

## **The Influence of Training and Development on Employee Performance: A Mediating Role of Job Satisfaction**

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### **Abstract**

*This study investigates the influence of training and development on employee performance within the employees of communication sector (NTC and Ncell) of Karnali Province, Nepal. It seeks to understand how training and development programs contribute to workforce efficiency and effectiveness, with a particular focus on the mediating role of job satisfaction. A causal-comparative research design was used in this study. Out of 400 questionnaires distributed, 355 were returned and used for analysis through convenience sampling. The participants were employees from Nepal Telecom and Ncell working in Karnali Province. A structured questionnaire with reliable measures (Cronbach's Alpha above 0.70) was used to assess training and development, job satisfaction, and employee performance. Partial Least Squares Structural Equation Modelling (PLS-SEM) was applied to examine the direct relationships between the variables and to test whether job satisfaction played a mediating role. The results indicate that training and development significantly and positively influence employee performance, both directly and indirectly, with job satisfaction acting as a mediating factor. This underscores the dual role of training programs in enhancing employee skills and fostering job satisfaction, which in turn boosts overall performance. The study concludes that training and development are critical drivers of employee performance in the communication sector. The use of convenience sampling and the focus on a single geographical region and sector may restrict the generalizability of the findings. Future studies could apply probability-based sampling and examine other sectors or provinces for broader insights. This study contributes to the literature by examining the training-performance relationship with job satisfaction as a mediating variable in the context of a developing economy. It underscores the essential role of well-designed training programs in cultivating a skilled, motivated, and satisfied workforce. The findings recommend that managers implement tailored training programs and foster a learning culture, while policymakers should support skill development initiatives, improve infrastructure, enforce fair labor practices, and promote local employment to ensure sustainable sector growth and regional economic advancement in Karnali Province.*

**Keywords:** Training and Development, Job Satisfaction, Employee Performance, Mediating Role

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### **Introduction**

The performance of an employee has a significant influence on the success or failure of any business; performance at a high level generally results in the continued success of an organization, and/or its growth. There are many different methods to enhance employee performance, including employee satisfaction, and the quality of the work environment. The majority of employees who are satisfied with both their position, and the work environment they have been placed into tend to be more productive than employees who do not find either of these elements satisfactory (Elnaga & Imran, 2013). Performance of employees is essential to all businesses, including telecommunications, as a result of its direct impact on the success of the business. In addition, employee performance also has a significant effect on customer satisfaction in the telecommunications industry. Customer satisfaction is enhanced by positive customer experiences created by well performing employees. This can create a positive outcome for the organization's overall success, and/or growth. Organizations should place an emphasis on employee training and development as a vital part of human resources, which in turn creates an increase in employee's knowledge, skills, and morale throughout the organization (Darshani, 2018).

Improving training and development is important to an organization's continued success; however, it also contributes to enhancing employee performance and maintaining a successful business (Arulsamy et al., 2023). Increasing employee performance through proper training sessions benefits all sizes of businesses (small or large) by preventing potential misleading actions, contributing to the overall success of the organization (Arulsamy et al., 2023). Two major influencing factors of employee performance include employee training and development, and employee job satisfaction (Khan et al., 2016). In addition to enhancing employee performance, training and development are important to an organization's daily performance and preventing misleading actions, thus making them important for both small and large-scale businesses, and for continued success (Ghalawat et al., 2021). In addition to employee performance, training and development are important to the formation of competent committees, and for the improvement of relevant expertise and intellectual capacity (Kum et al., 2014). T&D programs are also an effective method of providing a systematic approach to capturing, preserving, and disseminating new information to employees, so that they have the ability to respond to changing market needs and continue at a high level of performance (Imran & Tanveer, 2015). If an organization does not provide adequate training and development opportunities for its employees, employees will not have the opportunity to develop the needed skills and knowledge to successfully complete their assigned tasks, which can result in decreased productivity and decreased organizational performance (Karim, 2019).

Employee job satisfaction refers to an employee's perception of his/her work environment, job content, and organizational policies and regulations, and affects employee attitude, motivation, and performance (Wright & Cropanzano, 2000). This study will examine the interrelationship between employee training and development, job satisfaction, and employee performance, and the mediator effect of job satisfaction.

However, there is currently a significant void in understanding how these variables affect employee performance, particularly in the context of the Karnali Province. For this reason, this study was designed to explore the effect of employee training and development on employee performance, while examining the mediator effects of job satisfaction.

The literature review of this study provides the background information needed to understand the research questions and objectives of the study.

## **Theoretical Review**

Investing in employees' skills, knowledge and abilities is important because it increases their productivity, and therefore organizational performance. It has been defined as an investment in employee development, similar to investing in physical capital (be it plant, equipment) and financial capital (such as stocks). In fact, Gary Becker and Theodore Schultz first used this definition of human capital in the 1960's. As such, the focus of this study was on how training and development influences job performance through job satisfaction, which is a mediator between these variables; it shows how investments in employee development will increase employee performance and foster job satisfaction which will further enhance performance. Thus, this study aligns with the theoretical framework of human capital theory and illustrates how employee development will improve employee productivity and job satisfaction, ultimately contributing to an organization's success.

## **Review of Literature**

### **Employee Performance and Training and Development**

Darshani (2018) studied the relationship between training and development and employee job performance and the results show that the training and development has positive and significant impact on employee performance. Similarly, Karim (2019) found out that employees know how important training is, they are motivated by training and development; therefore, training and development will improve employee performance. In addition, Tahir et al. (2014) researched the impact of training and development on employee performance and productivity. The research findings show that the training and development positively and significantly influences employee performance. Likewise, Imran & Tanveer (2015), as well as Adamu et al. (2022) have shown that there is a positive relationship between training and development and employee performance. Furthermore, Kajwang (2022) has stated that the training and development practices positively influence employee productivity. Moreover, Sothy (2019) researched the effects of training and development on employee performance using a case study in some of the private secondary schools in Phnom Penh, Cambodia. The research results show that training and development had a statistically significant influence on employee performance. These findings are similar to many other studies that have shown that when employees are well trained; they are more skilled, competent, and proficient at work; thus, enhancing overall organizational performance. Training and development programs do not only help to bridge knowledge gaps, but they also create motivation and job satisfaction, which are essential for maintaining high productivity levels.

The experts mentioned above all emphasized that training and development has a significant influence on employee performance. As such, the researcher presents the following hypothesis based on this body of literature:

*H<sub>A1</sub>: There is a significant influence of training and development on employee performance.*

### **Job Satisfaction and Training & Development (T&D)**

Employee training & development can positively affect employee job satisfaction. A number of studies have explored the relationship between employee training & development and job satisfaction. Specifically, a study conducted by Bhanudas (2021) found a statistical relationship between training/development and job satisfaction for manufacturing industry employees. Consistent with Bhanudas' findings were those reported by Bercu (2017). According to Bercu (2017), there is a significant positive relationship between participating in training programs and employee job satisfaction. Similarly, Jabak (2023) demonstrated that

the presence of training & development at work will have a large positive effect on the degree to which an employee is satisfied with his/her job.

Research about manufacturing employees also includes research into particular populations. Mampuru et al. (2024), for example, conducted an analysis of how training affects job satisfaction for university staff using regression analysis. They determined that training and job satisfaction were significantly correlated among faculty at universities; they also determined that training and job retention and commitment were positively correlated among university faculty. The health care industry has also been researched regarding job satisfaction and training. For instance, Jha et al. (2020) evaluated the influence of training and development programs on job satisfaction of employees working in hospitals (both public and private). They concluded that training positively affected job satisfaction for hospital employees. Similarly, other studies have shown the correlation between training and job satisfaction for employees in multiple different industries. For example, Rajanikanth et al. (2024) showed there is a significant positive correlation between training and job satisfaction. Furthermore, Kanuto (2024) showed that training has a significant positive effect on job satisfaction and job performance. Additionally, Chaudhary and Bhaskar (2016) demonstrated a strong positive relationship between job satisfaction and training. They concluded that employees who participate in formalized training programs experience higher levels of job satisfaction than employees who do not receive formal training. Zubairi and Khan (2018) expanded upon the previous literature by identifying a strong relationship between training and job satisfaction as well as training and skill acquisition and training and motivation. Thus, based on the collective findings of the previous researchers, it is proposed that the following hypothesis be tested.

*H<sub>A2</sub>: Training and development exert a significant influence on job satisfaction.*

### **Employee Satisfaction and Employee Performance**

Research regarding employees' happiness and their productivity has been extensively studied empirically. Ndulue and Ekechukwu (2016), analyzed the positive relationship between job satisfaction and performance at Nigerian Breweries Plc in Kaduna State, Nigeria. The results of this study were based upon a statistically significant relationship between the variables. Likewise, as a result of analyzing data from the private sector, Navale (2018) concluded that employee satisfaction directly affects employee performance.

These findings are similar to another research conducted on this topic. A study conducted by Zergabachew and Shidega (2023) demonstrated a significant relationship between the variables and was supported by a case study conducted by Sutjitra (2015) at PT.Y. Sutjitra's study demonstrated how job satisfaction affects work output. Fadlallah (2018) further supported this conclusion with a study demonstrating a statistically valid relationship between the variables.

In addition to supporting the above conclusions, research has also shown that the relationship exists in multiple countries and industries. Research by Appasamy (2022) demonstrated a direct effect of job satisfaction on employee performance; while, research conducted by Kishori and Priya (2020) at TVs Pvt Ltd, in Madurai, demonstrated a statistically significant relationship between the variables. Additionally, research by Ratnasih et al., (2022) in Indonesia, showed a positive relationship existed between employee job satisfaction and employee performance.

Overall, the literature demonstrates that job satisfaction can positively affect employee performance. Therefore, it is proposed by the researcher, the following hypotheses be tested for each variable:

*H<sub>A3</sub>: Job satisfaction has a significant positive effect on employee performance.*

**Job Satisfaction as a Mediator between T&D and Performance**

Job Satisfaction Is a Key Mechanism for Translating Training into Performance, and Therefore it Can be Used to Develop a Hypothesis for the Relationship Between Training and Employee Performance.

While there are many studies that examine the relationship between training and development and employee performance, few studies have actually identified the mechanism(s) that link these two concepts. One such mechanism appears to be job satisfaction. This relationship was studied by Kanuto (2024), who found that training programs lead to higher levels of job satisfaction, and that in turn job satisfaction leads to better employee performance. Furthermore, he found that the direct relationship between training programs and performance is secondary to the indirect effects of training programs in enhancing job satisfaction and subsequently employee performance.

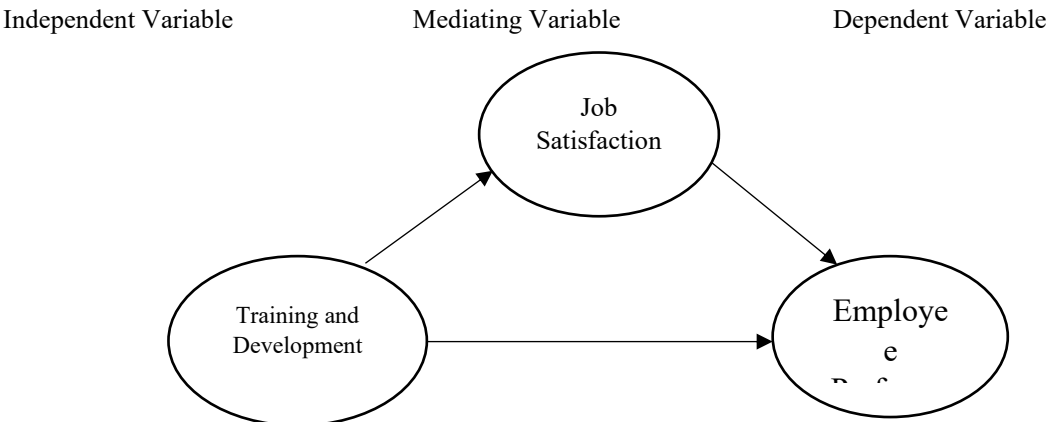
Kanuto's findings were substantiated by the data collected from an analysis of the relationships among training programs, job satisfaction, organizational commitment, and employee performance conducted by Siswanto (2024). He found that training programs in the technology sector do indeed contribute to employee performance; however, his results indicate that the effects of training programs are moderated by job satisfaction and organizational commitment.

Soegiarto et al., (2024) also demonstrated the importance of job satisfaction when examining the relationship among training, job autonomy, and organizational culture and employee performance. They found that training programs enhance employee satisfaction. Additionally, they found that the greater the degree of autonomy granted to employees regarding decision making, the more satisfied employees will be and the more productive they will become.

Based upon the findings from Kanuto (2024), Siswanto (2024), and Soegiarto et al., (2024), the researcher identifies the following hypothesis:

*H<sub>A4</sub>: There is a positive, statistically significant relationship between job satisfaction and employee performance, and job satisfaction is a mediator of the positive relationship between training and development and employee performance.*

**Conceptual Framework of the Study**



*Figure No: 1 Conceptual Framework of the Study*

## Research Method

A Quantitative Causal comparative research design was used to assess how training and development affected employee performance and this relationship was further moderated by job satisfaction among employees working in the Communication Sector of Karnali Province (Ncell and Nepal Telecom). Two types of structured questionnaires were used to collect data for this study; (i) Demographics which were closed ended questions and (ii) Five-point Likert scale items that measured perceptions of Training and Development, Employee Performance and Job Satisfaction. These questionnaires were distributed to all employees of communication sector in Karnali province and yielded 355 (valid) usable responses out of the 400 questionnaires distributed at a response rate of 88.75%. Respondents were explained about the confidentiality of their data and the objective of the study. Reliability of the questionnaire was established using Cronbach's alpha ( $\alpha > .7$ ) for each construct. In order to estimate the structural model, Smart PLS Version 4.1.1.1 was used for Partial Least Squares Structural Equation Modeling (PLS-SEM). The methodology of the analysis consisted of a twostep process; (i) assessment of the measurement model for both convergent and discriminant validity, and (ii) evaluation of the structural model using bootstrapping (5,000 subsamples) to examine both the direct effect (Training  $\rightarrow$  Performance) and the indirect mediation (Training  $\rightarrow$  Job Satisfaction  $\rightarrow$  Performance). Significance was assessed using  $p < .05$ . Ethically, the study ensured that respondents provided informed consent and were assured that their data would be handled anonymously. As a result, the study provided a thorough examination of the mediated relationships between Training and Development, Job Satisfaction and Employee Performance in the Communication Sector of Karnali Province.

## Demographic Data Summary and Relationship Between Training and Development and Employee Performance:

Descriptive statistics were utilized to summarize the demographic characteristics of the respondents including variables such as Age, Gender, Caste and Marital Status. Additionally, descriptive statistics were used to examine the effect of Training and Development on Employee Performance with Job Satisfaction acting as the mediator, specifically in the context of the Communication Sector in Karnali Province. For ease of interpretation, the demographic data were systematically organized and presented in table 1.

Table 1  
*Summary of the Demographic profile of the Respondents*

Categories		Frequency	Percent
Age	Up to 25	74	20.8
	26-40	167	47.0
	41-55	62	17.5
	56 and above	52	14.6
Gender	Male	232	65.4
	Female	123	34.6
Cast	Brahmin	104	29.3
	Chhetri	166	46.8
	Janajati	63	17.7
	Others	22	6.2
Marital Status	Married	247	69.6
	Unmarried	108	30.4

*Source: Calculation based on Author Survey, 2025*

Table 1 displays a summary of the demographics of the respondents. A total of four categories were considered – Age, Gender, Caste, Marital Status. With respect to the age of the respondents; 47.0% of the respondents were between 26 and 40 years old, while 20.8% of the respondents were below 25 years old, 17.5% of the respondents were between 41 and 55 years old and 14.6% of the respondents were 56 years or older. Concerning the gender of the respondents, a higher percentage of male respondents 65.4%, as opposed to female respondents 34.6%. The caste distribution showed that the highest number of respondents belonged to Chhetri 46.8%, followed by Brahmin 29.3%, then Janajati 17.7% and lastly other castes 6.2%. The majority of respondents were also found to be married at 69.6%, whereas 30.4% of respondents remained unmarried. These demographics represent the diversity in the age, gender, caste and marital status of the respondents in the study and provide an understanding of these factors.

### Measurement Model (Outer Model)

The outer model represents the relationship of each indicator to its respective latent variable. For each item used in the measuring model (outer model), validity and reliability must be examined. A software package called SmartPLS was used for testing the models. An example of the outer model is provided in the next Figure #2.

Using SmartPLS, the study evaluated both convergent and discriminant validity of the measurement model. As presented in Table 2, all items produced factor loadings which ranged from .384 to .869, thus providing evidence for convergent validity. The reliability measures of the study further demonstrated the constructs: Cronbach's alpha ( $\alpha$ ) and composite reliability (CR) values greater than .7 for all variables, and average variance extracted (AVE) values for each construct greater than .50.

Consistent with Hair et al.'s (2016) established criteria, the results validated the overall reliability of the measurement model.

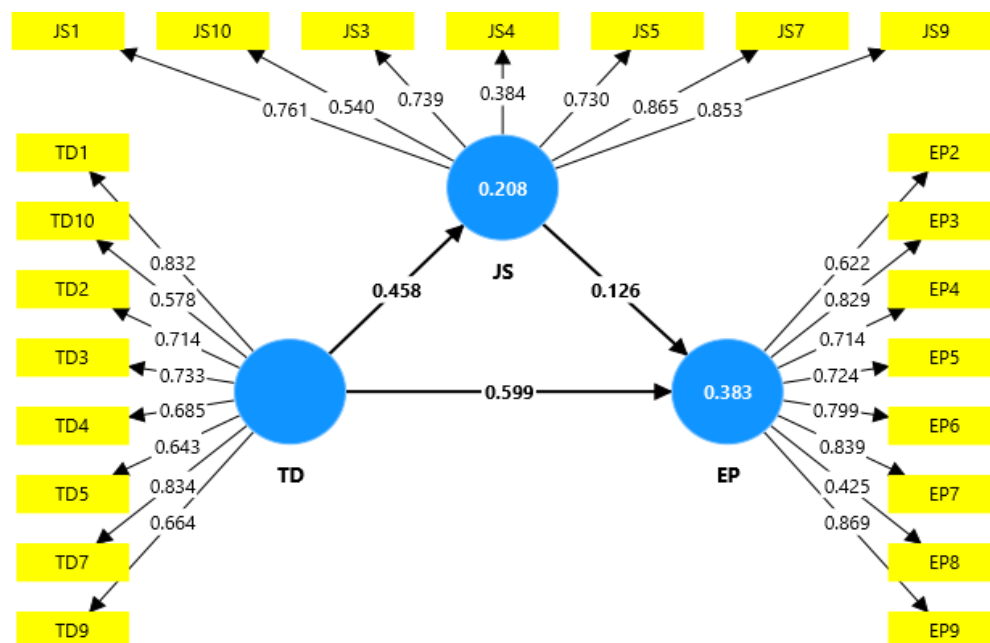


Figure No:2

**Table 2***Factor Loadings, Cronbach's Alpha, Composite Reliabilities, VIF and Average Variance Extracted*

Items	VIF	Factor Loading	Cronbach's Alpha	Composite Reliability rh-a	Composite Reliability rh-c	Average Variance Extracted (AVE)
EP2	1.722	0.622	0.876	0.901	0.904	0.548
EP3	3.567	0.829				
EP4	2.330	0.714				
EP5	1.838	0.724				
EP6	2.830	0.799				
EP7	3.394	0.839				
EP8	1.468	0.425				
EP9	3.147	0.869	0.832	0.901	0.874	0.510
JS1	2.210	0.761				
JS10	1.961	0.540				
JS3	1.934	0.739				
JS4	2.148	0.384				
JS5	1.903	0.730				
JS7	3.940	0.865				
JS9	3.599	0.853	0.861	0.877	0.892	0.511
TD1	3.005	0.832				
TD10	1.802	0.578				
TD2	1.897	0.714				
TD3	2.076	0.733				
TD4	2.128	0.685				
TD5	2.036	0.643				
TD7	2.515	0.834	0.664			
TD9	1.711	0.664				

*Source: Calculation based on Author Survey, 2025*

Table 2 presents result of the psychometrics and validity of three measurement constructs (TD, JS, EP) using multi-item scales that were assessed in terms of acceptable to good internal consistency. The scales exhibited good reliability as indicated by Cronbach's alpha values ranging from .832 (JS) to .876 (EP) and composite reliabilities (rho-h and rho-c) which ranged above .87. Most items had factor loadings in the moderate to high ranges (e.g., .829 for EP3, .869 for EP9, .865 for JS7) although a few items (e.g., EP8:.425, JS4:.384) showed lower correlations with the respective constructs; thus, they may be candidates for modification. Additionally, each of the AVE values for the constructs (.548 for EP, .510 for JS, .511 for TD) is at or greater than .50; therefore, there is support for convergent validity. Finally, the VIF values (range = 1.468 to 3.940) indicate that the constructs do not have any serious issues with multicollinearity. Therefore, the scales appear to be reliable and valid overall, however, a couple of the items did have questionable loadings.

**Table 3***Discriminant Validity Based on Fornell & Larcker's criterion*

	EP	JS	TD
EP	0.740		
JS	0.126	0.714	
TD	0.599	0.458	0.715

*Source: Calculation based on Author Survey, 2025*

Table 3 assesses the discriminant validity of three constructs (JS, EP, TD) utilizing Fornell & Larcker's criteria to compare the square root of the Average Variance Extracted (AVE) value for each construct (diagonal values: JS= .714; TD=.715; EP= .740) to the correlations between constructs (off-diagonal values). Discriminant validity exists when the diagonal values are larger than the correlations within the same row and column. For example, the correlation between EP and JS (.126) is very low as compared to both of their respective AVE square roots; thus, there is evidence of discrimination between these two constructs. In addition, the moderate-high correlation between EP and TD (.599) approaches but does not equal EP's AVE (.740); therefore, while some discrimination between these two constructs exists, there may be less discrimination than would be desirable. Furthermore, the moderate correlation between JS and TD (.458) is at least somewhat smaller than their AVE threshold values. Overall, the results provide support for sufficient discriminant validity; however, the strong relationship between EP and TD necessitates caution in the interpretation of their unique. Therefore, it provides evidence of discriminant validity (Hair et al., 2016).

**Table 4***R-square & Adjusted R-square*

	R-square	R-square adjusted
EP	0.387	0.383
JS	0.210	0.208

*Source: Calculation based on Author Survey, 2025*

Table 4 shows the R-squared ( $R^2$ ) and the adjusted R-squared values for the endogenous constructs used in the structural model. The results show that Employee Performance (EP) is explained moderately well ( $R^2 = .387$ ; adjusted  $R^2 = .383$ ), indicating that 38.7 percent of the variance in Employee Performance (EP) is explained by the predictor(s). In comparison, Job Satisfaction (JS) is explained to a much smaller degree ( $R^2 = .210$ ; adjusted  $R^2 = .208$ ), with only 21.0 percent of the variance in JS explained by the predictor(s). The small differences between the  $R^2$  and the adjusted  $R^2$  values for both Employee Performance (EP) and Job Satisfaction (JS) indicate that adding the predictor(s) into the model did not cause it to become overly complex, thereby supporting the applicability of the model to other studies. Hair et al. (2016) indicated that  $R^2$  values greater than .10 are generally acceptable in behavioral research contexts when using partial least squares structural equation modeling (PLS-SEM).

### Structural Model (Inner Model)

In order to test the structural model, route coefficients for the structural model were calculated using Smart PLS Version 4.1.1.1's PLS algorithm as depicted in Figure 3.

### Inner Model Test

The purpose of an inner model test was to evaluate the relationship among the constructs (i.e., correlation between the constructs, the significance value of the relationships among the constructs, and the  $R^2$  of the research model). Therefore, the analysis of the bootstrap results should focus on the  $R^2$  value for the endogenous latent variable and the t-statistic for each exogenous latent variable related to the endogenous latent variable.

### Hypothesis Testing (Bootstrapping)

When evaluating whether a hypothesis can be accepted or rejected, examine the significance values between constructs, the t-statistics and p-values. The bootstrapping procedure for this study utilized a two-tailed t-value of 1.96 ( $\alpha = 0.05$ ) and required the t-statistic to exceed 1.96.

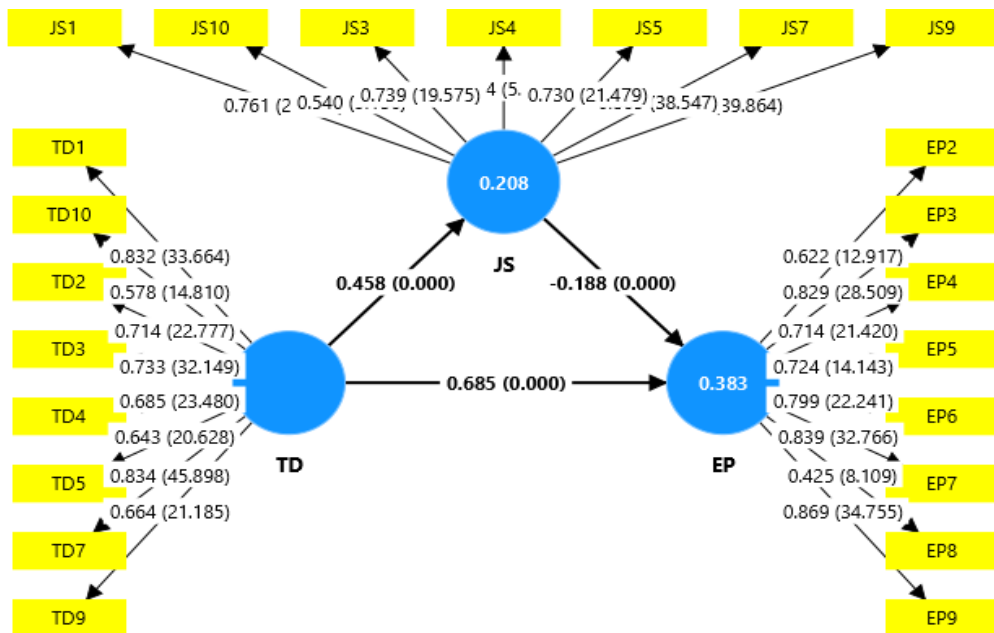


Figure: 3

After creating the path coefficients, the P-Values and T-Values were tested using bootstrapping methods using Smart PLS Version 4.1.1.1 to determine statistical significance. Table 3 shows the hypothesis test.

**Table 5**

*Path Coefficient (Direct effect)*

	Original Sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values	Decision
JS → EP	-0.188	-0.189	0.054	3.503	0.000	Accepted
TD → EP	0.685	0.692	0.037	18.513	0.000	Accepted
TD → JS	0.458	0.465	0.039	11.9	0.000	Accepted

Source: Calculation based on Author Survey, 2025

### Structural Model Analysis Results

Table 5 displays the structural model's results that include the structural coefficients, the bootstrapped results of the confidence intervals, and the hypotheses test outcomes. Every hypothesized path is statistically significant ( $p < .001$ ). For example, the hypothesized path between Employee Job Satisfaction (JS) and Employee Performance (EP), demonstrates a statistically significant but negatively related relationship ( $\beta = -0.188$ ,  $t = 3.503$ ). Training & Development (TD) has a highly positively related relationship to Employee Performance (EP) ( $\beta = 0.685$ ,  $t = 18.513$ ); and moderately positively related relationship to Employee Job Satisfaction (JS) ( $\beta = .458$ ,  $t = 11.9$ ). Bootstrapping (with 5000 subsamples) further validated the reliability of these estimates; since the sample mean was so close to each estimate and the standard deviation was very small (from 0.037-0.054), which indicates there is very little variance in the estimates. Additionally, every t-statistic exceeded the critical threshold value of 1.96; and the p-value of 0.000 provides very strong evidence for all the hypothesized relationships, and thus validates the structural paths as being statistically significant (Hair et al., 2016).

**Table 6**

*Specific indirect effects*

	Original Sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
TD -> JS -> EP	-0.086	-0.088	0.028	3.123	0.002

*Source: Calculation based on Author Survey, 2025*

Table 6 shows the indirect effects as described by the structural model for the mediation path of Training and Development (TD) on Employee Performance (EP) via Job Satisfaction (JS). The results of this analysis indicated an indirect effect was found to be statistically significant ( $\beta = -0.086$ ;  $t = 3.123$ ;  $p = 0.002$ ). The indirect effect indicates that Job Satisfaction (JS) is acting as a partial mediator in the relationship between Training and Development (TD) and Employee Performance (EP). Bootstrap results ( $n = 5000$ ) supported the finding of the indirect effect with a relatively small standard deviation (STDEV = 0.028) supporting the findings' reliability, with the sample mean (M = -0.088) being very close to the estimated coefficient. Additionally, the t-statistic exceeded the critical value (1.96), and the p-value supported the significance of the indirect effect at the .05 level, confirming the mediation path as stated by Hair et al. (2016).

**Table 7**

*F-square*

	EP	JS	TD
EP			
JS	0.045		
TD	0.604	0.266	

*Source: Calculation based on Author Survey, 2025*

The size of the relationship between the independent variables (predictor variables) and the dependent variable(s) is indicated by the f-squared ( $f^2$ ) effect size found in Table 7. The analysis of  $f^2$  has shown that Training & Development (TD) has a significant positive relationship with Employee Performance (EP) ( $f^2 = .604$ ) as well as a strong positive relationship with Job Satisfaction (JS) ( $f^2 = .266$ ). Conversely, it was

shown that the relationship between Job Satisfaction (JS) and Employee Performance (EP) is weak ( $f^2 = .045$ ). As per Cohen's (1988) criteria for assessing effect size,  $f^2$  values of .02, .15, and .35 are considered to be indicators of small, moderate to large, and large effect size respectively. Therefore, the data supports that TD is responsible for the majority of variance for both EP and JS while the variance accounted for in JS is negligible when explaining EP. The fact that there were no values present in some of the cells of Table 7 indicate that these paths were either not included in the hypotheses or were not examined in this research study. The examination of the size of the relationships between the independent variables and dependent variables provides additional information about the relative strength of each of the relationships beyond the determination of whether they are statistically significant (Hair et al., 2016).

## **Discussions**

This research established four hypotheses to examine the effect of training and development on employee performance, with job satisfaction being a mediator in the communication sector of the Karnali Province. The results of the present research provide strong empirical evidence for each of the hypothesized associations between training and development, job satisfaction, and employee performance, along with unique interpretations worth exploring further. The research results confirmed hypothesis HA1, which noted that "training and development" had a significant positive influence on "employee performance" ( $\beta = 0.685$ ,  $t = 18.513$ ,  $p < .001$ ) as similarly noted in past literature (Darshani, 2018; Karim, 2019; Tahir et al., 2014; Imran & Tanveer, 2015; Adamu et al., 2022). The human capital theory suggests that if an employer invests in the knowledge and skills of its employees, then the employer will see increased productivity and the employee will have developed greater competency. The relatively large effect size ( $\beta = 0.685$ ) shows that well-designed training programs can lead to employees who possess the knowledge, competence, and proficiency needed to support today's organizations.

Support for hypothesis HA2 was also evident because "training and development" had a significant positive association with "job satisfaction" ( $\beta = 0.458$ ,  $t = 11.9$ ,  $p < .001$ ). These results are in line with other research completed by Bhanudas (2021), Bercu (2017), Jabak (2023), and Mampuru et al. (2024) that show that employees perceive training opportunities as investments made by their employers in their professional development. Employees' perception of training opportunities results in employees having higher levels of intrinsic motivation and job satisfaction. The moderate effect size of  $\beta = 0.458$  shows that training and development make a meaningful contribution to job satisfaction. Other organizational factors may contribute to employees' job satisfaction and may interact with training and development to contribute to employees' job satisfaction.

The most unexpected finding was related to Hypothesis HA3, which showed a positive and statistically significant relationship between job satisfaction and employee performance ( $\beta = -0.188$ ,  $t = 3.503$ ,  $p < 0.001$ ). The finding is at odds with the majority of the literature reviewed including the studies by Ndulue and Ekechukwu (2016); Navale (2018); Zergabachew and Shidega (2023); and Fadlallah (2018), that demonstrated a positive association between job satisfaction and employee performance. It is possible that the findings of this study are attributed to several contextual issues. First, it is possible that employees who are extremely satisfied may feel a sense of complacency and thus become less motivated to perform above average. Second, the relationship between job satisfaction and employee performance may be influenced by either personal or organizational factors that were not accounted for in this study. Finally, the negative sign of the coefficient could represent a suppression effect, where the large positive effect of training and development on performance suppressed the satisfaction-performance path.

Lastly, the mediation analysis indicated a positive, statistically significant indirect effect of training and development on employee performance through job satisfaction ( $\beta = -0.086$ ,  $t = 3.123$ ,  $p = 0.002$ ). The demonstration of partial mediation as noted by Kanuto (2024), Siswanto (2024), and Soegiarto et al. (2024), although the negative direction of this indirect pathway provides a complex interpretation. The findings suggest that while training and development have a positive effect on both job satisfaction and employee performance, the mediating effects of job satisfaction diminish the positive effect of training and development on employee performance. This may illustrate that the relationship among these variables is more complex than previously conceived, likely due to organizational factors, employee expectations, or type of work.

These findings have numerous practical implications for organizational managers and human resources professionals. The large positive direct effect of training and development on employee performance illustrates the importance of organizations viewing training and development as strategic investments as opposed to operational costs. Furthermore, the complex mediating effects of job satisfaction illustrate that organizations cannot assume a simple, linear relationship exists between employee job satisfaction and performance outcomes. Organizations should therefore adopt a holistic approach to examining all variables that affect employee performance, and realize that employee satisfaction is not indicative of enhanced productivity. In general, the findings of this study add to the ongoing theoretical discussions about the satisfaction-performance relationship and highlight the necessity of completing research that examines organizations within specific contexts to gain a deeper understanding of the dynamic nature of organizations.

### **Conclusion and Implications**

Employee performance has been shown to be directly influenced by employee job satisfaction. Employee job satisfaction also influences employee performance indirectly through employee training and development. Employee training and development allows employees to improve their performance by improving their skills, and employee job satisfaction improves the likelihood of those improved skills being utilized. Thus, employee training and development, as well as employee job satisfaction are important for organizations to provide employees with the capabilities and motivation to perform at their best levels to ultimately increase organizational efficiency and success. Training and development are therefore a strategic means for organizations to connect their employees with the organization's goals to produce continued growth and competitive advantages in the communication sector.

The results of the study are very relevant to organizations and policymakers who operate in the communication sector. For managers to capitalize on the double positive effects of employee training and development on employee performance, employee training and development should be given priority status in the organization's strategic plan. Structured employee training and development programs should be developed by organizations to meet the needs of the organization and the employees so that a culture of ongoing learning is fostered. Policymakers should advocate for the establishment of the appropriate physical infrastructure and fair labor laws to allow the communication sector to develop the skills of its workforce and retain the workers once the skills are developed. The benefits of employee training and development go beyond the development of a highly skilled and motivated workforce and include investments in operational efficiency and an organization's competitive positioning to allow the organization to respond to changes in the industry. By working collaboratively to implement these types of

programs, organizations can develop a highly productive workforce that will provide the foundation for achieving long-term sustainable growth and innovation in the telecom industry.

## References

- Adamu, M. N., Mohammed, D., & Gana, J. (2022). *The impact of training and development on employee productivity in the 21st century*. 3(5).
- Aktar, S., Sachu, M. K., & Ali, E. Ed. (2012). The impact of rewards on employee performance in commercial banks of Bangladesh: An empirical study. *IOSR Journal of Business and Management*, 6(2), 9–15. <https://doi.org/10.9790/487X-0620915>
- Appasamy, D. A. S. (2022). *A study on impact of job satisfaction on employees' performance*. 3(12).
- Arulsamy, D. A. S., Singh, D. I., & Kumar, M. S. (2023). *Employee training and development enhancing employee performance – A study*. 16(3).
- Bercu, A.-M. (2017). Impact of employees' training programmed on job satisfaction. *Current Science*, 112(07), 1340. <https://doi.org/10.18520/cs/v112/i07/1340-1345>
- Bhanudas, Dr. D. A. (2021). *Impact of training and development on satisfaction level of employees in manufacturing industries*. 20(1), 4634–4642.
- Chaudhary, N. S., & Bhaskar, P. (2016). *Training and development and job satisfaction in education sector*. 16, 42–45.
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.
- Darshani, R. K. N. D. (2018). *The impact of training and development on employee job performance*. 2(1), 1–18.
- Elnaga, A. A., & Imran, A. (2013). The effect of training on employee performance. *European Journal of Business and Management*, 5(4), 137–147.
- Fadlallah, A. W. A. (2018). *Impact of job satisfaction on employee's performance an application on faculty of science and humanity studies university of salman bin Abdul-Aziz-Al Aflaj*. 2(1), 26–32.
- Ghalawat, S., Kiran, Malik, J. S., & Kumari, N. (2021). *Impact of training and development on employees' performance and productivity* [SJHR]. <https://doi.org/10.51168/sjhrafrica.v2i9>
- Hair, J. F., Sarstedt, M., Matthews, L. M., & Ringle, C. M. (2016). Identifying and treating unobserved heterogeneity with FIMIX-PLS: Part I – method. *European Business Review*, 28(1), 63–76. <https://doi.org/10.1108/EBR-09-2015-0094>
- Imran, M., & Tanveer, A. (2015). *Impact of training and development on employees' performance in bank of Pakistan*. 3(1), 22–45.
- Jabak, H. (2023). *The effect of training & development on job satisfaction: The mediating effect of coworker support*. 7(6), 379–386.
- Jha, R., Pandey, D. K., & Parihar, A. S. (2020). *Effect of training and development on job satisfaction of nurses in public and private hospitals in India*. 19(4).
- Kajwang, B. (2022). Effects of training and development practices on performance of insurance sector in Kenya. *International Journal of Research in Business and Social Science* (2147- 4478), 11(4), 140–148. <https://doi.org/10.20525/ijrbs.v11i4.1825>
- Kanuto, A. E. (2024). Examining the impact of employee training and development programs on their job satisfaction and performance. *International Journal of Science and Business*, 40(1), 63–79. <https://doi.org/10.58970/IJSB.2444>

- Karim, Md. M., Choudhury, M. M., & Latif, W. B. (2019). The impact of training and development on employees' performance: An analysis of quantitative data. *Noble International Journal of Business and Management Research*, 3(2), 25–33.
- Karim, R. A. (2019). Impact of different training and development programs on employee performance in Bangladesh perspective. *International Journal of Entrepreneurial Research*, 2(1), 8–14. <https://doi.org/10.31580/ijer.v1i2.497>
- Khan, A. A., Abbasi, S. O. B. H., Waseem, R. M., Ayaz, M., & Ijaz, M. (2016). Impact of training and development of employees on employee performance through job satisfaction: A study of telecom sector of Pakistan. *Business Management and Strategy*, 7(1), 29. <https://doi.org/10.5296/bms.v7i1.9024>
- Kishori, M. B., & Priya, A. L. (2020). *A study on impact of job satisfaction on employees' performance at TVs pvt ltd, in Madurai*. 5(5), 75–84.
- Kum, F. D., Cowden, R., & Karodia, A. M. (2014). The impact of training and development on employee performance: A case study of second consulting. *Singaporean Journal of Business, Economics and Management Studies*, 3(3), 72–105. <https://doi.org/10.12816/0010945>
- Mampuru, M. P., Mokoena, B. A., & Isabirye, A. K. (2024). Training and development impact on job satisfaction, loyalty and retention among academics. *SA Journal of Human Resource Management*, 22, 1–10. <https://doi.org/10.4102/sajhrm.v22i0.2420>
- Navale, D. S. (2018). The impact of job satisfaction on job performance an empirical analysis. *International Journal of Yogic, Human Movement and Sports Sciences*, 3(1), 709–711.
- Ndulue, T. I., & Ekechukwu, H. C. (2016). Impact of job satisfaction on employee's performance: A study of Nigerian breweries plc Kaduna state branch, Nigeria. *Kuwait Chapter of Arabian Journal of Business and Management Review*, 5(11), 13–23. <https://doi.org/10.12816/0031600>
- Rajanikanth, K., Student, P., Kumar, K. A., & Student, P. (2024). *Training and development and job satisfaction in education sector*. 15(1).
- Ratnasih, C., Kasmawati, Zulher, & Norawati, S. (2022). The impact of job satisfaction on employee performance (The case of construction companies in Indonesia). *International Journal of Scientific and Management Research*, 05(07), 79–88. <https://doi.org/10.37502/IJSMR.2022.5707>
- Siswanto, A. (2024). The impact of employee training, job satisfaction, and organizational commitment on employee performance in the tech industry. *Tafkir: Interdisciplinary Journal of Islamic Education*, 4(3), 473–485. <https://doi.org/10.31538/tijie.v4i3.1161>
- Soegiarto, I., Sihite, M., & Usmany, P. (2024). The influence of training and development Programs, job autonomy, and organizational culture on employee job satisfaction and performance. *International Journal of Business, Law, and Education*, 5(2), 1577–1583. <https://doi.org/10.56442/ijble.v5i2.596>
- Sothy, C. (2019). *The impact of training and development on employee performance: A case study of selected private secondary schools in phnom penh Cambodia*. 7(3), 40–49.
- Sutjitra, D. (2015). *The impact of employee job satisfaction towards employee job performance at PT.Y*. 3(2), 325–330.
- Tahir, N., Yousafzai, I. K., Yousafzai, I. K., Jan, Dr. S., & Hashim, M. (2014). The impact of training and development on employee's performance and productivity A case study of united bank limited peshawar city, KPK, Pakistan. *International Journal of Academic Research in Business and Social Sciences*, 4(4), Pages 86-98. <https://doi.org/10.6007/IJARBS/v4-i4/756>

- Wright, T. A., & Cropanzano, R. (2000). Psychological well-being and job satisfaction as predictors of job performance. *Journal of Occupational Health Psychology*, 5(1), 84–94. <https://doi.org/10.1037/1076-8998.5.1.84>
- Zergabachew, M. F., & Shidega, T. (2023). *Impact of employee job satisfaction on organization performance case of MOJO cable and wire factory*. 5(6), 1–71.
- Zubairi, M. N., & Khan, T. Z. (2018). The effect of training and development on job satisfaction, skill enhancement and motivation of employees. *International Journal of Research - GRANTHAALAYAH*, 6(11), 290–298. <https://doi.org/10.29121/granthaalayah.v6.i11.2018.1130>