictor variables. This suggests that the model retains very high explanatory power after adjustment for the number of predictors. However, the exceptionally high correlations among the independent variables require the individual regression coefficients to be interpreted cautiously because of possible multicollinearity.

The Root Mean Square Error (RMSE) of 0.096 indicates that the predicted employee retention values deviate only slightly from the observed values. The relatively low RMSE demonstrates that the regression model provides highly accurate predictions of employee retention.

Overall, the model summary indicates that the regression model fitted the observed data very closely. The very high R , R^2 , and Adjusted R^2 values, together with the low RMSE, support a strong joint predictive relationship between the three training and development dimensions and employee retention. Because the predictors were exceptionally highly correlated, the model is more reliable for assessing their combined prediction than for ranking their unique individual effects.

Table 4: ANOVA

Source	Sum of Squares	Degrees of Freedom	Mean Square	F Statistic	Significance
Regression	163.732	3	54.577	5915.848	< .001
Residual	1.688	183	.009		
Total	165.420	186			

Source: Field data (2026).

Table 4 presents the results of the Analysis of Variance (ANOVA) for the multiple regression model. The regression sum of squares was 163.732, while the residual sum of squares was 1.688, resulting in a total sum of squares of 165.420. The substantially larger regression sum of squares compared with the residual sum of squares indicates that the regression model explains a considerable proportion of the variation in employee retention.

The regression model produced an F statistic of 5915.848, with a p -value of < 0.001 . Since the p -value is well below the conventional 0.05 threshold, the overall regression model is statistically significant. This finding indicates that onboarding and induction training,

leadership and management development, and professional development and compliance collectively have a statistically significant effect on employee retention in Rwamagana District.

The highly significant F statistic further confirms that the regression model provides an excellent fit to the observed data and that the independent variables jointly explain variations in employee retention significantly better than would be expected by chance alone. Consequently, the null hypothesis that independent variables have no significant combined effect on employee retention is rejected, while the alternative hypothesis is accepted.

Overall, the ANOVA results show that the regression model was statistically significant for joint prediction of employee retention. The individual coefficients are

reported below, but their relative sizes must be interpreted cautiously because of serious multicollinearity among the predictors.

Table 5: Regression Coefficients

Variable	Coefficient (B)	Std. Error	t-value	Significance
Constant	.073	.030	2.393	.018
Onboarding & Induction	.114	.043	2.670	.008
Leadership & Management Development	.754	.056	13.512	< .001
Professional Development & Compliance	.118	.054	2.185	.030

Source: Field data (2026).

Table 5 presents the regression coefficients for the three independent variables included in the model. The constant was 0.073 and was statistically significant ($t = 2.393$, $p = 0.018$). Because a value of zero lies outside the 1–5 Likert-scale range used for the predictors, the intercept has limited substantive meaning and is reported only as a model parameter.

Onboarding and induction training recorded an unstandardized coefficient of 0.114 and was statistically significant ($t = 2.670$, $p = 0.008$). Holding the other predictors constant, a one-unit increase in the onboarding and induction score was associated with a 0.114-unit increase in the employee-retention score. This coefficient indicates a positive predictive association within the fitted cross-sectional model rather than proof of causation.

Leadership and management development recorded the largest unstandardized coefficient in the fitted model ($B = 0.754$) and was statistically significant ($t = 13.512$, $p < 0.001$). Holding the other predictors constant, a one-unit increase in leadership, and management development was associated with a 0.754-unit increase in employee retention. However, the exceptionally high correlations among the predictors indicate serious multicollinearity; therefore, the relative size and stability of this coefficient should be interpreted cautiously.

Professional development and compliance recorded an unstandardized coefficient of 0.118 and was statistically significant ($t = 2.185$, $p = 0.030$). Holding the other predictors constant, a one-unit increase in this score was associated with a 0.118-unit increase in the employee-retention score. This should be interpreted as a positive predictive association, not a causal estimate.

All three predictor coefficients were positive and statistically significant: onboarding and induction training ($B = 0.114$, $p = 0.008$), leadership and management development ($B = 0.754$, $p < 0.001$), and professional development and compliance ($B = 0.118$, $p = 0.030$). Leadership and management development had the largest coefficient in this fitted model, but the severe overlap among the predictors means that the coefficients

should not be treated as a definitive ranking of unique causal influence.

Overall, the regression results indicate that the three training and development dimensions jointly provide strong explanatory power and each has a positive statistically significant coefficient. The model supports an integrated training and development strategy. It does not, however, provide a fully stable basis for declaring one predictor uniquely most influential because of serious multicollinearity among the independent variables.

4.3 Discussion of Research Findings

The discussion of research findings relates the study results to the specific objectives, relevant theories, and findings reported in previous empirical studies.

4.3.1 Objective One: Effect of Onboarding and Induction Training on Employee Retention

The first objective assessed the effect of onboarding and induction training on employee retention in Rwamagana District. The descriptive results produced an overall mean of 4.01, while Pearson correlation showed a very strong positive relationship with employee retention ($r = 0.983$). The regression coefficient was also positive and statistically significant ($B = 0.114$, $t = 2.670$, $p = 0.008$). These results indicate that better onboarding and induction practices are associated with stronger employee retention in the fitted model.

The result is consistent with prior literature showing that structured onboarding improves organizational socialization, employee adjustment, commitment, and retention by helping new employees understand the organization and their roles (Ibrahim et al., 2022).

The finding also agrees with evidence that effective onboarding strengthens workplace well-being and organizational identification and, through these positive experiences, reduces turnover intention (Mosquera & Soares, 2025). The present study extends this evidence to a Rwandan local government context.

The finding supports Human Capital Theory because onboarding develops the knowledge and role competence employees need to perform effectively. It also supports Social Exchange Theory because employees may interpret structured induction, mentorship, and early support as organizational investment and reciprocate through stronger commitment and willingness to remain.

4.3.2 Objective Two: Effect of Leadership and Management Development on Employee Retention

The second objective assessed the effect of leadership and management development on employee retention. The descriptive results produced an overall mean of 3.95. Leadership and management development had the largest bivariate correlation with employee retention ($r = 0.994$) and the largest coefficient in the fitted regression model ($B = 0.754$, $t = 13.512$, $p < 0.001$). Because the predictors were exceptionally highly correlated, however, this coefficient should be interpreted cautiously and should not be treated as definitive proof that leadership development has the largest unique causal effect.

The positive result is consistent with evidence that transformational leadership and rational, strategic decision-making are associated with employees' intention to remain in their organizations (Cerutti et al., 2020). This comparison supports the study's finding that better managerial decision-making, leadership capability, autonomy, coaching, and mentoring can contribute to retention.

The result is also consistent with literature showing that employee training and development strengthens engagement, workplace capability, and organizational stability (Bhakuni, 2023). In Rwamagana District, leadership development appears to be especially important when implemented together with the other training dimensions.

The finding supports Social Exchange Theory because supportive leadership, coaching, mentoring, and career-development support represent valued organizational resources that employees may reciprocate with commitment and loyalty. It also supports Human Capital Theory because developing managers improves the organization's leadership capability and the quality of employee support.

4.3.3 Objective Three: Effect of Professional Development and Compliance on Employee Retention

The third objective assessed the effect of professional development and compliance on employee retention. Respondents reported an overall mean of 3.98, and the variable had a very strong positive correlation with employee retention ($r = 0.987$). The regression

coefficient was positive and statistically significant ($B = 0.118$, $t = 2.185$, $p = 0.030$), indicating that professional development and compliance remained positively associated with employee retention after the other measured training dimensions were included in the model.

The finding is consistent with evidence that employee development positively influences employee retention and can strengthen the retention benefits of broader talent-management practices (Dogbe et al., 2025). This supports the view that continuous development opportunities can increase employees' perceived value of remaining with an organization.

The result differs partly from evidence showing that job training and career development were not individually significant predictors of retention in one private-sector setting, although they were jointly significant with compensation (Yuniana & Hanafia, 2024). The difference may reflect contextual variation between private-sector organizations and a Rwandan local government institution.

The finding supports Human Capital Theory because professional development increases employees' knowledge, skills, competencies, and capacity to perform. It also supports Social Exchange Theory because employees who perceive continued investment in their professional growth may reciprocate with greater commitment and intention to remain.

4.3.4 Objective Four: Joint Predictive Effect of Training and Development Programs

The fourth objective determined the joint predictive effect of onboarding and induction training, leadership and management development, and professional development and compliance on employee retention. The model produced $R = 0.995$, $R^2 = 0.990$, Adjusted $R^2 = 0.990$, and $RMSE = 0.096$. The ANOVA result was statistically significant, $F(3, 183) = 5915.848$, $p < 0.001$; therefore, H_{04} was rejected. The three training and development dimensions jointly predicted employee retention significantly better than an intercept-only model.

The strong joint result is broadly consistent with Rwandan evidence showing that training practices can explain substantial variation in organizational outcomes and that coordinated training systems are more informative than isolated interventions (Hakizimana & Maringe, 2024).

The result is also consistent with findings from decentralized entities in Rwanda showing very strong positive relationships between training implementation, evaluation, and organizational performance (Twesige, 2020). Although the outcome in the present study is employee retention rather than performance, both studies

emphasize the value of systematic employee development.

The exceptionally high correlations among the three predictors indicate serious multicollinearity. The most defensible interpretation is therefore that the three dimensions function as a closely related training and development system whose combined relationship with employee retention is strong; the model should not be used to make a definitive ranking of unique causal effects.

5. Conclusions and Recommendations

This section presents the conclusions drawn from the study findings and provides recommendations intended to strengthen training and development programs and employee retention.

5.1 Conclusion

The study concludes that onboarding and induction training have a positive and statistically significant relationship with employee retention in Rwamagana District. Effective onboarding helps employees adapt to organizational policies and expectations, develop positive relationships with the organization, acquire early job knowledge and skills, understand their roles and responsibilities, and integrate into the organizational culture. These outcomes can strengthen commitment and support employee retention.

The study concludes that leadership and management development has a strong positive and statistically significant relationship with employee retention in Rwamagana District. It enhances managers' decision-making abilities, strengthens leadership skills, promotes employee autonomy, supports career development, and encourages coaching and mentoring. Although it recorded the largest coefficient in the fitted model, severe multicollinearity means that it should not be described as definitively more influential than the other training dimensions.

The study concludes that professional development and compliance have a positive and statistically significant influence on employee retention in Rwamagana District. Professional development and compliance enhance employees' knowledge, skills, and competencies, improve their ability to perform assigned duties, strengthen their understanding of organizational policies and ethical standards, and encourage continuous learning. Consequently, employees who receive regular professional development and compliance training demonstrate stronger organizational commitment and are more likely to remain with the organization.

The study concludes that onboarding and induction training, leadership and management development, and

professional development and compliance jointly provide statistically significant prediction of employee retention in Rwamagana District. The model's very high explanatory power supports the combined relevance of the three dimensions, while the severe multicollinearity cautions against interpreting their separate coefficients as a definitive ranking of unique effects.

The study concludes that onboarding and induction training, leadership and management development, and professional development and compliance each have positive statistically significant coefficients and jointly provide substantial explanatory power for employee retention in Rwamagana District. Leadership and management development had the largest coefficient in the fitted model, but the exceptionally high correlations among the predictors prevent a definitive ranking of their unique effects. The strongest conclusion is that a coordinated combination of the three dimensions is important for employee retention.

Overall, the study provides empirical evidence that sustained investment in training and development is an effective human resource management strategy for strengthening employee retention in Rwamagana District. The findings suggest that organizations that invest in structured onboarding and induction, effective leadership and management development, and continuous professional development and compliance training are better positioned to retain skilled employees, enhance organizational performance, and improve the quality of public service delivery.

5.2 Recommendations

Based on the study findings and conclusions, the following recommendations are proposed to strengthen the practices examined and improve the achievement of the intended organisational outcomes.

1. Rwamagana District should strengthen its onboarding and induction programs by ensuring that all newly recruited employees receive comprehensive orientation on the District's policies, procedures, organizational culture, performance expectations, and job responsibilities.
2. The District should invest continuously in leadership and management development for supervisors, departmental heads, and senior managers. Training should strengthen decision-making, communication, employee coaching, mentoring, conflict resolution, performance management, and career-development support.
3. The District should strengthen professional development and compliance by establishing continuous learning opportunities that address employees' competency needs and

organizational priorities. Employees should be provided with equitable access to workshops, seminars, professional certification programs, higher education, and other career development opportunities.

4. Policymakers should establish robust monitoring and evaluation mechanisms to assess the implementation and effectiveness of training and development programs across public institutions. Standard performance indicators should be developed to evaluate the impact of onboarding and induction, leadership and management development, and professional development initiatives on employee performance and retention.
5. Human resource managers should establish mechanisms for continuously monitoring and evaluating the effectiveness of training and development programs.

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