



ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
SCHOOL OF COMMERCE
GRADUTE PROGRAM IN PROJECT MANAGEMENT

**ASSESSING EFFECT OF MANPOWER TRAINING AND
DEVELOPMENT ON PROJECT PERFORMANCE: THE CASE OF
TELECOM EXPANSION PROJECT (TEP) IN ETHIO TELECOM**

BY

MULUKEN ABERA GSR/8913/11

JUNE, 2020

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THE PROJECT WORK SUBMITTED TO ADDIS ABABA UNIVERSITY SCHOOL OF
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ADVISOR: ATSEDE TEFAYE (PhD)

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Declaration

I, Muluken Abera, declare that this work entitled “Assessing Effect of Manpower Training and Development on Project Performance: The case of Telecom Expansion Project in Ethio Telecom.” is outcome of my own effort and study and that all sources of materials used for the study have been accordingly approved. I have produced it independently except for the guidance and suggestion of the research advisor Atsedo Tesfaye (PhD). This study has not been submitted for any degree in this university or any other university. It is presented for the partial fulfillment of the degree of Masters in Project Management (MA).

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Letter of Certification

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This is to certify that Muluken Abera Bayisa has worked on the title “Assessing Effect of Manpower Training and Development on Project Performance: The Case of Telecom Expansion Project in Ethio Telecom” under my supervision. This work is original in nature and it is suitable for submission in the partial fulfillment of the requirement for the Degree of Master of Arts (MA).

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List of Acronyms and Abbreviation

ANOVA	- Analysis of Variance
AU	- African Union
BH	- Backhaul
BSS	- Business Support System
CBS	- Cellular Base Station
CC	- Call Control
CEO	- Chief Executive Officer
CRM	- Customer Relationship Management
ECA	- Economic Commission for Africa
ET	- Ethio Telecom
ETA	- Ethiopian Telecommunications Authority
ETC	- Ethiopian Telecommunications Corporation
FLNGN	- Fixed Line Next Generation Network
FR	- Frequency
GC	- Gregorian calendar
GSM	- Global System for Mobile
HR	- Human Resource
HRD	- Human Resource Division
IBTE	- Imperial Board of Telecommunications of Ethiopia
IP	- Internet Protocol
IS	- Information System
ISD	- Information System Division
LTE	- Long Term Evolution
MBH	- Mobile Backhaul
mVAS	- Mobile Value Added Service
ND	- Network Division

OF	- Optical Fiber
OSS	- Operation Support System
P&E	- Power and Environment
PMBOK	- Project Management Body of Knowledge
PMI	- Project Management Institute
PRO	- Project Rollout Office
Q&PD	- Quality and Process Division
RAN	- Radio Access Network
SD	- Standard Deviation
SD/SDP	- Service Delivery/ Service Delivery Platform
SFD	- Sourcing and Facility Division
SPSS	- Statistical Package for Social Science
SWOT	- Strength, Weakness, Opportunity and Threats
T&D	- Training and Development
TEP	- Telecom Expansion Project
TNA	- Training Needs Assessment
TP	- Training Program
UMTS	- Universal Mobile Telecommunication System
UN	- United Nation

ABSTRACT

Training and development plays an important role in contributing to project performance. The significance of improved employee performance and job performance has been acknowledged in any organization and this improvement lies on the proper and effective training and development. The purpose of this study is to assess effect of TEP staff training and development in contributing to project performance at Ethio telecom. Both primary and secondary data were collected for the study. In order to collect and analysis primary data 132 staffs of core team and 3 key informant were taken. Questionnaires and interviews used as the method of data collection, and the data collected, analyzed using descriptive statics, correlation and regression analysis using SPSS. The specific objective of the study were grouped into five major sections that; assessing the objective of training and development, training and development need assessment, training and development delivery method, training and development effectiveness evaluation and training and development effect on project performance. The study indicated that 90.2% of the respondent was agreed that the training and development provided were good and relevant to objective of the project. The study also indicated that 76.5% of the respondent was agreed that the training and development needs assessment were conducted by the immediate supervisor in consultation with employee. The Project used both on the job and off-the-job training methods as ascertained by 81.8% of the respondents. It was also found that the TEP had exercised training and development effectiveness evaluation, as agreed by 84.1% of the participants, the training and development effectiveness were evaluated in terms of feedback received from coworkers regarding their job performance. The correlation of the study showed that there is significant positive relationship between three of the training practice, training objectives, need assessment and evaluation but no relationship between training methods implemented and project performance. Recommendation are provided on how to build effective training and development programme at ET. Furthermore, it is recommended for future researchers, to include all regional administrative of the company and to look the whole staffs including temporary employees by expanding to other graphical areas.

Key Words: *Manpower, Training and Development, Training Need Assessment, Method of Training Delivery, Training and Development Evaluation, project performance*

CHAPTER ONE

1. INTRODUCTION

1.1. Background of the study

Training and development have become the most important tool all most in organizations, because training and development direct to high performance in the similar field and are vital phase of human resource department (Armstrong, 2006). Training and development activities focus at achieving improved performance and productivity of an organization work force (Armstrong and Taylor, 2014). Manpower Training and development is therefore becomes powerful tool to enhance workforce abilities, skills knowledge, commitment, moral, involvement, improves over all organizational performance and minimize employee turnover by developing company's image in the employee.

Therefore, training and development benefits an organization to attain project goals and objectives through developed effectiveness and efficiency of organization workforce, this safeguards the growth and reliability of Project performance. According to Neelam Tahir, and Others (2014), “training and development contributing to the overall goal of the organization that generate overall revenues, developing core competencies and motivates employees to scope higher standards but not only an organization it also benefits the individuals who making up that organization.” In this regard, training and development provide the means by which people can grow on their jobs performance. Since new technology, innovation and materials are developing daily, the training and development helps employees to work on and manage sophisticated and complex technology. Therefore, the improvement of skills, knowledge and ability between the employees of project organization significantly influence competitiveness and project performance.

To improve project performance, empowering employee by providing proper training and development is significant in project oriented organization. Adequacy and appropriateness of training can be determine through various factors, among these factors training design, training need assessment, evolution of training and development effectiveness and delivery method plays a major role to provide appropriate training. According to Ginsberg, (1997), training and development design should be according to the needs of the employees and organization. “A bad training design is nothing but the loss of time and money” (Tsaur and Lin, 2004). Mark A. Griffin et al., (2000), reinforced that “if someone is not providing the training in an impressive way and

he is not catching the attention of the audience it means he is wasting the time”. Another factor is training need assessment which include organizational analyses, job analyses and individual analyses to determine what is actually needed. Desimon and Harris (1998), stated that a “need can either be a current deficiency, such as a poor employee performance, or a new challenge that demands in the way organizations operates”.

Recently studies of training and development practice of project organization in Ethiopia show that as project organization do not give much attention to the T&D of employees and the effectiveness of the program. Rather the practice of organization indicate that more consideration has been paid to the preparation of documentation and written program than to the actual practice.

Currently many project organization in Ethiopia devote huge amount of investment to train their people. The project organizations are expected to be effective from the investment that they invest for training but it is not enough only investing huge amount of Birr for training. Also they must evaluate their payback on investment to check how much they are effective from it.

According to UN population report, Ethiopia is population is estimated about 112.079 million in 2019 (UN Data report, 2020). Ethiopia is also the center of diplomacy and holds most international meetings and trainings also hosting the headquarters of African Union (AU) and the United Nations Economic Commission for Africa (ECA). As the population increases and international meeting holds in Ethiopia, the demand for Telecommunication service is increasing. In order to meet the increasing demand for Telecommunication service, Ethio Telecom implements Telecom Expansion Project. To improve the project quality than the previous similar project Ethio Telecom provides training for TEP employee to enhance employees performance and project performance by increasing project team skills, knowledge, capacity, moral, commitment and attitude through different training and development programs.

Training and development programs need to be effective and be able to bring positive impact on the Project performance. However, as this researcher assessment, there are no studies which assess the effect of manpower training and development on project performance conducted in Telecom Expansion Project (TEP) at Ethio Telecom. The purpose of the study, therefore, envisioned to assess effect of manpower training and development on project performance of TEP in Ethio telecom.

1.2. Back ground of Ethio Telecom

Telecommunications service was introduced in Ethiopia during Emperor Menelik II in 1894 when the construction of the telephone line from Harar to the capital city, Addis Ababa, was commenced and expanded to all directions from the capital by line (<https://www.ethiotelecom.et/aboutus>). After the end of the war against Italy, It was re-organized as Ministry of Post, Telegraph and Telephone took over the running of Telephone, Telegraph and Radio communications in 1942. ‘In October 15, 1952 IBTE (Imperial Board of Telecommunications of Ethiopia) was established by the proclamation No 131 having an authority to rehabilitate, extend, repair and maintain the telecommunication facilities of Ethiopia and to engage in the business of telecommunication for profit’ (Ethio telecom Growth and Transformation plan II, 2015).

“In 1996, again it was reorganized and established a separate regulatory body namely the Ethiopian Telecommunications Authority (ETA) by Proclamation No. 49/1996 on November 1996 and the Ethiopian Telecommunications Corporation (ETC) by regulation 10/1996.” Under the supervision of the ETA, the principal duty of ETC is maintaining and expanding telecommunication services in the country and providing domestic and international telephone, telex, and other communication services (Kalkidan, 2017).

During Ethiopian growth and Transformational plan (I) Ethiopian government has decided to focus on the improvement of telecommunication services, considering Telecommunication service as a key sector for development of Ethiopia. In 2010 it was restructured, rebranded and reestablished and named as Ethio Telecom, from this ambition of supporting the steady growth of a country and having the vision to be a world class telecom service provider. As of today structure and Project office of the company is designed as below.

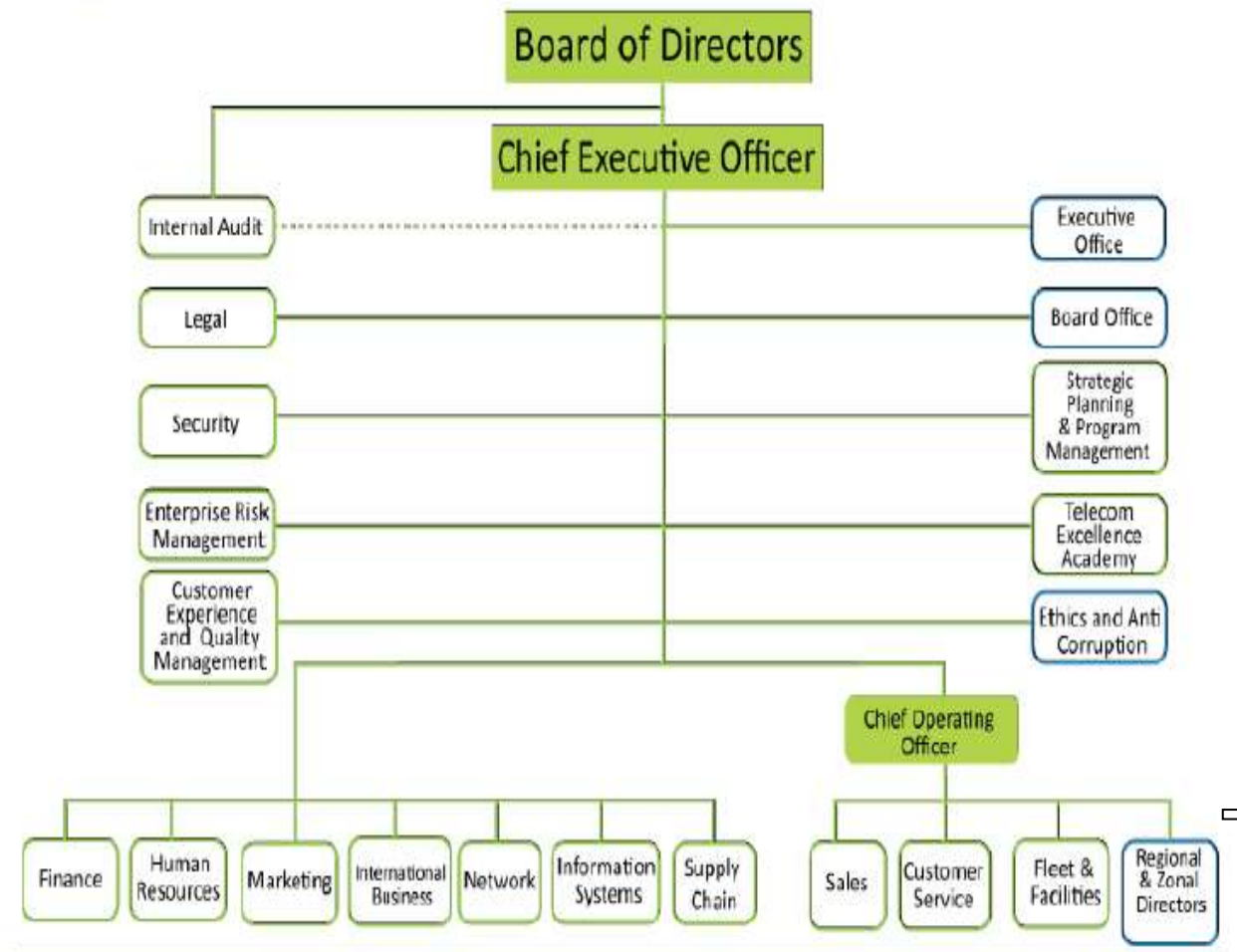


Figure 1. 1 Ethio telecom updated organizational structure

Source: Ethio telecom annual report, 2019.

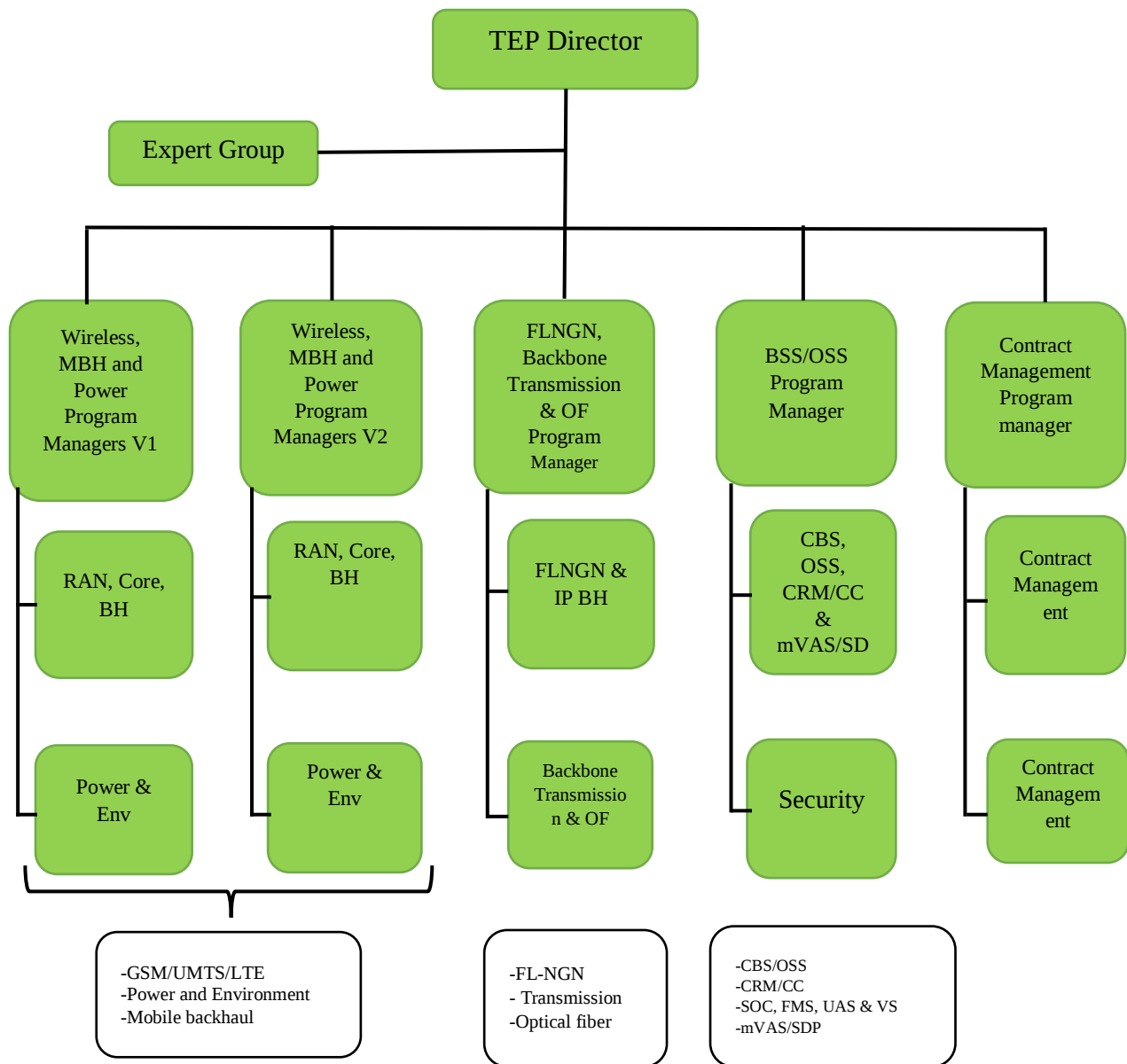


Figure 1. 2 TEP organization

Source: Ethio telecom annual report, 2019.

1.3. Statement of the problem

Ethio Telecom referred to in this study are government owned development Organization and committed to provide high quality, innovative and affordable telecom products and services that enhance the development of the nation and ensure high customer satisfaction. Additionally aimed to build its managerial capability and manpower talent that enables Ethio telecom to operate at international level. The Telecom Company is considered as one of the most important and crucial sectors that has a major contribution towards generating revenue for the country. Besides that, this sector plays a great role in reducing unemployment by hiring and providing works to the small and micro enterprise. Currently Ethio Telecom employs more than 15,000 employees as permanent basis and more than 3000 as contract basis that is large number of Ethiopian citizens. Among these employee about 284 permanent staffs are participated in Addis Ababa TEP and majority of project staff has got training and development. Since the primary goal of training and development is to contribute to the overall organizational goals, therefore organizations are expected to give training and development to their staff in order to develop their knowledge, skill, attitude and behavior that could help employee to enhance their performance. Cut Zurnali (2004), showed that the prime purpose of training is to have a better knowledge, behaviors, and skills highlighted in training programs and to use it in daily activities.

Ethio telecom has a training and development program for both project staffs and operational staffs. Among those project staff in Ethio telecom, Project Rollout Office (PRO), Network Division (ND) and Information System Division (ISD) are directly spend most of their time with TEP and responsible for the project than anyone else in the company and they are seen as the frontline staffs in dealing with Telecom Expansion Project/TEP. Sourcing and facility division (SFD), Finance division, human resource division (HRD), quality and process division (Q&PD) and legal division are responsible to provide support for the program. Thus, Telecom Expansion Project/TEP frontline staff go through training and development in issues relating to Project Engineering design training; Location site up training; Project etiquette; Products and Services Training; Systems site up and installation training; Configuration Training; Equipment installation training; Monitoring, Inspection and Testing Training, Server installation, configuration and upgrading Training; Quality Assurance training etc.

Many researcher's describes that the training and development produce improvement on workforce performance, and this change on employee performance contributes to project performance. Nguku (2006), examined employee training and development practices in state companies in Kenya. "She revealed that employee trainings is intended to contribute to employees a better skills, knowledge and attitudes on the way to their work produced better performance. Mohammed Raja Abulraheem Salah (2016), researched in transportation companies of Jordan that said that "training and development programs takes a great role in order to gain brilliance and capabilities in theoretical, technical, talent, potential, behavioral change and attitude so than to meet rapid changes in technology and changes in work practices".

Finally, there are many studies that have been done on training and development focusing on different organizational of human resource management and organizational performance but none of these studies has undertaken the relationship between training and development and Project performance in of Telecom Expansion Project in Telecommunication industry. Furthermore, its effect on project performance never been evaluated and no studies have been carried out. To the best of the researcher's knowledge, this is the first study to assess the effect of manpower training and development on TEP performance. Thus, the aim of this research is to find out whether training and development help TEP project to improve overall performance and achieve project goals and objectives or not. So, this constitutes a knowledge gap that the present study seeks to fill the aim of the study. Therefore, it is to establish the association between training and development, and Project performance in Telecom expansion project in Ethio Telecom.

1.4. Research Questions

1. How do TEP staffs perceive the objective of training and development at Ethio Telecom?
2. How is the training and development needs of TEP staffs determined?
3. What are the TEP training and development delivery methods being applied at ET?
4. What measures are used to evaluate the effectiveness of TEP training and development at ET?
5. Is there a relationship between TEP staff training and development practice and project performance at ET?

1.5. Objectives of the study

1.5.1.General Objective of the study

The general objective of the study is to assess effect of TEP staffs training and development in contributing to project performance at ET.

1.5.2. Specific objectives of the study

- To assess the perception of TEP staffs on objective of training and development at ET
- To explore the training and development programs needs assessment at TEP
- To investigate the methods used to conduct TEP training and development at ET
- To assess the measures applied to evaluate the effectiveness of TEP training and development at ET
- To assess the relationship between TEP staff training and development practice and project performance at ET.

1.6. Significance of the study

Training and development is all about developing and qualifying people. Also training and development is the systematic approach by which a project organization makes themselves a capable and the easiest way to strength the performance through enhancing employee performance. Therefore, training and development is a vital asset of any project based organization. In other ways Training and development enable managers to assist employees to perform better in the work and keep them motivated to meet project goals and objectives. Thus, the study becomes significant since many project in this modern world are motivated to gain competitive power. To achieve this the crosscutting way is increasing employees' competencies, capabilities, and skills through proper training and development program. Therefore, this study result will enables the project management and company management teams to identify and know effects of Manpower training and development on project performance. Additionally, the study had not been previously done on telecom expansion project of Ethio telecom, so this study will point out areas for future researches. Almost all Research gives clue for a researchers to convert the theoretical study or finding to practice. Thus this finding encourages others researcher to adapt it to practice also supports them for citation and reference for their future study.

1.7. Scope of the study

Due to the outbreak and spread of Covid-19 in the country, Ethiopian country declare state of emergency and partial lock down of all government owned companies in all over the country including Ethio Telecom. Consequently, the study focuses only on Addis Ababa Telecom Expansion Project. Also, the study was limited to frontline project team members those who deals with project work directly, these includes Project Rollout Office/PRO, Network Division and IS Division. The target population of this study are staffs who are participated in the project as a frontline and who takes the direct responsibility in three department namely PRO, Network division staffs and IS division staffs as they were accountable toward the project work. The results of the study, therefore, hold only for Addis Ababa Telecom Expansion Project members of Ethio Telecom. Since the participants of the studs are only technical staff of the project the study does not represent other public projects. This study focuses only on internal factor but External factors that affects performances of project is not be considered.

1.8. Limitation of the Study

The willingness of the respondents was the major limitations to the study as some of the employees felt uncomfortable due to the COVID-19. The other limitation include the absence of employee due to state of emergency declared which only allows organization staff to work with half-staff. Another case was, the researcher could not be able to access certain secondary documents since half of an authorized staffs are staying at home for the fear of Corona virus and also the project office has no compiled documentations, as the project is over and many authorized staffs have left their position. In addition to this, the company is on adapting new organizational structure because of this the staffs are on moving from one division or section to another for this reason it is too difficult and challenging to get organized data. Regarding to the willingness and absence of the respondents the researcher tries to reach the respondent using both online question supported by google form and printed questionnaires (hard copy) to minimize the fear and risk of Covid-19. For the case of interview researcher uses mobile voice call to reach directors and chief officers to minimize risk of Covid-19. However, the above limitations did not have any significant effect on the validity and reliability of the findings of the study. The study covered only Ethio Telecom case of TEP its findings cannot generalize other project regarding to the effect of manpower training and development on project performance.

1.9. Definition of Terms

- **Training:** - Training is the action of growing the knowhow and expertise level of worker for doing a specific job. It is a short term educational process and applying a methodical and prearranged technique by which staffs study theoretical proficiency and skills for a specific works.
- **Development:** - development is the growth of employees in all aspects associated with the overall growth of employees and it is a long term perspective and career centered in nature.
- **Training design:** - Training design is a scheme for training and development programs. It is a comprehensive plan for what project organization will do, why project organization will be doing it and the best way to reach training objective.
- **Training need assessment:** - Training need assessment is a systematic way of gather information that can be used to decide what type of training and development will be preferred as appropriate and useful.
- **Training delivery:** - Training delivery is the method by which training will transfer to trainees that will help them to gain the required knowledge and skills for performing a task or learning a subject.
- **Training evaluation:** - Training evaluation is evaluating the effects and effectiveness of training and whether the planed goals have been achieved in line with intended individual, organizational goals and objectives.
- **Project:** According to the Project Management Institute's (PMI, 2008) Body of Knowledge (PMBOK), project is unique in that it is not a routine operation, but a specific set of operations designed to accomplish a singular goal. And project is temporarily in that it has defined beginning and end time, and therefore has a defined scope and budget.
- **Project performance:** - is the overall aspect of a project in terms of budget, time, quality, its impact, value to beneficiaries, implementation effectiveness, efficiency and sustainability.
- **Project Scope:** is a common understanding among stakeholders about what goes into a project and what factors define its success. It is about dealing with project goal, deliverables, features, functions, tasks, deadlines and ultimately costs. Project scope is also the work that needs to be completed.

- **Schedule:** - is a timetable showing the forecast about start and finish dates for activities or milestones or portfolio within the project (APM Body of knowledge 7th edition)
- **Budget:** - is the total amount of authorized financial resources allocated for the particular purpose of the project for a specific period of time. It gives a detailed statement of all the direct and overhead cost required to carry out the project goals and objectives (APM Body of knowledge 7th edition)
- **Quality:** - It is also the degree of excellence compared to the planned or designed overall project. It includes the processes and activities that determine quality policy, objectives and responsibilities.
- **Customer satisfaction:** - is the measurement that determines how happy customers are with the project delivery
- **Manpower:** Manpower is any person who is paid to work for an organization include unskilled, skilled, staffs, supervisory and management staff of a company.

1.10. Organization of the paper

The study is organized into five chapters. The primary parts discuss with the introductory part of the paper. The introduction covers background of the study, Background of the company, statement of the problem, research questions, research general and specific objectives, significance of the study, scope, limitation of the study and definition of terms. Chapter two cover literature review. Chapter three deals with the research methodology that have been used to gather and examine the data. Chapter four focus on data presentation, analysis and discussion & findings of the result. Finally, chapter five cover conclusion, recommendation, suggestion for future research, lists of references and appendix.

CHAPTER TWO

2. LITERATURE REVIEW

2.1. Introduction

In this chapter, the researcher was reviewed other literature related to effect of manpower training, development and project performance. The review was abstracted under the objective and goal of the study. The following comprehensions give a review of relevant literature in an accordance with the objective of the study.

2.2. Theoretical Review

In the literature review, it has been observed that the training and development has an impact on employees' performance that leads to project performance. This part surveys the mass of theory that has gathered in regard to a subject, concept, theory, phenomena.

2.2.1. Telecommunication industry

Telecommunication industry is a companies that make communication possible on a global scale, weather it is through the phone or the internet, through airwave or cable through wireless or wire. Telecom companies created the infrastructure that allows data in world. The Telecommunications industry is an important sector that enable productivity across economies and societies. It is also a substantial contributor towards the growth of other industries. In latest times, developing nations have witnessed significant transformation within this sector due to the impact it has had on their economies (R. Venkatram, 2012). As of today it is widely acknowledged that a competitiveness, innovativeness and powerfulness of any organization is relies on the quality, efficiency and effectiveness of its manpower. According Deloitte, (2017), the Telecom sector remains to be at epicenter for development, innovation and disruption for growth, innovation and disruption for virtually any industry. Since new technology, innovation and materials are developing daily, the training and development helps employees to work on and manage sophisticated and complex technology. Training and development has an important role in the telecom industry to put forward innovation. Majority of world Telecom Company has training and development program for their staffs to enhance employee performance. The training is provided either at their own training center or in collaboration with their country University.

Ethio telecom is among these sector that provide mobile and landline telephone and internet service to the customer. Ethio telecom implemented telecom expansion project to reach out the customer satisfaction. As a result of TEP Mobile service penetration has reached 44%, and Internet penetration has also reached 11%. About 85% of geographic area the country has got a coverage of mobile service and CDMA landline phone. If only habitable areas are considered, this can be taken as 100% coverage (Wubshet, 2017). Also the mobile network coverage contains 3G and 2G services, and 4G LTE technology deployment in the capital Addis Ababa.

In order to implement and achieve the project goal, these company is working on capacity building of both project staffs and support staffs. Accordingly both support and project team has got training and development program. This training and development program helps an employee to perform better in their daily works and has a contribution towards the project success. Ethio Telecom has its own training center named as Telecom Excellence Academy (TEXA) which is primarily established to train and develop their staffs. In addition to this center the company provided a development program in collaboration with Addis Ababa University.

2.2.2. Training and development

Training and development plays a crucial role in order to provide an employee with a necessary skills, knowledge and abilities to manage their day to day tasks, as well as the development and achievement of the organization. Many scholars argued that manpower training and development is a systematic approach which directs employees of organization to obtain behavioral change, appropriate knowledge and skills needed to satisfy the compulsory performance. Mefleh, Abedallah, Al-rifai and Omer, (2015), argues that there is a direct relationship between appropriate training and workers' job performance. The economic means designed to minimize the deficiency between current performance and the needed performance is providing effective manpower training and development programs. Chandan, (2007), revealed that training and development is the means of acquiring and emerging the necessary knowledge, skills and behaviors that will empower employee and helps them to minimize their deficiency and to perform better in their job. When a gap happened between actual performance and what is needed, proper training can reduce that gap. Also it helps to minimize direct supervision need and the rate at which employee leave an organization and this results increased efficiency in financial gains. Therefore Training and

development is considered in organization as a critical tools assist to obtain the quickest change of performance in work systems. Every project based organization wants skilled, motivated, knowledgeable and capable workforce, and this is cannot be obtained easily without providing proper and effective employees training and development that makes important aspect of its human resources practice.

Training: is a short term process. According to Saleem Q, (2011), training is an organized learning process of increasing knowledge, skills and sensations desired for workforce members to perform efficiently in the required process, as well as, to operate in complex condition. Training is the method whereby individuals to obtain capabilities to perform tasks (Mathis & Jackson, 2010, p. 250), and helps to deliver employee with attitude, specific knowledge and skills that improves performance in their current accomplishments. Cole, (2002) outlines that the training as an educational action focused on the achievement of certain knowledge and skills for the objective of a specified task. Training is a structured process by which individuals or colleagues learn a particular area of attitude, knowledge or skills of a specific area through learning experience to attain effective performance and improvement in an activity. The specific objective and aim of training is enhancing individual and organization competence, capacity, efficiency, performance and the way of assisting employee to gain their true potential that could affects the performance of project.

On the other hand Development is: a long term education process aimed at career progression. Development focuses on employee development and future performance progression than an immediate change, also require huge investment and it is more expensive than training. Development is about providing the general knowledge and attitudes, which is helpful to employers in higher positions (Mohammed Raja Abulraheem Salah, 2016). Development provides knowledge about business environment, management principles and techniques, change management, human relations, specific industry study and capacity building for better administration of any project oriented organization and business organization. Development is a mutual initiative of the workers as well as the project organization to advance the existing attitude, skills and knowledge of their workers, also it is a method that helps to produces growth, improvement, constructive change in the employee as well as to the organization. Employee development is about change in capacity and capability building of an employee and organization

to meet the standard performance level (Gilley, 2000). Surely, training and development go-with each other (Aguinis & Kraiger, 2009).

2.2.3. Training and development process

Training and development in project organization is an important tool to enhance the overall performance of an organization by developing abilities and performance of the work force. Training and development process has different steps and sequence of activities. Every project organization required to have training and development plan in order to improve project performance by improving employee knowledge, skill and abilities to perform. Prior to all process Employee needs and Job analysis is taken place, As the training and development need assessment completed and objective established, training and development design phase will commenced, then finally implementation and evaluation will follow.

2.2.4. Training and development Need Assessment

Training and development need analysis is an approach to identify the need of training at employee and organization level to decide the importance of training and development. Desimon and Harris (1998) stated that a “need can either be a current deficiency, such as a poor employee performance, or a new challenge that demands in the way organizations operates”. Training and development need assessment is a way to collect the necessary information about the training to decide what type of training and development will be favored as appropriate and useful. Additionally needs assessment used to determine whether training and development is necessary in organizations or not. According to Paynes (2008), “a need can be simply defined as the difference between what is currently being done and what needs to be done”. Also (Gupta 2007, p. 15) noted training needs assessment as “a analytical process that based on data collection, collaboration, and settlement to pinpoint and exactly know gaps in learning and performance and to determine future actions”. Training and development needs can be organized and sequenced based on the objective of the organization (Mathis & Jackson, 2010). Need assessment is a part of planning which focus on identifying the needs of training at individual level, organizational level and task analysis, identifying deficiency and performance problem solving. Kulkarni (2013, p. 142) stated that

“Training and development need = standard performance - actual performance”

Different literatures stated that as training need assessment consists three level of assessment namely organizational analysis, Task or job analysis and Individual analysis (Miller, 2002; Boydell, 1979; Mathis & Jackson, 2010, p. 261).

- A. **Organizational Analysis:** - is analyzing the organizational effectiveness, successfulness and deficiency to identify where gaps and inconsistency happens and to analyze company needs to meet its strategic plan and objectives.
- B. **Task analysis:** - is about examining and pinpointing the required skills, knowledge and experience specified in the job description, providing data about a jobs, knowledge, skills, experience, attitudes and abilities required to realize the intended performance.
- C. **Individual's analysis:** - is about determining needs at individual level which includes; who needs the training, what they need to be trained, why they need to be trained, they readiness and level of training they need. This need assessment includes identifying the need for both existing employees and new employees, also have unique training needs and formal training programmes for new employees often fail to present material at the appropriate level of difficulty and job specificity (Feldman, 1989). "When the diagnosis of recruits strengths and weakness is inadequate, many organizations will provide training at lowest common denominator, resulting, in sub-optimization of training effectiveness" (Feldman, 1989).

2.2.5. Developing Training and development program

Currently at every project oriented organization and business organization accepts the importance, value and benefits of workforce training and development as a tool for improving overall performance. Implementing training and development in proper way, it directs to change in performance which is obtained from the change in workforce efficiency. Project performance improvement is resulted from improvement in manpower performance. Also improvement of manpower performance and efficiency will directs to increasing of overall revenue, profits, decreasing of waste and cost of production. Following training and development need assessment another important and next stage is stablishing training and development program composed of objective and priorities by taking in consideration the need assessment. Based on training need assessment and organizational objective training can be developed (Mathis & Jackson, 2010), and objective setting is prior to training implementation based on what employee should be able to do

after completion of training and development. The learning objective addresses knowledge, skill and attitudes which employee obtain in order to create the maximum performance. After learning objective established, then creating contents that covers the objective will follow. According to Hamza, (2012, p.15) before begin to stablish the designing of training course, four question must be answered. These are

- ❖ Who is the target audience?
- ❖ What is their roles?
- ❖ What gaps exist?
- ❖ And finally will the training help fill this gap?

Again (Hamza, 2012) identified five primary component of training design. These are

- i. **Learning outcomes:** at the end of the training what the employee will be able to do.
- ii. **Training materials:** what material needed to develop and material need to be included.
- iii. **Trainers and content experts:** who will facilitate the training and give training
- iv. **Training methods:** what methods will be used to deliver training?
- v. **Logistics:** the necessary overall budget to accomplish training and development objective.

2.2.6. Training and development methods/techniques

According to Gezahegn, (2018), Training techniques are tools which undertake to create learning climate for the participant employee. Different project organization uses multiple training method to train and develop their employees based on identified needs, organizational strategy, objectives, and resources available of the organization. According to cherrington (1995), selection of a training technique should be determined primarily based on the objective of the training. According to DeCauza et al (1996), the most popular training techniques used by different organization are either on-the-job training (at the regular place) or off-the-job training (away from their original work environments for a specific period). Both on-the-job training and off-the-job training has the vital role to fulfill skill gap of an employee and objective of an organization and advantageous if applied properly by evaluating its advantages and disadvantages according to the gap identified.

On-the-job training method (OJT): is a techniques used to deliver a training at their work place while employees are on the work to reinforce the technical skill gap of employee and make them familiar with their working environment and technology. This training method is a systematic way of learning by doing approach method in which employee get a chance of get the direct involvement of using machinery, equipment, devices and materials thus an employee becomes more experienced and skillful on their specific job. Such type of training is more advantageous for the project organizations because of the training is ongoing process with no disrupt normal project operation and minimize the problem of knowledge transfer linked with training method, skill gap and requires less investment in time or money for materials, the trainer's salary, or instructional design when compare to off-job training. On-the-job training includes coaching, mentoring, job rotations and transfers, in-service training, apprenticeship, internships, induction and orientations, and job instruction or job shadowing.

Off-the-job training Method: is training delivery method in which employee trained for specific period while they are out of their work place. Nwachukwu (2000, P 110) noted that “Off-the-job-method is also known as vestibule training”, that the method in which trainee train at out of their regular work place about how to manage and accomplish their duty using arranged organization resource. Training material is directly provided to the trainers and trainees for a complete theoretical knowledge. Trainers train trainees and trainees are expected to express their question, perspectives, idea and participation in exercise during the training session. Off-the-job training method includes Case studies, conferences, films or audiovisuals, seminars, simulations, role play, sensitivity training, workshop, computer based training, business game, discussion, lectures etc. since off-the-job training requires a choice of training place, experts and arrangement of training facilities all requirement because of this its more expensive than on-the-job training.

2.2.7. Implementation and evaluation of training and development program

Training and development implementation, is the phase at which the techniques and program of T&D is applied to help employees acquire job-related knowledge, skills, abilities, attitude, and behaviors, with the goal of enhancing employee and project performance. In this phase objective of T&D, budget and duration are allocated and also it requires repetitive adjusting, restructuring, and refining to accomplish the objective of the training.

Training evaluation: is the most valuable and significant part of the training process which focuses on change and effectiveness measurement after training. Berardin and Russel (1993) revealed that evaluation is the method of collecting information about the satisfaction of trainees with the program, learning material, and were able to apply the skills back on the job. Evaluation emphasizes on assessing the influence of training and whether the planned goals have been achieved compared to individual, organizational goals and objectives. According to Gezahegn (2018), the purpose of training evaluation is for improving the future of training program, identifying the reason to continue or drop the training program and to justify budget. Training evaluation is very necessary to evaluate effectiveness of training in line with learning outcomes planned and to locate where improvement or changes are needed to make the training more effective, (Armstrong, 2003). There are several ways of training evaluation which are categorized under formative and summative evaluation. Beardwell and Holden (1993), have mentioned some of these evaluation method those categorized under formative and summative evaluations, these are Questionnaires, feedback forms, Tests or examinations, structured exercises and case studies, Interviews of trainees, observation and behavioral change.

2.2.8. Project Performance

It is known and believed that if an employee is not doing something correctly as seated standard or efficiently as required with in needed quality, time and cost then he or she needs more training and direct supervision to maintain his or her abilities. Therefore training can solve any deficiency regarding abilities problem and performance problem that directs an organization to under performance and which may result a loss. Training and development program is one of the valuable systems and quickest way to improve project performance resulting from improved employee performance. Employee performance can be measured in terms of capability of employee to achieve a specific job within standard kept by the organization.

Cleland as cited by Prabhakar & Lane, (2008, p.4) point-out that project success is meaningful only if measured from two degrees: “the degree to which the project's technical performance objective was accomplished on time and within budget and the degree of contribution that the project made to the strategic mission of the organization”. Project that can be effective for one organization is failure for another project organization, due to this it is very necessary that

performing an intermediate or post-completion assessment to identify cause and effect. Project success can be seen in different views but the overall success relies on the quality of project organization manpower and general project management. Project was success if it delivers what it said it would, with in the schedule, quality and budget performance. This mean if the project delivered on schedule, within agreed budget, expected quality, agreed project objective and if the project creates significant net value after the project is completed. Generally, performance is a wide concept which includes effectiveness, efficiency, budget, quality, and consistency behavior and employee capability. Therefore among those efficiency and effectiveness of the project are the major component of project performance and this can be achieved through proper training and development of employee based on the need assessment.

Performance: The attainment and completion of an assumed activity measured against current acknowledged accuracy standard, completeness, quality, scope, time, budget and customer need. “Performance is a complete task with application of knowledge, skill and abilities” (John Shield; Michelle brown; et al, 2015). Performance is measurable outcomes, accomplishments, valued by the system done and it is the combination output of knowledge, skill and abilities.

- **Knowledge:** is acquired though study or experience. “Knowledge refers to a theoretical or practical understanding of a subject. According to Noe (2010, p.56), Knowledge refers to “what persons or groups of workers know or know how to act (human and social knowledge) as well as company rules, processes, tools, and routines (structured knowledge)”.
- **Skill:** is the ability to handle and manage a task with determined outcomes regularly with in a given amount of time, energy, quality and cost.
- **Abilities:** is the readiness and talent of physical power, mental power and skill needed to accomplish a given task.

2.2.9. Training and Development and Project Performance

Training and Development primarily deals with the acquisition of knowledge and skill to analyze, expertise, techniques and practices. Training and development is a systematic way to gain and develop new and existing knowledge, skills, behavior and attitudes need to perform a task and to improve performance in the job environment (Tharenou, Saks and Moore, 2007:252). Arikewuyo

(1999) argues that training and development is a road to obtain new knowledge and skill and develop further talents and techniques to work efficiently. The improvement of skills and knowledge among the employees is becoming significant towards the change on performance, competitiveness and innovation (Lawler, Mohrman, & Ledford, 1998; Martocchio & Baldwin, 1997). Sims, R. (2002), stated that training and development profits not just only the individual employees but also to organization itself. “Training is an important action needed in order of achieving the learning that are necessary for improved performance” (Kenney & Reid, 1986). “We can define Project Performance as Job performance and Job performance as employees perform, their actions according to the requirement of the job” (Khan, 2011). “There is a positive relationship between job involvement and performance” (Hafeez & Jinnah, 2015). According to Rozthwell, and Kazanas, (2006), effective employee training leads to “an increase in quality goods and services as a result of potentially fewer mistakes”. Employee quality, experience and performance determines the Success or failure of any project organization. Thus, highly developed, knowledgeable, intelligent, flexible, skilled, competent, effective and well trained manpower is fundamental to performance, productivity and the success of organizations (Mohammed, 2016). Neo et al (2004:145) revealed that the employee development gained from training and development can decides the long-term output of an employee on the work. One of the pillar that helps to determines project success is the skills, motivation, efficiency and abilities of workforce and the efficiency of a project. The improvement of employee skills, knowledge, abilities, efficiency and performance is directly linked to project performance. This shows that employee performance positively correlated to project performance. Therefore, Training and development has significant influence on employee’s performance and employee performance has significant influence on Project performance, this indicates training and development and Project performance has a direct relationship. “Manpower training and development has been found to contribute to their performance effectiveness and productivity of organizations” (Ameeq and Hanif, 2003; Olaniyan and Ojo, 2008; Singh and Mohanty, 2012; Kum et al, 2014; Colombo and Stanca, 2008).

2.2.10. Benefits of Training and development

In Recent years training and development recognized as tool for performance improvement of any organization where investment in employee development is greatly highlighted. The main role and importance of training and development is mainly to assistance the workforce acquire and maintain

the required skills, knowledge, attitude, capabilities, personal capacities, motivation and project performance to contribute more satisfactorily to the attainment of organizational goal and objectives and create competitive advantage by adding value to their key resources. Cut Zurnali (2004), mentioned that the main importance of employees training and development is to possess a better knowledge, behaviors, and skills highlighted in training programs and to use them in their tasks. Moreover, training and development importance is linked with the need to develop and performance enhancement, also need to obtain and increase knowledge in a good way, improve attitudes towards work related tasks, and improve skills. Training importance is not only for production increment but also to motivate and inspire workers by allowing them to distinguish how significant their jobs are and providing them all necessary material they want to perform those tasks (Anonymous, 1998). Since new technologies emerge daily, employees skills and knowledge should be improved to keep up with technology and for this training and development is very important than manual skills. Training and development systematic way to bring both short term and long term change to the individual and organization itself. As Cole (2011) discussed that the benefits gained from training and development includes: High morale, lower cost of production, improved motivation and job satisfaction, lower turnover rate at which employee leave an organization, change management, improvement of availability and quality of staff, provision of recognition, improved employee performance, boosted accountability and the possibility of improved wage and preferment for employees.

According to Oguntimehin (2001), “training improves efficiency, increases the quality of work, enhances know-how, comprehension, understanding and outlook of the trainee, as well as enhance an individual’s use of tools and machines”; it also reduces wastes, accidents, and turnover, among others. To be sure, proper training and development based on the need assessment of an organization’s and staff ensure new skills development, Knowledge, capabilities and competencies which is guarantee for project performance improvement and an project organization’s competitive edge over its competitors. In general training and development benefits are summarizes as below:

Improve employee motivation, job satisfaction and morale: - Training and development has an ability to boost motivation, satisfaction, confidence and morale of employee. “Training increases up the morale of workforce” (Zahra, Iram & Naeem, 2014). Generally, Training and development programs has a power to enhance job satisfaction and to motivate employee.

Improve employee performance: - If adequate training based on the need assessment received the probability experience improvement is high which directs them to improve their overall performance. Well organized training and development boost skills, boost ability to familiarize and make changes, and performance better (Mathis & Jackson, 2010). Employee performance can be revealed in terms of production, easiness in adapting new technology, motivation to work and job satisfaction and thus highest job retention, than those who are not happy with their jobs.

Lower cost of production: - Training and development reduces risks, because trained employees are able to perform better and material and equipment can be used in economic way, thus, waste can be reduced and avoided.

Lower employee turnover: - In fact all employee turnover is not negative to the organization, few turnover case is advantageous to an organization, which resulted due to dismissal for poor performance, incompetency or work rule violation at all levels of organization. But to the revers it is a crisis to lose a highly qualified and experienced employees since it requires high investment to obtain skilled, knowledgeable, capacitated and experienced employee. Training and development make employees feel safer at the workplace and it helps to reduces labor turnover and absenteeism at work place.

Change management: - Training and development aids to manage change by enhancing the consideration and participation of staffs in the change practice and also delivers the skills and abilities required to regulate to new environments.

2.3. Empirical Review

Training and development has a power to changes employee way of thinking, acting and performing their duties. As employee trained and developed on their specific skill or knowledge area based on the need, employee efficiency can be improved this shows that training and development has a direct relationship with the performance of employee that leads to project performance. Berhan (2008), stated the significant positive links among education level, preparedness and job performance. Also according to Berhan (2008), there was no significant connection among job performance and gender, age, marital status of employee. Dr. Divya Rana (2016), described that Training and development are fundamental indispensable tool to successful work and growth in any organization. Also He revealed that “manpower is the very essential and the foundation of every organization”. “Training is a scheduled, methodical and it results in

improved level of talent, knowledge and proficiency that are very important to accomplish work successfully” (Gordon, 1992). Many researcher revealed that training and development method has a significant effect on workers and organizational performance. According to Atola (2013), the choice about what method to take to training be determined by on several reasons that include the expanse available for training, specificity and difficulty of the knowledge and skills needed, timeliness of training needed, and the capacity and motivation of the learner. Blanchard and Thacker (1998) revealed that off the job delivery methods are best for knowledge development and on the job delivery methods for skills. Atola (2013) stated that Off-the-job training and development method is usually intended to meet the communal learning needs of a group rather than a particular individual’s needs. Skills needed to problem solving and interpersonal are mostly obtained effectively and efficiently by the employees through Off Job training (VanWart, Cayer and Cork, 1993). Off-the-job training and development method is also suitable when complex skills required to be mastered or when there is the necessity to emphasis on definite interpersonal skills that might not be apparent in normal work environment (Schuler and Huber, 1993). According to Thacker (1998), Off-the-job training usually emphases more on long-term development and general education than on the skills and information required to perform a specific job.

On the other hand Nader t.al (2011) revealed that the importance of on-the-job training method is to deliver employee with task-specific knowledge and skills in work area. The knowledge and skills obtainable during on-the-job are directly linked to job requirements (Salini, 2015), and this type of training method is good for task oriented duties (Nader t.al, 2011). Nadir Khan (2012), stated that the goal of on the job training training is get aware of the workforce with fresh practices or promote the sills of the workers related to a specific job. According to Somayeh et.al (2013), On-the-job training is commonly seen as one of the most effective management approaches for familiarizing workers to environmental changes and it can secure anticipated performance, particularly in services and governmental organizations. Somayeh et.al (2013) also stated that if on-the-job training is be implemented regularly and purposefully based on actual needs of staff, it may not only indorse organizational performance, but also it can improve administrators’ skills and effect in increasing workforce and customers’ satisfaction. Training and development can be

seen as the main impact in the formation of human capital, which decides the long-term efficiency of an employee's performance.

H.Singh, (2012) point out that the role of training and development as a leading factor for improving workforce productivity. He also stated in his finding that training and development plays a necessary role in enhancing the productivity of manpower. Likewise Graig, P. (1996), presented that the helpfulness of T&D in an organization and recognized the purposes of training as follow: It boosts productivity and quality of jobs; skills and comprehension, understanding and behavior; improves the usage of tools, equipment and machine; decreases waste and accidents; employee turnover, late coming and absenteeism; capital management and other overhead costs; technologies, techniques and products; enhances the employment of new strategies and guidelines; prepares workers for attainment, advances staffs progress and safeguards the existence and progression of the enterprise. Guest (1997) described in his study that T&D is very important human resource management practice which positively impact the quality of the workers knowledge, skills and capability and thus results in higher employee performance on the job. Farooq. M, & Aslam. M. K's (2011) study's findings illustrates the positive correlation among training and employee performance. Tamkin, (2005) mentioned a "significant relationship between a highly skilled manpower and organizational performance, most commonly measured by the level of labor manpower productivity". Beatrice Chinomnso (2014), described training investment for each worker was also related with handling technological complexity and innovation. Dearden and Van Reenen (2000) mentioned that there is a link between higher proficiency and higher workers productivity across a number of sectors. D'Arcimoles, (1997) stated that when more training and development given o employee the organization results better the economic performance, this suggests that training and development has permanently and clearly relationship with profitability and productivity increment.

Many researcher also revealed that there are number of performance factor relating to age of worker, marital status, gender, salary, motivation and management practice. Relating to age, few researcher revealed that as the worker getting older they are less able to learn, less adaptable, less flexible, resistant to change, less able to perform, fade away and less motivated. McGregor and Gray (2002), in their finding of stereotypes found that older workers possess negative stereotypes about "flexibility" factors such as digitalized and computer technology also resistance to

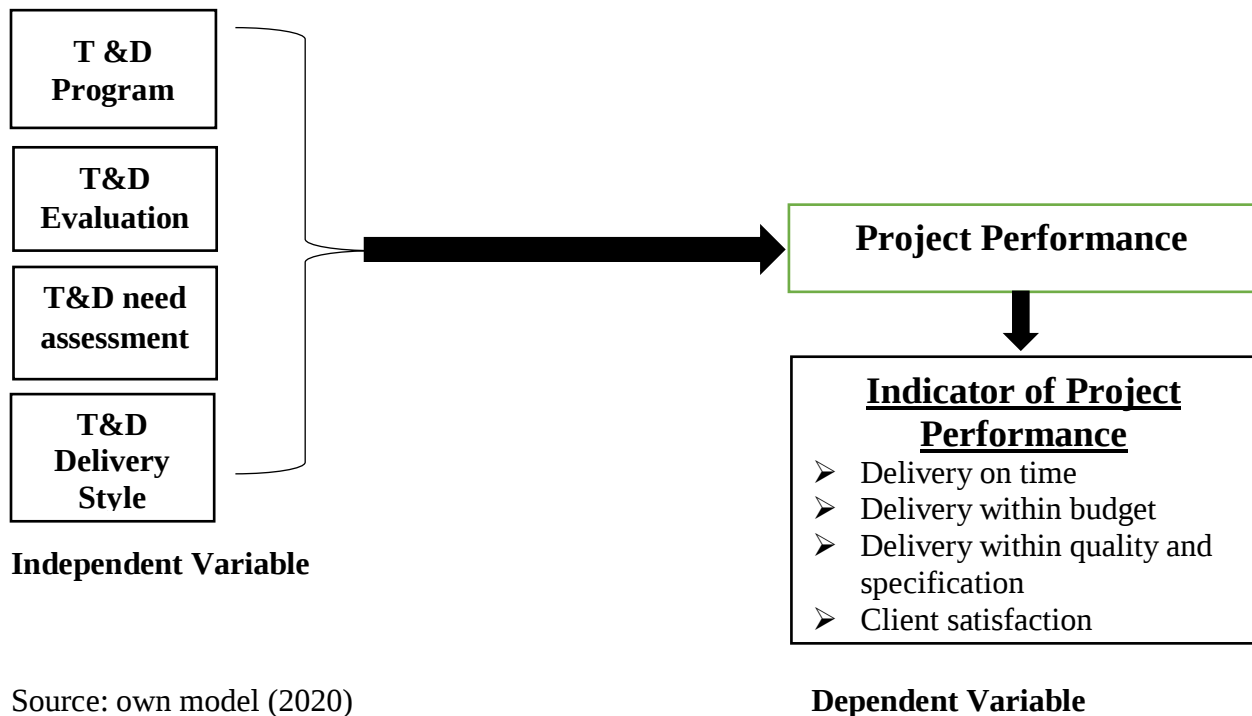
transformation. Few researcher also found that there were a positive stereotypes about old workers which revealed that they were seen as opportunity and as being more dependable such as reliability, loyalty and commitment to work (Posthuma and Campion, 2009), more experienced (Finkelstein et al, 2000) and more wiser (Kogan and Shelton, 1960) than young workers. Whereas there is less perception of findings focused on young workers, there are evidence for both positive and negative stereotypes of young workers as well. Young workers are understood as more energetic, work-motivated, manage changes, ambitious, and able to learn quickly than older workers. On the other hand, young employees perceived as careless, less loyal and less emotionally stable (e.g. Gibson et al., 1993; Rosen and Jerdee, 1976). This author observed that the performance of manpower is directly related to the age since the worker getting older and older the performance of the employee declines gradually. Kotur and Anbazhagan (2014) found that performance of manpower gradually increases with getting more experience at up to experience of 20 years and after an after 45 years of experience the performance is again getting lower. Gobel and Zwick (2010; P13), on their discussion paper have found that productivity of manpower increases until the age group 50-55 years and only decreases gradually after age of 55. This may happen because of some physical attribution such as eye sight, hearing and physiological system deteriorate.

Bartel (1994), point out that there is a positive correlation between provision of effective training program and employee productivity. The above finding of literature provides the testament regarding the paybacks of training and its positive influence on employee performance. Scott, Clothier and Spriegel (1977) argued that training is the most important for better organizational management, due to the fact that it can makes employees more efficient and effective. Also another researcher revealed that it enables employees to advance themselves within the organization and promote their importance in the market. Jones, George and Hill (2000), stated that training and development benefits to ensure the organizational staffs to gain the knowledge and skills they require to perform their jobs efficiently and effectively, to take on new responsibilities, and to adapt themselves in changes. In the same way, training benefits an organization to ensure improved quality, to maintain customer satisfaction, to maintain and improve productivity, enhance morale, management practice, professional development, maintain profitability and organizational performance. Training and development benefits both individuals and organization, as individual level it helps as promotion, enhances knowledge, develops motivation, changes attitude, to deal with innovation, newly developed technology, and makes empower, as organization level it helps

to obtain adequate human resources, improve performance and minimize turnover of employee. Effective and proper Training and development programs allows an organization to maintain enough manpower who effectively replace and takeover other employees who may leave an organization or who are transferred to other work place. In the literature, “project performance can be simplistically measured in terms of the cost–time–quality triangle at the desired level” (Pinto and Slevin, 1988). On the other hand, Cheung et al (2004) said there are seven key indicators for project performance which are: “deliver time, delivery cost, quality, client or customer satisfaction, client or customer changes, business performance, and safety and health”. Many Scholars have go into detail that the evaluation of project performance to include communication characteristics, such as communication with clients (Jugdev and Muller, 2005); the outlook of stakeholders or sponsor, such as customer satisfaction and profitability (Freeman and Beale, 1992); internal and external stakeholders or sponsor (Lester, 1998); the project environment, such as gradual or radical change (Raz et al., 2002); and multicultural observations (Pinto, 2013). Similarly, according to Navon (2005), performance is comparison measurement between the anticipated plan and the actual performances. According to Sujinda and Sununta, (2014), Project oriented companies often evaluate the degree of successfulness that knowledge transferred to the next relevant project which earned from previous relatively similar project, thus shortening the timeline of the new project and this helps to improve the performance of the project. According to many empirical studies, Human resource management practices, training and development have a positive correlation with project-related performance in both the short term (project completion) and long run (the potential knowledge transfer of the project for the related upcoming projects). According to Chen and Huang (2009), “HRM practices have a positive effect on innovation performance by enhancing the capacity for knowledge acquisition, sharing, and application of skills”. Cheung et al (2004) identified “project performance groups such as people, cost, time, quality, safety and health, environment, client satisfaction, and communication”. According to Pheng and Chuan (2006) define the project success as the accomplishment of a project within acceptable time, tolerable cost and expected quality and achieving client's or customer satisfaction. Moreover, training and development maintains employee's job related behavior, skill and knowledge, this improvement assist them to contribute for the success of the project and ultimately project gets improved performance payback due to higher performance of its workers.

2.4. Conceptual framework

As discussed in the literature review and introduction of the study above training and development is the technique and way of providing employee with skill, knowledge, promotion and awareness of organizational goal, objective, mission and vision. Training and development program assist a project organization to maintain the skill and knowledge that each workers needs to progress. Additionally training and development program allows project management to pinpoint employee weakness, enhance employee satisfaction and morale, to locate organization weaknesses, safeguards employee to have consistent experience and background knowledge, enhance innovation in new strategies and product also it allows organization itself to increase productivity and quality, reduce time waste and budget, reduce employee turnover and enhance organization image and profile. The conceptual framework that could be developed to study the roles of training and development is based on the review of the literature. The following conceptual model presented below Figure 2.1 in this study is drawn graphically based on the grounds of literature review that the researcher has carried out to answer the research question and describe the roles of training and development in enhancing project performance.



Source: own model (2020)

Figure 2. 1 Study Framework

CHAPTER THREE

3. RESEARCH DESIGN AND METHODOLOGY

3.1. Introduction

Research design and methodology present a description about the design employed for this study, the various procedures and processes used to collect and analyze the data. It also indicate the path through which researcher need to conduct the study and the method of analysis of the data. Generally this chapter highlights in what way the research finding was obtained in line with objective of the study.

3.2. Research Approach

Both qualitative and quantitative data was collected for this study, using well-structured questionnaires containing both open-ended and closed-ended. The main aim of gathering qualitative and quantitative data is to acquire all necessary data as much from the entire of studied population that was used to answer research question in relation to the effect of manpower training and development on project performance. Those both open ended and closed ended questionnaires allows the researcher to look in deep, observing and analyzing of the populations under this study.

3.3. Research Design

The major goal of this research was to identify the effect of manpower training and development on project performance and its relationship. This study applied research survey design that describes behaviors by obtaining respondents opinion, attitudes beliefs and insight about their project to achieve this general objective. The research design was formed in the form of descriptive survey study to be ideal since it requires describing the characteristics. The description are then summarized by the frequencies, percentage and mean value of responses. As the study of Pilot and Hurgler (1995), descriptive survey primarily used for analyzing, reciting and recording aspects of a situation as it is clearly take place rather than clarifying them. Additionally, descriptive study design has also an advantage of producing good quantity of responses from a wide range of populations (Fraenkel and Wallen, 1993). Parallel to that, it gives uncomplicated and clear picture of the study at a point in time. when collecting information about people's attitudes, opinions, habits or any of the variety of education or social issues descriptive study is further desirable than other design and gives opportunity to mix the qualitative and quantitative approaches of data collection (Orodho and Kombo, 2002).

3.4. Population and Sample

Target population can be defined as a group of individual taken from the general population who share a common characteristics. This research was focus on staffs who involved in Addis Ababa Telecom Expansion Project of Ethio telecom. There are about 284 staffs including both frontline and support staffs of project. From those staff study was focus only on the staffs who enrolled directly and spend their time with Addis Ababa TEP those are Project Rollout Office (PRO), Network Division (ND) and Information System Division (ISD).

Sampling is a system of identifying individuals from wider targeted population for study purpose. Sampling design are also known as sampling techniques. During sampling cost, quickness of data collection must considered. The population of the study was only focus on participant of TEP project those who directly responsible for the Expansion project in Addis Ababa. The total number of members participated in Addis Ababa Expansion Project is about 284 including support team. Among 284 staffs 165 of them are the core team who are responsible for the project and since the population is only 165 and less 200 the researcher used the whole population of the three division as its sample size.

Table 3. 1 Number of respondent among all division

No	division	Total number of participant
1	Network	110
3	Information System	25
4	TEP office	30
Total		165

Source TEP Report August 2017

3.5. Source of Data

Data collection is a process of collecting all necessary data either primary data or secondary data or both from different sources which is used as input for the study. This study was conducted by collecting data from both primary and secondary sources. Primary data is the original data that is collected directly from the targeted respondent for the purpose of the intended research using proposed instrument. In case of this study researcher uses structurally designed questionnaire which contains an open ended, closed ended and interviews. Open ended questionnaires and

interview helps researcher to gather qualitative data whereas closed ended helps to get quantitative data.

Secondary data is a data which is already published for other purpose but which can be used as input. For the purpose of this research researcher uses organizational and division annual report, annual plan and final report to obtain secondary data.

3.6. Data Collection

3.6.1. Research Instrument

Questionnaire and interview was used to collect information about effect of manpower training and development on project performance case of TEP in Ethio telecom. The self-administered structured questionnaires contains both open and closed ended questions was administered. The questionnaires was structured in to two section, the first section addresses general information of the respondent and the second section is the main body that tries to answer the objectives of the study that includes TEP staff perception of T&D objective at ET, TEP T&D need assessment at ET, T&D delivery method at ET, evaluation of T&D effectiveness and Relationship of T&D and Project performance at ET. In addition to questionnaires, in this study interview was conducted with three key informant from TEP, IS and Network divisions. The interview was conducted using mobile phone to minimize fear and risk of Covid-19

3.6.2. Data Collection Procedures

Received letter written from university to Ethio telecom was submitted to Ethio Telecom and discussion was taken place with HR deputy Chief Officer and TEP director on how to reach study population, distribute and collect distributed questionnaires, how hold interview with key informant. With the help of TEP office delegates, hard copy of questionnaire was distributed after respondents briefed in detail on the aim of study and online survey was also provided for the respondent who prefer online questioners because of Covid-19 and while submission of questionnaires its completeness was checked. In fact many academic research was done before in Ethio telecom because of this all respondents have an awareness regarding the aim of academic research. Behind this, the three key informant individuals was informed about the study and appointment was take place to conduct one on one interview through mobile voice call. Finally on the appointment date researcher conducts interview using voice call.

3.7. Data Analysis

Both qualitative and quantitative data was collected by using both online survey and hard copy questionnaire which is analyzed to answer the following research questions; how do TEP staffs perceive the objective of training and development at Ethio Telecom? How is the training and development needs of TEP staffs determined? What are the TEP training and development delivery methods being applied at ET? What measures are used to evaluate the effectiveness of TEP training and development at ET? Is there a relationship between TEP staff training and development practice and project performance at ET?

Questions with options assigned ordinal through Likert scales where the respondents choose among options like strongly agree, agree, unsure, disagree and strongly disagree. The data collecting method was edited, coded and analyzed using descriptive statistics and correlation analysis. Collected data from both open ended questions and closed ended questions was analyzed using SPSS version 23 software to meaningfully describe the distribution measurements of the phenomena under the study. This involved use of measure of distributions in case of frequency and percentages, correlation of variables and presentation of the information in tables

3.8. The Model Used

3.8.1. Regression with Multiple Descriptive Variables

The model used both descriptive and inferential statistics (like, linear regression model, Bivariate correlation, ANOVA, Mean, Standard deviation) can be extended to include multiple descriptive variables by simply adding additional variables to the equation. Major variables independent and dependent have been on this research.

Dependent variable is predicted by the sum of all independent variables (Project Performance = T&D objective + T&D need assessment + T&D delivery method + T&D evaluation). The form of the model is the same as a single response variable (Y), but Y is predicted by multiple descriptive variables (X_1 to X_3). Major variables independent and dependent have been on this research and other concepts thinking necessary to be defines are stated below.

$$Y = \alpha_0 + \beta_{1x1} + \beta_{2x2} + \beta_{3x3} + e$$

Where,

$$y1 = \alpha_0 + \beta_{1x1} + e$$

$$y2 = \alpha_0 + \beta_{2x2} + e$$

$$y3 = \alpha_0 + \beta_{3x3} + e$$

$$y4 = \alpha_0 + \beta_{4x4} + e$$

$$Y = f(X)$$

Y = Dependent Variable

X = Independent Variables

Where:

Y = Project Performance

X = Training and development

$$Y = (y1, y2, y3, y4)$$

$$X = (x1, x2, x3, x4)$$

Where:

y1 = Delivery on time

y2 = delivery within budget

y3 = delivery within quality

y4 = meeting customer satisfaction

X1 = training and development objective

X2 = T&D need assessment

X3 = T&D delivery method

X4 = T&D evaluation

The interpretation of the parameters (β and α) from the above model is basically the same as for the regression model above, but the relationship cannot now be graphed on a single scatter plot. 'α' indicates the value of Y when all values of the descriptive variables are zero. Each 'β' parameter indicates the average change in Y that is associated with a unit change in X, whilst (at the same time) controlling for the other descriptive variables in the model. Model-fit can be assessed through comparing deviance measures of nested models.

The significance of the change in the deviance scores can be assessed through the calculation of the F-statistic using the equation provided above (these are, however, provided as a matter of course by most software packages). As with the linear regression, it is a simple matter to compute the R-square statistics.

3.9. Validity and Reliability

According to Mugenda, (2003), "Validity indicates the extent to which the instruments measure the variables under investigation". In this study, validity was taken into consideration. The questionnaire is constructed by the researcher, it is designed on the basis of the researcher's needs

in relation to the study and so brings advantages in the sense that it measures exactly what the researcher intends to measure. In confirming content validity, the questionnaire reviewed by advisor to ensure that the data collected would represent the content that the test designed to measure.

The researcher used Cronbach's alpha in this study. This contained randomly dividing all the items that measure the effect of manpower training and development on project performance into five sets. "Reliability reflects consistency and replicable over time". "Furthermore, reliability is seen as the degree to which a test is free from measurement errors, since the more measurement errors occur the less reliable the test"; (McMillan & Schumacher, 2001, 2006; Moss, 1994; Neuman, 2003). Cronbach's alpha of well above 0.7 implies that the instruments were sufficiently reliable for the measurement. "As most item total correlations were reasonably high, the construct validity of the instruments was considered reasonable" (Brown, 2000). As shown in the table 3.2 below all variable reliability statistics is above 0.7 this implies the instruments were sufficiently reliable for the measurement.

Table 3. 2 Reliability Statistics

variables	Cronbach's Alpha	N of Items
Training and development	.745	9
Training need assessment	.733	9
Training and development evaluation	.785	8
Project performance	.929	16

Own survey result, 2020

3.10. Ethical Consideration

To be ethical the research topic the study was planned and reviewed in a way that ensure integrity also it cannot be disclose the secret of the organization to third party. Additionally, before going to reach the respondent, TEP office was consulted and their consent was obtained. Respondents was also be briefed in detail about the need of study. The confidentiality of information supplied by research subjects and the anonymity of respondents was kept. Participation of respondent was based on their voluntary and they are free to withdraw from the study at any time if they wish. Data acquired from respondent was used only for academic purpose. The study is independent, free from conflict of interest, partiality and any politics. Finally study was made based on the answer gathered from the respondents.

CHAPTER FOUR

4. RESULT AND DISCUSSION

4.1. Introduction

This chapter discusses the data analysis, presentation and interpretation of finding relating to effect of manpower training and development on project performance case of Telecom Expansion Project in Ethio Telecom based on different variable.

4.2. Respondent's Response Rate

The questionnaires were collected from 3 division of Ethio telecom those who was accountable for the project in Ethio Telecom. Out of the 165 questionnaires distributed using both online and hard copy, 132 respondent 80% of response rate were filled and returned. The following table shows the general response rate respondents rate.

Table 4. 1 Respondent rate

Division	Distributed questionnaires	Returned questionnaires	Returned percentage
Network	110	87	79.09%
Information System	25	21	84%
Project Rollout office	30	24	80%
Total	165	132	80%

Researcher's own computation survey result (2020)

As it seen in the above table 4:1, total respondent response were 80%, it indicates that the largest part of questionnaires were collected and it is relevant for the analysis and finding of the study. 20% questionnaires were not collected due to Covid-19, since the outbreak of Corona virus in Ethiopia the company only allows staffs to work by half-staff and shift schedule which will recycled after 5 weeks that is why 20% of respondent were not available. Therefore, response rate was sufficient; and almost more number of the questionnaires prepared for the study were collected.

4.3. Study Survey Result

4.3.1. Respondent Background Information

This Section reviews about gender of respondent, age of respondent, marital status of the respondent, educational level, job level (position) of respondent in the project and location of training.

Table 4. 2 Respondent Background information

No	Respondent background	Description	Frequency	%
1	Gender of respondents	Male	77	58.3
		Female	55	41.7
		Total	132	100.0
2	Age of respondents	26-35	52	39.4
		36-45	53	40.2
		46-55	27	20.5
		Total	132	100.0
3	Marital status of respondent	married	98	74.2
		single	34	25.8
		Total	132	100.0
4	Education Level of respondent	First Degree	87	65.9
		Master's degree	45	34.1
		Total	132	100.0
5	Position of respondent	Staff	53	40.2
		Specialist	44	33.3
		Supervisor	5	3.8
		Expert	18	13.6
		Manager	12	9.1
		Total	132	100.0
6	Respondent Experience in TEP	Less than 6 months'	24	18.2
		6 month to 1 year	12	9.1
		1 year to 2 year	29	22.0
		More than 2 years'	67	50.8
		Total	132	100.0

Source: Own computation from survey result, (2020)

Background Information of respondent: - the above table 4.2 indicates respondent background information data of TEP staff in Ethio telecom. The study shows that the majority (58.3%) of the respondents were male and 41.7% of the respondents were female. This may be due to there are more males in in the project when compared to women.

Age of respondent: - Concerning age, 39.4% of respondent were between 26-35years, 40.2% of respondent are in age group of 36-45 years, and 20.5% of respondent are in age category of 46-55 years. This result depicts that majority of those who participated in in this study 40.2% are relatively in adult age group of 36-45 years.

Marital Status: - Regarding respondent marital status, 74.2% of respondents were married and 25.8% of respondents were single. The finding indicates that the majorities of the respondents are relatively married.

Educational level: - from the above table respondent educational qualification shows that, 65.9% of respondent are first degree holder and 34.1% are master's degree holders. From the finding the highest percentage 65.9% of respondents was first degree holders. The finding indicates that the TEP staff respondent have a higher educational qualification level that constitutes them to manage and improve project performance.

Position Level: - concerning respondent job position, 40.2% of the respondent were staffs, 33.3% of them are specialist, 3.8 of the respondent are supervisor, 13.6% of them are working as expert and 9.1% of the respondent are managers. This indicates that highest number 40.2% of the respondent are technical teams those who handles first level activities.

Respondent TEP Experience: - Experience of TEP employee respondent indicates duration of respondents have been stayed and worked in telecom expansion project. Based on this, 18.2% of the respondents have experience at TEP for less than 6 months', 9.1% of the respondents stayed in the project for six month to one ear, 22% of the respondent experienced for one year to two year in the project and 50.8% of the employees experienced for more than two years in the. This may indicates that majority of the respondents have adequate experience in TEP and have enough understanding to consider and value their response equally in this research.

4.3.2. Assessment of Training and development Objective at Ethio Telecom TEP

The first objective of this study was to assess employees' perception on the objective of training on project performance of TEP in Ethio Telecom. The respondents were asked to rate their perception on objective of training and development on project performance using a 5- Likert scale. 5-Strongly agree, 4-Agree, 3-Unsure, 2-Disagree and 1-Strongly disagree. For the purpose of this study the mean score below 3 is considered as low level of agreement 3 – 3.5 neutral or moderate and above 3.5 as high level of agreement.

Table 4. 3 Assessment of training and development

No	Study question	Level of Agreement	FR	%	Mean	SD
1	The quality of training and dev't provided were good and related to objective of the project	Strongly Disagree	1	.8	4.05	.426
		Disagree	1	.8		
		Agree	119	90.2		
		Strongly Agree	11	8.3		
		Total	132	100.0		
2	The training and development received is relevant to my project work	Strongly Disagree	1	.8	4.06	.441
		Disagree	1	.8		
		Agree	117	88.6		
		Strongly Agree	13	9.8		
		Total	132	100.0		
3	T&D objectives were set and in consideration of the project goal.	Strongly Disagree	1	.8	3.95	.604
		Disagree	5	3.8		
		Unsure	6	4.5		
		Agree	107	81.1		
		Strongly Agree	13	9.8		
		Total	132	100.0		
4	Training and development helped me to develop new skill and knowledge	Strongly Disagree	2	1.5	4.17	.656
		Disagree	2	1.5		
		Unsure	1	.8		
		Agree	94	71.2		
		Strongly Agree	33	25.0		
		Total	132	100.0		

5	In my opinion, training and development has helped me to improve my job performance	Strongly Disagree	1	.8	4.22	.734
		Disagree	6	4.5		
		Agree	81	61.4		
		Strongly Agree	44	33.3		
		Total	132	100.0		
6	Training and development motivates me to work harder in the project	Strongly Disagree	1	.8	4.42	.925
		Disagree	11	8.3		
		Unsure	1	.8		
		Agree	38	28.8		
		Strongly Agree	81	61.4		
		Total	132	100.0		
7	Training and development increase job satisfaction and morale among staff	Disagree	4	3.0	4.20	.602
		Unsure	1	.8		
		Agree	91	68.9		
		Strongly Agree	36	27.3		
		Total	132	100.0		
8	Training and development can reduce the rate at which employee leave the Project	Disagree	2	1.5	3.83	.843
		Unsure	54	40.9		
		Agree	41	31.1		
		Strongly Agree	35	26.5		
		Total	132	100.0		
9	Training and development leads to a better understanding of the project goal	Unsure	6	4.5	4.27	.540
		Agree	84	63.6		
		Strongly Agree	42	31.8		
		Total	132	100.0		

Source: Researcher's own computation survey result, (2020)

Above Table 4.3 indicates employee perception towards objective of training and development that the researcher wanted to establish how the respondents understand the objective of training and development with the quality of training provided and relation to objective of the project. The study showed that 8.3% of respondents strongly agreed that provided training was developed in good quality and related to the objective of the project, more of the respondent 90.2% agreed that the training provided was in good quality as they expect and as it related to the objective of the project, 0.8% respondents disagree and 0.8% of respondents strongly disagreed on training provided. The mean 4.05 shows that the staff highly agreed that training provided was in good quality and had value on the project goal.

Concerning provided training relevance with project work, 9.8% of respondents strongly agreed on relevance of training to project work, 88.6% of respondents were agreed, 0.8% respondents were disagreed and few respondent 0.8% of respondent strongly disagree. The finding depicts that majority of the respondents, 88.6% agreed that the received training was relevant to the project work. The mean 4.06 shows that respondent highly agreed that received training was relevant and add values on the project activity.

Regarding the T&D objectives in relation to project goal showed, 9.8% of respondents strongly agreed, 81.1% agreed, 4.5% Unsure, 3.8% disagree and 0.8% strongly disagreed with the training objective set. The finding showed, majority of respondent 81.1% agreed with the objective sated in relation to project goal. The mean 3.95 indicate that the respondent highly agreed that the training and development objective were set in consideration of project.

Regarding enhancement of new skill and knowledge, the study clearly shows that majority of the respondents 71.2% agreed that as they developed new skill and knowledge after they received training, 25% indicated strongly agreed, 0.8% unsure, strongly disagreed and disagreed 1.5% respectively on the developing new skill and knowledge after training and this shows few of the respondent need another training to empower themselves and develop new skill. The mean 4.17 depicts that the staffs extremely agreed that after the training given, majority of the respondents developed new skill and knowledge.

Regarding Job performance improvement, motivation, and satisfaction of job, the study shows that 61.4% agreed that training helped them to improve their job performance also very few respondent 0.8% strongly disagreed, in another case 61.4% Strongly agreed that training motivates them to work harder in the project and few of them 0.8% strongly disagreed. 68.9% of respondent agreed that as the training and development increases job satisfaction and morale among staffs and 3% strongly disagree. From the finding mean 4.22, 4.42 and 4.20 shows that the staffs highly agreed that training and development had an influence on job performance, motivation to work harder and enhancement of job satisfaction and moral among staffs in telecom expansion project at Ethio telecom.

Regarding employee turnover, the finding revealed that majorities of respondent 40.9% are not sure whether it helps to reduce turnover or not, 26.5% of respondent strongly agreed, 31.1% of respondent agreed that training and development reduce employee turnover, and very few percent

of respondent 1.5% disagree. The mean 3.83 shows that the respondent highly agreed that training and development was helped to reduce the rate at which employee leaves TEP in Ethio telecom.

Concerning better understanding of the project goal, most of the respondent 63.3% agreed as training lead to a better understanding of the project goal, 31.8% strongly agree and very few number of respondents 4.5% are unsure. The mean 4.27 implies that the staffs highly believed that training has helped them to increase their level of TEP goal understanding.

4.3.3. Training and development need assessment of TEP employee at Ethio telecom

The second objective of this study was to examine how training and development programs needs of TEP employee determined.

Table 4. 4 Training and development need assessment

No	Study question	Level of Agreement	FR	%e	Mean	SD
1	Training and development is compulsory in the Commission	Disagree	1	0.8	4.33	0.704
		Unsure	15	11.4		
		Agree	56	42.4		
		Strongly Agree	60	45.5		
		Total	132	100.0		
2	Training and development needs are determined through Quarter/annual appraisal process	Strongly Disagree	10	7.6	3.05	1.241
		Disagree	49	37.1		
		Unsure	17	12.9		
		Agree	37	28.0		
		Strongly Agree	19	14.4		
		Total	132	100.0		
3	Training and development need are determined by SWOT analysis of the Project	Strongly Disagree	8	6.1	2.76	1.027
		Disagree	63	47.7		
		Unsure	16	12.1		
		Agree	43	32.6		
		Strongly Agree	2	1.5		
		Total	132	100.0		
4	Training and development needs assessment are determined by immediate Supervisor	Strongly Disagree	3	2.3	4.08	0.688
		Disagree	1	0.8		
		Unsure	5	3.8		
		Agree	96	72.7		
		Strongly Agree	27	20.5		
		Total	132	100.0		

5	Training and development needs assessment are determined by management	Strongly Disagree	1	0.8	3.70	0.856
		Disagree	2	1.5		
		Unsure	62	47.0		
		Agree	38	28.8		
		Strongly Agree	29	22.0		
		Total	132	100.0		
6	Training and development needs are identified by the employee request	Strongly Disagree	10	7.6	3.45	0.999
		Disagree	3	2.3		
		Unsure	52	39.4		
		Agree	51	38.6		
		Strongly Agree	16	12.1		
		Total	132	100.0		
7	Training and development needs are conducted by the immediate supervisor in consultation with employee	Strongly Disagree	4	3.0	3.81	0.792
		Disagree	8	6.1		
		Unsure	8	6.1		
		Agree	101	76.5		
		Strongly Agree	11	8.3		
		Total	132	100.0		
8	Training and development needs assessment are determined through future needs methods	Strongly Disagree	3	2.3	2.87	1.108
		Disagree	70	53		
		Unsure	11	8.3		
		Agree	37	28		
		Strongly Agree	11	8.3		
		Total	132	100.0		
9	Training and development received was in consonance with individual needs of the employee	Strongly Disagree	5	3.8	3.80	0.947
		Disagree	9	6.8		
		Unsure	18	13.6		
		Agree	76	57.6		
		Strongly Agree	24	18.2		
		Total	132	100.0		

Source: Researcher's own computation survey result, (2020)

Table 4.4 showed that the survey result of training and development need assessment. The researcher wanted to establish how training and development programs needs of TEP employee determined. The study revealed that Ethio telecom was used different method to identify employee need of training in TEP execution. The finding indicates majority respondent 45.5% strongly agreed that training was compulsory in the commission, 42.4% of respondent agreed that training was compulsory in the commission, 11.4% of respondent were unsure and 0.8% disagree on training was compulsory in the commission. The mean 4.33 indicate that the respondent highly agreed that training was very important in TEP execution.

Regarding training need assessment determination through quarter or annual appraisal, majority 37.1% of the respondent disagreed and they believed that need assessment is not based on quarter or annual appraisal process. 14.4% of respondent strongly agreed, 28% of respondent agreed, 12.9% of respondent were Unsure and 7.6% of respondent strongly disagreed concerning assessment were based on quarter or annual appraisal process. The mean 3.05 shows that respondent were unsure that as assessment were made through annual or quarter appraisal process.

Concerning need assessment conducted based on TEP SWOT analysis, majority 47.7% of TEP participant disagreed concerning need assessment were based on SWOT analysis, 1.5% of respondent strongly agreed, 32.6% of participant agreed, 12.1% of respondent were Unsure and 6.1% of respondent strongly disagreed. The mean 2.76 indicates that respondent agreed that Ethio telecom do not use SWOT analysis to identify training need.

Regarding need assessment are determine by immediate supervisor, the finding clearly shows that majority 72.7% respondent agreed that the need assessment were determine by immediate supervisor, 20.5% of respondent strongly agreed, 3.8% of respondent were unsure, 2.8% of respondent strongly disagreed and very few 0.8% of respondent disagreed that the need assessment were determine by immediate supervisor. The study mean 4.08 revealed that respondent highly agreed that the need assessment were determined by immediate supervisor.

Concerning need assessment are determine by management, the study revealed that majority of respondent 47% were unsure that the need assessment were determined by management, 22% of respondent strongly agreed, 28.8% of respondent agreed, 1.5% disagreed and very few 0.8% respondent strongly disagreed. The study mean 3.70 revealed that respondent highly agreed that the need assessment were determined by management.

Another variable of the study is concerning need assessment are determine by employee request, the finding shows that majority of the respondent 39.4% were unsure, closely more respondent 38.6% agreed that the need assessment were identified by their own request, 12.1% of the respondent strongly agreed, minimum respondent 7.6% strongly disagreed and very few number of respondent 2.3% disagreed. The study mean 3.45 revealed that respondent were unsure that the need assessment were determined by employee request.

Concerning need assessment are determine by the immediate supervisor in consultation with employee, more number of respondent 76.5% agreed that the training need assessment is determined by immediate supervisor in consultation with employee, 8.3% of respondent strongly agreed, 6.1% of respondent were unsure and disagreed respectively and very few number of respondent 3% strongly disagree. The mean 3.81 finding shows that the need assessment of TEP staff were determined by immediate supervisor in consultation with employee.

Concerning need assessment were determined through future needs, the finding shows that majority of respondent 53% disagreed while 28% of respondent agreed, 8.3% of respondent strongly agreed whereas 8.3% were unsure and minimum number of respondent 2.3% strongly disagreed. The study mean 2.87 revealed that TEP training need assessment was not determined through future needs.

Another variable is regarding received training was in consonance with employee need, the finding clearly shows that majority of the respondent 57.6% agreed that the training had a consonance with their need, 18.2% of respondent strongly agreed. While, 13.6% of respondent were unsure. Whereas 6.8% of respondent disagreed and very few 3.8% of respondent strongly disagreed. The mean 3.80 finding shows that the staffs extremely agreed that training given to the TEP staff was in consonance with employee need.

4.3.4. Training methods used and the effective and efficient to conduct TEP training and development and at ET

The third objective of this study was to investigate the methods used to conduct TEP training and development at ET. Which includes: On-the-job training and off-the-job. The respondents were asked to indicate method used by selecting on the mode of delivery.

Table 4. 5 Delivery method used and effectiveness and efficiency of method used

No	Study question	Method used	Frequency	Percentage
1	what method used	On-the-job	4	3.0
		Off-the-job	20	15.2
		Both	108	81.8
		Total	132	100.0
2	Which one is efficient and effective training and development method	On-the-job	29	22.0
		Off-the-job	22	16.7
		Both	81	61.4
		Total	132	100.0

Source: Researcher's own computation survey result, (2020)

Table 4.5 showed that the survey result of method used to deliver TEP training and development, the study revealed that Ethio telecom used different method to conduct TEP training. The study indicated in table 4.5 above shows that 81.8% of the employee received training using both on-the-job and off-the-job training, 15.2% of respondent indicates as the training was delivered only using off-the-job and 3% of respondent indicated that as they received only on-the-job training. From this study researcher understood that as Ethio telecom used both on-the-job and off-the-job training to delivery TEP training.

The other point of this study was to identify efficient and effective method of training. The study finding in table 4.5 showed that, majority 61.4% of the respondent indicated both On-the-job training and off-the-job training method was efficient and effective to give clear understanding about the project work and project goal, 16.7% indicated off the job method and 22% of respondent indicated that on the job training was efficient and effective than off the job training. The study result clearly implies both On-the-job training and off-the-job training method was effective and efficient to enhance TEP employee understanding about their duty, responsibility and project goal.

4.3.5. TEP training and development program evaluation at ET

The fourth objective of this study was to assess the measures applied to evaluate the effectiveness of TEP training and development at ET.

Table 4. 6 Evaluation of training and development

No	Study question	Level of Agreement	FR	%	Mean	SD
1	I see clear improvement in my work performance after every training and development program	Disagree	49	37.1	3.48	1.21
		Agree	53	40.2		
		Strongly Agree	30	22.7		
		Total	132	100.0		
2	I receive feedback from other people in my workplace on how I am performing my duty	Strongly Disagree	1	0.8	3.91	0.61
		Disagree	7	5.3		
		Unsure	4	3.0		
		Agree	111	84.1		
		Strongly Agree	9	6.8		
		Total	132	100.0		
3	Most training and development encourage workers to pursue further learning on their job	Disagree	3	2.3	4.25	0.61
		Unsure	3	2.3		
		Agree	84	63.6		
		Strongly Agree	42	31.8		
		Total	132	100.0		
4	Training and development courses are evaluated in terms of improved work performance	Disagree	20	15.2	3.89	0.97
		Unsure	9	6.8		
		Agree	68	51.5		
		Strongly Agree	35	26.5		
		Total	132	100.0		
5	Immediate supervisors evaluate my work performance after every training and development program	Strongly Disagree	3	2.3	3.39	1.11
		Disagree	25	18.9		
		Unsure	52	39.4		
		Agree	21	15.9		
		Strongly Agree	31	23.5		
		Total	132	100.0		
6	Training & development programmes are arranged in terms of Project goals	Strongly Disagree	1	0.8	4.14	0.66
		Disagree	3	2.3		
		Unsure	5	3.8		
		Agree	90	68.2		
		Strongly Agree	33	25.0		
		Total	132	100.0		

7	I receive knowledge and skill based exam after every training and development	Strongly Disagree	5	3.8	3.75	0.94
		Disagree	14	10.6		
		Unsure	7	5.3		
		Agree	89	67.4		
		Strongly Agree	17	12.9		
		Total	132	100.0		
8	Determined by annual performance appraisal	Strongly Disagree	1	0.8	3.61	0.87
		Disagree	7	5.3		
		Unsure	59	44.7		
		Agree	41	31.1		
		Strongly Agree	24	18.2		
		Total	132	100.0		

Source: Researcher's own computation survey result, (2020)

Table 4.6 showed that the survey result of evaluation of training and development. The researcher wanted to establish how was training and development programs effectiveness evaluated in TEP. The study result shows that TEP staff were used different method to identify effectiveness of training in TEP execution. The study indicated in table 4.6 above shows that 40.2% of the employee agreed that they saw improvement in their work performance after they received every training, 22.7% of respondent strongly agreed, while 37.1% of respondent disagreed. The mean 3.48 finding revealed that respondent agreement were neutral about improvement on their work performance after they receive every training and that training had a value in their work performance.

Concerning received feedback from other people in their work place how individuals are performing, majority 84.1% of respondent agreed that feedback was provided by others coworkers in their work place how they were performed their job, 6.8% of respondent strongly agreed, 3% of respondent were unsure, 5.3% of respondent disagreed and very few numbers of respondent 0.8% strongly disagreed. The mean 3.91 clearly shows respondent highly agreed that training effectiveness and how they perform their duty was evaluated by provided feedback from other workers in TEP.

Regarding training encourage workers to pursue further learning on their job, the study clearly shows majority 63.6% of respondent agreed that training encouraged them to pursue further learning on their job, 31.8% of respondent strongly agreed, 2.3% of respondent were unsure and

disagreed respectively. The mean 4.25 shows that respondent extremely believed that training and development provided were encourage workers to pursue further learning on their job in TEP.

Another determinant of training evaluation is through improved work performance, the study revealed that 51.5% of respondent agreed that effectiveness of training and development was measured through improved work performance, 26.5% of respondent also strongly agreed, 15.2% of respondent disagreed while minimum number 6.8% of respondent were unsure. The mean 3.89 revealed that staffs extremely agreed training given has an influence on work performance and effectiveness of the training was also measure through improved work performance.

Concerning evaluation of training and development effectiveness through immediate supervisor, majority of respondent 39.4% were unsure, 23.5% of respondent strongly agreed, 15.9% of respondent agreed, 18.9% of respondent disagreed and very few respondent 2.3% strongly disagreed. The mean 3.39 shows the respondent were unsure that as immediate supervisors evaluate their work performance after every training and development program. 68.2% of respondent agreed that training and development was arranged in terms of project goal, 25% of respondent strongly agreed, 3.8% of TEP participant were not sure and very few 2.3% and 0.8% of respondent disagreed and strongly disagreed respectively. The mean 4.14 shows the respondent highly agreed that the evaluation of training and development effectiveness was evaluated in relation to project goal.

Concerning evaluation of training by providing knowledge and skill based exam, 67.4% of respondent agreed, 12.9% strongly agreed, 5.3% of TEP participant were not sure, 10.6% of respondent disagreed, and few 3.8% of respondent strongly disagreed. The mean 3.75 shows that the staff highly agreed that at the end of every training there was knowledge and skill based exam to evaluate training effectiveness.

Another determinant of training and development evaluation is annual performance appraisal, this study shows that majority of respondent 44.7% were unsure regarding to training effectiveness evaluation through annual performance appraisal, 18.2% of respondent strongly agreed, 31.1% of respondent agreed, 5.3% of respondent disagreed, and very few 0.8% respondent strongly disagreed. The mean 3.61 shows that respondent were highly agreed that the training effectiveness evaluated through annual performance appraisal.

4.3.6. Relationship between T&D and Project performance

The fifth objective of this study was to examine the relationship between T&D practice and project performance. The main point is that to determine the project performance includes: delivery on time, budget, quality and customer satisfaction.

Delivery on Time

Table 4.7 showed that the survey result of relationship of TEP employee training and development and project performance. The researcher wanted to establish how training and development programs enhance project performance in TEP. The study result shows majority of the respondent believed that the training and development given to the staff was enhanced TEP project performance. The study shown in table 4.7 below indicates that 64.4% of respondent agreed that the training and development given to them had completed at its expected completion time, 9.8% of respondent strongly agreed, 16.7% of respondent were unsure about, few 6.1% of respondent disagreed and very few 3% of respondent strongly disagreed. The mean 3.72 result indicate that respondent highly agreed that TEP was completed at its expected completion time.

Concerning Time management for each activity, majority 44.7% of respondent agreed that TEP was delivered before the schedule, 9.1% of respondent strongly agreed, 17.4% of respondent were not sure, 25.0% of respondent disagreed and very few 3.8% respondent strongly disagreed that TEP was not delivered before the schedule. The mean 3.30 finding indicate that respondent were not sure regarding TEP project completion before the schedule.

Concerning Effect of T&D on TEP Schedule, majority of the respondent 72.7% strongly agreed that T&D has positive effect on TEP Schedule, 16.7% of respondent agreed, 9.8% of respondent were unsure, and 0.8% of respondent disagreed. The mean 4.61 implies that respondent extremely agreed that training and development given has a positive effect on project performance of TEP in Ethio telecom.

Table 4. 7 Relationship between T&D and Time

No	Study Question	Level of Agreement	FR	%	Mean	SD
1	TEP was completed at its expected completion time/ schedule	Strongly Disagree	4	3.0	3.72	0.841
		Disagree	8	6.1		
		Unsure	22	16.7		
		Agree	85	64.4		
		Strongly Agree	13	9.8		
		Total	132	100.0		

2	Time allotted for each task was used properly without losing	Strongly Disagree	5	3.8	3.30	1.062
		Disagree	33	25		
		Unsure	23	17.4		
		Agree	59	44.7		
		Strongly Agree	12	9.1		
		Total	132	100.0		
3	Training and development has positive effect on TEP schedule	Disagree	1	0.8	4.61	0.695
		Unsure	13	9.8		
		Agree	22	16.7		
		Strongly Agree	96	72.7		
		Total	132	100.0		

Source: Researcher's own computation survey result, (2020)

Delivery within Budget

The study shown in table 4.8 below indicates that 65.2% of respondent agreed that TEP was completed within planned budget, 3.8% of respondent strongly agreed, 28% of respondent were unsure about and few 3% of respondent disagreed. The mean 3.7 result indicate that respondent highly believed that TEP was completed within planned budget.

Concerning proper management of budget for each activity, majority 65.9% of respondent were unsure about that, 6.8% of respondent strongly agreed, 12.9% of respondent were agreed, 11.4% of respondent disagreed and very few 3% respondent strongly disagreed that Budget allotted for each activity was managed properly. The mean 3.09 indicate that respondent were unsure about the proper usage of budget allotted for each activity.

Concerning financial resource management, majority 54.5% of the respondent agreed that Financial Resources were managed successfully, 18.9% of respondent strongly agreed, 22% of respondent were unsure, very few 1.5% of respondent disagreed and few 3% of respondent strongly disagreed. The mean 3.85 implies that the respondent highly believed that training and development given has given an opportunity to manage financial resource successfully.

Concerning supplementary budget needed, majority 42.4% of the respondent agreed that there was no supplementary budget need at closure, 12.1% of respondent strongly agreed, 38.6% of respondent were unsure and very few 6.8% of respondent disagreed. The mean 3.6 implies that respondents were highly agreed that there was no supplementary budget need at closure.

Table 4. 8 Relationship between T&D and Budget

No	Study Question	Level of Agreement	FR	%	Mean	SD
1	TEP was completed within planned budget	Disagree	4	3.0	3.70	0.592
		Unsure	37	28		
		Agree	86	65.2		
		Strongly Agree	5	3.8		
		Total	132	100.0		
2	Budget allotted for each activity was managed properly	Strongly Disagree	4	3.0	3.09	0.796
		Disagree	15	11.4		
		Unsure	87	65.9		
		Agree	17	12.9		
		Strongly Agree	9	6.8		
		Total	132	100		
3	Financial Resources were managed successfully	Strongly Disagree	4	3	3.85	0.851
		Disagree	2	1.5		
		Unsure	29	22		
		Agree	72	54.5		
		Strongly Agree	25	18.9		
		Total	132	100		
4	There was no supplementary budget need at closure	Disagree	9	6.8	3.6	0.79
		Unsure	51	38.6		
		Agree	56	42.4		
		Strongly Agree	16	12.1		
		Total	132	100		

Source: Researcher's own computation survey result, (2020)

Delivery within Quality

The study shown in table 4.9 below indicates that 71.2% of respondent agreed that TEP were successfully achieved its intended objective, 17.4% of respondent strongly agreed, 8.3% of respondent were unsure about and few 3% of respondent disagreed. The mean 4.03 result point out that the intended objectives of TEP were successfully achieved.

Regarding successful delivery of all quality standard, majority 71.2% of respondent were agreed that TEP were successfully delivered of all quality standard, 13.6% of respondent strongly agreed, 4.5% of respondent were unsure, 10.6% of respondent disagreed. The mean 3.88 result exposed that all the quality standards expected by Ethio telecom from the project were successfully delivered.

On the other hand concerning Achieving its designed goal, majority 52.3% of the respondent strongly agreed that TEP was completed in a way that can contribute to its designed goal, 30.3% of respondent agreed, 9.1% of respondent were unsure and few 8.3% of respondent disagreed. The mean 4.27 shows that respondent extremely agreed that TEP was completed in a way that can contribute to its designed goal.

Relating to variation from the original design at closure, majority 43.2% of the respondent were unsure as there was no variation from the original design, 12.9% of respondent strongly agreed, 17.4% of respondent were agreed, 21.2% of respondent disagreed and few 5.3% of respondent strongly disagreed. The mean 3.11 indicate that respondent were unsure about the variation from the original design.

Regarding Quality measures, majority 63.6% of the respondent agreed that all quality measures are applied during project execution, 16.7% of respondent strongly agreed, 11.4% of respondent were unsure and few 3.8% of respondent disagreed and 4.5% of respondent strongly disagreed. The mean 3.84 suggests that all quality measures are applied during project execution and training received helped them to achieve all quality measures.

Finally, concerning project deficiency, majority 56.1% of the respondent were unsure, 5.3% of respondent strongly agreed, 36.4% of respondent were agreed and few 1.5% of respondent disagreed and very few 0.8% of respondent strongly disagreed. The mean 3.44 exposed that respondent were unsure that as project deficiency enhanced.

Table 4. 9Table 4.9 Relationship between T&D and Quality

No	Study Question	Level of Agreement	FR	%	Mean	SD
1	The intended objectives of TEP were successfully achieved	Disagree	4	3.0	4.03	0.617
		Unsure	11	8.3		
		Agree	94	71.2		
		Strongly Agree	23	17.4		
		Total	132	100.0		
2	All the quality standards expected by Ethio telecom from the project were successfully delivered.	Disagree	14	10.6	3.88	0.772
		Unsure	6	4.5		
		Agree	94	71.2		
		Strongly Agree	18	13.6		
		Total	132	100.0		

3	TEP was completed in a way that can contribute to its designed goal	Disagree	11	8.3	4.27	0.94
		Unsure	12	9.1		
		Agree	40	30.3		
		Strongly Agree	69	52.3		
		Total	132	100.0		
4	There was no variation from the original design	Strongly Disagree	7	5.3	3.11	1.053
		Disagree	28	21.2		
		Unsure	57	43.2		
		Agree	23	17.4		
		Strongly Agree	17	12.9		
		Total	132	100.0		
5	All quality measures are applied during project execution	Strongly Disagree	6	4.5	3.84	0.907
		Disagree	5	3.8		
		Unsure	15	11.4		
		Agree	84	63.6		
		Strongly Agree	22	16.7		
		Total	132	100.0		
6	Project deficiencies was enhanced	Strongly Disagree	1	0.8	3.44	0.657
		Disagree	2	1.5		
		Unsure	74	56.1		
		Agree	48	36.4		
		Strongly Agree	7	5.3		
		Total	132	100.0		

Source: Researcher's own computation survey result, (2020)

Customer Satisfaction

Table 4.10 below indicates that, majority 67.4% of respondent agreed that the project met customer's expectation, 22.7% of respondent strongly agreed, 6.8% of respondent were unsure about, 1.5% of respondent disagreed and 1.5% of respondent strongly disagreed. The mean 4.08 result indicate that the project met the customer's expectation. Relating satisfying customer need, majority 53.8% of respondent agreed that TEP was successfully satisfies customers need, 31.8% of respondent strongly agreed, 7.6% of respondent were not sure, 6.1% of respondent disagreed and very few 0.8% respondent strongly. The mean 4.10 finding indicate that TEP was successfully satisfies customers need.

Concerning role of T&D in achieving customer need, 46.2% of the respondent strongly agreed that T&D has helped them to meet customer need, 45.5% of respondent agreed, 6.8% of respondent were unsure, and 1.5% of respondent disagreed. The mean 4.36 implies that respondent extremely believed that training and development given has helped them to meet customer need.

Table 4. 10 Relationship between T&D and Customer Satisfaction

No	Study Question	Level of Agreement	FR	%	Mean	SD
1	The project met the customer's expectation	Strongly Disagree	2	1.5	4.08	0.7
		Disagree	2	1.5		
		Unsure	9	6.8		
		Agree	89	67.4		
		Strongly Agree	30	22.7		
		Total	132	100.0		
2	TEP successfully satisfies customers need	Strongly Disagree	1	0.8	4.10	0.837
		Disagree	8	6.1		
		Unsure	10	7.6		
		Agree	71	53.8		
		Strongly Agree	42	31.8		
		Total	132	100.0		
3	In my opinion, training and development has helped me to meet customer need	Disagree	2	1.5	4.36	0.68
		Unsure	9	6.8		
		Agree	60	45.5		
		Strongly Agree	61	46.2		
		Total	132	100.0		

Source: Researcher's own computation survey result, (2020)

Selection method (multiple response)

Regarding the selection criteria majority 69.69% of respondent agreed that training and development selection is based on random selection, 55.30% agreed based on supervisor recommendation, 52.27% agreed that T&D is compulsory for all, 34.09% of respondent showed that selection is based on performance appraisal, minimum 31.81% number of respondent agreed that training and development provided on the joining of the company and very few 6.81% of respondent showed that T&D selection were upon employee request. This shows that there were no tangible criteria for the selection process.

Table 4. 11 Selection criteria

No	Study Question	Method of selection	Frequency	Percentage
1	How did you get a chance?	On Joining the company	42	31.81
		Up on employee request	9	6.81
		Supervisor recommendation	73	55.30
		Performance appraisal	45	34.09
		Compulsory for all employee	69	52.27
		Random selection	92	69.69
		other		

Source: Researcher's own computation survey result, (2020)

Training location

Training location: The other point was to identify place where the training and development was given. The study finding showed that, majority 59.1% of the respondent indicated as they received both local training and abroad training, 6.1% indicated abroad training and 34.8% of respondent indicated that as local training was given to them. The study result clearly implies both local training and abroad training was given to the employee to enhance TEP employee skill gap, work performance, and to empower them.

Table 4. 12 Training place

No	Study Question	Level of Agreement	FR	%
1	Where did you take the training?	Local training	46	34.8
		Abroad training	8	6.1
		Both	78	59.1
		Total	132	100.0

Source: Researcher's own computation survey result, (2020)

4.4. Interpretation and Discussion

The general objective of the study was to assess effect of TEP staff training and development in contributing to project performance at ET. In line with this five research questions with specific objectives were developed in chapter one. This section discusses the findings of the study to answer the research questions.

Objective of manpower training and development

Regarding the objective of manpower training and development program at TEP staff, the study exposed that the training and development highly improved TEP employee performance. Also from the respondent indication of all factor studied, training and development was noticed to have positive impact on employee's performance as shown the table 4.3 above. The finding is in line with woretaw (2015) and Kulkarni, (2013), who argued that training and development has a positive impact on employee performance. These include improvement of employee performance, motivating of staff to work harder, increasing moral among staff and satisfaction and reducing the rate at which employees leave the project, develop new skill and knowledge regarding of their specific job their understanding of project goal. The result agreed with Smith (2010), who argued that training and development motivates employee to work hard and make them more productive. Providing appropriate training and development to fulfill employee needs is a responsibility for Ethio telecom. Thus training and development provided at TEP of Ethio telecom met its objective and they perceived that objective of training comply with project goal.

Methods used to determine Training and development needs assessment

The second specific objective of the study was to investigate the method employed to asses training needs assessment method of TEP staff. Training need assessment is an important tool served in project organization to provide appropriate training and development and to satisfy employee and organizational need. Bryan (1990), revealed that employee learn if they admit the importance of training and they dedicated to it. The finding revealed that training is extremely compulsory at Ethio telecom for TEP employee, and the result shows that training need assessment of TEP employee is determined through different methods. Majority of respondent agreed that training need assessment in TEP was determined through immediate supervisor, immediate supervisor in consultation with employee and through management. From interview, the researcher discovered

that the project office management determine and analyze the training needs with the help of online survey methods. But the respondent disclosed that there were no online survey implemented to assess the need of training. The result also revealed that the training received by TEP employee was in congruence of employee need. Training need assessment is identified at the level supervisor and manager but providing training and development is the responsibility of TEP Project rollout office in collaboration with company human resource division. Therefore the researcher conclude that the training need was identified through different method and received training met employee need and training is seen as extremely important in TEP.

TEP training and development delivery methods applied in ET

The third specific objective of this study was to explore techniques of T&D delivery applied at TEP. The findings showed that both on-the-job training and off-the-job training was employed to deliver training for TEP employee at Ethio telecom, based on its importance and need of employee. The respondent indication agreed with mark and Andrew (2000), who exposed that if training is not delivered in fascinating way and unable to capturing the attention of the employee; it means the trainer is losing the time. Additionally The results agreed with Mansor & Othaman, (2011), who revealed that massive technique of training delivery have been recommended which is included in on-the-job and off-the-job training (those are, lectures, discussion, field visits, demonstration, case study, problem based learning, presentations seminars or workshops, Exercise training, attachments, internship, consulting assignments, research). Also this study exposed that both training methods are effective and efficient when applied according to the need. Vasanthi and Dr. S.Rabiyathul (2019), finding showed that employee need based, effective on-the-job training improves the technical practical skill of the workers and off-the-job training helps workers to have theoretical knowledge. The researcher therefore concludes that mode of delivery influences employee impression of accepting training and training effectiveness.

TEP training and development program evaluation at ET

The forth objective of the study was to identify evaluation of training and development effectiveness. It was evidenced from the finding that the respondent evaluate the effectiveness of training and development after training through multiple ways, these are in terms of improvement in their work performance, feedback received from coworkers, initiation to pursue further learning, improved work performance, project goal awareness, and knowledge and skill based exam after

every training and development. From interview, the researcher exposed that after every training project office in collaboration with HR and IS division examines effectiveness of training through online knowledge and skill based exam. The finding is in line with Beard well and Holden (1993), who argued that several of method can be applied to evaluate effectiveness of training and development these includes feedback forms, knowledge or skill based examinations, structured exercises, interview of trainees and behavioral change of employee etc. The researcher conclude that various method was used to examine effectiveness of TEP training and development at ET. But researcher noticed that evaluation of training and development effectiveness was not sufficient enough because of evaluation was not undertaken through their immediate supervisor or annual performance appraisal.

Relationship between T&D and Project performance

The fifth objective of the study was to investigate the relationship between T&D and Project performance. Regarding the relationship between T&D and delivery on time, the finding exposed that majority of the respondent believed that T&D given helped them to complete each activities and over all tasks of TEP within scheduled time. Also they believed that T&D given has a positive effect on TEP schedule. Time is one of the most and basic criteria to regulate a project success. Additionally, majority of respondent believed that T&D helped them to control total budget allotted for the project properly and helped them to manage financial resource and this helped them to minimize supplementary budget needed at closure time. As of time, budget is the most and basic benchmark to standardize project success. On the other hand training and development helped the project team to meet project objective, to deliver all quality standards, to complete in the way that can contribute to its design goal and to apply all quality measures during project execution. Quality standard is one of the major aspect of project success. Regarding to customer satisfaction, the project met the customer expectation, successfully satisfies customer need and the most helped the respondent to meet customer need. This implies that training and development given in TEP has a positive relationship with project performance and T&D has a positive contribution to project performance. The finding is in line with smith (1997) and in Iraitto (2006), who revealed that training has a major important role for the project performance which has a potential to improve productivity of labor, improve output quality, improve time and budget management and improve capability of employee to adapt to any change.

4.5. Pearson Correlation showing the relationship between manpower training and development and project performance of TEP at ET

Table 4. 13 Correlations

		Objective of training and development	Need assessment	T&D Method	Training Evaluation	Project performance
Objective of training and development	Pearson Correlation	1	.538**	.194*	.507**	.462**
	Sig. (2-tailed)		.000	.026	.000	.000
	N	132	132	132	132	132
Need assessment	Pearson Correlation	.538**	1	-.004	.390**	.487**
	Sig. (2-tailed)	.000		.967	.000	.000
	N	132	132	132	132	132
T&D Method	Pearson Correlation	.194*	-.004	1	.400**	.165*
	Sig. (2-tailed)	.026	.967		.000	.059
	N	132	132	132	132	132
Training Evaluation	Pearson Correlation	.507**	.390**	.400**	1	.595**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	132	132	132	132	132
project performance	Pearson Correlation	.462**	.487**	.165*	.595**	1
	Sig. (2-tailed)	.000	.000	.059	.000	
	N	132	132	132	132	132
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Source: Researcher's own computation survey result, (2020)

Table 4.13 above shows Pearson Correlation of Coefficient between training and development program and project performance of TEP at Ethio telecom. From the correlation matrix above, there is a positive correlation between project performance and objective of the training and development ($r = 0.462$, $P < .001$), between project performance and need assessment ($r = .487$, $P < .01$), between project performance and evaluation ($r = .595$, $p < .01$). However since $p > .05$ there is no significant correlation between project performance and training and development methods.

These measures of correlations indicate significant positive relationships between project performance and training objective, need assessment and evaluation, but no relationship between project performance and training method used at ET.

Finally, Correlation shown on table 4.13 above exposed that there is a statistically significant positive relationship between objective of training and development and project performance. This indicate that objective of the T&D and Project performance has a positive relationship and has a significant effect on project performance. The result was in line with Ameeq and Hanif, (2003); Olaniyan and Ojo, (2008); Singh and Mohanty, (2012); Kum et al, (2014); Colombo and Stanca, (2008), who argued that T&D contribute to employee performance and productivity of organization. On the other hand, there is a statistically significant positive relationship between training need assessment and project performance. This indicate that objective of the T&D need assessment and Project performance has a positive relationship and has a significant effect on project performance. The study was in line with Mathis and Jacson, (2010), who argued that need assessment assesses employee and organization performance to identify the gap between what must be able to do and what is currently doing. Regarding method of training delivery there were no significance between T&D and Project performance. Concerning evaluation of training and development effectiveness the finding exposed that there is a statically significant positive relationship between evaluation of training and development effectiveness and project performance. This shows that training evaluation has statistically positive significance on project performance. Generally, training and development practice experienced in TEP of Ethio telecom has statically significant positive relationship with project performance.

4.6. Regression analysis

Regression is a measure of association between two quantitative variables. The following table below shows the regression analysis of the effect of T&D on project performance.

The beta value is a measure of how strongly predictor variable influences the criterion variable. So that the beta value of this study as indicated in table 4.14 below is 0.657 which indicates that a change of one standard deviation in the predictor variable that is training resulted in a change of 65.7% standard deviations in the criterion variable that project performance. Thus, there is a higher effect of training on project performance. Since the higher the beta value the greater the impact of the predictor variable on the criterion variable. Moreover, when you have only one predictor variable in your model, then beta is equivalent to the correlation coefficient between the predictor and the criterion variable.

Table 4. 14 Analysis model summary of R and R²

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.657 ^a	.432	.414	6.92389	.432	24.132	4	127	.000
a. Predictors: (Constant), what method used, Need Assessment, Evaluation, Objective of Training									
b. Dependent Variable: Project performance									

Own computation survey result 2020

From the above model summary table 4.14 it can be seen that R is 0,657 and R square is 0.414. This indicates about 41.4% of the variance is project performance (dependent variable) can be explained by overall training and developments (independent variable), the remaining 58.6% of the variance is explained by other variables that are not included in the study.

Table 4. 15 (ANOVA) T&D to as predictor to project performance

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4627.558	4	1156.890	93.022	.000 ^b
	Residual	6088.412	127	47.940		
	Total	10715.970	131			
a. Dependent Variable: Project performance						
b. Predictors: (Constant), delivery method used, Need Assessment, Evaluation, Objective of Training						

Own computation survey result 2020

The F- test result in the ANOVA table 4.15 and the P Value, tests whether the overall regression model is good predictor and the probability of this result is occurred by chance or not. In this

regard, the result above shows ANOVA that tests whether the model is significantly better at predicting the outcome than using the mean as a best guess. Specifically, the F-ratio represents the ratio of the improvement in prediction that results from fitting the model. The value of the sum of squares for the model represent the improvement in prediction results from fitting regression line to the data rather than using the mean as an estimate of the outcome. The F- test result is 93.022 with a significance of less than 0.01. Therefore, significant amount of project performance is influenced by the TEP training and development practice, which means independent variable (T&D) significantly predict the dependent variable (project performance) and it can be concluded as the overall regression model is significant , $F=93.022$, $P<0.01$, $R^2 = 43.2\%$ (that is the regression model is a good to fit the data). In the analysis of variance, bivariate regression measures the association or relationship between a dependent variable and an independent variable that estimates the measurable difference in the dependent variable for each one-unit of change in independent variables. Since, $P < 0.01$, they have strong significance relation.

Table 4. 16 (Coefficient) training and development as predictor to Project performance

Coefficients						
Model		Un-standardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	24.627	3.332		7.391	.000
	T&D objective	2.105	.066	.468	32.100	.000
	T&D need assessment	1.968	.059	.464	33.194	.000
	T&D delivery method	2.036	1.341	.108	1.519	.131
	T&D evaluation	1.874	.053	.523	35.682	.000
a. Dependent Variable: Project performance						

Own computation survey result 2020

This table 4.16 shows estimation for b-values and the values indicate the individual contribution of each predictor to the model. The b-value shows the relationship between project performance and each predictor. The data above shows three predictors (T&D objective, T&D need assessment,

T&D evaluation) have positive b-values indicating positive relationships and outcome but no significant positive relationship with T&D delivery method. So, as training and development objective increases, project performance increase; as training and development need assessment increase, so do project performance; and finally as training and development effectiveness evaluation increase, project performance increases.

Un-standardized coefficients of b-value are the values for the regression equation for predicting the DV from the IV; objective of training and development, so for every unit increase in objective of training and development, 2.105 unit increase in project performance holding all other variables constant. The result is statistically significant at ($p < 0.01$). Training and development need assessment: for every unit increase in Training and development need assessment, 1.968 unit increases in project performance. The result is statistically significant at ($p < 0.01$). Training and development effectiveness evaluation: for every unit increase in training and development effectiveness evaluation, 1.874 unit increase in project performance. The result is statistically significant at ($p < 0.01$). Training and development delivery method: for every unit increase in training and development delivery method, 2.036 unit do not increase in project performance.

CHAPTER FIVE

5. SUMMARY, CONCLUSION AND RECOMMENDATIONS OF THE FINDINGS

5.1. Introduction

This chapter presents the summary of the findings, discussions, conclusion and recommendations on the research results of the study. The findings are discussed, conclusions drawn and recommendations made on areas of further research. The purpose of the study was to assess the effect of manpower training and development on project performance of Addis Ababa TEP in Ethio telecom.

5.2. Summary of the findings

The general objective of the study were; to assess the effect of manpower training and development on project performance of TEP in Ethio telecom. Additionally the specific objective of the study were; to assess the perception of TEP staffs on objective of training and development at ET, to identify how training and development program needs of TEP employee determine, to examine the methods used to conduct TEP training and development at E, to assess the measure applied to evaluate the effectiveness of TEP training and development at ET and to analyze the contribution of TEP employee training and development to project performance. To achieve the objectives of the research, 165 staff was planned but due to Corona virus (Covid-19) outbreak in the country 132 staffs was reached additionally 3 key informants were interviewed. The study revealed the following major findings.

5.2.1. Objective of training and development of TEP in Ethio telecom

The study exposed that the employee had behavioral and attitude change, skilled, and knowledgeable after training and development. Also the finding indicates that majority of the respondent agreed their job performance was improved, motivates them to work harder in the project, improves moral and job satisfaction among staffs of TEP, helped them to develop new skill and knowledge and leads them to better understanding of project goal. Additionally, found that quality of provided training and development programs were good and related to objective of the project work, relevant to project work and objective T&D were established in consideration of

project goal. The findings agreed with Dr. Divya (2016) who argued that the trained employees of an organization perform well as compared to untrained employees of an organization. Therefore, the researcher found that training and development had a positive effect on employee and enabled them to perform better and improves project performance of TEP in Ethio telecom. This indicate that training and development objective of Ethio telecom met its objective and it is developed in line with project goal.

5.2.2. Methods used to determine Training and development needs of TEP staffs at ET

Training and development is the systematic way to confirm and endorse the need, focus area, employee to be included, appropriate/required training, scope of the skill and knowledge of a training and development program for the purpose of improving employee current job performance, project performance and to correct deficiency. The study found that training and development need assessment of TEP were determined by immediate supervisor of the staffs, by employee request and immediate supervisor in consultation with employee. The findings agreed with saleem and Hasan (2012), who argued that training need assessment works in different circumstance including; Observation, interview, questionnaires, appraisal review, immediate manager or supervisor observation and problem solving conference. And this helped the TEP employee to receive appropriate, efficient and effective training that had a consonance with individual need and their project work. Behind this this research exposed that training is extremely compulsory for all employee of TEP in Ethio telecom to enhance performance of project and employee to perform better. Also the research found that annual or quarter appraisal, SWOT analysis, observation of project rollout office management and determination through future need was not used for the purpose of training and development need assessment of TEP in Ethio telecom.

5.2.3. TEP training and development delivery methods applied in ET

The finding established that majority of the respondent 81.8% acquired their training and development from both on-the-job training and off-the-job training. These findings have been supported by Taiwo (2007), who argued that it is recommended to combine both technical or practical (on the job) and theoretical (off the job) training method to compensate the drawback of

one method by other method. The study established that majority of the respondents were trained inside and outside of the country and they agreed that both training methods was appropriate, effective and efficient to accomplish training objective and project goal. The result was matching with NIK ALIA (2014) who revealed that all organizations will choose separate method of training techniques due to few reasons such their strategy, objectives, and resources available of the organization.

5.2.4. TEP training and development program evaluation at ET

Evaluation of the training and development program is of vital tool and extremely important examine and ensure effectiveness of the training and development program. The research exposed that majority of respondent agreed training and development evaluation was done through improvement work performance, feedback received from coworkers, initiation to pursue further learning, project goal awareness, and knowledge and skill based exam after every training in collaboration with IS division and HR division and development. Majority of respondent revealed that several method were used to evaluate effectiveness of training and development. The finding is in line with Beard well and Holden (1993), who argued that several of method can be applied to determine effectiveness of training and development.

5.2.5. Relationship between T&D and Project Performance

Project performance can be measured in terms of time deliverable, budget deliverable, quality deliverable, scope and customer satisfaction. The research found that training received enhances TEP performance in terms of time, budget, quality and customer satisfaction. Majority of respondent agreed performance of TEP were enhanced after training given to them. Manpower Training and Development has played major part in improvement project performance of TEP in Ethio telecom. The finding is in line with M. Shahzad, Maood.N, Hazoor.M and Bashir. A (2012), who argued that training of project team and compensation plan are an essential tool of the project success for any project oriented company. This implies that training and development and project performance has a positive relationship.

5.3. Conclusion

In modern world nature of work is continually changing due to the change of technology and application of new skill required. If manpower's are experienced in change management, flexibility and effectiveness on their duty, the employee need gain and advance their knowledge and skills. An organization also expected to fulfill the need of employee and empower their knowledge and skill in order to enhance project performance. The general objective of the study was to investigate the effect of manpower training and development on project performance of TEP in Ethio telecom. Training and development improves employee skill, competency, knowledge, ability, capacity and performance. It come after that project success be dependent on on the skills, knowledge and abilities of organization manpower. This exposed that project organization should give training in order to enhance overall project performance. It is very difficult for an employee to work well their duty without any adequate training. For project oriented organization to achieve established project goal and objective, training and development of employee should be extremely persuaded. When effective and adequate training applied rate at which employee leave the project can be reduced and cost of the recruitment and training of new staff as well reduced. In addition to providing adequate and effective training, it is important to assess training need, selecting appropriate method of delivery and examining effectiveness of training to ensures project performance and appropriateness of the training and development. It is noted that from the research training and development provided should be in accordance with project goal and objective. In order to achieve research objective descriptive study and correlation analysis have been used. Having this in mind from the finding obtained the research concluded that:

- Respondent showed that Employee training and development applied in TEP at Ethio telecom has an influence on employee performance and it has positive relationship with project performance.
- Training and development program, method of delivery, evaluation of training and development effectiveness and training need assessment has a correlation
- The research revealed that project office of TPE in collaboration of company HR provides both on-the-job training and off the-job training were applied at outside the country and in the country.
- Effectiveness of training and development were evaluated in terms of project coworkers, improvement of work performance and knowledge and skill based exam.

- Researcher observed that training and development selection criteria were set but respondent refuses that criteria were not used for selection purpose instead immediate supervisor recommendation and random selection had been used.
- The research also found that training need assessment were determined at the level of immediate supervisor and employee need request. From the interview it is considered that online survey method was used but majority of respondent against the online survey method.
- Finally, project rollout office of TEP has well organized and systematic plan for training and development in connection with company HR training policy and plan. Additionally, the researcher obtained that company HR has additional training program for company employee which is provided proportionally among all division.

5.4. Recommendation

Based on the findings and conclusions of this study and for the intended of achieving mentioned objective, the following recommendation are delineated for addressing inadequacy observed.

1. The finding shows that training need assessment are conducted in the project mostly by immediate supervisor and employee request.
 - The researcher recommend that in order to provide adequate and appropriate training and development and to meet project and employee needs, there should be active involvement of all technical higher and middle level management in training need assessment, training and development effectiveness evaluation and T&D program and objective setting.
 - Additionally professional online survey should be applied periodically to collect employee need and to identify skill and knowledge gap to supplement deficiency happened.
 - The training and development provided should be designed based on the need of the individuals, with the alignments of the goal of the project and the selection for training should be based on the proper need assessment, this helps the project organization to identify whether the employees are comfortable with their job and their work place and to check how the employees deliver quality service.

2. Evaluation of the training program is extremely important for the reason that it helps in guaranteeing the effectiveness of training and development program. It was clear that from the finding most respondent agreed that training and development effectiveness evaluation was determined in terms of feedback received from coworkers, improvement of job performance and knowledge and skill based exam after training. Pre evaluation, feedback from immediate supervisor after training and annual appraisal are not functional.
 - The researcher recommend that pre evaluation should be applied in order to identify deficiency that need to be filled.
 - Also evaluation report should be available by immediate supervisor in order to evaluate the effectiveness of provided training after every training.
 - It should be learnt that training and development programs needed being evaluated before, after and during planning, acting and accomplishing the training and development programs, this can contribute to alterative obstacles if there are or could be, and improve certainties effectively and efficiently.
3. Finally, it was marked that from the study training selection criteria were set in order to provide local and abroad training for TEP employee without any bias. But the criteria was not functional instead most of respondent agreed that immediate supervisor recommendation and random selection method are in use.
 - Therefore, researcher recommend that in order to minimize complain, dissatisfaction of employee and bias regarding training opportunity, selection criteria should be functional.

5.5. Suggestion for Future Study

The research was limited to Addis Ababa TEP in Ethio telecom without touching other 11 company administrative region due to outbreak of Covid-19 in the country and lack of time and money. Future studies will seek to include employees from others company administrative region to make the research all-inclusive. Also the study was primarily intended at frontline employee who are permanently assigned to TEP rather than temporary staff and support staff. Future studies will seek to include employees from both frontline and support also temporary and permanent employee so as to have a complete representation on effects of manpower training and development on employee project performance.

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7. APPENDIX

Addis Ababa University College of business and economics, School of commerce department of project management.

Dear Respondents

I would like to inform you that, this questionnaire has purely an academic purpose because I am conducting a research at Addis Ababa University College of business and economics for partial fulfillment of MA Degree In project management. This questionnaire is designed to collect data for a research paper entitled **“Assessing Effect of Manpower Training and Development on Project Performance: The Case of Telecom Expansion Project (TEP) in Ethio Telecom”**. The questionnaire is intended to assess the Effect of training and development on project performance of TEP. Thus your reply will have a real contribution to the accuracy and use-fullness of the study. Therefore, I kindly request your cooperation in filling up the questionnaire. Finally, I assure you that the response recorded by you will be kept strictly confidential and will not be used other than the intended purpose. In case of any dilemma or question contact me via email: muluken2000abera@gmail.com or mobile 0917853080/0911527695.

General Instruction

- ❖ Please, try to answer all questions.
- ❖ In the cases where answer options are available, tick (X) inside the box provided.
- ❖ For the open questions, write your answers in the space provided.

Section One: Background Information

Please indicate your appropriate choice among the options provided by marking (X).

1. Gender: A) Male ☐ B) Female ☐
2. Age: A) 18-25 ☐ B) 26-35 ☐ C) 36-45 ☐ D) 46-55 ☐ E) 56-65 ☐ F) >65 ☐
3. Marital status: Single ☐ Married ☐ Divorced ☐ Widowed ☐ Separated ☐
4. Level of education:
A. Certificate ☐ B. Diploma ☐ C. First Degree ☐
D. Master's degree ☐ E. PhD ☐ F. If other specify _____

5. Work experience in the organization

A) 0- 5 years ☐ B) 6-10 years ☐ C) 11-15 years ☐ D) 16-20 years ☐ E) $\geq$ 21 years ☐

6. Your Experience on TEP implementation

A) Less than 6 months' ☐ B) 6 month to 1 year ☐

C) 1 year to 2 year ☐ D) More than 2 years' ☐

7. What is your job level?

A) Staff ☐ B) Specialist ☐ C) Coordinator ☐ D) Supervisor ☐

E) Expert ☐ F) Manager ☐ G) Director ☐ H) Chief Officer ☐

Section Two: Training and Development and project performance

- Please indicate the extent to which you agree with each statement concerning TEP Training and development implementation practices and project performance at Ethio telecom by putting an (X) in the appropriate block.

No	Descriptions	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
1	Objective of Training and Development					
1.1	The quality of training and development provided were good and related to objective of the project					
1.2	The training and development received is relevant to my project work					
1.3	Training and development objectives were set and in consideration of the project goal.					
1.4	Training and development helped me to develop new skill and knowledge					
1.5	In my opinion, training and development has helped me to improve my job performance					
1.6	Training and development motivates me to work harder in the project					

1.7	Training and development increase job satisfaction and morale among staff					
1.8	Training and development can reduce the rate at which employee leave the Project					
1.9	Training and development leads to a better understanding of the project goal					
2	Training and development need assessment					
2.1	Training and development is compulsory in the Commission					
2.2	Training and development needs are determined through Quarter/annual appraisal process					
2.3	Training and development needs are determined by SWOT analysis of the Project					
2.4	Training and development needs assessment are determined by immediate Supervisor					
2.5	Training and development needs assessment are determined by management					
2.6	Training and development needs are identified by the employee request					
2.7	Training and development needs are conducted by the immediate supervisor in consultation with employee					
2.8	Training and development needs assessment are determined through future needs methods					
2.9	Training and development received was in consonance with individual needs of the employee					
3	Evaluation of training and development					
3.1	I see clear improvement in my work performance after every training and development program					
3.2	I receive feedback from other people in my workplace on how I am performing my duty					

3.3	Most training and development encourage workers to pursue further learning on their job					
3.4	Training and development courses are evaluated in terms of improved work performance					
3.5	Immediate supervisors evaluate my work performance after every training and development program					
3.6	Training & development programmes are arranged in terms of Project goals					
3.7	I receive knowledge and skill based exam after every training and development					
3.8	Determined by annual performance appraisal					
4	Relationship between T&D and Project Performance					
4.1	Time					
4.1.1	TEP was completed at its expected completion time/ schedule					
4.1.2	Time allotted for each task was used properly without losing					
4.1.3	Training and development has positive effect on TEP schedule					
4.2	Budget					
4.2.1	TEP was completed within planned budget					
4.2.2	Budget allotted for each activity was managed properly					
4.2.3	Financial Resources were managed successfully					
4.2.4	There was no supplementary budget need at closure					
4.3	Quality					
4.3.1	The intended objectives of TEP were successfully achieved					
4.3.2	All the quality standards expected by Ethio telecom from the project were successfully delivered.					
4.3.3	TEP was completed in a way that can contribute to its designed goal					
4.3.4	There was no variation from the original design					

4.3.5	All quality measures are applied during project execution					
4.3.6	Project deficiencies was enhanced					
4.4	Customer satisfaction					
4.4.1	The project met the customer's expectation					
4.4.2	TEP successfully satisfies customers need					
4.4.3	In my opinion, training and development has helped me to meet customer need					

5. Have you received any form of training and development since you joined TEP? Yes ☐ No ☐

6. If yes, how did you get a chance? (Multiple response possible)

- A) On Joining the Company ☐ B) Upon employee request ☐
C) Supervisors recommendation ☐ D) Performance appraisal ☐
E) Compulsory for all employee ☐ F) Random Selection ☐
G) If others specify _____

7. Where did you take the training?

- A) Local training ☐ B) Abroad training ☐ C) Both ☐ D) Non ☐

8. What type of training and development method was used?

- A) On-the-job ☐ B) Off-the-job ☐ C) Both ☐ D) If other specify _____

9. Which training method do you consider to be the most effective and efficient?

- A) On-the-job ☐ B) Off-the-job ☐ C) Both ☐

10. Which training method in your opinion will be the most appropriate?

Online google form questionnaires URL

https://docs.google.com/forms/d/e/1FAIpQLSdxGCvXSO_YN9cNgD-CPgMN_nbSGbfqfpz9gaV9rlluhtqzhg/viewform?usp=pp_url

Interview Question to HR and Project Rollout office

I. How did you determine training need of TEP employee?

II. What method used to deliver TEP training and development?

III. What do you imagine can be done to progress employee training and development programs you previously undertook?

IV. What is the influence of employee training and development on TEP project performance?

V. How did you evaluate the effectiveness of TEP training and evaluation?

VI. How did you provide training for the TEP employee?

THANK YOU FOR YOUR COOPERATION