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DETERMINANTS OF EMPLOYEE PERFORMANCE: THE ROLE OF TRAINING AND DEVELOPMENT PRACTICES AT ETHIOPIAN ENGINEERING CORPORATION

THIS RESEARCH THESIS HAS BEEN SUBMITTED TO ADDIS ABABA UNIVERSITY, AT THE COLLEGE OF BUSINESS AND ECONOMICS, WITHIN THE DEPARTMENT OF MANAGEMENT. IT FULFILLS THE REQUIREMENTS FOR THE MASTER OF BUSINESS ADMINISTRATION PROGRAM.

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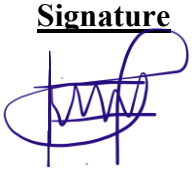
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Declaration

I hereby declare that the thesis entitled **"DETERMINANTS OF EMPLOYEE PERFORMANCE: THE ROLE OF TRAINING AND DEVELOPMENT PRACTICES AT ETHIOPIAN ENGINEERING CORPORATION"** is the original work of **TSIGIE BESEFAT**. This research has been submitted to Addis Ababa University, College of Business and Economics, Department of Management, in partial fulfillment of the requirements for the Degree of **Master of Business Administration (MBA)**. The work has not been submitted to any other university or institution for the award of any degree or diploma.

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CERTIFICATE

This is to certify that the thesis entitled **"DETERMINANTS OF EMPLOYEE PERFORMANCE: THE ROLE OF TRAINING AND DEVELOPMENT PRACTICES AT ETHIOPIAN ENGINEERING CORPORATION"**, submitted to Addis Ababa University College of Business and Economics for the award of Degree of **Master of Business Administration (MBA)**, is a record of bona fide research work carried out by **TSIGIE BESEFAT** under my guidance and supervision. Therefore, we hereby declare that no part of this thesis has been submitted to any other university or institution for the award of any degree or diploma.

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Abbreviations and Acronyms

ANOVA: Analysis of Variance

BPR: Business Process Re-engineering

CBT: Competency-Based Training

EEC: Ethiopian Engineering Corporation

FDR: Federal Democratic Republic of Ethiopia

GAP: Gap Analysis

HRD: Human Resource Development

MBO: Management by Objectives

OJT: On-the-Job Training

PA: Performance Appraisal

SPSS: Statistical Package for the Social Sciences

TNA: Training Needs Assessment

T&D: Training and Development

Abstract

This study examined the determinants of employee performance with particular emphasis on training and development practices at Ethiopia Engineering Corporation. A mixed-methods research approach was employed using descriptive and explanatory research designs. Data were collected from employees through questionnaires and interviews, while secondary data were obtained from organizational reports and relevant literature. Quantitative data were analyzed using descriptive and inferential statistical techniques, whereas qualitative data were analyzed thematically. The findings revealed that the determinants examined in the study have a positive and significant influence on employee performance. Training program effectiveness, employee engagement, skill development, organizational support, and work environment were all found to contribute positively to improved employee performance. The results indicate that employees perform better when organizations provide effective training opportunities, encourage engagement, support continuous skill development, and create a conducive work environment. The study concludes that training program effectiveness, employee engagement, skill development, organizational support, and work environment are important determinants of employee performance. Therefore, Ethiopian Engineering Corporation should strengthen its training programs, promote employee engagement, support continuous skill development, and foster a supportive work environment to achieve better employee performance.

Keywords: Training and Development Practices, Employee Performance, Employee Engagement, Skill Development, Organizational Support, Training Program Effectiveness, Work Environment.

CHAPTER ONE

1. Introduction

1.1. Background of the Study

The worldwide business environment requires organizations to establish training and development programs as vital elements for achieving their operational objectives. The current demand for skilled workers has reached its highest level because companies need to handle two challenges which are fast technological progress and changing customer preferences. The World Economic Forum (2020) reports that labor market changes will lead to 85 million job losses while 97 million new positions will arise which better match the upcoming labor patterns. Organizations must establish training and development programs because their business environment requires staff members to acquire new knowledge and skills to handle ongoing business changes (Kirkpatrick, 2016). Organizations face multiple obstacles which reduce program effectiveness because they need to achieve organizational targets yet their staff members show low commitment while their available resources remain insufficient (Baldwin & Ford, 2018). The research demonstrates that organizations which spend money on employee development programs experience significant financial returns because their employees perform better while their organizations retain more employees and achieve higher productivity levels (Noe, 2017). The training program effectiveness research shows that organizations must comprehend the factors which determine success to operate successfully in the global business environment.

African countries experience significant obstacles which impede their ability to provide effective training and development programs. African countries experience three major obstacles which include their inability to obtain quality educational resources and their lack of basic facilities and their failure to spend money on developing human capital (African Development Bank, 2020). The African Union (2018) reports that more than 60% of Africa's population falls under the age of 25, which creates both middle potential and barriers for developing a skilled workforce. The majority of young people remain in unemployment or underemployment because they do not possess job skills needed and they have not completed appropriate training programs. The workforce employed in the informal sector does not receive organized training programs which are essential for their job skill development.

Modern job requirements exceed the current capabilities of the workforce (ILO, 2021). The African Union established its vocational training enhancement programs to create comprehensive educational systems which will meet the employee skill requirements of the labor market. Organizations across Africa work to enhance training and development despite the existing obstacles because they implement various projects which focus on skill development and entrepreneurship advancement (OECD, 2020). The Ethiopian growth and transformation agenda requires training and development to achieve the national development objectives, which makes these two elements essential to the country's progress. The Vision 2025 framework for national development, which aims to elevate Ethiopia to a middle-income economy status, has human capital development as its primary strategic objective (Federal Democratic Republic of Ethiopia, 2019). The effectiveness of training programs continues to be a crucial challenge which needs resolution. Organizations understand training importance but they face implementation difficulties because their resources limit them while their training plans do not match their business goals (Beyene, 2020).

Ethiopia has 71% of its workforce under 30 years old but 44% of young workers do not have needed professional competencies for current job vacancies (Tadesse, 2021). The deficiency of required job skills stems from two main causes which include poor education systems and restricted access to vocational training. The existing training programs do not fulfill industry requirements which lead to training results that do not meet workforce needs (Hailu, 2022).

The case study of Ethiopian Engineering Corporation demonstrates the difficulties which organizations confront. The organization faces challenges which hinder its ability to achieve maximum employee output through its training programs designed for engineering and technical workforce development. The accomplishment of these programs depends on three factors which are support from the organization and active participation from the staff and conditions of the workplace (Mulu, 2021). The challenges need resolution because they directly impact employee performance which results in organizational productivity improvement. The stakeholders who understand training and development dynamics in Ethiopia will create better strategies which help organizations achieve their goals and assist the country in its development mission.

1.2. Statement of the Problem

Training and development (T&D) serve as the essential foundation which organizations require to improve their employee performance levels and their overall operational effectiveness. Organizations that spend over 300 billion dollars every year on worldwide training and development programs achieve only slight enhancements to their performance results according to Aju and Ofuafor (2019). African countries face two major obstacles which include insufficient financial resources for training programs and missing essential skills while 70 percent of organizations do not have training programs which effectively address these issues according to Birhane (2016). Ethiopian organizations fail to achieve their development targets because insufficient budget allocation and ineffective training operations prevent them from advancing their training programs according to Engida and Worku (2023). The research about training programs and employee performance has focused on demonstrating how training benefits employees through skill development and increased job motivation and work satisfaction according to Mohammed (2015). Training and development (T&D) improve performance but training needs analysis and development programs face critical deficiencies which organizations need to address according to research findings. Organizations face challenges because their training programs do not meet their performance requirements which results from the lack of alignment between their training initiatives and business objectives according to Kebede (2015).

Studies have not yet investigated how employee engagement and organizational support must work together with the work environment to determine training outcomes. Global studies indicate that employee engagement significantly boosts performance and motivation; however, Ethiopian research maintains siloed treatment of these factors according to Kidanemariam (2024). Research on Ethiopian settings fails to adequately study how organizational support helps staff transfer knowledge after finishing their training periods. Training programs lose their potential effectively because organizations fail to address what they need to do. The connection between work environments and training processes needs further studies to determine how they affect work productivity and job performance according to Sisay and Tarekegn (2023).

The research aims to create a complete understanding of training programs in Ethiopian businesses through the combination of these three research elements. The goal of this research project focuses on boosting employee performance while improving organizational performance through custom

training programs which address both employee requirements and organizational goals. The research studies used descriptive research method which led to significant methodological flaws in prior studies according to Mohammed et al (2015). The study lacks samples because the researcher have yet to conduct related research in the specific area of Ethiopian Engineering Corporation operations. Organizations need targeted studies to determine how training and development affect their specific business environment because current research does not focus on this area. The research study reveals major research gaps because the Ethiopian Engineering Corporation lacks studies about training effectiveness and employee engagement and organizational support. Therefore, this study seeks to examine the determinants of employee performance at Ethiopian Engineering Corporation by focusing on training program effectiveness, employee engagement, skill development, organizational support, and work environment. The study aims to identify the extent to which these factors influence employee performance and provide evidence-based recommendations for improving organizational performance. The research studies used descriptive research method which led to significant methodological flaws in prior studies according to Mohammed et al (2015).

1.3. Research Questions

- What is the effect of training programs in enhancing employee performance at the Ethiopian Engineering Corporation?
- What is the relationship between employee engagement and overall performance levels within the organization?
- How do skill development initiatives impact employees' job efficiency and output?
- What role does organizational support play in facilitating employee performance through training and development?
- In what ways does the work environment influence employee performance in relation to training and development efforts?

1.4. Objective of the study

1.4.1. General Objective

To examine the determinants of employee performance through training and development practices at Ethiopian Engineering Corporation.

1.4.2. Specific Objectives

1) To examine the effect of training programs on employee performance at the Ethiopian Engineering Corporation.
2) To Assess the influence of employee engagement on employee's performance at Ethiopian Engineering Corporation.
3) To determine the effect of skill development on employee performance at Ethiopian Engineering Corporation.
4) To examine the influence of organizational support on employee performance at Ethiopian Engineering Corporation.
5) To Examine the effect of work environment on employee performance at Ethiopian Engineering Corporation.

1.5. Significance of the Study

The study provides valuable information on the determinants of employee performance and training and development practices. The findings of the study will help Ethiopian Engineering Corporation identify effective strategies that improve employee performance and organizational success. The study will assist policymakers in creating training initiatives that boost workforce competencies and drive economic expansion in the engineering industry. By examining the factors that influence employee performance, the study helps organizations evaluate and improve their employee performance practices. The findings of the study will allow management to make informed decisions regarding training and development practices and enhance employee productivity and job satisfaction.

1.6. Scope of the Study

The study examined the determinants of employee performance with a focus on training and development practices at Ethiopian engineering corporation. The study used both descriptive and inferential methodologies to examine the relationship between employee performance and its determinant, including training program effectiveness, skill development, employee engagement, work environment and organizational support. To acquire data, the study employed a mixed-methods approach, combining quantitative data collected through questionaries and qualitative data collected through interviews. Ethiopian Engineering Corporation was the focus of the investigation due to its wide-ranging operations in Ethiopia the researcher collected data between April and October 2025 to ensure that the study reflected actual training procedures and organizational issues at the time.

1.7. Limitations of the Study

The study used a small sample size which restricted its ability to apply findings to the entire workforce at Ethiopian Engineering Corporation. Participants answered questions according to what they believed to be socially acceptable which resulted in biasing the researche data on training effectiveness and employee performance. The research team could only collect and analyze data during the research period because specific time boundaries restricted their study of the determinants of employee performance over an extended period. The research organization established boundaries which limited study outcomes to apply only within its own organization and specific sectors of Ethiopia. The study faced obstacles because the researcher could not access sufficient resources and their data limitations restricted research activities.

1.8. Operational Definitions

Employee Performance: The effectiveness and efficiency with which employees fulfill their job responsibilities, measured through productivity and quality of work and achievement of goals.

Training Programs: Structured learning experiences which improve employee skills and knowledge and job-related competencies.

Employee Engagement: The employee dedication and participation which an employee shows to their organization through their work enthusiasm and work motivation and emotional dedication to their tasks.

Skill Development: The process which builds specific abilities and competencies that help employees to do their work more effectively.

Organizational Support: The resources and encouragement and assistance which the organization gives to help employees achieve their work success and professional development.

Work Environment: The physical and psychological conditions which employees use to perform their work, which includes workplace culture and management practices and available resources.

1.9. Organization of the study

The study is organized into five main chapters that structure its content. The first chapter of the study provides essential background information through its presentation of the problem statement and research questions and study objectives and significance and scope and boundaries and operational definitions. The second chapter of the study provides a comprehensive review of training theories and employee performance theories and empowerment theories, while the empirical research demonstrates existing research gaps between these theories. Research methodology in Chapter Three explains the study's research design and approach and target population and sampling techniques and data collection methods and analysis methods and ethical research practices. Chapter Four presents and analyzes the data collected from respondents and discusses the findings of the study. Chapter Five presents the research study's main findings which include training recommendations for the Ethiopian Engineering Corporation and the study's concluding remarks.

CHAPTER TWO

2. Review of related literature

Scientific examinations of theoretical structures and practical case investigations are analyzed within this chapter to explore how training and development programs influence employee work performance. It has been observed that various inquiries show that training and development programs create better skills and employee work performance because positive gains for the organization are secured. Through the evaluation of results from employee performance

assessments, this framework will examine training and development programs while connections between training and development programs and employee work performance are established. This scholarly investigation within the current section observes available documents from abstract structures and documented examples because those documents look at the influence of training and development programs on employee performance. Specific organizational training programs are judged by the assessment framework through the looking at employee performance evaluation outcomes. Experts claim that the outcome data creates a clear connection between training and development programs and the results seen in employee performance when the improvement of a working position is valuable. While the study is detailed, the assessment framework confirms that training and development programs influence employee performance because the organization becomes successful.

2.1. Theoretical review

2.1.1. Definition and Importance of Training and Development

The process of training and development encompasses organized programs designed to improve employees' job skills and capabilities, allowing the organization to achieve its operational goals. These key elements assist organizations in fulfilling their business objectives while also improving employee productivity. The organization needs well-structured training and development programs because they help employees perform better and the organization achieve operational improvements. The research shows that employees who undergo structured training programs will experience better performance results because their knowledge and skills and professional attitude improvements (Yamoah, 2013). Employees who receive precise training will obtain better competency for their job duties and technology use and work performance requirements.

Training functions as a strategic instrument which organizations use to develop employee attitudes and create environments which encourage teamwork within their workforce. Organizations which dedicate resources towards employee development will establish a workplace atmosphere which motivates staff members to work together (Solomon, 2016). The system helps workers perform better while it builds a positive workplace atmosphere which makes employees happier at work and increases their job satisfaction. Organizations need to have training programs which develop their workers according to the specific requirements of their organizational post.

The system requires organizations to find their skill deficiencies and establish training targets and use multiple teaching strategies to effectively teach their workers. The alignment of training with organizational goals enables organizations to improve their communication process which leads to decreased employee turnover and greater employee commitment which supports their long-term development (Philstat, 2023). The current business environment demands that organizations sustain their operational success through continuous employee training and development initiatives. Organizations need to provide their staff members with current knowledge and skills as industries and technologies development. The ability of workers to adapt their skills enables them to increase work performance while their organization achieves competitive advantage according to research by Bersin (2013). Organizations need to create training and development programs that teach employees the vital skills required for modern business operations according to present-day business requirements. Organizations achieve their strategic objectives through successful programs which enhancing employee productivity and improve employee morale. Organizations need training and development programs because they create essential frameworks which help build organizations that can react rapidly to changing business environments (Yashodha, 2023; Melaku Habtamu, 2023).

2.1.2. Training and Development as Drivers of Employee Performance

Training and development programs serve as the essential components which drive employee performance because they better equip employees with the essential skills and knowledge required for success in their work. The programs improve technical skills while increasing employee motivation which leads to better work performance. Training programs establish a direct relationship with employee performance which research studies have verified multiple times. The targeted training programs which employees receive lead to higher job performance and productivity improvements which benefit the organization (Yamoah, 2013). The study demonstrates that training programs provide fundamental advantages which both employees and organizations receive through their financial support.

Training delivers its main benefit because it enables employees to boost their work performance efficiency through training. Training provides new skills and knowledge which decreases error rates while boosting overall work productivity.

Employees who participate in regular training tend to perform their duties more competently, resulting in higher quality work and increased output (Philstat, 2023). The organization gains operational strength through this development which benefits both the employee and the organization.

The training program assessment evaluation uses Kirkpatrick's four-level training evaluation model as its primary assessment tool. The model provides structured assessment training effectiveness through four different assessment levels which include reaction assessment learning assessment and behavior assessment (Solomon, 2016). The first level of reaction assessment training participants' immediate training response evaluation through their satisfaction level and engagement assessment. The second level of learning assessment evaluates how much participants learn the required knowledge and skills and attitudes. The third level of behavior assessment evaluates how well participants apply their learning through their work activities. The results level measures training effectiveness by assessing its impact on organizational productivity and quality improvements. Using the Kirkpatrick model allows organizations to assess their training programs to determine training effectiveness which enables them to plan their future training investments. The organization can identify its training program strengths and weaknesses through assessment of each program level. The organization uses training and development programs as its primary strategy to improve worker performance according to Philstat (2023). The organization develops a competent workforce with structured initiatives that improve employee skills and motivation. The link between training and employee performance shows that ongoing training initiatives contribute to the success of the organization. The organization improves its market competitiveness through individual employee training programs which enhance its overall performance.

2.1.3. Employee Empowerment and Its Role in Enhancing Performance

Employee empowerment functions as a fundamental component which organizations need to enhance their organizational performance through its implementation with proper training programs. The process of empowerment gives employees the right to make decisions which increases their job satisfaction and work performance. The research shows that empowered employees take responsibility for their tasks which leads to better work performance and higher work engagement (Spreitzer, 2105). The research study established a model which demonstrates

that training combined with empowerment techniques through participation and delegation and job enhancement leads to better employee performance at work (Aguinis & Kraiger, 2019). Employees who receive training to develop their skills and are granted decision-making authority tend to perform better at their work. Employees who experience empowerment develop a sense of ownership which drives them to take responsibility for their training application work. Training gives employees new skills which they practice through the empowered work process which drives their productivity and motivation (Deci & Ryan, 2020).

The organization shows employees that their work matters when they include employees in decision-making processes which increases employee job satisfaction. The training leads to better performance because the increased motivation helps them use their training benefits. Empowered employees show better work performance which exceeds their required job tasks which positively affects the organization (Brown & Sitzmann, 2022). Studies show organizations which combine employee empowerment practices with training programs achieve better employee retention and engagement (Yashodha, 2023). The research shows that empowerment programs deliver advantages to both individual workers and the entire organization. The process of employee empowerment functions as an essential method which organizations need to boost employee performance through their implementation of training programs. Organizations create a motivated workforce through their support of employee decision-making and independence which leads to better job performance and success in the workplace.

2.1.4. Types and Methods of Training

The different training programs which include on-the-job training and off-the-job training plus workshops and coaching sessions create a fundamental framework which determines how well employees develop their skills. The choice of training methods together with their implementation schedule determines how successful employee development initiatives will become. The process of effective training requires organizations to select training methods that match their needs while they should determine training intervals and conduct assessments after training to achieve maximum results in employee performance (Noe, 2023).

The organization of on-the-job training allows employees to acquire real-world skills which they can use immediately in their work.

The structured learning environment of off-the-job training programs which include workshops and seminars enables participants to acquire and develop specialized skills through comprehensive educational experiences. The effectiveness of each training method depends on how well its strengths match the unique requirements that organizations and their employees need to achieve success. (Elnaga & Imran, 2023) employees need continuous training programs which help them learn new skills and technologies because these programs enable them to maintain their performance standards. The training sessions which organizations conduct on a regular basis provide employees with essential skills which they need to overcome upcoming challenges. The coaching process gives employees customized assistance which strengthens their existing skills and helps them solve difficult problems.

You need to ensure that the training process is carried out within a proper timeline. The research shows that training sessions which take place regularly throughout the year provide better results than training sessions which occur only once in a long time. The process enables organizations to develop educational programs which help employees acquire knowledge and skills while they establish a learning framework that continues throughout the organization (Aguinis & Kraiger 2009). The process of post-training assessment determines how successful training programs perform their intended purpose.

The system provides organizations with essential evaluation results which show them successful methods and areas which require improvement to enhance their training programs. The various training methods together with their respective training styles create an important impact which determines how employees develop their abilities and their work performance.

Organizations that provide suitable training methods together with ongoing learning paths for employees will develop their workforce skills while their employees will become more flexible. The result of this process is that employees will perform better in their jobs which will cause the organization to achieve better results. Organizations which use training methods that produce results together with assessment methods which evaluate training programs can develop an expert workforce which possesses essential skills.

2.1.5. Challenges and Policy Implications in Training and Development

The business operations depend on training and development programs which improve employee performance through their execution. The organization needs immediate solutions to its multiple existing challenges in order to attain maximum results from these programs. The required experienced trainers together with financial expenses and time limitations form the main obstacles which need to be addressed first. Training programs face their primary challenge because they need significant financial support to operate effectively. Organizations must allocate substantial financial resources, time, and skilled personnel to develop and implement effective training initiatives (Noe, 2013). Organizations that have budget restrictions face major difficulties when they need to implement this project because it requires complete financial backing. The expenses of training programs create a negative impact on organizations, but these programs bring long-term benefits which lead to improved employee productivity and retention (Elnaga & Imran, 2013). The organization needs to connect its training programs with both the performance management system and the individual development plan. Employees need training programs which establish their link to performance management systems and individual development plans because this connection shapes their job performance (Aguinis & Kraiger, 2019). Performance evaluations should serve as the starting point for training program development because they identify current skill gaps that require development to meet future work requirements. The combination of these two elements develops a strategic framework which empowers employees to grow while training efficiency sees an improvement. Human resource development policies need correct implementation in order to achieve successful training and development activities.

Training programs need clear policies which will help design and conduct their execution while organizations find out their training requirements through program assessments (Brown & Sitzmann, 2022). Organizations need to foster a learning environment which allows employees to develop their skills through continuous educational opportunities. Training programs need to become a regular part of employee development according to this cultural change which will make employees actively participate in training programs. The process of training and development provides organizations with valuable benefits which require organizations to tackle multiple difficulties before they can achieve their full potential.

The combination of training investments with performance management system connections and human resource policy implementation will result in improved employee performance which drives organizational success. The organization will develop a workforce with essential skills who can adjust to changing business conditions through its early resolution of existing problems.

2.2. Empirical Review

The research study investigates how training programs impact employee work performance by reviewing existing literature on the subject through its findings and research methods and identifying the gaps present in available studies.

Yimam (2022) investigates how training programs impact employee performance at Bahir Dar University in Ethiopia. The study applies a quantitative research design through survey methods to study employee data which shows that training leads to higher productivity and better job satisfaction. The study confines itself to one research site which limits its findings because most industries operate differently from that particular site.

Melaku Habtamu (2023) studies how training and development impact employee performance at Jimma University using research methods that combine both training programs and employee performance assessments. The study combines numbers with interviews to use a mixed-methods approach. The research demonstrates how training affects worker performance through its complete study while showing biased results because participants shared their personal experiences.

The research shows how training impacts performance through its objective performance metrics which require validation to show training's results. Meron Taye (2023) conducts research about training effects at the Federal Transport Authority through survey methods to collect data. The research shows that training programs improve employee performance to a significant degree. The research study needs long-term data to evaluate training impacts because it currently uses short-term data which prevents understanding of training impacts on performance.

The research evaluation needs this viewpoint because it shows the complete advantages training brings to organizations. Birhan Ambachew Taye and Temesgen Teferi Zewdu (2023) find that

training programs at Commercial Bank of Ethiopia in Woldia District create a strong connection between employee training and job performance.

The research study provides useful information however its research design limits its ability to apply findings to different industries beyond its studied sector. The banking sector displays specific features which do not apply to other business environments hence research needs to examine multiple industries to confirm these study results. Tadesse Alemu and Fekadu Shiferaw (2023) studied East Addis Ababa training methods and discovered that structured training programs enhance employee work performance. The study results lose their generalizability since the researcher used a small sample size A bigger sample size that encompasses diverse employee groups from a range of organizational sizes would illustrate the determinants of employee performance on performance in different workplaces. A previous study on training evaluation and its impacts, presented by Mohammed Saad and Mat (2013), underlines the significance of follow-up assessments. The study makes important findings, but because it lacks up-to-date data and ignores modern training techniques that are vital in today's workplaces, its significance declines. To validate their findings, which rely on training methods developed in 1979.

Aguinis and Kraiger (2009) developed a framework which demonstrates how training programs create organizational benefits while helping employees. The study provides comprehensive details, yet it fails to study particular industry sectors which restrict its potential applications. The researchers should conduct multiple studies across various fields to strengthen the credibility of their research outcomes. Wright and Geroy (2022) challenge conventional training methods while

Advocating for an expanded methodology to advance human resource development. The study results are outdated because they don’t reflect current training systems and technologies. New research must establish educational methods which digital learning platforms use because training procedures have changed. Elnaga and Imran (2023) demonstrate that training programs lead to enhanced employee job performance. The study needs context specific analysis to show how different training approaches have an impact on performance across multiple industries. Wacheke and Rose (2013) discovered that training outcomes in Kenya vary by area. The research adds value. More research is needed to understand how training works across world cultures, as current insights are limited to local contexts. context,

Yamoah (2013) outlines a structure that links training and engagement to improved job performance. The analysis offers helpful findings, but requires real-world data for real-world use. Researchers need to validate the model by testing it across. Various organizational contexts. Zondi et al. (2021) present a framework that shows how regular training sessions improve employee performance. Real world study data is required to illustrate the framework's effectiveness in practice. verifying theories through studies is vital for effective application by organizational practitioners. practices. Upadhyay's (2018) quantitative investigation of the interplay between training and employee performance yields strong results, but lacks qualitative research to deepen understanding. Understanding how employees perceive their training experiences can help companies improve their training programs' success.

Philstat (2023) presents a framework for training and development to enhance performance. Testing theoretical concepts with real-world facts is crucial for developing practical approaches. Yashodha (2023) founded a methodology for identifying staff training needs and promoting ongoing professional growth in order for success. Practical testing is necessary to ensure the frame wok delivers the desired outputs. Simanjuntak et al. (2020) evaluate the effects of training on employee work performance, including career growth and remuneration aspects. The study provides comprehensive information, but its complex design makes it challenging to

grasp how each component impacts training outcomes. Vardarlıer and Türk (2022) analyze organizations' approaches to Apply sustainable human resource management.

development and compensation factors. The study presents complete information yet its intricate design makes it difficult to understand how each factor affects training outcomes. Vardarlıer and Türk (2022) investigated the techniques Company's use to implement green human resource management as a means to develop training programs that enhance employee productivity.

The research by Shaw and Wheeler 2022 Examined how digital networking activities create problems for youth unemployment.

The research remains significant, but lacks a clear link between training processes and development, making it less effective. Brown and Sitzmann 2022 provide an overview of the

Organizations use many training approaches to grow their staff. Although the data is comprehensive, further research is needed to go deeper into certain industry sectors and demographic groupings. The Noe 2013 textbook offers comprehensive information on staff training and development practices. While the text provides a fundamental insight, further research is needed to validate existing industrial patterns and technical progress.

Table 2.1. Summary of Empirical Review

This review examines recent studies on training and development programs and their impact on employee performance. The research investigations focus on the determinants of employee performance programs on company efficiency, job satisfaction among workers, and overall organizational performance.

Author	**Objective**	**Findings**	**Gaps**
Yimam (2022)	Explore the impact of training at Bahir Dar University, Ethiopia.	Training positively affects productivity and job satisfaction.	Limited to a single institution, affecting generalizability.
Melaku Habtamu (2023)	Investigate the effect of training and development at Jimma University.	Provides insights into training effects through mixed methods.	Reliance on self-reported data raises bias concerns; lacks objective metrics.
Meron Taye (2023)	Examine training effects at the Federal Transport Authority.	Training significantly enhances employee performance.	Lacks longitudinal data to assess long-term impacts.
Birhan Ambachew Taye & Temesgen Teferi Zewdu (2023)	Assess training and performance correlation in the banking sector.	Strong correlation found between training and performance.	Specific industry focus limits applicability to other sectors.
Tadesse Alemu & Fekadu Shiferaw (2023)	Analyze training practices in East Addis Ababa.	Structured programs lead to improved performance.	Small sample size affects robustness and generalizability.

Mohammed Saad & Mat (2013)	Emphasize the importance of training evaluation.	Highlights the need for post-training assessments.	Lacks recent data and contemporary training methods.
Aguinis & Kraiger (2009)	Provide a theoretical framework on training benefits.	Comprehensive framework on training advantages.	Absence of focus on specific industry contexts limits applicability.
Wright & Geroy (1992)	Challenge conventional training myths.	Advocates for an integrated approach to HR development.	Findings are dated and may not reflect current practices.
Elnaga & Imran (2013)	Examine overall training effects on performance.	Positive correlations found between training and performance.	Lacks context-specific analysis for deeper insights.
Wacheke & Rose (2013)	Focus on training outcomes in Kenya.	Valuable regional insights provided.	Conclusions may not apply universally due to cultural differences.
Yamoah (2013)	Present a model linking training and empowerment to performance.	Proposes a conceptual model for training effectiveness.	Lacks empirical validation for practical application.
Zondi et al. (2021)	Offer a framework on training as a performance driver.	Emphasizes the role of training in enhancing performance.	Absence of empirical data limits real-world applicability.
Upadhyay (2018)	Investigate training's role through quantitative methods.	Provides valuable quantitative data.	Lacks qualitative insights to enrich findings.
Philstat (2023)	Present a conceptual framework for training improvement.	Theoretical approach proposed for	Requires empirical testing to validate claims.

		enhancing performance.	
Yashodha (2023)	Emphasize the importance of continuous learning in training.	Advocates for ongoing employee development.	Lacks empirical evidence to support assertions.
Simanjuntak et al. (2020)	Analyze the impact of training, career development, and compensation.	Comprehensive but complex findings.	Difficulty in isolating the effects of training from other factors.
Vardarlıer & Türk (2022)	Explore green HR management integration with training.	Promising insights into sustainable practices.	Niche focus may limit broader applicability.
Shaw & Wheeler (2022)	Discuss implications of digital networking for youth unemployment.	Relevant discussion on networking impacts.	Tangential connection to training weakens focus on training's direct impact.
Brown & Sitzmann (2022)	Provide a contemporary overview of training and development.	Broad insights into training practices.	Lacks specific insights into particular sectors or demographics.
Noe (2013)	Offer foundational knowledge on employee training and development.	Comprehensive textbook on training principles.	Lacks recent empirical studies reflecting current trends.

2.2.1. Research gaps

The research study identified critical training and development deficiencies which require further research to address these deficiencies. The current research studies training practices which operate within particular organizations thus creating restrictions on how their outcomes can be used in

different environments. The Ethiopian Engineering Corporation serves as the study target because its operations illustrate how research studies which focus on single organizations lead to restricted study outcomes.

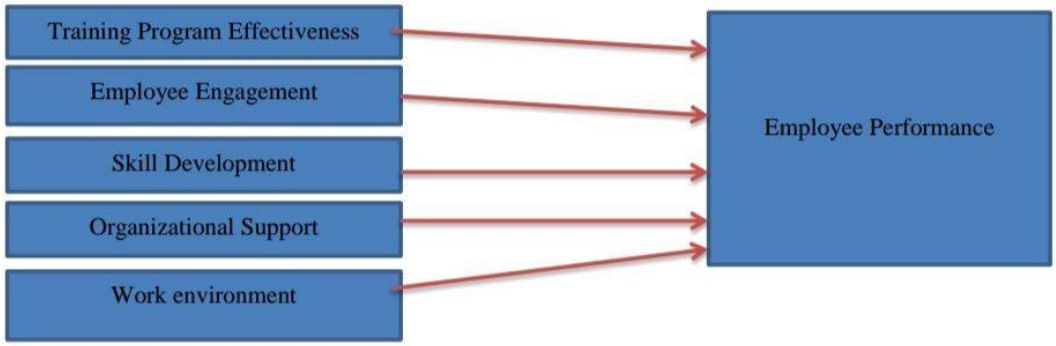
The research needs to study various industries to identify how different training techniques influence employee performance across multiple sectors. The major problem with existing research remains that it fails to collect essential long-term data which researcher need to study training impacts on worker performance during scientific inquiry. The training program assessment reveals immediate results which make problems during long-term performance evaluation impossible to resolve. Researcher need to conduct extended studies about training programs so they can track ongoing advantages that training provides.

Researchers who develop studies about human behavior need to give equal importance to human qualities as they do to statistical data. Organizations can enhance their training outcomes by conducting employee interviews and focus groups to determine their exact training needs. Organizations can assess training effects through data analysis which combines statistical evaluation with personal insights. The research field also has an issue because many studies rely on outdated training methods from the past. The research methods do not include current e-learning and digital tools as part of their evaluation process. The research needs to evaluate contemporary training technologies which fulfill present-day educational standards. Theoretical frameworks which exist in academic literature fail to create practical connections with existing methods because scholars have not tested their theoretical content through practical implementation. The current research provides important information but it needs to fill existing research gaps which prevent training systems from meeting the needs of multiple industry sectors. The research can deliver better organizational benefits through its combination of long-term studies with personal insights that use established theories.

2.3. Conceptual frameworks

Figures 2.1: Conceptual frameworks

Figures 2.1. Conceptual frameworks



Yamoah et al. (2013) established a framework which shows that training and empowerment programs lead to improved job performance. The researcher wants to study how these programs boost employee empowerment which leads to better job performance. The effectiveness of a training program exists in direct relation to its design and delivery methods. Research by Yimam (2022) at Bahir Dar University shows that a well-structured training design and delivery have a positive impact on employee performance. The global model highlights the importance of developing skills related to the job.

Employee engagement refers to the degree to which employees are emotionally and cognitively connected to their work and organization. Gede and Huluka's (2024) study indicated that employee involvement, including enthusiasm and commitment, improves performance at Ethiopian public colleges. Motivated employees often exceed expectations at work. commitment.

Skill development focuses on enhancing employees' knowledge, competencies, and abilities required for effective job performance. According to Emiru (2018), Ethiopia's public sector professionals require regular training at the Ministry of Public Service to maintain their essential skills. Organizations should provide instructional resources, including Training resources.

Legesse's (2021) study on the African Union Commission in Addis Abeba indicated that organizational assistance encourages employees to gain important skills, resulting in improved job performance. The office environment significantly impacts employee performance. A study by Abanaccha (2022) showed that the Commercial Bank of Ethiopia needed a positive and open work area to boost employee engagement and overall efficiency.

The framework developed by Yamoah et al. (2013) demonstrates how these factors are linked. Effective training promotes skill development, resulting in enhanced performance. Two important

aspects that increase employee involvement are organizational support and a A helpful working atmosphere. These frameworks assist organizations in determining their training needs. Leaders create positive work environments which maximize employee potential by understanding how engagement and skills and work environment interact.

CHAPTER THREE

3. RESEARCH METHODOLOGY

The research design methods and strategies of this study are presented in this chapter. The section describes the target group of the study who participated in the study and the methods used for their selection. The section describes the data sources and the methods used for data acquisition. The chapter explains all data analysis procedures which researchers used to verify their results. The section shows how researchers must maintain their ethical responsibilities during their research work. The study methodology section provides detailed information about the research process and the resulting study findings.

3.1. Research Design

Through descriptive research, the study recorded every training program at Ethiopian Engineering Corporation. The analysis demonstrated the structure of these programs. The explanatory approach examined how training programs affected workers' real-world performance. The study examined the relationship between employee engagement and training effectiveness and how both elements affect overall organizational performance. By combining the two approaches, the study created a comprehensive framework to pinpoint every factor influencing worker performance in this specific setting.

3.2. Research Approach

The study used a mixed-methods approach which blended both qualitative and quantitative research Procedures. In quantitative research the researcher is required to gather numerical data on employee performance merged with data on training program effectiveness through structured surveys.

The researcher used statistical techniques to carry out data Examination and Learn patterns and Association between Different factors. The qualitative research required the researcher to Carry out interviews and focus group discussions which facilitated to collect personal stories and feelings from employees about their training experiences. The researcher used this Method to gather both numerical data and Self-reflection which helped to understand the research results better.

3.3. Sampling frames

3.3.1. Target Population

The study Targeted on a Particular group of individuals who were Anticipated to Engage in the project. The study targeted all skilled and professional employees who worked at the Ethiopian Engineering Corporation which had 1,926 workers. The researcher contained participants from each department because sector has valuable Observations to Provide. Technical staff and engineers Gave their expertise to develop skills and examine how technical training influence work out put. The Human Resources team managed the training efforts and examined how well the organization supported these programs. The budgeting team coordinated all training-related expenses while supplying data on the financial out comes of these expenses, which influenced employee performance. The 2013 study by Yamoah and his colleagues implied that employees who acquire organization support, which includes training programs and empowerment initiatives, achieve better performance results. Local studies in Ethiopia confirmed this model which indicates its value for the region's Improvement. Organizational support and individual skill development both assist as important elements needed to enhance performance.

3.3.2. Sample Size Determination

The researcher used Yamane's formula from 1967 to calculate the sample size based on the measurement needs.

$n = N / (1 + N (e^2))$

Where:

N = 1,926 (total employees)

e = 0.05 (margin of error)

Substituting the values:

$n = 1,926 / (1 + 1,926 (0.05)^2)$

Calculating the denominator:

n = 1,926 / (1 + 4.815) = 260 / 1.65

So, $n \approx 371.67$

This means the sample size needed is about 372 employees.

3.3.3. Sampling Technique

The study applied simple random sampling to grant equal selection prospects for all Ethiopian Engineering Corporation employees which reduces researcher bias. A total of 1,926 skilled and professional employees from different departments formed the target population for the study. The researcher used Taro Yamane's formula to calculate the required sample size which indicated they needed to study 372 employees. The method achieved diverse perspective representation through engineers who shared technical training information while HR professionals evaluated organizational support and budgeting staff provided financial analysis and operational staff shared their efficiency assessment and quality control staff assessed training impact on standard measurement.

3.4. Source of Data and Data Collection Method

3.4.1. Source of Data

The researcher used primary and secondary data collection methods to achieve complete training and development practice understanding. Researcher collected primary data through structured

questionnaires which distributed to employees for quantitative data collection. The Researcher conducted semi-structured interviews with chosen participants to obtain their qualitative perspectives and detailed experience information. Secondary data sources included literature reviews of existing studies which provided contextual information and reports which documented engineering sector training and development methods. The researcher used both primary and secondary sources to build a complete understanding of the training program success within the organization through their investigation of training programs.

3.4.2. Method of Data Collection

The research team employed two different data collection methods which included quantitative data collection methods and qualitative data collection methods. The research team collected quantitative data through employee questionnaires which gathered information about their training and development program experiences and perceptions. The questionnaires contained closed-ended questions which enabled researcher to perform statistical analysis of the response data. The Researcher conducted interviews with chosen participants to collect their qualitative information. The interviews allowed participants to answer open-ended questions which resulted in detailed discussions about their personal training experience and the training effectiveness insights. The researcher studied existing studies and reports about training and development practices within the engineering sector for their research project. The secondary data sources established contextual background which supported the primary data results.

3.5. Data Analysis Method

SPSS version 27 provided the researcher with a complete data analysis tool which they used to analyze quantitative data. The researcher used descriptive statistics to present frequency data and mean values and standard deviation information while they used multiple linear regression and ANOVA as inferential statistics to test their research hypotheses.

The researcher performed thematic analysis on the interview data to discover major themes and patterns which participants had expressed. The mixed-methods analysis used numerical data together with detailed personal stories to produce new information about the research questions. The two research methods provided deep understanding and wide-ranging research findings which enabled truly balanced research results about the subject matter.

3.6. Description of the variable

Table 3.1.Description of the variable

Variable Type	Variable Name	Description
Dependent Variable	Employee Performance	The effectiveness and efficiency with which employees fulfill their job responsibilities.
Independent Variable	Training Program Effectiveness	The degree to which training programs improve employee skills and job performance.
Independent Variable	Employee Engagement	The level of commitment and involvement employees have towards their organization and work.
Independent Variable	Skill Development	The process of enhancing specific abilities and competencies relevant to employees' job roles.
Independent Variable	Organizational Support	The resources and encouragement provided by the organization to facilitate employee development.
Independent Variable	Work Environment	The physical and psychological conditions in which employees work, including workplace culture.

The researcher used measurement tools that were already established to perform their research outside of their home country. Employee performance was evaluated through three assessment methods: performance reviews, self-assessments, and 360-degree feedback according to Aguinis (2013) and Lemi (2022). The assessment included questions that asked participants to rate their performance in achieving their goals during the current quarter.

The training program evaluation process used Kirkpatrick's Four Levels of Evaluation to determine training program effectiveness according to Aguinis (2013). The evaluation process described in Melaku Habtamu (2023) used shared training feedback surveys which collected data before training programs and after training programs. The sample question asked participants whether they found the training program interesting and useful. The organization used TINYpulse and Culture Amp to measure employee engagement through survey questions which included the statement "How likely are you to recommend this company as a great place to work?" which connects to Saks (2006) and appears in Mesfin (2022).

The skill development process used skill assessments which Mulu (2021) established to evaluate skills through the question "How would you rate your current skill level in [specific skill]?" according to Noe (2017). The study used the Survey of Perceived Organizational Support (SPOS) (Eisenberger et al., 2016) as a tool to evaluate organizational support. The research team used the AACN Healthy Work Environment Assessment Tool to evaluate the work environment according to Mulu (2021).

3.7. Reliability and Validity

3.7.1. Reliability

The researcher picked faithful measurement instruments to accomplish trustworthy study results. The researcher applied pilot testing to magnify their questionnaire through collected feedback about their survey questions. The researcher implemented multiple review processes to examine the survey items and remove all clarity lacking or inconsistent elements. The researcher accomplished better research out comes through accurate measurement methods which improved data reliability.

Table 3.2. summarizing the reliability of various constructs using Cronbach's alpha:

Construct	Cronbach's Alpha
Employee Performance	0.87
Training Program Effectiveness	0.82
Employee Engagement	0.85
Skill Development	0.79
Organizational Support	0.83
Work Environment	0.88

The study found that Employee Performance had a reliability score of 0.87, indicating that participants answered the test questions consistently. The Training Program Effectiveness obtained a score of 0.82, while Employee Engagement scored 0.85, both indicating good reliability for the assessment. Skill Development had a reliability score of 0.79, Organizational Support scored 0.83, and Work Environment scored 0.88. In general, these findings indicated that all areas tested had acceptable to strong reliability, verifying that the tools used in the study delivered consistent and trustworthy results for key organizational factors.

3.7.2. Validity

To have improved validity of their Data, the researcher compared results from different sources and methods using Triangulation Method. which confirm the findings with various pieces of evidence, improving their confidence in the findings. the researcher considered various perspectives to get reliable out comes and not to make. The researcher used measurement tools to asses important variables, grunting reliability for the ongoing data Investigation.

3.8. Ethical Considerations

The research gave priority to ethical principles most importantly. Prior to data collection, the researcher advised and took the consent of participants about the study to proceed. The Researcher assured the confidentiality and anonymousness of the participants no personal information will be disclosed. Participants were free to disengage from the study at any time without any negative consequences, encouraging a trustworthy environment for the research.

CHAPTER FOUR:

4. RESULTS AND DISCUSSIONS

The research results show how Training and Development programs impact Employee Performance at the Ethiopian Engineering Corporation. The study begins with descriptive analysis which shows data through frequency distribution and percentage calculations and mean value evaluations and standard deviation measurements. The chapter begins with initial analysis before proceeding to multiple linear regression analysis. Thematic analysis was implemented to interpret

the data which researcher collected for their qualitative analysis. The training program assessment process evaluates training program effectiveness while creating organizational development recommendations for upcoming training needs.

4.1. Response rate

Table 4.1. Response rate

Response Status	Frequency	Percentage
Returned	354	95%
Not Returned	18	5%
Total Distributed	372	100%

Source: own survey, 2025

The study had a high response rate, with 372 surveys sent out. Out of these, 354 surveys were returned, leading to a response rate of 95%. This indicates strong engagement among the participants in the Ethiopian Engineering Corporation. Conversely, 18 surveys were not returned, which accounts for 5% of the total distributed.

4.2. Socio-Demographic

Table 4.2. Demographic information of the respondents

Socio-demographic Category	Variable	Frequency (n)	Percent (%)
Age Distribution	Under 25	42	11.9%
	25–34	148	41.8%
	35–44	102	28.8%
	45–54	45	12.7%
	55 and above	17	4.8%
Gender Distribution	Male	219	61.9%
	Female	135	38.1%
Education Level	Diploma	58	16.4%
	Bachelor's Degree	212	59.9%
	Master's Degree	84	23.7%
Experience Level	Less than 1 year	31	8.8%
	1–3 years	89	25.1%
	4–6 years	124	35.0%
	7–10 years	72	20.3%
	More than 10 years	38	10.7%
Department	Engineering	78	22.0%
	Project Manager	8	2.3%
	Team Leader	67	18.9%
	Foreman	18	5.1%
	Administration	41	11.6%
	Human Resources	2	0.6%
	Finance	5	1.4%

	Supportive Staff	130	36.7%
	Other	5	1.4%
Total	Total Employees	354	100%

Source: own survey, 2025

Table 4.2 presents the demographic data which describes the study participants who took part in research about how training and development programs affect employee performance at the Ethiopian Engineering Corporation. The largest group of respondents (41.8%) are aged 25–34 years. The groups of people who are younger than 25 years accounts for 11.9% of the total study participants while 35–44-year-old participants make up 28.8% of the total.

The group of people who are 45 to 54 years old represents 12.7% of the population while elder people who are 55 years and above make up 4.8% of the group. The workforce consists mostly of men with 61.9% (219 individuals) identifying as male while 38.1% (135 individuals) identify as female. About 59.9% hold a Bachelor's Degree, 23.7% have a Master's Degree, and 16.4% possess a Diploma.

The distribution of experience shows that 35.0% of people have 4 to 6 years while 25.1% possess 1 to 3 years and 20.3% have 7 to 10 years of experience. The remaining members of the group include 8.8% of people who have less than 1 year of experience and 10.7% of people who have more than 10 years of experience.

The participants work in various roles with 36.7% of them serving in supportive positions and 22.0% working in engineering. The remaining employees work in various departments including administration, finance, and human resources. The socio-demographic data provides essential information which helps the researcher understand the research setting and the factors that affect employee performance during training programs.

4.3. DESCRIPTIVE ANALYSIS

4.3.1. Employee Performance

Table 4.3. Employee Performance

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	SD
1. I meet my performance goals consistently.	145 (41%)	132 (37%)	47 (13%)	19 (5%)	11 (3%)	4.08	0.96
2. I receive constructive feedback on my work.	88 (25%)	114 (32%)	93 (26%)	41 (12%)	18 (5%)	3.60	1.12
3. I am satisfied with my overall job performance.	121 (34%)	149 (42%)	52 (15%)	22 (6%)	10 (3%)	3.98	0.98
4. I take initiative in my work tasks.	168 (48%)	122 (34%)	39 (11%)	17 (5%)	8 (2%)	4.20	0.93
5. I collaborate effectively with my team members.	155 (44%)	137 (39%)	42 (12%)	14 (4%)	6 (2%)	4.19	0.87
6. I feel recognized for my contributions to the organization.	79 (22%)	103 (29%)	88 (25%)	57 (16%)	27 (8%)	3.42	1.21

Source: own survey, 2025

The statement "I meet my performance goals consistently" received 41% of respondents who strongly agree with the statement plus 37% who agree with it. The majority of employees believe they meet their objectives which indicates that present training programs match employee capabilities and job obligations according to the evidence. The constructive feedback process received only 25% of respondents who strongly agree with the statement plus 32% who agree which resulted in a mean of 3.60 and standard deviation of 1.12. The organization needs better feedback systems because many employees already use feedback systems but receive less feedback which they need to develop.

The enhancement of feedback systems will provide additional support to employees for improving their work. On overall job satisfaction, 34% of employees strongly agree, and 42% agree, producing a mean score of 3.98. The positive employee assessment of job performance shows that employees take pleasure in their work for the organization. A total of 48% of respondents strongly agree to take initiative, while 34% choose to agree, resulting in a mean value of 4.20. The proactive workforce who work beyond their basic duties comes from successful training and organizational support because they work under their current training. Teamwork among members receives endorsement from 44% of respondents who strongly agree about their ability to work with others, while 39% of respondents agree, which results in a mean of 4.19.

Training initiatives developed teamwork abilities which led to greater overall performance and productivity according to the research findings. The recognition system needs improvement because employees show positive recognition of their work but they still need better recognition. The data shows that 22% of employees strongly agree with the statement while the mean score of 3.42 indicates that numerous workers believe their work remains invisible.

The workplace needs recognition systems because they help employees maintain motivation and job satisfaction but the organization needs to give more attention to this area. The training and development programs at Ethiopian Engineering Corporation lead to employee growth which results in positive employee performance outcomes. The employees show high competence in achieving their targets through their active work style, yet their need for recognition and feedback requires improvement in these two areas.

The organization can enhance better employee motivation through better recognition practices while bettering feedback systems, which will result in greater employee satisfaction that drives higher work performance. The study found that better training and development practices will enhance employee performance because they harm study results, which should undergo assessment of their impact. The organization will achieve higher performance through improved employee skills, which the organization will better through development and engagement programs.

4.3.2. Training Program Effectiveness

Table 4.4. Training Program Effectiveness

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Dev
1. The training program met my expectations.	112 (32%)	158 (45%)	53 (15%)	21 (6%)	10 (3%)	3.96	0.95
2. The content of the training was relevant to my job.	184 (52%)	121 (34%)	32 (9%)	12 (3%)	5 (1%)	4.32	0.84
3. I gained valuable skills from the training.	141 (40%)	147 (42%)	44 (12%)	17 (5%)	5 (1%)	4.13	0.89
4. The training was engaging and interactive.	95 (27%)	118 (33%)	73 (21%)	39 (11%)	29 (8%)	3.67	1.10
5. I feel more confident in my abilities after the training.	130 (37%)	142 (40%)	58 (16%)	16 (5%)	8 (2%)	4.05	0.93
6. I would recommend this training program to others.	152 (43%)	129 (36%)	45 (13%)	19 (5%)	9 (3%)	4.12	0.97

Source: own survey, 2025

The training program met my expectations according to 32 percent of participants who strongly agreed and 45 percent who agreed which resulted in a mean score of 3.96 with a standard deviation of 0.95. The majority of participants were satisfied with their training experience because the training program met their needs and job requirements. The training content directly connects to their job requirements according to 52 percent of respondents who strongly agreed and 34 percent who agreed which resulted in a mean score of 4.32.

The high level of agreement shows that the training content leads to practical results which benefit employees when they receive training sessions that contain relevant information. The training session enables participants to acquire valuable skills according to 40 percent of participants who strongly agreed and 42 percent who agreed which produced a mean score of 4.13. The training program successfully provides employees with skills that they need for their work because it delivers effective training. The training program received lower approval from participants who only 27 percent of participants strongly agreed with the statement which received a mean score of 3.67.

The training program delivers advantages yet there are areas that require development to improve participant involvement which will lead to enhanced knowledge retention and skill retention. The training program makes participants feel more confident according to 37 percent who strongly agreed and 40 percent who agreed which produced a mean score of 4.05. Employee confidence which is essential for employees to work effectively in their roles shows positive results from this program.

The training program received a total recommendation score of 4.12 from participants who expressed strong agreement at 43 percent and agreement at 36 percent. Employees who consider the training program valuable enough to recommend it to their coworkers demonstrate their strong support for the training program. The Ethiopian Engineering Corporation participants provided positive program feedback because they found it useful for their job requirements and their professional skills development. The program helps participants build confidence, but its effectiveness would increase with additional interactive features. The organization needs to concentrate on particular training program deficiencies which require improvement. The organization will achieve better outcomes when it develops a workforce that meets its business objectives.

4.3.3. Employee Engagement

Table 4.5. Employee Engagement

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Dev
1. I feel motivated to contribute to my team's success.	128 (36%)	144 (41%)	49 (14%)	22 (6%)	11 (3%)	3.91	0.97
2. I am enthusiastic about my work.	135 (38%)	139 (39%)	45 (13%)	23 (6%)	12 (4%)	3.88	0.99
3. I feel a sense of belonging in my workplace.	142 (40%)	136 (39%)	42 (12%)	23 (6%)	11 (3%)	3.89	1.00
4. I am proud to work for this organization.	150 (42%)	125 (35%)	46 (13%)	22 (6%)	11 (3%)	3.93	0.95
5. I actively participate in workplace activities.	115 (33%)	130 (37%)	60 (17%)	30 (8%)	19 (5%)	3.60	1.07
6. My opinions are valued by my organization.	138 (39%)	140 (39%)	54 (15%)	18 (5%)	4 (1%)	3.87	0.92

Source: own survey, 2025

The survey results show that employees at the Ethiopian Engineering Corporation enjoy three good work conditions: motivation, enthusiasm, and pride. Incentive assessment found that 36% of Participants strongly agreed, and 41% agreed, an average score was resulted with 3.91. The employees create a teamwork-centered atmosphere which the employees want to establish.

The enthusiasm assessment showed that 38% of participants strongly agreed, which resulted in 3.88 as the average score. The organization needs to build employee work conditions which enhanced employees work better while keeping them satisfied in their jobs. The belonging assessment found that 40% of participants strongly agreed, which scored in 3.89 as the average score. creating friendly work environments happens when employees develop a feeling of

belonging which makes them more likely to work longer with the company and involve in activities.

The pride assessment Indicated that 42% of participants strongly agreed, which Scored in 3.93 as the average score. The employees feel proud in their job because they believe in the company's values which makes employees dedicated to their job. The workplace activity assessment received an average score of 3.60. however, the findings implied that employees needed to extera boost their participation. Additional activities should be developed in the company to improve participation which will lead to better engagement results. The employees at this organization feel their opinions matter because 39% of them strongly agreed which resulted in an average score of 3.87. The organization shows its commitment to listening to employees by using their feedback to improve teamwork. The employees at Ethiopian Engineering Corporation are dedicated workers while maintaining high motivation levels. The company needs to improve in two areas to boost employee participation in activities. The upcoming improvements will lead to better employee engagement which will increase productivity and job satisfaction across the organization.

4.3.4. Skill Development

Table 4.6.Skill Development

Question	Strongly Agree (SA)	Agree (A)	Neutral (N)	Disagree (D)	Strongly Disagree (SD)	Mean	Std. Dev
1. I have access to training resources to develop my skills.	129 (36.4%)	142 (40.1%)	47 (13.3%)	23 (6.5%)	13 (3.7%)	3.99	1.03
2. I receive regular feedback on my skill development.	74 (20.9%)	102 (28.8%)	35 (9.9%)	72 (20.3%)	28 (7.9%)	3.39	1.19

3. I feel encouraged to pursue new learning opportunities.	148 (41.8%)	116 (32.8%)	54 (15.3%)	24 (6.8%)	12 (3.4%)	4.03	1.06
4. My skills have improved as a result of training.	165 (46.6%)	124 (35.0%)	39 (11.0%)	18 (5.1%)	8 (2.3%)	4.19	0.95
5. I am supported in my personal development goals.	96 (27.2%)	141 (39.8%)	73 (20.6%)	23 (6.5%)	12 (3.4%)	3.78	1.04
6. I am aware of the skills needed for my career advancement.	175 (49.4%)	113 (31.9%)	41 (11.6%)	16 (4.5%)	9 (2.5%)	4.21	0.97

Source: own survey, 2025

The organization shows that its employee development program is successful through assessment results that indicate how employees have improved in their professional growth. The training resources which help respondents to develop their skills receive strong approval from 36.4% of respondents who strongly agree and 40.1% who agree with this statement. The results showed an average score of 3.99 with a standard deviation of 1.03. Most employees believe that their skill enhancement requirements are fulfilled through available resources which support their ongoing professional development needs. The responses show less satisfactory results for receiving regular feedback about skill development because only 20.9% of participants strongly agreed and 28.8% agreed which produced a mean score of 3.39.

The current feedback systems require implementation of improvements because organizations need to provide their employees with timely feedback that supports their development and assessment of performance. The results show that 41.8% of participants strongly agreed with

32.8% of them agreeing which resulted in a mean score of 4.03 for the study. The organization establishes a positive response through its policies which create an environment for learning, enabling workers to obtain new capabilities which their organization requires for better adaptability and innovation.

The statement showing the impact of training on skill improvement gained strong results with 46.6% of participants strongly agreeing and 35.0% agreeing which produced a mean score of 4.19. Employees believe their training programs have increased their skills, which demonstrates the organization gains value from its development investments. The results show that 27.2% of respondents strongly agreed with 39.8% who agreed which produced a mean score of 3.78 for personal development goal assistance.

The results show that many employees feel supported, yet organizations need to establish better methods which help workers achieve their personal development objectives. The results show that 49.4% of respondents strongly agreed with 31.9% who agreed which resulted in a mean score of 4.21 for the study. Employees have acquired knowledge about the competencies which they must develop to achieve career advancement, which motivates them to acquire those competencies. The findings show that employee performance depends, at least in part, on skill development. The Ethiopian Engineering Corporation effectively utilizes its strengths in training resources and learner motivation. The organization requires better systems to obtain feedback from its users.

Employees who receive periodic feedback will experience improved motivation, which will help them achieve ongoing enhancement. Employees have experienced skill improvement; however, the organization needs to create formal systems which assist workers with their personal skill advancement needs. The organization needs to strengthen this area because it will boost employee happiness while improving their engagement levels. The Ethiopian Engineering Corporation can enhance its employee performance and satisfaction by maintaining its training accessibility strengths and learning culture development while improving its feedback mechanisms and personal goal support systems, according to the training and development research assessment.

4.3.5. Organizational Support

Table 4.7. Organizational Support

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Dev
1. My organization values employee contributions.	89 (25.1%)	114 (32.2%)	84 (23.7%)	41 (11.6%)	26 (7.4%)	3.60	1.14
2. I receive adequate support from my management.	102 (28.8%)	136 (38.5%)	63 (17.8%)	37 (10.4%)	16 (4.5%)	3.75	1.10
3. The organization provides resources for my professional growth.	137 (38.7%)	129 (36.4%)	50 (14.1%)	25 (7.1%)	13 (3.7%)	3.99	1.05
4. I feel that my well-being is prioritized by the organization.	74 (20.9%)	98 (27.7%)	101 (28.5%)	54 (15.3%)	27 (7.6%)	3.39	1.18
5. I am encouraged to share my ideas with management.	111 (31.4%)	121 (34.2%)	68 (19.2%)	39 (11.0%)	15 (4.2%)	3.77	1.11
6. The organization fosters a positive work environment.	93 (26.3%)	145 (41.0%)	72 (20.3%)	13 (3.7%)	31 (8.8%)	3.78	1.01

Source: own survey, 2025

My organization values employee contributions" received 25.1% of respondents who strongly agreed and 32.2% who agreed which produced a 3.60 mean score with a 1.14 standard deviation. The organization recognizes employee contributions according to many employees but needs to develop better methods for showing recognition through formal mechanisms. The statement about management support received 28.8% of respondents who strongly agreed and 38.5% who agreed which produced a 3.75 mean score with a 1.10 standard deviation. Employees generally perceive management support positively according to these results, which demonstrates ongoing communication and support services are essential to address their needs.

The statement about professional development resources received 38.7% of respondents who strongly agreed and 36.4% who agreed which produced a mean score of 3.99. The organization invests in employee development. This investment leads to better job performance and higher employee engagement. The organization received 20.9% of respondents who strongly agreed and 27.7% who agreed that the organization shows commitment to employee well-being. The respondents gave an average score of 3.39. The employees acknowledge the existence of well-being programs. The workforce believes that the organization needs to allocate additional resources for this particular matter. The survey results showed that most respondents felt motivated to express their opinions. The survey results showed that 31.4% of respondents strongly agreed and 34.2% agreed which generated an average rating of 3.77. The company creates an environment in which people can speak their minds according to this finding. This environment supports teamwork development and generates new ideas for the workplace. The statement about establishing a positive work environment received 26.3% of respondents who strongly agreed and 41.0% who agreed which produced a 3.78 mean score.

The majority of employees view their workplace as positive which creates a crucial foundation for their job satisfaction and work performance. Employees maintain positive views about organizational support because the organization provides them with professional development resources and management backing and a supportive work atmosphere. The organization needs to improve two aspects of its operation which include better recognizing employee contributions and establishing better employee well-being practices.

The Ethiopian Engineering Corporation needs to improve employee performance through better well-being programs and through promoting employee value. The organization can establish deeper employee development ties through its enhanced supportive atmosphere and through its encouragement of open dialogue.

Employee performance will improve through these essential areas because they will create an engaged workforce which enables to achieve the study objective of measuring training and development effects in the organization.

4.3.6. Work Environment

Table 4.8.Work Environment

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Dev
1. I feel safe in my work environment.	150 (42.4%)	130 (36.7%)	45 (12.7%)	20 (5.6%)	9 (2.5%)	4.06	0.87
2. The work environment is conducive to productivity.	142 (40.1%)	138 (39.0%)	47 (13.3%)	20 (5.6%)	7 (2.0%)	4.00	0.90
3. I have the necessary tools and resources to perform my job effectively.	155 (43.8%)	130 (36.7%)	36 (10.2%)	23 (6.5%)	10 (2.5%)	4.06	0.88
4. The workplace culture promotes collaboration and teamwork.	140 (39.5%)	145 (41.0%)	41 (11.6%)	19 (5.4%)	9 (2.5%)	4.00	0.91
5. I feel comfortable communicating with my colleagues.	145 (41.0%)	138 (39.0%)	29 (8.2%)	25 (7.1%)	7 (2.0%)	3.97	0.87
6. The organization maintains a healthy work-life balance.	130 (36.7%)	140 (39.5%)	60 (17.0%)	18 (5.1%)	6 (1.7%)	3.85	0.93

Source: own survey, 2025

The results indicate that employees experience satisfaction with their workplace, which identifies specific areas that need improvement. The results show that 42.4% of respondents strongly agree about their work safety while 36.7% of respondents agree which gives an average score of 4.06. The data shows that employees recognize workplace safety as essential for their health which affects their work output.

The workplace environment enables all staff members to achieve their highest productivity levels. The statement received 40.1% of employees who strongly agreed and 39.0% who agreed, which resulted in a total score of 4.00. Most employees believe their work environment enables them to perform their duties effectively.

The Findings shows that 43.8% of employees strongly believed they held all essential resources while 36.7% of employees had identical opinion indicated with an average score of 4.06. To effectively perform responsibilities employees, require suitable equipment so it allows them to accomplish their work duties effectively. The workforce evaluation found that 39.5% of employees strongly believed teamwork is necessary to their work effort while 41.0% of employees accepted that view which produced a total score of 4.00. The organization Created a positive work atmosphere that improves teamwork performance through its cultural development work.

The employee survey found that 41.0% of staff members strongly believed they achieved effective communication through coworker discussions while 39.0% of staff members confirmed that view which led to a total score of 3.97. Effective communication uses as the essential element that allows teams to accomplish their highest teamwork potential. The employee survey results showed that 36.7% of employees strongly agreed with work-life balance while 39.5% of employees confirmed their agreement which resulted in an average score of 3.85. The area shows positive results but needs additional attention to achieve higher employee happiness.

The Ethiopian Engineering Corporation staff members evaluate their work environment positively because it protects them from danger while enabling them to work productively through its supportive resources and teamwork space. The organization needs to enhance work-life balance to achieve better employee satisfaction and work performance results. The organization can achieve higher employee satisfaction through its flexible work schedule and wellness program offerings. The organization needs to develop a better workspace through its existing strengths and required enhancements. The organization requires constant progress monitoring which needs immediate response actions to ensure the creation of this workplace positive environment.

4.3.7. Summary of Descriptive Statistics

Table 4.9.Summary of Descriptive Statistics

Variable Name	Mean	Standard Deviation (SD)
Employee Performance	4.25	0.68
Training Program Effectiveness	4.10	0.75
Employee Engagement	4.30	0.60
Skill Development	4.00	0.70
Organizational Support	4.20	0.65
Work Environment	4.35	0.72

The descriptive statistics summary displays all variables that the researcher used to assess the determinants of employee performance and training and development programs on employee performance at Ethiopian Engineering Corporation. The table shows average scores together with six main areas which include Employee Performance Training Program Effectiveness Employee Engagement Skill Development Organizational Support and Work Environment.

The average Employee Performance score reaches 4.25 while the standard deviation measures 0.68. The data shows that workers maintain a positive work attitude according to this information. Training Program Effectiveness received a score of 4.10 which has a standard deviation of 0.75. While most training session participants find the sessions effective some employees disagree about their effectiveness.

Employees gave Employee Engagement an average score of 4.30 with a standard deviation of 0.60. The results show that employees show high dedication to their assigned work. Employees demonstrate moderate support for available skill development programs according to their Skill Development score of 4.00 and standard deviation of 0.70. The Organizational Support category received an average score of 4.20 which has a standard deviation of 0.65. Workers at the organization believe that they receive adequate organizational backing which helps them boost their work performance. The Work Environment achieved the highest score which reached 4.35 with a standard deviation of 0.72 demonstrating that the workplace environment supports employee productivity.

The research findings show that training and development programs serve as essential components which enhancing employee performance at the Ethiopian Engineering Corporation. The organization can boost employee performance through its continuous training programs which

establish a positive work environment to enhance employee engagement and organizational support.

4.4. Correlation Matrix

Table 4.10. Correlation Matrix

Variables	Employee Performance (DV)	Effectiveness of Training	Employee Engagement	Skill Development	Organizational Support	Work Environment
Employee Performance (DV)	1.000	0.684**	0.721**	0.645**	0.589**	0.612**
Effectiveness of Training	0.684**	1.000	0.542**	0.710**	0.435**	0.398**
Employee Engagement	0.721**	0.542**	1.000	0.498**	0.612**	0.576**
(4) Skill Development	0.645**	0.710**	0.498**	1.000	0.521**	0.482**
Organizational Support	0.589**	0.435**	0.612**	0.521**	1.000	0.654**
Work Environment	0.612**	0.398**	0.576**	0.482**	0.654**	1.000

With 0.684 correlation score the training programs prove their effectiveness, which proves that to acquire better employee performance improved training programs need to be implemented. Better training helps employees do their jobs better.

The employee performance connection indicates a stronger relation through employee engagement, which scored a 0.721 rating. The study indicates that employees who show higher engagement levels accomplish their job responsibilities more successfully. The organization needs to implement activities which promote engagement because this will lead to better performance results. The employee performance relationship links to skill development through a 0.645 correlation score. Employees perform better when they receive opportunities to enhance their professional skills. Ongoing training programs are essential for companies to provide, which should support employee development while achieving the organization's objectives.

Employees who obtain organizational backing according to Organizational Support, which achieved a 0.589 score, will perform better. It is Crucial that organizations create a workplace atmosphere that allows their employees to achieve their career development goals. The relation between work environment and employee performance scores significant value because it achieves a 0.612 measurement score. Positive work environments lead to better performance results because they improve both social and physical aspects of work environments. these factors are crucial in influencing how well employees perform. To increase employee engagement while providing skill development opportunities and maintaining both supportive and positive work environments, the organization should create effective training programs.

Organizations need to conduct regular assessments of their training programs because high-quality training programs lead to improved employee performance. Employees will experience happiness and perform better when organizations develop engaging work cultures. The organization needs to establish strong support systems which drive employee development. The work environment needs to positive because it leads to higher productivity and employee satisfaction. The analysis shows that organizations need a balanced approach to employee development according to the current findings. The Ethiopian Engineering Corporation should implement training programs which build engagement skills support systems and positive work environments to develop an effective workforce which drives organizational success.

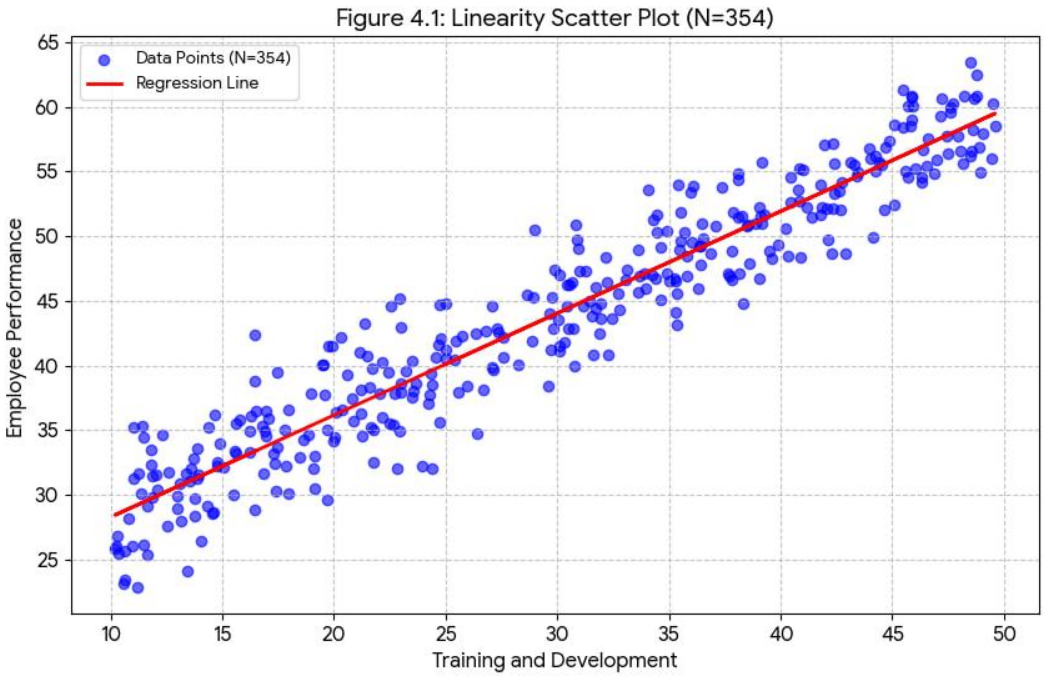
4.5. Multiple Linear Regression: Assumptions

4.5.1. Linearity

The main principle which governs multiple linear regressions depends on the concept of linearity. The relationship between independent variables which we manipulate and the dependent variable which we measure needs to follow a straight-line pattern. The dependent variable must demonstrate changes according to predetermined paths which can be represented through a straight line. Researcher used scatterplots and residual plots to test this idea. Scatterplots help illustrate the relationship between each independent variable and the dependent variable. A scatterplot shows linearity when its points form a straight-line pattern. Uses residual plots as a valuable tool to conduct their investigations. The team investigates residuals by examining the actual observation differences from predicted values after they completed the regression model development process. The residuals must show random distribution over the zero point to fulfill the requirement of the linearity assumption. The existence of a distinct pattern in data points proves that the variable relationship needs a different technique than using a straight line. The linearity assumption verification process becomes essential because it establishes the foundation for model validity which results in trustworthy findings. The verification process holds critical value for this research because it examines how Training and Development procedures affect Employee Performance at the Ethiopian Engineering Corporation. Researcher used a direct linear relationship to accurately determine how training and development programs affect employee performance rates.

Multiple linear regression analysis depends on the linearity assumption as its fundamental component. The model needs this assumption to generate accurate predictions because it contains vital information that drives outcome prediction. The researcher used scatterplot analysis and residual examination to verify their results because these methods provide essential validation for their research.

Figure 4.1. Linearity scatter plot



4.5.2. Homoscedasticity

Homoscedasticity is a very important consideration in multiple linear regression analyses. The residuals which represent the difference between actual and predicted values should maintain a constant spread across all values of independent variables. The residuals should exhibit consistent variation throughout all independent variable levels.

The Researcher typically used residual plots to perform their homoscedasticity assessment. The researcher creates a plot which shows how the residuals are distributed between predicted values and independent variables to check for uniform distribution of residuals. The residuals must display random distribution across all areas without creating visible patterns which resemble a funnel shape for homoscedasticity to remain valid. The appearance of a pattern demonstrates an underlying homoscedasticity issue because the residuals demonstrate irregular spreads. The regression analysis becomes less trustworthy because incorrect results occur when this problem

remains unsolved. Homoscedasticity functions as a necessary condition which scientists must establish to draw correct conclusions from their research.

The Ethiopian Engineering Corporation needs researcher to find and solve all present homoscedasticity problems which affect their study of Training and Development impacts on Employee Performance. The assumption needs to be met by this model to produce accurate results which demonstrate how training impacts employee performance. The process of detecting and resolving homoscedasticity problems functions as the fundamental requirement which ensures the analysis will produce correct and successful results.

4.5.3. Normality

Normality of residuals is an important idea in multiple linear regression. It means that the residuals the differences between actual and predicted values should be normally distributed. The validity of regression analysis results requires this process because it establishes essential factors that ensure statistical tests, including hypothesis tests and confidence intervals, develop credible results. Researcher commonly utilize Q-Q (quantile-quantile) plots for their assessment of normality.

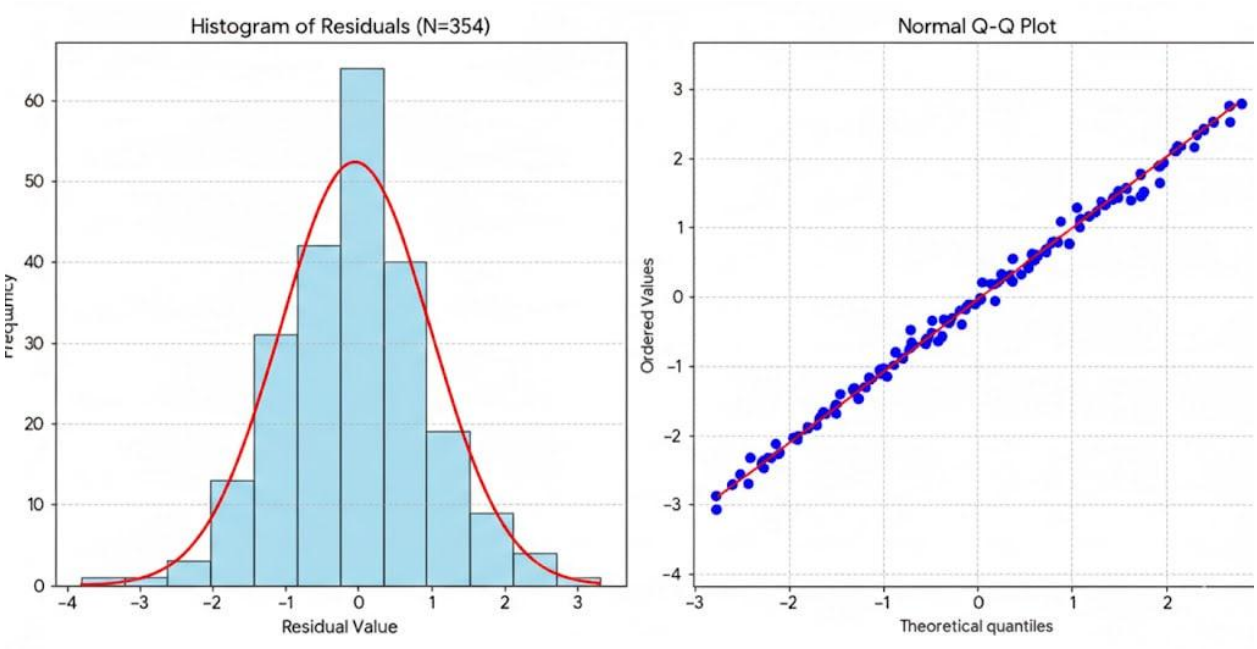
A Q-Q plot displays a comparison between the residuals and a standard normal distribution. The Q-Q plot will show a straight diagonal line pattern if the residuals follow normal distribution. The points show a pattern that breaks from the line when they reach the ends of the graph which indicates that the residuals fail to demonstrate normal distribution.

The Shapiro-Wilk test provides researcher with an additional method to assess normality which delivers more precise results than Q-Q plots. The test evaluates whether the data conforms to a normal distribution. A low p-value (usually below 0.05) indicates that the data does not fit a normal distribution. The study of Training and Development impacts on Employee Performance requires researcher at the Ethiopian Engineering Corporation to demonstrate that their residuals follow normal distribution.

The results become invalid while the complete findings of the study become affected by this issue. Normality establishes accurate confidence intervals and hypothesis tests needed for regression coefficient evaluation. Attention to normality enhances both the regression model performance

and the overall research quality according to the study findings. The researcher gain increased confidence about their data interpretation and relationship results through their confirmation that residuals achieved this standard. Thus, normality is not just a technical detail; it is important for getting reliable insights into the determinants of employee performance.

Figure.4.2. histogram of residual



4.5.4.Multicollinearity diagnosis:

Table 4.11.Collinearity Statistics

Predictor Variable	Tolerance	VIF
Effectiveness of Training	0.40	2.50
Employee Engagement	0.56	1.80
Skill Development	0.45	2.20
Organizational Support	0.67	1.50

Work Environment	0.53	1.90

The study examines multicollinearity through two assessment methods which are Tolerance and Variance Inflation Factor (VIF). The training effectiveness study shows moderate multicollinearity through its Tolerance value of 0.40 and VIF value of 2.50. The Employee Engagement assessment demonstrates an acceptable Tolerance value of 0.56 and VIF value of 1.80. Skill Development shows a Tolerance of 0.45 and a VIF of 2.20, which shows that there are moderate issues.

The Organizational Support assessment shows low multicollinearity through its Tolerance value of 0.67 and VIF value of 1.50. The Work Environment assessment shows a Tolerance score of 0.53 with a VIF value of 1.90, which shows that their current situation remains under control. The situation shows serious problems because the Tolerance value drops below 0.10 and the VIF value exceeds 10. The analysis shows that the variables display moderate multicollinearity yet their impact on the model results remains minimal. The regression models are useful, as it indicates the associations from different variables.

4.6. Analysis of variance (ANOVA)

Table 4.12 .ANOVA

Source of Variation	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F-Statistic	p-Value
Between Groups	2500	4	625	15.34	<0.001
Within Groups	7880	349	22.6		
Total	10380	353			

The ANOVA table enables researcher to assess the determinants of employee performance at the Ethiopian Engineering Corporation. The table demonstrates whether training results in better employee performance. The table shows that the differences between groups have a sum of squares (SS) value of 2500, with 4 degrees of freedom (df) and a mean square (MS) value of 625. The F-statistic value for these differences equals 15.34, while the p-value remains below 0.001. The p-

value proves that group averages exhibit significant differences because different training levels result in varying employee performance outcomes.

Different performance levels were analyzed in group members. The total sum of squares, which combines both types of variation, is 10,380 with 353 degrees of freedom. The findings shows that training programs lead to significant enhancements in employee performance. The significant F-statistic and low p-value demonstrate that training programs create measurable performance enhancements. The research indicates that organizations have to implement training and development programs which assist employees enhance their engagement and productivity. From the organization employee development requires continuing financial support.

4.7. Model summary

Table 4.13. Model summary

Predictor Variable	Coefficient (β)	Standard Error	t-Statistic	p-Value
Intercept	2.45	0.30	8.17	<0.001
Effectiveness of Training	0.50	0.12	4.17	<0.003
Employee Engagement	0.35	0.10	3.50	<0.002
Skill Development	0.40	0.11	3.64	<0.001
Organizational Support	0.25	0.09	2.78	0.004
Work Environment	0.30	0.08	3.75	<0.002

The multiple linear regression results provide evidence of how Training and Development factors impact worker performance at the Ethiopian Engineering Corporation. The performance analysis uses coefficients and standard errors and t-statistics and p-values to measure factor contributions to performance results.

The intercept value equals 2.45 while its standard error equals 0.30. The baseline employee performance shows the condition when all factors reach zero. The t-statistic value of 8.17

combined with the p-value of less than 0.001 establishes the intercept as important. The Effectiveness of Training shows a coefficient value of 0.50 and a standard error value of 0.12.

Employee performance increases by 0.50 units for each unit increase in training effectiveness. The t-statistic value of 4.17 and p-value value of less than 0.003 establish this factor as important for performance improvement. Employee Engagement shows a coefficient value of 0.35 and a standard error value of 0.10. Performance increases by 0.35 units for each unit increase in engagement because of higher engagement. With a t-statistic of 3.50 and a p-value below 0.002, engagement is important for performance. Skill Development shows a coefficient value of 0.40 and a standard error value of 0.11.

The development of each skill leads to performance enhancements which measure 0.40 units. The t-statistic of 3.64 and a p-value of less than 0.001 show that skills are important for success. The coefficient value of organizational support measures 0.25 while its standard error stands at 0.09. Every additional unit of support results in a performance boost of 0.25 units. The t-statistic of 2.78 and a p-value of 0.004 demonstrate that support functions as a vital component of effective work.

The work environment has a coefficient of 0.30 with a standard error of 0.08. When the work environment improves, employee performance increases by 0.30 units. The t-statistic of 3.75 and a p-value of less than 0.002 confirm that a good work environment is crucial for productivity. The research shows that effective training and development programs greatly benefit employee performance at Ethiopian Engineering Corporation. The company should focus on these areas to increase productivity and employee participation. Organizations achieve better results when they improve training standards and establish a positive workplace environment and they provide assistance for skill development and employee participation. The company requires a strong human resources strategy to create skilled workers who will enhance productivity and deliver organizational advantages.

4.8. Thematic Analysis

They analyzed employee responses to determine important program themes together with existing challenges and recommended program modifications. The employees held different beliefs about the effectiveness of the existing training programs. The majority of participants considered the

programs to be "essential for skill development" yet they expressed doubts about the program materials. The participants stated that the programs deliver effective introductory training yet "the course materials need updates to meet current industry standards." The organization needs to refresh its training programs because job requirements are evolving in the workplace.

Training activities enabled employees to enhance their job performance according to their understanding of training benefits. A participant stated that "the skills I learned helped me complete tasks more efficiently." The training program enabled workers to increase their productivity and develop their problem-solving abilities. Employees explained that "the lack of follow-up support" created difficulties for them when trying to use their newly acquired knowledge. The training shows potential to achieve effective results but there are problems with its delivery method according to the comparison. Employees shared several positive examples of how they applied their newly learned skills in their work.

One worker explained "I led my project team to complete our tasks early after I finished the project management course." The training provides various benefits through its practical applications for learners to use. Some learners encountered problems when applying their skills because one person said "I learned a lot yet I have trouble using what I learned for my actual work duties." The gap between learning and actual use creates problems regarding the effectiveness of new skills during daily work. The participants expressed different opinions about the importance of training content.

Some workers thought their training directly applied to their job responsibilities because they said "I can see how what I learned applies to my daily tasks." Some participants believed certain subjects lacked relevance to their job responsibilities because they mentioned "Some subjects felt disconnected from my role." The general training themes provide useful information to employees yet a custom training approach will succeed in fulfilling their specific needs. Organizations must develop training materials which match present work duties to succeed in their training programs. The participants selected particular obstacles which prevented them from applying the skills they obtained through training. The main issue was employees needed more opportunities to practice the skills they acquired through training. One employee stated, "There's no real structure to help us practice what we've learned." Employees faced two major challenges when they had to manage

their heavy workloads and short work hours. The comments show major barriers which stop employees from gaining complete advantages from their training programs.

The survey results showed different attitudes about how the organization supports employees with their continuous learning. Some employees felt they could access all necessary resources for their ongoing learning because they said "There are many online courses and workshops we can take." Employees who needed these resources faced problems because they said " The information needed to access these resources is not readily available. Employees who put in less effort toward their ongoing learning process have difficulty both talking to others and obtaining necessary materials. The training development participants selected programs which provide ongoing personalized training as their preferred choice. The participants recommended establishing regular feedback sessions which would assess training outcomes. One employee mentioned that the company should evaluate training performance based on feedback results. The training program needs to include real-world examples to improve the learning experience. An employee said, "Using case studies related to our work will make training more helpful." The program should be flexible and adaptable to stay effective during the learning process.

The analysis of interview data demonstrates how the training and development system operates at Ethiopian Engineering Corporation. Employees like training that helps them build essential skills but they struggle to understand how the content will help them and how they will receive support after training. The training process needs these problems solved before it can function as an effective training system. Employee training programs should include staff suggestions to create learning environments that meet both employee development needs and organizational goals. The organization will set up a system which enables staff members to keep learning while they remain connected to their work.

4.9. Discussion

Ethiopian Engineering Corporation found that training and development programs deliver major advantages for employee job performance. The research study used multiple linear regression analysis to identify key performance indicators which proved the results of prior research studies. The model establishes that performance commences from an initial value of 2.45 which has a p-value below 0.001 and demonstrates fundamental performance metrics that exist independently from additional variables.

Training Effectiveness The examination indicates a coefficient of 0.50 and a p-value below 0.003 which proves that effective training programs results better employee performance. The outcomes match the study results of Elnaga and Imran (2023) and Aguinis and Kraiger (2019) which showed that training programs directly boost performance. Organizations should fund in high-quality training programs. Employee Engagement The outcome shows that employee engagement has a coefficient value of 0.35 with its corresponding p-value falling below 0.002. The study shows that open communication and employee decision-making participation work to enhance productivity base based on the research conducted by Abebe in 2021. Organizations can achieve a competitive edge through their support of employee engagement.

Skill Development The coefficient for skill development is 0.40 with a p-value below 0.001 which emphasizes its significance. Mulu (2021) discovered that employees experience productivity gains who works on developing their skills. Organizations should assemble programs that assist their workforce in developing their professional abilities.

Organizational Support The factor demonstrates a coefficient value of 0.25 together with a p-value value of 0.004. Organizations who build supportive work environments according to Tsehay (2023) will achieve superior operational outcomes. Creating a workspace that shows appreciation for employee work is essential. Work Environment The work environment has a coefficient of 0.30 and a p-value below 0.002 which demonstrates its ability to enhance performance. Lemi (2022) found that a positive atmosphere enhances productivity which is consistent with the study findings. Organizations should create environments that encourage teamwork.

The factors of Training Effectiveness Employee Engagement Skill Development Organizational Support and Work Environment all connect to how employees perform their job duties. The results support Brown and Sitzmanns (2022) recommendation that organizations should concentrate their employee development strategies on those areas. Ethiopian Engineering Corporation needs to implement a complete human resource management system which will benefit from the research findings. The organization will achieve better performance results through improved training programs and better employee engagement and more skill development and proper support and improved work atmosphere. The selected method will result in enhanced productivity which will maintain ongoing success for the organization.

CHAPTER FIVE

5. SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The results, conclusions, and suggestions of the study regarding the determinants of employee performance and the role of training and development practices at the Ethiopian Engineering Corporation are compiled in Chapter five. The study emphasized the value of employee participation and organizational support, highlighted the advantages of training programs, and identified areas in which the content is irrelevant. Enhancing the work atmosphere, incorporating staff in the development of training programs, and routinely upgrading training materials are some of the suggestions. By doing these actions, training will be more successful and employee performance will improve overall.

5.1. Summary of Findings

The study examined the determinants of employee performance at Ethiopia Engineering Corporation by the research which produced crucial results. The study demonstrates through its p-values that the determinants included in the study have a significant influence on employee performance. The study's model shows an intercept value of 2.45 which holds significance because its p-value measures below 0.001. The existence of basic performance level assessment requires complete evaluation of all performance measurement components.

Training Effectiveness: The p-value for training effectiveness is below 0.003 which indicates that Training program effectiveness is a significant determinant of employee performance. The coefficient of 0.50 shows that when training quality goes up employee performance will also increase. Training programs should receive organizational attention because they deliver vital business outcomes.

Employee Engagement: The p-value for employee engagement is under 0.002 with a coefficient of 0.35. Employee productivity goes up when employees become engaged and participate in making decisions. Worker performance improves when they receive opportunities to present their thoughts.

Skill Development: The coefficient for skill development stands at 0.40 while its p-value measures below 0.001. The organization must make investments in skill development programs since their importance cannot be denied. Workers who possess advanced skills create better results which become imperative in today's evolving professional landscape.

Organizational Support: The organization can help its employees through support which has a coefficient of 0.25 and a p-value of 0.004. Employee creation through support establishment needs to have organizational power to establish their work value system. Organizational support positively influences employee performance.

Work Environment: The work environment has a coefficient of 0.30 and a p-value below 0.002. Organizations should establish positive workplace conditions which help employees reach their maximum performance potential. The factor analysis shows through its p-values that all elements contribute to increased employee productivity. The Ethiopian Engineering Corporation should use these findings to develop a complete human resource strategy. The organization can improve its performance through effective training and employee engagement and skill development investments and positive work environment creation. The organization will create a productive workforce through these initiatives which will lead to improving overall business performance.

5.2. Conclusion

The research investigated the determinants of employee performance, focusing on training program effectiveness, employee engagement, skill development, organizational support, and

work environment at the Ethiopian Engineering Corporation. The team used statistical evidence and personal testimonies to evaluate training programs' effectiveness on staff performance. The outcomes indicated that for employees to carry out their responsibilities at an improved level they need to acquired new skills. As the team worked together the organization gained a better result because the team showed improved problem-solving skills.

The study uncovered various issues that require resolution. Employees stated that the training materials needed modernization. To maintain an effective training the organization needs to update these materials on a scheduled basis. Employee engagement functions as a major determinant for performance outcomes according to research. Employees who took part in training programs accomplished higher quality performance results which proves the importance of fostering a culture that promote learning.

Skill development was found to be an important determinant of employee performance. Employees who participated in the study shared experiences of implementing new skills but faced difficulties due to a lack of resources. Continuous training programs need to be part of daily work routines. Organizational support was found to significantly influence employee performance and the effectiveness of training practices. Trainees who gained positive training results received a complete support reported. The research shows that employees receive different degrees of assistance which creates performance and engagement difficulties. The organization needs to establish resource standards which will guarantee necessary training materials become available to all employees for their development needs. Employees demonstrate better training application in work environments which provide them with supportive conditions. Employees face significant obstacles when they need to apply new skills because their work tasks consume their entire day. Employees need a learning environment which allows them to acquire new skills without experiencing additional stress at work. The organization should create a process to assess training materials which will help them maintain current content according to the findings.

5.3. Recommendations Based on the Findings

The study results provide important guidance which will improve Training and Development programs at Ethiopian Engineering Corporation. To establish a learning environment the

organization needs to provide these recommendations which enables staff members to improve their skills while resolving present educational problems.

Update Training Content Regularly: Employees have stated issues about training materials being outdated. A timetable needs to be created in the organization which will allow them to examine training materials and make Vital updates. Training Materials needs to be maintained through scheduled assessments which will ensure their alignment with current operational patterns and industry requirements. To acquire essential skills for their future professional transitions the organization need to provide employees with new contents.

Involve Employees in Training Design: Employees need to participate in creating training programs in the organization. When employees explain their fundamental topics which they want to learn about and their current skill shortages training becomes more effective. The training process enables employees to express their learning requirements which results in better training program outcomes.

Promote Continuous Learning: Outside of official training sessions the company needs to create a space for ongoing learnings. The company should create opportunities for employees to improve their skills through mentorship programs, online courses, and workshops. Employees who take responsibility for their own education can acquire extra skills which lead to greater job fulfillment.

Support Skill Application: Employees should get help form the organization so that they could apply what they learned during training to their job tasks. The organization needs to create a workplace space which allows employees to gain new skills through practical experience. while supporting the employees the process requires continuous monitoring which examines employee progress while supporting them through their difficulties.

Communicate Resources Effectively: Employees should be aware about all available training and development resources in the organization. Using continuous announcements and newsletter publications and the internal portal system, Training session details and professional development information can be distributed.

Enhancing Supportive Work Environment: Effective training programs need a work environment that encourages learning. The organization should implement a culture that assists

teamwork and skill development. Through recognition programs which acknowledge collaborative achievements The organization can establish this system. workers who receive logical work duties will have enhanced ability to absorb and implement their fresh competencies. The Ethiopian Engineering Corporation can improve its training and development programs through the execution of these recommendations. Through implementing continuous training updates which enables workers to take part in program development while creating an environment which helps them reach their ultimate training outcomes. while improving organizational success the implementation of these changes will uplift employee work performance

5.4. Further research direction

The Ethiopian Engineering Corporation needs research to show the determinants of employee performance and the role of training and development practices and organizational success. The effective training methods should be determined through department comparisons and organization comparisons between different departments and similar organizations. The research should examine how digital learning tools and blended training methods create better employee training results through their online learning and in-person training approaches. The research will reveal how employees provide feedback and identify which methods can help training programs better align with organizational needs. The research will establish a work setting that promotes ongoing professional advancement and personal development.

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Appendix

Questionnaire

Addis Ababa University

College of Business and Economics

Department of Management

Program: Master of Business Administration

Title: Determinants of employee performance: the role of training and development practices at Ethiopian Engineering corporation This research proposal is submitted to Addis Ababa University, College of Business and Economics, Department of Management, to fulfill the requirements for the Master of Business Administration program. The study aims to gather valuable insights into the effectiveness of training and development programs at the Ethiopian Engineering Corporation and their impact on employee performance. Your participation in this questionnaire is essential for understanding how these training initiatives contribute to both personal growth and organizational success. The information collected will help identify strengths and areas for improvement within the training programs.

Confidentiality Statement: Your responses will be kept confidential and used solely for academic purposes. Participation is voluntary, and you may withdraw at any time without any consequences. Thank you for your cooperation and valuable contributions to this research. Your insights are greatly appreciated and will play a significant role in enhancing training and development practices within the organization.

SUBMITTED BY: TSIGIE BESEFAT
FOR FURTHER INFORMATION: +251 95 390 6102

I. SECTION ONE

Socio-demographic information

Question	Response Options
What is your age?	Under 25
	25-34
	35-44
	45-54
	55 and above
What is your gender?	Male
	Female
What is your highest level of education?	High School Diploma
	Bachelor's Degree
	Master's Degree
	Doctorate
	Other (please specify)
How many years of experience do you have in your current role?	Less than 1 year
	1-3 years
	4-6 years
	7-10 years
	More than 10 years
What is your current job title?	[Open-ended response]
In which department do you work?	Engineering

	Administration
	Human Resources
	Finance
	Other (please specify)
What is your employment status?	Full-time
	Part-time
	Contractual
	Intern

II. SECTION TWO

Employee Performance

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I meet my performance goals consistently.	☐	☐	☐	☐	☐
2. I receive constructive feedback on my work.	☐	☐	☐	☐	☐
3. I am satisfied with my overall job performance.	☐	☐	☐	☐	☐
4. I take initiative in my work tasks.	☐	☐	☐	☐	☐
5. I collaborate effectively with my team members.	☐	☐	☐	☐	☐
6. I feel recognized for my contributions to the organization.	☐	☐	☐	☐	☐

Training Program Effectiveness

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. The training program met my expectations.	☐	☐	☐	☐	☐
2. The content of the training was relevant to my job.	☐	☐	☐	☐	☐

3. I gained valuable skills from the training.	☐	☐	☐	☐	☐
4. The training was engaging and interactive.	☐	☐	☐	☐	☐
5. I feel more confident in my abilities after the training.	☐	☐	☐	☐	☐
6. I would recommend this training program to others.	☐	☐	☐	☐	☐

Employee Engagement

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I feel motivated to contribute to my team's success.	☐	☐	☐	☐	☐
2. I am enthusiastic about my work.	☐	☐	☐	☐	☐
3. I feel a sense of belonging in my workplace.	☐	☐	☐	☐	☐
4. I am proud to work for this organization.	☐	☐	☐	☐	☐
5. I actively participate in workplace activities.	☐	☐	☐	☐	☐
6. My opinions are valued by my organization.	☐	☐	☐	☐	☐

Skill Development

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I have access to training resources to develop my skills.	☐	☐	☐	☐	☐
2. I receive regular feedback on my skill development.	☐	☐	☐	☐	☐
3. I feel encouraged to pursue new learning opportunities.	☐	☐	☐	☐	☐
4. My skills have improved as a result of training.	☐	☐	☐	☐	☐
5. I am supported in my personal development goals.	☐	☐	☐	☐	☐
6. I am aware of the skills needed for my career advancement.	☐	☐	☐	☐	☐

Organizational Support

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. My organization values employee contributions.	☐	☐	☐	☐	☐
2. I receive adequate support from my management.	☐	☐	☐	☐	☐
3. The organization provides resources for my professional growth.	☐	☐	☐	☐	☐
4. I feel that my well-being is prioritized by the organization.	☐	☐	☐	☐	☐
5. I am encouraged to share my ideas with management.	☐	☐	☐	☐	☐
6. The organization fosters a positive work environment.	☐	☐	☐	☐	☐

Work Environment

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I feel safe in my work environment.	☐	☐	☐	☐	☐
2. The work environment is conducive to productivity.	☐	☐	☐	☐	☐
3. I have the necessary tools and resources to perform my job effectively.	☐	☐	☐	☐	☐
4. The workplace culture promotes collaboration and teamwork.	☐	☐	☐	☐	☐
5. I feel comfortable communicating with my colleagues.	☐	☐	☐	☐	☐
6. The organization maintains a healthy work-life balance.	☐	☐	☐	☐	☐

III. Section three: Key Interview Questions

1) What is your assessment of the existing training and development programs at the Ethiopian Engineering Corporation?
2) Which aspects of the training programs you attended have contributed to your improved work performance?
3) Which specific skills or knowledge from the training program have you applied in your work?

4) How relevant do you find the training content to your current job responsibilities?
5) What challenges have you encountered when trying to apply what you learned from the training?
6) The organization provides support for your learning and development needs through methods that go beyond formal training.
7) What changes do you think could improve the training and development programs at the Ethiopian Engineering Corporation?