



# **TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING AUTHORITY**

## **STATUS OF GENDER AND DISABILITY MAINSTREAMING IN KENYAN TVET INSTITUTIONS**

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## ABSTRACT

*Gender mainstreaming in TVET refers to incorporating gender perspectives into all aspects of TVET planning, implementation, and evaluation. This means considering the different needs and experiences of women and men and ensuring that TVET programs are accessible and relevant to both genders. Disability mainstreaming, however, ensures that learners with disabilities have equal opportunities to access and benefit from TVET. This includes making physical facilities accessible, providing assistive devices and support services, and adapting teaching and learning materials. Gender and disability mainstreaming is crucial in ensuring inclusivity and equity in all programs within any society. This study aimed to determine the status of gender and disability mainstreaming in Kenyan TVET institutions. The gender and persons with disability (PWD) disaggregated data in all programs offered in sampled institutions was determined. Additionally, the support structures available in technical and vocational training institutions for disability and gender mainstreaming were also established. The study used descriptive and qualitative research design. The target respondents were administrators from registered TVET institutions in the country. Stratified and simple random sampling techniques were applied in the identification of TVET institutions to be included in the study. A total of 250 institutions, comprising all the categories (National Polytechnics, Technical and Vocational Colleges, and Vocational Training Centres) and types (Public or Private) were sampled for this study. Data was collected using a questionnaire consisting of both structured and open-ended questions. Collected data was analyzed using SPSS and advanced Excel. The results obtained from this study were used to identify the extent to which gender and disability mainstreaming has been achieved in the Kenyan TVET institutions and the mechanisms for improving gender and disability mainstreaming proposed. The study found that the overall enrollment of male trainees was slightly higher than that of female trainees. The enrollment of PWDs in the institutions was relatively low at 0.904%. The proportion of male teaching staff was higher than that of the female in most categories of institutions. On average only 1.279% of staff employed by the TVET institutions were PWDs. On the support structures a higher proportion of public institutions have put them compared to private TVETS. It was established that the most prevalent challenges that were faced by PWDs included unfriendly physical facilities, financial barriers, and lack of aiding equipment and support services. Based on the findings, Regular sensitization and advocacy on gender and disability mainstreaming, progressive employment of PWDs, mobilization of resources to support infrastructural improvement; and development and implementation of disability and mainstreaming policy.*

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## ABBREVIATIONS AND ACRONYMS

ECOSOC	United Nations Economic and Social Council
GDP	Gross Domestic Product
GBV	Gender-Based Violence
GOK	Government of Kenya
ICT	Information Communication Technology
ILO	International Labour Organization
KCB	Kenya Commercial Bank
KISE	Kenya Institute of Special Education
KNBS	Kenya National Bureau of Statistics
MoE	Ministry of Education
NCPWD	National Council for Persons with Disabilities
NGEC	National Gender and Equality Commission
NPs	National Polytechnics
OECD	Organization for Economic Co-operation and Development
PWD	Person with Disability
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNCRPD	United Nations Convention on the Rights of Persons with Disabilities
USAID	United States Agency for International Development
UTVET	University Directorate of TVET
SDG	Sustainable Development Goals
STEM	Science, Technology, Engineering and Mathematics
TESDA	Technical Education and Skills Development Authority
TVETA	Technical and Vocational Education and Training Authority
TVET	Technical and Vocational Education and Training
TVCs	Technical and Vocational Colleges
VTCs	Vocational Training Centres
WHO	World Health Organization

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background Information

Gender and disability mainstreaming is recognized globally by national and international agencies and education and training institutions as a strategy for promoting equality. Mainstreaming seeks to build on gender and disability issues in the organization's processes. Gender mainstreaming became necessary, especially because of the inequalities that were visible in workplaces and societies in general. It, therefore, emanates from institutionalized patterns of distributing resources, social value, and power in public and private spheres worldwide (Mbilinyi, 2000).

The achievement of gender equality and the empowerment of all women and girls is one of the seventeen goals of the United Nations Sustainable Development Goals (SDGs). Gender equality is a fundamental human right and a necessary foundation for a peaceful, prosperous, and sustainable world. Although appreciable progress has been made in promoting gender equality, gender inequality practices still occur in nearly all fields of development; one of which is education for development. So, providing women and girls with equal access to education is very important and will fuel the benefits for humanity at large (Nurhaeni & Kurniawan, 2018).

According to the World Disability Report, over one billion (15%) of the world's population is disabled, with females outnumbering males. The same survey shows that women account for up to three-quarters of people with disabilities in most low- and middle-income nations, with 65% to 70% of these women living in rural regions. Due to other complicated variables such as poverty, inadequate maternal health systems, and civil wars, the rate in Africa could be substantially higher. Although people with disabilities face marginalization across Africa, the issue is exacerbated for women with disabilities, who face double marginalization due to their gender and impairment (WHO & World Bank, 2011).

In the Philippines, to promote gender equality and empowerment of women, the Philippine Magna Carta of Women (MCW) requires substantive equality between women and men and the empowerment of women. This principle has been further articulated in terms of equal access and elimination of discrimination in education, scholarship, and training particularly: encouraging the enrolment of women in non-traditional skills training; promotion of gender-sensitive training programs, curricula, and instructional materials; and gender-responsive career counseling. Moreover, the Technical Education and Skills Development Authority (TESDA), along with other entities, has developed mechanisms for the assessment and monitoring of compliance. These initiatives have led to women outnumbering men in technical courses. Similarly, it led to similar training completion rates in recent years by both women and men resulting in about the same sex ratio among the TVET graduates (ILO, 2018).

The emerging interest in TVET as a pro-poor investment strategy is well justified in Cambodia (OECD, 2017). Marginalized groups including those with disabilities and women have difficulty accessing formal TVET programs. Subsequently, training interventions were undertaken with a broader choice of occupational options that would challenge traditional beliefs about gender domination and maintain data on barriers and impairments, which may prevent the involvement of people with disabilities (Berry *et al.*, 2018).

Gender disparities in opportunities, security, and participation have become important issues for developing economies, particularly in Africa (World Bank, 2010). This is why gender equality is now among the aims of most poverty reduction strategies and one of the United Nations Millennium Development Goals (MDGs 3). In the context of gender inequality, gender disparities in labor markets are especially important. Literature shows that in several African countries, women are less likely to be in paid jobs, are disproportionately concentrated in informal and precarious employment, and are usually paid less (ILO, 2002; Nordman, 2009).

The Government of Kenya has put in place several legal and policy frameworks supportive of women's and men's participation in socio-economic development which encourages gender equality and gender mainstreaming. The Constitution of Kenya (GoK, 2010) through Articles 10, 27, and 100 provides for values and principles of governance, equality, equity, respect for human dignity, inclusiveness, and non-discrimination to support women, men, and other vulnerable groups to contribute to national building.

The establishment of the State Department for Gender Affairs in 2015 by the government of Kenya marked a major milestone in providing an institutional framework for integrating gender considerations into all government policies and programs. The department is currently domiciled in the Ministry of Public Service, Gender, Culture, the Arts and Heritage and its role is to promote gender mainstreaming in national development processes to champion gender mainstreaming in national development planning and promote equitable political and socio-economic development for women, men, girls and boys. This strengthens national gender mainstreaming and provides a supportive environment for gender equality in all spheres of life in Kenya. To promote equity and access in TVET institutions, gender and disability mainstreaming was a performance contracting (PC) requirement and it ensures the development and implementation of both gender and disability mainstreaming policies.

The Education and Training Sector Gender Policy of 2015 (GoK, 2015) is a policy document that is aimed at ensuring equal rights to education and equal participation between men and women, boys and girls. The policy highlights important and relevant areas where gender can be integrated including the need to have a gender-responsive, inclusive, and quality curriculum at all levels, a safe environment to prevent sexual harassment and gender-based violence, and various ways in which mechanisms to increase equal participation in STEM can be promoted.

The TVET Act 2013 dictates that the training programs shall be designed to operate within a framework that leads to lifelong education and training, and which facilitates the special needs of

persons with disability and marginalized groups. The Act further guides that there shall be no discrimination in offering training on gender basis or any other ground. Further, the TVET Authority is mandated to prescribe the minimum criteria for admission to training institutions and programs to promote access, equity, and gender parity (GoK, 2013).

The Government of Kenya together with other stakeholders has put in place several initiatives to promote equity and access to Technical and Vocational Education and Training (TVET). In TVET, both female and male trainees are equipped with skills, knowledge, and competencies for job creation and employment. Despite various policies on disability mainstreaming in place, there could be an issue with the implementation and cascading of policy goals due to limited awareness of disability inclusion and the devolved government system. To overcome these challenges and limited resources, the MoE in recent years increased funding. The ministry provides training programs and funding schemes to support youth with disabilities in accessing tertiary institutions, particularly investing in TVET to meet the learning needs of youth with disabilities (UoN, 2023). Gender and disability mainstreaming is an essential part of ensuring that all learners have equal opportunities to access and benefit from TVET. By taking steps to mainstream gender and disability in TVET, we can help to achieve gender equality, social inclusion, and economic development.

## **1.2 Statement of the Problem**

The population of women was higher than men according to the 2019 Kenyan Census while the PWD population was 2.2% of the total population (KNBS, 2020). The Government of Kenya together with other stakeholders has put in place gender and disability mainstreaming policies and government funding to promote equity and access to Technical and Vocational Education and Training (TVET). The NCPWD champions disability mainstreaming in public and private sector institutions through training, advocacy, sensitization, and carrying out accessibility audits. To promote access and inclusivity in TVET, the GoK through the Ministry of Education increased the enrolment of trainees with special needs as well as increased their participation in STEM subjects. The plan includes and is not limited to adapting TVET disability-friendly infrastructure and provision of sanitary towels to female students to aid in retention (NGEC, 2022). Given the multiple interventions by stakeholders in promoting equity and access to training, it was therefore necessary to establish the status of gender and disability mainstreaming in Kenyan TVET institutions.

## **1.3 Objectives of the Study**

### **1.3.1 Main Objective**

The main objective of this study was to determine the status of gender and disability mainstreaming in Kenyan TVET institutions.

### **1.3.2 Specific Objectives**

The specific objectives of the study were to:

- i. Determine the gender-disaggregated enrolment in TVET institutions;
- ii. Determine the enrolment of PWDs in the TVET institutions;
- iii. Determine the gender and disability disaggregated staffing levels within the institutions;
- iv. Establish the support structures available in TVET institutions for persons with disabilities;
- v. Identify the support structures available in TVET institutions for gender mainstreaming
- vi. Establish challenges faced by persons with disabilities in TVET institutions.
- vii. Identify gender-based challenges in TVET institutions;

## **1.4 Justification of the Study**

According to the Kenya National Bureau of Statistics report (2017), Women and PWDs in Kenya are underrepresented in decision-making positions. They also have limited access to higher education, land ownership, and employment. The Sessional Paper No. 1 of 2019 notes that gender and PWD disparities exist in TVET and lays out government interventions to mitigate this situation (GoK, 2019). Therefore, sector players must undertake studies to ascertain the progress made in the realization of gender and disability mainstreaming periodically. The findings from this study provided the status of gender and PWD parity in TVET and informed policy decisions.

### **1.5 Scope of the Study**

This study was focused on determining the status of gender and disability mainstreaming in Kenyan TVET institutions. The study determined the distribution of trainee enrolment and the nature of support offered to trainees about gender and disability. To a further extent, it established the challenges faced in gender and disability mainstreaming.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

The United Nations Convention on the Rights of PWDs enshrines equality between men and women as one of its general principles. It also considers the specific situation faced by women with disabilities, recognizing that they can be subjected to multiple forms of discrimination and hence the need to adopt measures to ensure that they exercise their rights and liberties without any discrimination (UNCRPD, 2006). In Kenya, the National Gender and Equality Commission has developed a Model Gender Mainstreaming Policy for the Technical and Vocational Education and Training (TVET) Sector (With Elements of Inclusion), to give guidelines for all institutions to close gender gaps in training and employment by promoting uniformity in institutional gender policies' interpretation, implementation, and application

Data from UNESCO shows that girls' enrolment has improved dramatically over the past 25 years; 180 million more girls are enrolled in primary and secondary education. Between 1995 and 2019, the primary school enrolment rate of girls increased from 79 to 90 percent, while the percentage of boys enrolled increased from 86 to 92 (UNESCO, 2021). Efforts at devising innovative measures to increase the participation of women in the TVET system must recognize the key factors that impede their inclusion and understand and analyze the barriers from a gender perspective. The main key barriers that have been identified to hinder gender mainstreaming include

SDG Goal 4 emphasizes the necessity for inclusive and equitable education, including Technical, Vocational Education, and Training (TVET) for all nations and genders (UNESCO, 2016). It aims to improve inclusion and non-discrimination based on race, ethnicity, sex, religion, or disability by promoting equality in access to skills training and acquisition. The Cracking the Code report (UNESCO, 2017) showed an overall under-representation of girls and women in STEM courses in higher education, especially in ICT and engineering, manufacturing, and construction. It also noted significant national and regional variation in the proportion of female students in higher education enrolled in natural sciences, mathematics, and statistics, ranging from 16 percent in the Ivory Coast to 86 percent in Bahrain. The report generally showed that high proportions of female students were enrolled in engineering, manufacturing, and construction in South-East Asia, the Arab States, and some European countries, while much lower proportions were found in sub-Saharan Africa.

## **2.1 Prevalence of Persons with Disabilities**

According to the 2019 census, 2.2% (0.9 million people) of Kenyans live with some form of disability. Direct comparison of disability prevalence in 2009 and 2019 is problematic due to differences in data collection methodologies, ages covered, and size of administrative units. The 2019 census appears to show a sharp drop in disability prevalence; the 2009 census states 3.5%, but when looking at the same age threshold (i.e. adults and children above five years of age) the 2009 disability prevalence rate was 3.8%. The 2019 census indicates that 1.9% of men have a disability compared with 2.5% of women. For comparison, the 2009 census reported that 3.4% of men and 3.5% of women had a disability; again, when looking at the same age threshold (i.e. adults and children above five years of age), 3.7% of men and 3.9% of women had a disability. There are more people with disabilities living in rural than urban areas. Analysis of prevalence rates by residence shows that 2.6% (0.7 million) of people in rural areas and 1.4% (0.2 million) of people in urban areas have a disability. The 2009 census reported that 3.8% of rural populations and 3.1% of urban populations had a disability (KNBS, 2020).

## **2.2 Status of Disability Mainstreaming in Kenya**

The NCPWD promotes disability mainstreaming in public and private sector institutions by conducting accessibility audits, advocacy, training, and sensitization. The training covers disability in the workplace and the community. The training targets people with disabilities and disability mainstreaming committees. The disability mainstreaming efforts by the NCPWD aim to promote access to employment opportunities by the Persons with disabilities; access to the organization's services by the Persons with disabilities as well as physical access to the organization in question. Generally, the promotion of access to employment opportunities by Persons with disabilities and physical access is guided by standardized policy and legislative provisions. For instance, according to the Persons with Disability Act 2003, 5% of job opportunities in public institutions should be reserved for persons with disabilities. Further, all buildings and built environments are expected to be designed in such a manner that they do not present physical barriers to access by persons with disability.

The NCPWD monitors public agencies to comply with legal requirements, but many organizations fail to comply with a law allowing 5% employment opportunities for persons with disabilities. Moreover, even in instances where there is the intention to comply, low skill levels and requisite experience among persons with disability hinder the enforcement of this provision. Similarly, the NCPWD does not have adequate resources to audit the organizations and enforce the law that promotes accessibility. For instance, the NCPWD can only audit 20-100 of 1000 organizations annually. Low organizational capacity, inadequate funding, and low awareness of disability negatively impact disability mainstreaming efforts. Despite these challenges that significantly hinder disability mainstreaming efforts, the positive impact of disability mainstreaming in national development practices remains a constant driving force.

The Kenyan TVET subsector has the highest enrollment in National Polytechnics, with 3,785 trainees annually, and the lowest in Vocational Training Centres, with 147 students per year. Kenyan trainees with disabilities make up less than 4% of the total student population, often enrolled in Vocational Training Centres, and less than 0.5% in National Polytechnics and Technical Training Institutions which have more specialized training curricula and equipment (KISE, 2019).

### **2.3 Gender Mainstreaming**

According to the Office of the Special Adviser of Gender Issues to the United Nations, OSAGI (1997), “gender mainstreaming is a globally accepted strategy, an approach, and a means for promoting gender equality. Mainstreaming involves ensuring that gender perspectives and attention to the goal of gender equality are central to all activities. Mainstreaming represents a shift in thinking about women; from women as a target group of development assistance to gender equality as a development objective.”

Gender mainstreaming in the UN was established through the Beijing Platform of Action in 1995, which was further enhanced by the UN's twenty-third special session in 2000, following its implementation. Later the twenty-third special session of the UN general assembly, in June 2000 to follow up the implementation of the Beijing platform of action, enhanced the mainstreaming mandate within the UN. The Economic and Social Council (ECOSOC) has adopted a resolution (ECOSOC resolution, 2001) promoting gender mainstreaming, requiring the inclusion of gender perspectives in all its activities and recommending a five-year review of the 1997 ECOSOC conclusions. More recently, the Economic and Social Council adopted a resolution (ECOSOC resolution, 2001) on gender mainstreaming which calls on the ECOSOC to ensure that gender perspectives are considered in all its work, including in the work of its functional commission and recommends a five-year review of the implementation of the ECOSOC conclusions 1997.

The European Commission's Employment and Social Affairs Department (2004) states that gender mainstreaming acknowledges the importance of targeted programs for women who are marginalized in society. However, these measures alone will not be sufficient to effect significant change. According to the Beijing Platform of Action, gender analysis is the critical starting point for gender mainstreaming which cannot be achieved without an explicit institutional commitment to the strategy and systematic efforts to implement it. To Hannan (2000), “There is no set formula or blueprint to mainstreaming that can be applied in every context.” What is however common to mainstreaming is that a concern for gender equality is brought into the mainstream of activities rather than be dealt with, as an add-on activity. This means that the first step in the mainstreaming strategy is to assess how and why gender differences and inequalities are relevant to the subject under discussion, identify where there are opportunities to narrow these inequalities, and decide on the approach to be taken.

## **2.4 Empirical Literature**

The population of PWDs constitutes approximately 15% of the global population and estimated 785 million persons of working age. The PWDs represent a marginalized group in the labor market in all countries around the world, being far more likely than persons without disabilities to be unemployed, under-employed, or economically inactive. Where they have participated in vocational training, it is often in segregated settings where courses are frequently not linked to labor market requirements or at a standard lower than that required by employers. And where they are employed, workers with disabilities are more likely to be in low-paid jobs with poor promotional prospects and working conditions. Their labor market situation entails social and economic losses which have been estimated by the ILO to be between 3% to 7% of GDP.

In the Philippines, to promote gender equality and empowerment of women, the Philippine Magna Carta of Women (MCW) requires substantive equality between women and men and the empowerment of women. This principle has been further articulated in terms of equal access and elimination of discrimination in education, scholarship, and training particularly: encouraging the enrolment of women in non-traditional skills training; promotion of gender-sensitive training programs, curricula, and instructional materials; and gender-responsive career counseling. Moreover, TESDA, along with other entities, is advised to develop mechanisms for the assessment and monitoring of compliance. These initiatives have led to women outnumbering men in technical courses. Similarly, it led to similar training completion rates in recent years by both women and men resulting in about the same sex ratio among the TVET graduates (ILO, 2018).

The emerging interest in TVET as a pro-poor investment strategy is well justified in Cambodia (OECD, 2017). Marginalized groups including those with disabilities and women have difficulty accessing formal TVET programs. Several African countries such as Mauritius, Kenya, Malawi, Tanzania, Rwanda, Seychelles, Uganda, and South Africa have targeted policy attention on increasing women's participation in TVET specifically in male-dominated courses (Prendergast, 2020). Akyeampong (2004) stated that female access to education is hindered by certain cultural beliefs and practices such as the expectation that girls will help with household chores and family businesses, as well as early marriages.

In Kenya, according to the MOE, the number of women enrolled in TVET programs was 39.41 percent, and for men 69.59 percent. This number indicates that fewer women enroll in TVET compared to the targets set by the Ministry requiring at least a 50 percent enrolment and access for both men and women (ILO, 2021). In other studies, it was further noted that the enrolment for women was highest in NPs with an average of 3,785, and lowest in VTCs with an average of 147 trainees annually. Trainees with disabilities constituted less than 4% of the total student population. Further, many trainees with disabilities are enrolled in VTCs which is the lowest level among the technical institutions in Kenya. NPs and TVCs which have more specialized training programs and equipment, enrollment was less than 0.5% of trainees with disabilities (KISE, 2019).

As mentioned in the Kenyan Population Census 2019, the ratio of Male to Female citizens is approximately 50:51 while PWD constitute 2.2% of the total population. To promote the access and inclusivity of this population to TVET training the GoK through the Ministry of Education increased the enrolment of trainees with special needs as well as increasing their participation in STEM subjects. The plan includes and is not limited to adapting TVET disability-friendly infrastructure and provision of sanitary towels to female students to aid in retention (NGEC, 2022).

There is an urgent need to address the marginalization of people with disabilities in the labor market and take steps toward reducing the great social and economic cost this represents to individuals, communities, economies, and society at large. Providing greater opportunities to develop skills and qualifications relevant to the local, regional, and national labor markets by making TVET and skills systems disability-inclusive is an important part of this process (ILO, 2017).

## **CHAPTER THREE**

### **METHODOLOGY**

#### **Introduction**

This chapter presents the methodology used for the study. It specifically outlines the research design, target population, sampling technique, and sample size, data collection technique and instruments, pilot testing, legal considerations, and data analysis.

#### **3.1 Research Design**

The study used a descriptive research design that aimed to accurately and systematically describe the population, situation, or phenomenon. An online questionnaire composed of both structured and open-ended questions was used to collect data from a sample of the target population.

#### **3.2 Target Population**

The target population of this study was all the accredited TVET institutions in Kenya (2,300) as of December 2023. This constituted National Polytechnics (NPs), Technical and Vocational Colleges (TVCs), Vocational Training Centers (VTCs), and University TVET Directorates.

#### **3.3 Sample Size and Sampling Technique**

A stratified and simple random sampling method was used to obtain a sample of respondents. The counties of site, category, and type of institution were treated as strata and the institutions from each stratum were randomly selected. The sample size was estimated using Yamane's 1968 formula.

$$n = \frac{N}{1 + N(e)^2}$$

Where; n = sample size, N = target Population, and  $e^2$  = probability error.

#### **3.4 Data Collection Instruments**

A questionnaire scripted in Kobo Collect software was used to collect data from sampled institutions.

#### **3.5 Data Collection Procedure**

A team of two TVETA officers visited each of the sampled institutions and administered the questionnaire to institutional administrators. The principals/administrators were the target respondents.

#### **3.6 Pilot Testing**

A pilot study was conducted on 12 institutions in Nairobi County. The respondents who took part in the pilot study were assumed to have homogenous characteristics to the target population of all TVET institutions. None of the respondents misinterpreted any item in the questionnaire which gave the confidence that the data collected would be consistent and reliable. The tools were pre-

tested on a sample of non-study participants before being administered to ensure their validity and reliability. This ensured that the data collected was relevant and reliable to the study.

### **3.7 Legal Considerations**

The Authority obtained a research permit from the National Commission for Science, Technology, and Innovation (NACOSTI) as required by the Science, Technology and Innovation Act, 2013 to conduct the study. TVETA is registered as a data controller and processor by Section 18 of the Data Protection Act (DPA) of 2019 and is fully committed to protecting personal data. To ensure dignity and respect for the respondents, the researchers conducted themselves with courtesy and respect. In addition, they ensured that the respondents felt free to respond to the questionnaires by ensuring that no questions would make them uncomfortable. All the respondents were informed of the confidentiality of the data they were providing. They were requested to give honest responses to all items in the questionnaire.

### **3.8 Data Analysis**

Descriptive statistics were used in data analysis. Quantitative data was sorted, coded, cleaned, analyzed, and presented in the form of frequency tables, bar graphs, pie charts, and narratives. Data quality checks were done to eliminate errors or points of contradiction in data.

## CHAPTER FOUR RESULTS AND DISCUSSIONS

### Introduction

This chapter presents empirical findings and discussions of the study. Specifically, the chapter discusses the response rate, demographic information as well as the results and discussions for the specific objectives of the study.

### 4.1 Response Rate

The total number of institutions sampled through stratified and simple random sampling for this study was 250 and 213 responded as shown in Table 1.

*Table 1: Response Rate*

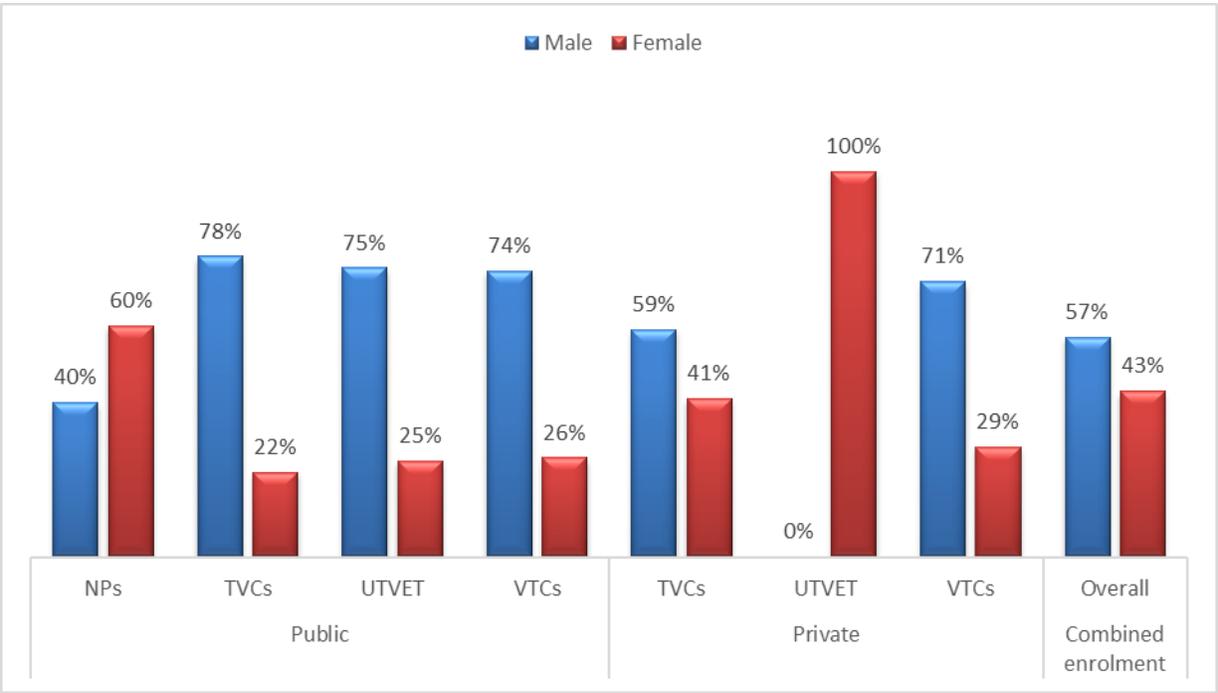
	National Polytechnic	University Directorate		TVCs		VTCs		Total
	Public	Public	Private	Public	Private	Public	Private	
Number Sampled	11	11	3	59	75	71	20	250
Number Responded	10	8	3	59	56	70	7	213
Response (%)	90.9	72.7	100.0	100.0	7	98.6	35.0	85.2

The number of institutions that responded to the questionnaire from 45 out of 47 counties was 213, representing an overall response rate of 85.2%. The high response rate and the coverage of nearly all the counties in Kenya, apart from Wajir and Mandera implied that the results from this study were representative and could therefore be generalized for all the TVET institutions in Kenya. The lower response rates from the private institutions were due to the closure of some of the sampled institutions. Most of the proprietors of the institutions that had ceased operation stated that their operations were affected by the effects of the COVID-19 pandemic.

### 4.2 Demographic Characteristics of Respondents

#### 4.2.1 Gender Distribution of Respondents

The Kenyan constitution has important provisions for gender equality and participation in all sectors of the economy, including education and training. The government has developed a comprehensive National Gender and Development Policy to provide a framework for the effective implementation of these constitutional provisions. The gender distribution of the respondents is shown in Figure 1.

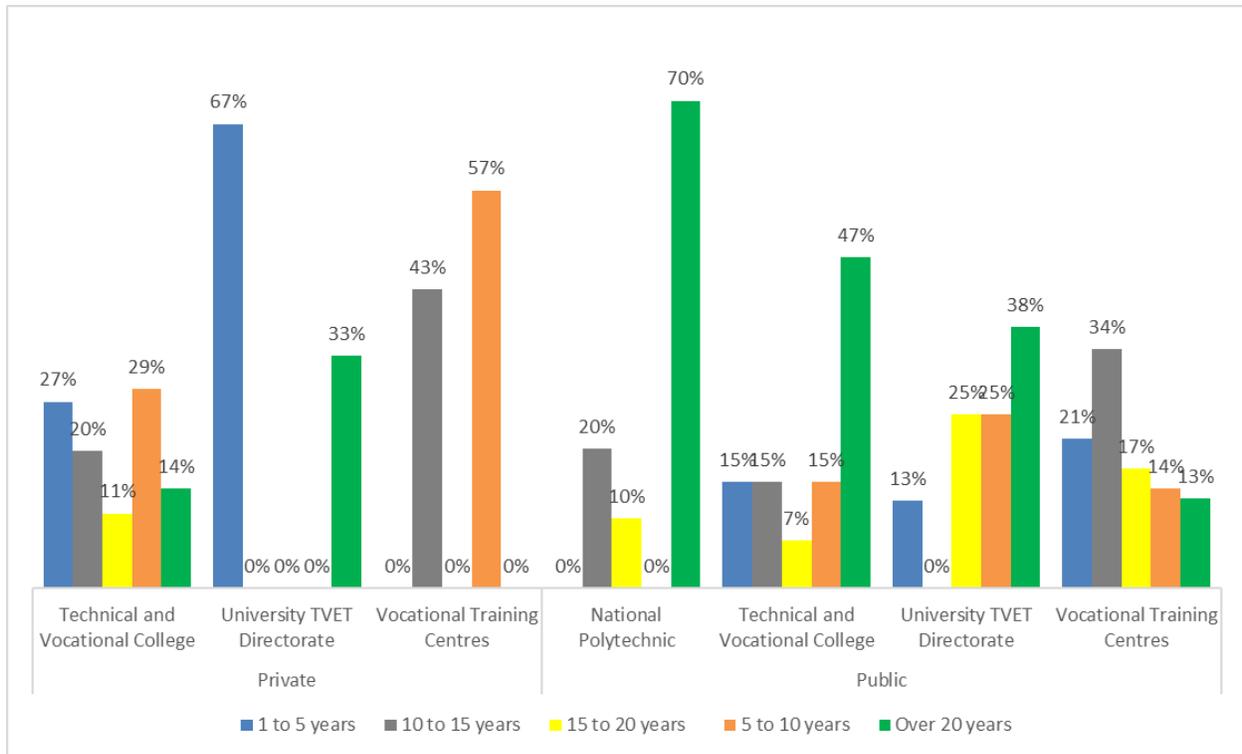


**Figure 1: Gender Distribution of Respondents**

The proportion of male respondents was higher than that of female respondents for all the categories of TVET institutions except in the National Polytechnics and private University TVET Directorates. The gender proportion was however compliant with the two-third gender rule required by the Kenyan constitution.

**4.2.2 Respondent’s Training Experience**

Experienced administrators play a critical role in the effective running of institutions and equipping the youth with relevant skills required for a smooth transition to the job market or active engagement in the communities. The experiences of the respondents who participated in this study are shown in Figure 2.



**Figure 2: Administrators' Training Experience**

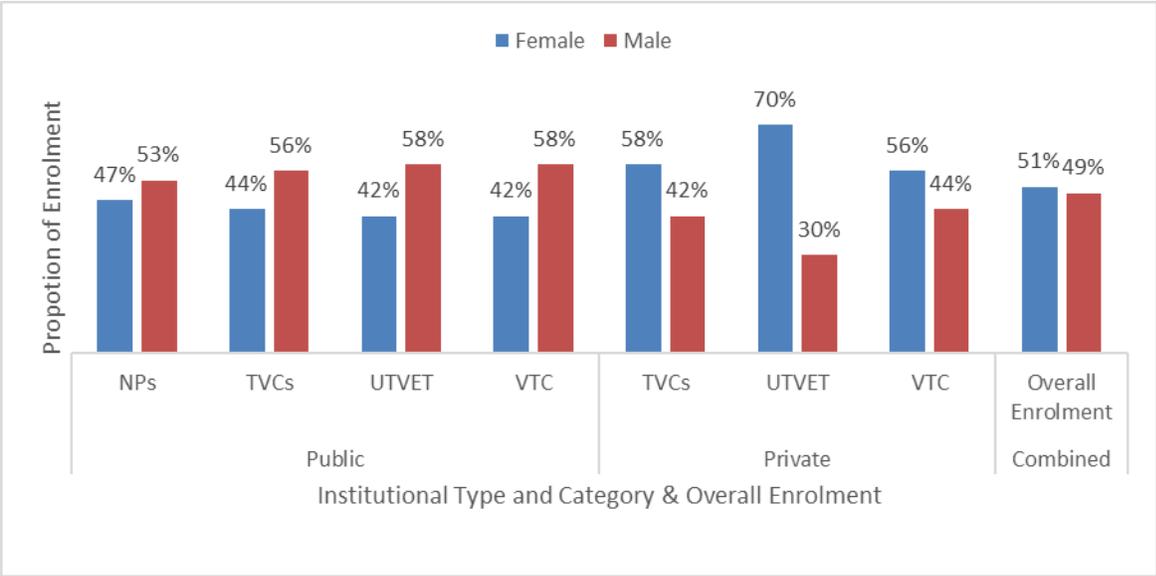
The NPs had the highest proportion of respondents with the highest number of years of experience, followed by those from public TVCs, public university TVET directorates, private university TVET directorates, private TVCs, and public VTCs respectively.

### 4.3 Gender Disaggregated Enrolment in TVET Institutions

Understanding gender-disaggregated enrollment in TVET institutions is essential for promoting gender equality, and informing policy and program development. By analyzing enrollment data, institutions can better address the diverse needs and aspirations of male and female trainees, ultimately contributing to a more inclusive learning environment.

#### 4.3.1 Gender Disaggregated Enrollment in TVET Institutions

The study determined the enrollment in the TVET institutions to establish whether there were any gender disparities. Figure 3 shows the disaggregated proportion of gender enrolment in the various categories of TVET institutions.



**Figure 3:** Gender disaggregated trainee enrollment

The private TVET institutions registered a higher proportion of female enrollment than male trainees while the public institutions had a higher proportion of male enrollment than females as shown in Figure 3. This enrolment trend could be attributed to the nature of courses offered in private and public TVET institutions. The overall male enrollment of trainees was slightly higher (51%) than that of the female trainees (49%). The findings from this study are consistent with a global study done by Stromquist (2014) that made a general conclusion that the male gender dominates the female in technical education across the globe.

**4.3.2 Gender Disaggregated Enrollment in STEM and Non-STEM Courses**

The study sought to establish any gender disparities in STEM and non-STEM courses. Gender disparities refer to one sex being disadvantaged over the other. Table 2 shows the proportion of trainees' enrollment in STEM and Non-STEM courses

**Table 2:** Trainees Enrolment in STEM and Non-STEM Courses

Institution Type/Category	% of male trainees in STEM Courses	% of Female in STEM Courses	% of male trainees in Non-STEM Courses	% of females in non-STEM courses
<b>Private</b>	<b>38%</b>	<b>62%</b>	<b>43%</b>	<b>57%</b>
TVC	43%	57%	44%	56%
UTVET	29%	71%	39%	61%
VTC	43%	57%	45%	55%
<b>Public</b>	<b>60%</b>	<b>40%</b>	<b>31%</b>	<b>69%</b>
NP	59%	41%	25%	75%
TVC	60%	40%	30%	70%
UTVET	62%	38%	49%	51%

VTC	60%	40%	20%	80%
<b>Average</b>	<b>49%</b>	<b>51%</b>	<b>37%</b>	<b>63%</b>

The enrollment of trainees in STEM and non-STEM courses revealed that the proportion of female trainees enrolled for STEM courses in private institutions was higher than that of male trainees. This enrolment trend could be attributed to the nature of courses offered in private and public TVET institutions. While public TVET institutions primarily offer traditional STEM courses, private TVET institutions mainly offer STEM programs focused on Hospitality that are popular with female trainees and require less initial investment. There was a higher number of male trainees than female trainees enrolling in STEM courses in public institutions. These findings agreed with Delaney and Devereux's (2019) study which claimed that while the education levels of women have been increasing dramatically relative to men, women are still underrepresented in STEM college programs.

#### 4.3.3 Association Between Gender and the Choice of Course (STEM/ Non-STEM)

The study determined the association between gender and the choice of the course. The study was guided by the following hypothesis:

H0: There is no association existing between gender and the choice of the course

H1: There is a significant association between gender and the choice of the course

The study used the chi-square test to determine the level of association between the variables. The findings are presented in Table 3.

**Table 3: Output of Chi-square Test of Association**

```
CH<-matrix(c(122483, 11635, 87054, 27411), 2, 2)
rownames(CH)<-c("STEM", "NONSTEM")
colnames(CH)<-c("MALE", "FEMALE")
CH
##           MALE FEMALE
## STEM      122483  87054
## NONSTEM   11635   27411

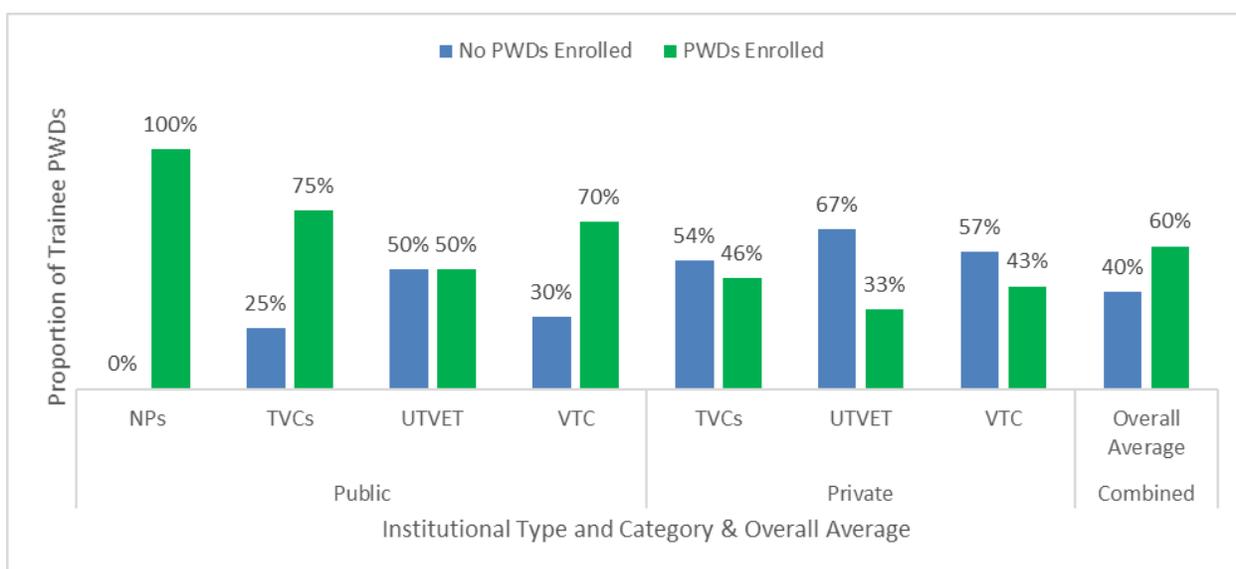
chisq.test(CH)
##
## Pearson's Chi-squared test with Yates' continuity correction
##
## data:  CH
## X-squared = 10878, df = 1, p-value < 2.2e-16|
qchisq(p = .05, df = 1, lower.tail = FALSE)
## [1] 3.841459
```

From the chi-square test of association,  $\chi^2$  (10878) < critical value (3.842); p-value (0.0001) < 0.05. This implies that we reject the null hypothesis and conclude that there exists a relationship between gender and the type of course.

## 4.4 Enrolment of PWDs in TVET Institutions

### 4.4.1 Availability of Trainees with Disabilities in TVET Institutions

Disability refers to any physical, sensory, mental, psychological, or other impairment, condition, or illness that has or is perceived by significant sectors of the community to have a substantial or long-term effect on an individual's ability to carry out ordinary day-to-day activities (GoK, 2010). This study sought to establish whether institutions had any trainees with disabilities enrolled and the type of their disabilities. Respondents were asked whether they had any trainees with disabilities enrolled in their institutions. The results are depicted in Figure 4



**Figure 4:** Availability of Trainees with Disabilities in TVET Institutions

All National Polytechnics, 75% of Public TVCs and 70% of public VTCs had at least one trainee with disabilities enrolled. However, only 50% of Public University TVET directorates had PWDs enrolled. In private TVET institutions, the enrollment rates of PWDs were lower, with only 46% of TVCs, 33% of University TVET directorates, and 43% of VTCs having PWDs enrolled. From the foregoing trends, public institutions appear to be more inclusive.

**Table 4:**

*Enrolment of trainees with disability per Institutional Category*

Institution Type and Category	Proportion
<b>Private</b>	<b>0.486%</b>
Technical and Vocational College	0.624%
University TVET Directorate	0.323%
Vocational Training Centres	0.176%
<b>Public</b>	<b>0.939%</b>
National Polytechnic	0.226%
Technical and Vocational College	1.321%

University TVET Directorate	0.494%
Vocational Training Centres	2.620%
<b>Overall</b>	<b>0.904%</b>

The enrollment of persons with disabilities (PWDs) in the TVET institutions was generally low. PWDs made up 2.62% of the total enrollment in public VTCs, the highest proportion among categories of TVET institutions which could be attributed to the accessibility of VTCs and the fact that many PWDs leave formal education at the primary level and hence become eligible for admission in VTCs. However, the private VTCs had the lowest proportion (0.176%) of PWDs enrolled.

In contrast, PWDs constituted only 0.226% of the total enrollment in NPs. The PWDs enrolled in all the categories of TVET institutions constituted only 0.904% of the total enrollment. This finding corroborates a study published by the Kenya Institute of Special Education (KISE, 2019) that showed there were more trainees with disabilities enrolled in VTCs relative to other categories of TVET institutions. The overall PWD enrolment in TVET is below the national average of 2.2% as per the 2019 census.

The private institutions had a lower proportion of PWD trainees compared to the public TVETs. This could be attributed to the fact that public institutions have invested more in promoting inclusion and addressing barriers that exclude PWDs from full and equal participation in training as compared to private institutions.

#### 4.4.2 Types of Trainee Disabilities in TVET Institutions

This study categorized disability into six key domains, in line with the International Classification of Functioning, Disability, and Health framework. The six disability domains were: physical disabilities; visual impairments; hearing, speech, and language disabilities; mental health disorders, intellectual disabilities, and autism spectrum disorders; progressive chronic conditions; and maxillofacial disabilities. For ease of data collection, the six disability domains were further broken down into thirteen sub-areas/ types, and data was collected in each category of institution as shown in Table 5.

**Table 5: Proportion of trainee enrolment per type of disability**

Type of disability	NPs	TVCs	UTVET	VTCs	Overall
Totally Blind	0.009%	0.086%	0.028%	0.109%	0.059%
Special and Language Difficulties	0.001%	0.023%	0.000%	0.083%	0.019%
Hard of Hearing	0.001%	0.027%	0.000%	0.064%	0.020%
Autism	0.000%	0.018%	0.000%	0.058%	0.014%
Albinism	0.010%	0.014%	0.000%	0.000%	0.012%
Low vision	0.020%	0.073%	0.282%	0.083%	0.058%

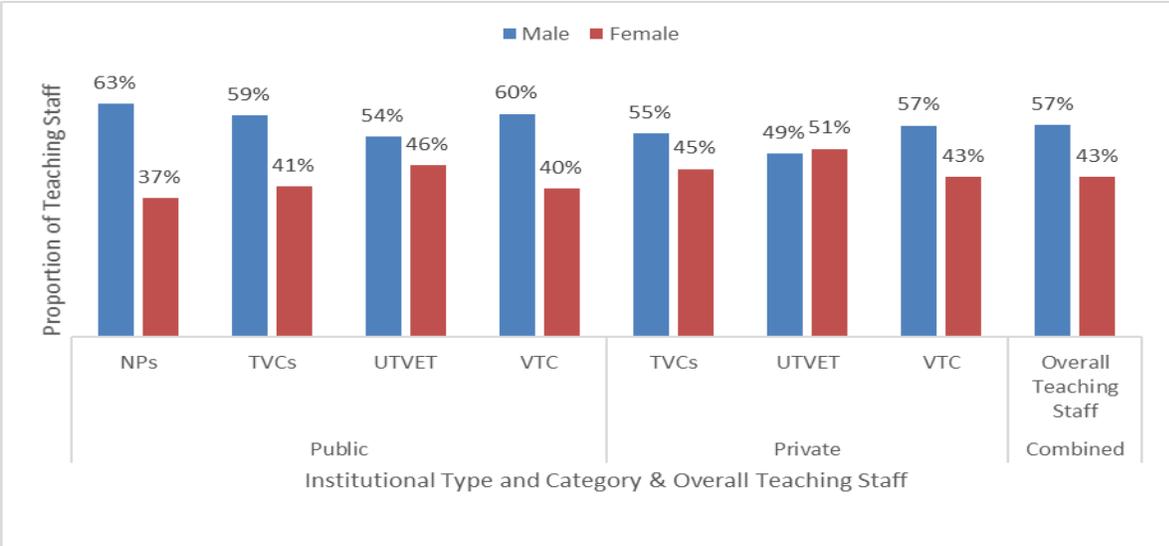
Special Learning Disabilities	0.001%	0.403%	0.000%	0.186%	0.239%
deafness	0.002%	0.315%	0.000%	0.225%	0.192%
Cerebral Palsy	0.001%	0.019%	0.000%	0.045%	0.014%
Deaf-Blindness	0.000%	0.013%	0.000%	0.000%	0.007%
Intellectual Learning Disabilities	0.001%	0.079%	0.000%	0.359%	0.068%
Physical Impairment	0.177%	0.174%	0.141%	0.488%	0.194%
Multiple disabilities	0.002%	0.012%	0.028%	0.032%	0.010%
<b>Total</b>	<b>0.226%</b>	<b>1.256%</b>	<b>0.479%</b>	<b>1.732%</b>	<b>0.904%</b>

The prevalent types of disabilities in the National Polytechnic were physical impairment at 0.177% and low vision at 0.002% while for TVCs special learning difficulties (0.403%), deafness (0.315%), and physical impairment (0.174%) were more prevalent. The most common type of disability in University TVETs was low vision (0.282%) and physical impairment (0.141%). In VTCs, the most prevalent types of disabilities were physical impairment (0.488%), intellectual learning disabilities (0.359%), deafness (0.225%), and special learning difficulties (0.186%). Generally, the most prevalent types of disabilities in TVET institutions include; special learning disabilities (0.239%), physical impairment (0.194%), and deafness (0.192%). This result is consistent with a survey conducted by KISE (2019) that revealed some of the most prevalent types of disabilities among trainees enrolled in TVET institutions including physical disabilities, learning disabilities, mental disabilities, deaf, hard of hearing, low vision, blindness and cerebral palsy. With disregard of the type of disability, the average proportion of male and female trainees with disability in TVET institutions was 1.15% and 0.86%, respectively.

#### **4.5 Gender and Disability Disaggregated Staffing in TVET Institutions**

##### **4.5.1 Gender-Disaggregated Teaching Staff**

The gender-disaggregated staffing levels in the TVET institutions were recorded to determine the extent of gender mainstreaming within the staff. The results are presented in Figure 5

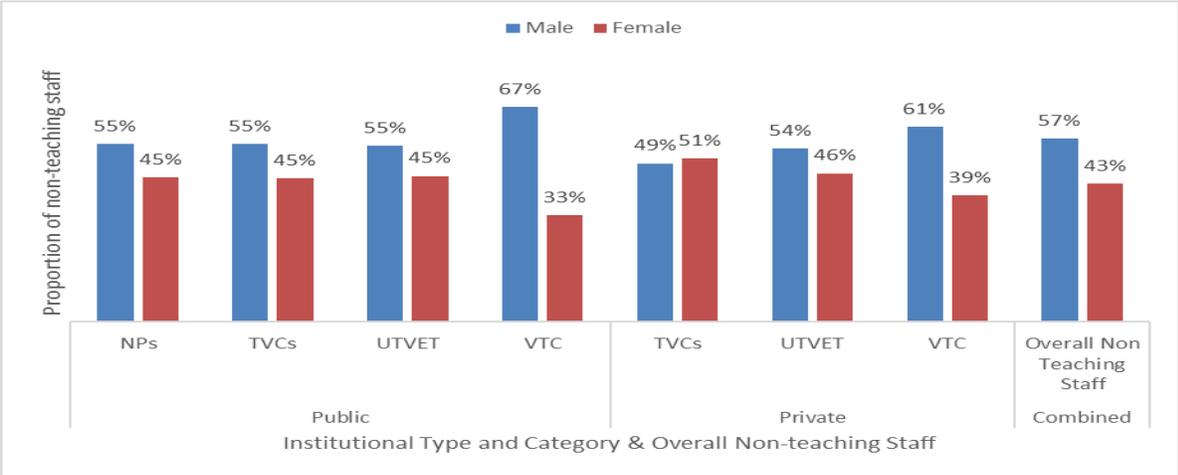


**Figure 5: Gender Disaggregated Teaching Staff**

The proportion of male teaching staff was higher than that of females in all institutions except the university directorate of TVET where female training staff was slightly higher than that of male staff at 51%. The overall proportion of male teaching staff (57%) was slightly higher than that of the female staff (43%). This proportion satisfies the Kenyan constitution requirement (two-thirds gender principle). This can be attributed to enhanced advocacy by different agencies on gender mainstreaming.

**4.5.2 Gender Disaggregated Non-Teaching Staff**

The gender-disaggregated staffing levels in the TVET institutions were recorded to determine the extent of gender mainstreaming within the non-teaching staff. The results are presented in Figure 6.



**Figure 6: Gender Disaggregated Non-Teaching Staff**

The proportion of male non-teaching staff was higher than that of the female in all institutions except private TVCs where female training staff was slightly higher than that of male staff at 51%. The overall male non-teaching staff was higher (57%) than that of the female staff (43%). A study conducted by Kenyatta University Women’s Economic Empowerment Hub showed that in the year 2020, women employees comprised 24.01% while men comprised 75.99% of the total public service workforce.

#### 4.5.3 Staff with Disability per Institutional Category

The proportion of staff with disabilities in the TVET institution was recorded and analyzed. The findings are presented in Table 6

**Table 6:**

*Proportion of Staff with Disability per Institutional Category*

<b>Institutional Category and Type</b>	<b>Proportion</b>
<b>Private</b>	<b>0.505%</b>
Technical and Vocational College	0.470%
University TVET Directorate	0.952%
Vocational Training Centres	0.495%
<b>Public</b>	<b>1.399%</b>
National Polytechnic	1.222%
Technical and Vocational College	1.463%
University TVET Directorate	1.802%
Vocational Training Centres	1.403%
<b>Overall</b>	<b>1.279%</b>

The proportion of PWD who had been employed by the various categories of TVET institutions ranged from 0.470 % to 1.802%. The findings further show that 0.505% and 1.399% of the staff employed in private and public institutions were PWDs. On average 1.279% of staff employed by the TVET institutions were PWDs. These findings are consistent with the PSC, 2022 report which showed that the representation of PWDs in the public service was at 1.4%. However, there is still a significant gap between the current employment status of PWDs in TVET institutions and the legal requirement of 5% recommended by the PWDs Act, 2003. The responsible government agencies should enforce the implementation of laws and regulations to mainstream disability.

**Table 7:**  
**Proportion of Staff with Various Types of Disability**

Types of Disability	NPs	TVCs	UTVET	VTCs	Overall
Autism	0.14%	0.00%	0.00%	0.11%	0.042%
Multiple Disabilities	0.03%	0.04%	0.00%	0.00%	0.034%
Speech and Language Difficulties	0.03%	0.03%	0.00%	0.00%	0.025%
Albinism	0.00%	0.01%	0.00%	0.00%	0.008%
Deafness	0.07%	0.05%	0.00%	0.22%	0.068%
Physical Impairment	0.70%	0.79%	0.61%	0.66%	0.754%
Total Blindness	0.00%	0.00%	0.00%	0.00%	0.000%
Deaf-Blindness	0.00%	0.01%	0.00%	0.00%	0.008%
low vision	0.14%	0.31%	0.92%	0.22%	0.279%
Intellectual and Developmental Disability	0.00%	0.01%	0.00%	0.00%	0.008%
Hard of Hearing	0.10%	0.04%	0.00%	0.00%	0.051%
<b>Total</b>	<b>1.22%</b>	<b>1.30%</b>	<b>1.53%</b>	<b>1.20%</b>	<b>1.279%</b>

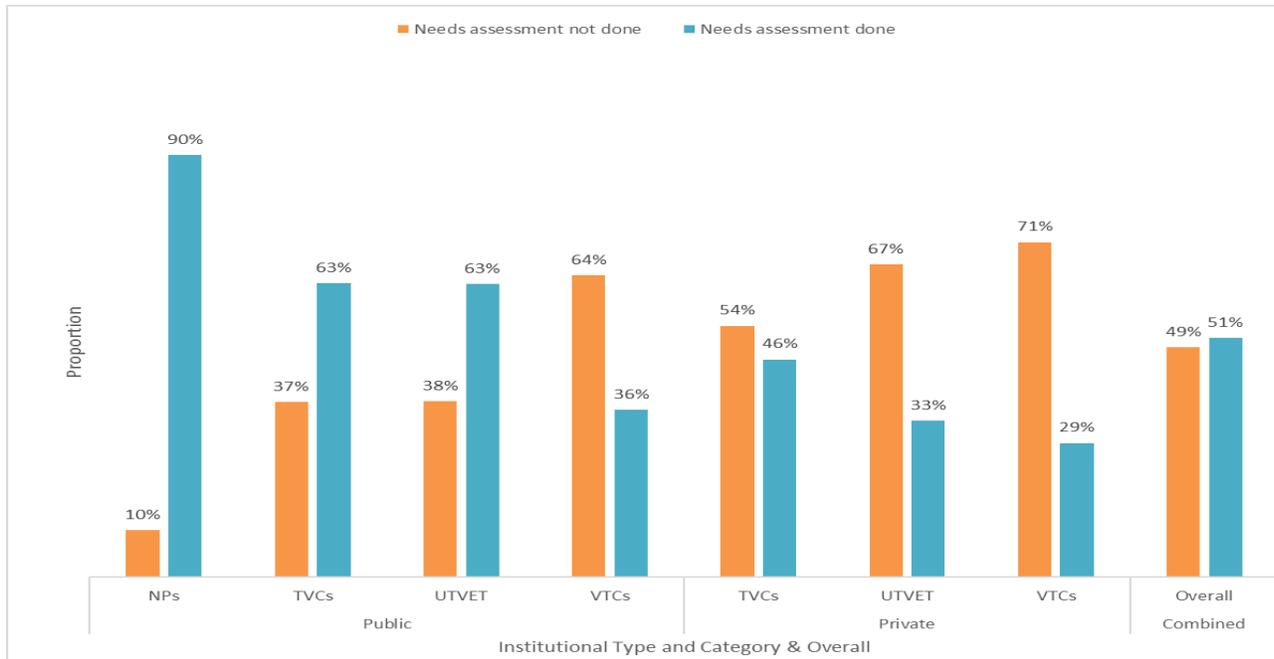
The PWDs that were engaged in the TVET institutions had various types of disabilities. The proportion of the types of disabilities for each category of institution is shown in Table 7. Physical impairment was the most common type of disability among staff in the NPs, TVCs, and VTCs, while low vision was more prevalent among the UTVET staff.

#### **4.6 Support Structures Available in TVET Institutions for PWDs**

This study sought to establish whether institutions had put in place the necessary initiatives to make their premises friendly to PWDs. The initiatives included periodic needs assessments to determine the needs of PWDs, availability of disability mainstreaming committee and policy, capacity building, adaptation of instructional materials, and availability of disability-friendly physical facilities.

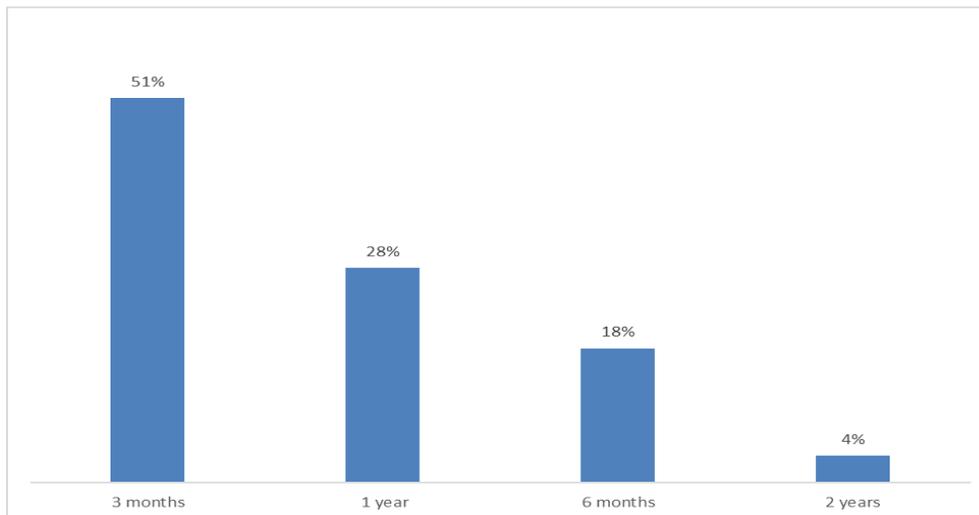
##### **4.6.1 Assessments to Identify PWD Needs**

Needs assessment is crucial for institutions to determine disability mainstreaming interventions, prioritize them, and allocate resources. Respondents were asked whether they conducted periodic needs assessments to determine the needs of PWDs. The results are shown in Figure 7



**Figure 7: Assessments to Identify PWD Needs**

Findings from the study showed that 90% of NPs conducted assessments to identify the needs of PWDs. In comparison, the percentage for public TVCs and University TVET directorates was 63%. Only 36% of Public VTCs conduct these assessments. This shows high levels of awareness in National Polytechnics and low awareness in VTCs on the requirement to conduct periodic needs assessments. The proportion of private TVET institutions that were conducting needs assessments was lower, with percentages of 46% for TVCs, 33% for University TVET directorates, and 29% for VTCs. Most of the institutions that were not conducting periodic assessments to determine the needs of PWDs stated that they had not developed a disability mainstreaming policy.

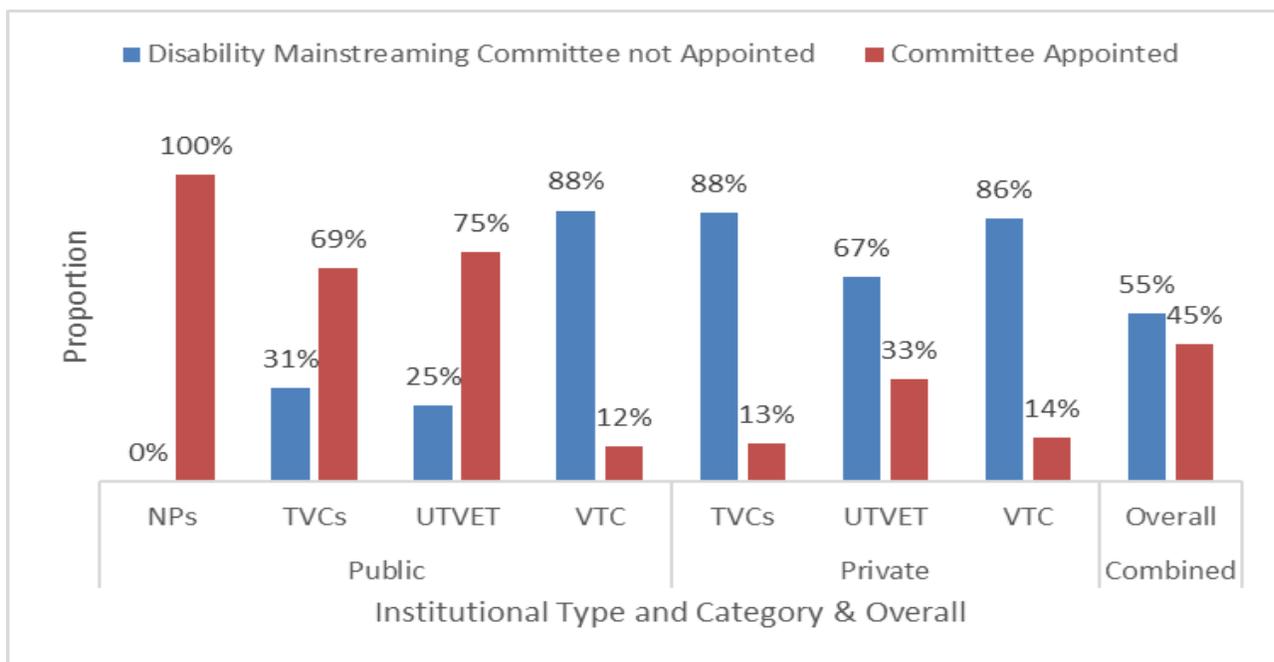


**Figure 8: Intervals for Conducting Needs Assessments**

Institutions were asked to state the frequency of conduction needs assessments. Results are presented in Figure 8. According to the study findings, 51% of institutions that conduct needs assessments for PWDs do so after every 3 months, 28% annually, 18% every 6 months, and 4% biennially. The reasons given by the institutions that had not conducted the needs assessment included lack of capacity; some stated it was unnecessary and others noted inadequate funds. Furthermore, the absence of guidelines on how needs assessments should be conducted along with the lack of emphasis or reinforcement from institution leadership were identified as contributing factors.

#### 4.6.2 Appointment of Disability Mainstreaming Committee

The disability mainstreaming committee plays a crucial role in promoting inclusion and ensuring that PWDs are fully integrated into the institution. All the TVET institutions are required to establish, implement, and maintain a diversity inclusion policy to ensure non-discrimination of a trainee based on disability and assure inclusion to undertake quality education and training. Thus, the study sought to establish the availability of disability mainstreaming committees in the institutions. The proportion of institutions that had appointed disability mainstreaming committees is shown in Figure 10.



**Figure 10:** Availability of Disability Mainstreaming Committee

All the National Polytechnics had established disability mainstreaming committees. Most of the public University TVET directorates and public TVCs have also established the committee. The lower proportion of VTCs and private TVET institutions that had established disability mainstreaming committees could be attributed to a lack of awareness and capacity to establish and operationalize the committees. Generally, a significant percentage of TVET institutions (55%) had

no disability mainstreaming committee in place. This could explain why many institutions are yet to institutionalize disability mainstreaming and attract more PWD enrollment.

### 4.6.3 Disability Mainstreaming Policy

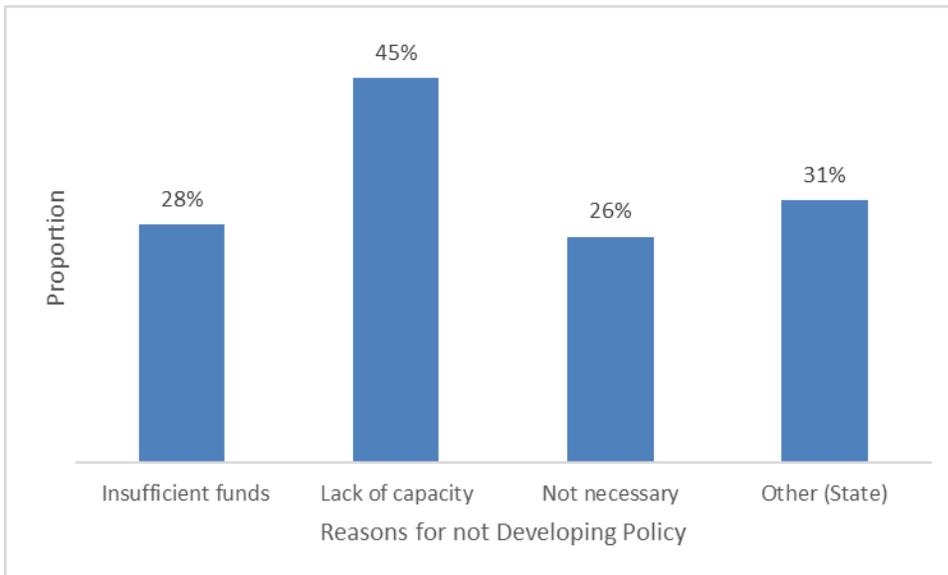
Policies play a critical role in national development efforts since they provide clear guidelines for the implementation of various programs and service delivery. The disability mainstreaming policy outlines the institution's commitment to ensuring that PWDs have equal access to education and training opportunities. The implementation of this policy by the institutions is meant to promote inclusivity, accessibility, and equal opportunities for PWDs. The study sought to establish the availability and implementation level of this document. Table 8 below depicts the findings of the study as follows;

*Table 8: Availability and Implementation of disability mainstreaming policy*

<b>Institution type/category</b>	<b>Policy availability</b>	<b>Implementation</b>
<b>Public</b>	<b>59%</b>	<b>88%</b>
National Polytechnic	90%	100%
Technical and Vocational College	61%	86%
University TVET Directorate	75%	100%
Vocational Training Centres	9%	67%
<b>Private</b>	<b>26%</b>	<b>47%</b>
Technical and Vocational College	21%	92%
University TVET Directorate	0%	0%
Vocational Training Centres	57%	50%
<b>Overall</b>	<b>43%</b>	<b>68%</b>

The reason why there were high proportions of NPs, public University TVET directorates, and TVCs who have the policy and were implementing was due to the introduction of the PC indicator on disability mainstreaming. Unlike their public counterparts, VTCs were lagging in terms of policy development. This could be due to a lack of awareness and capacity to develop the policy. In comparison to the public institutions, there were lower proportions of private institutions who owned the policy. None of the private University TVET directorates were compliant with the policy possession. It is also important to note that not all institutions who owned the policy implemented them. Bah, 2024 noted that the development and effective implementation of policies are clear indicators of committed institutions in addressing public concerns. He explained that the non-availability, inadequate, biased, and irresponsible policies can result in uneven distribution of resources, conflicts, condemnation, underfunding of institutions, favoritism, nepotism, discrimination, corruption, extortion, bribery, and disadvantaging of communities among other social ailments.

The study further established the reasons why some institutions had not developed a disability mainstreaming policy. The results are represented in Figure 11.

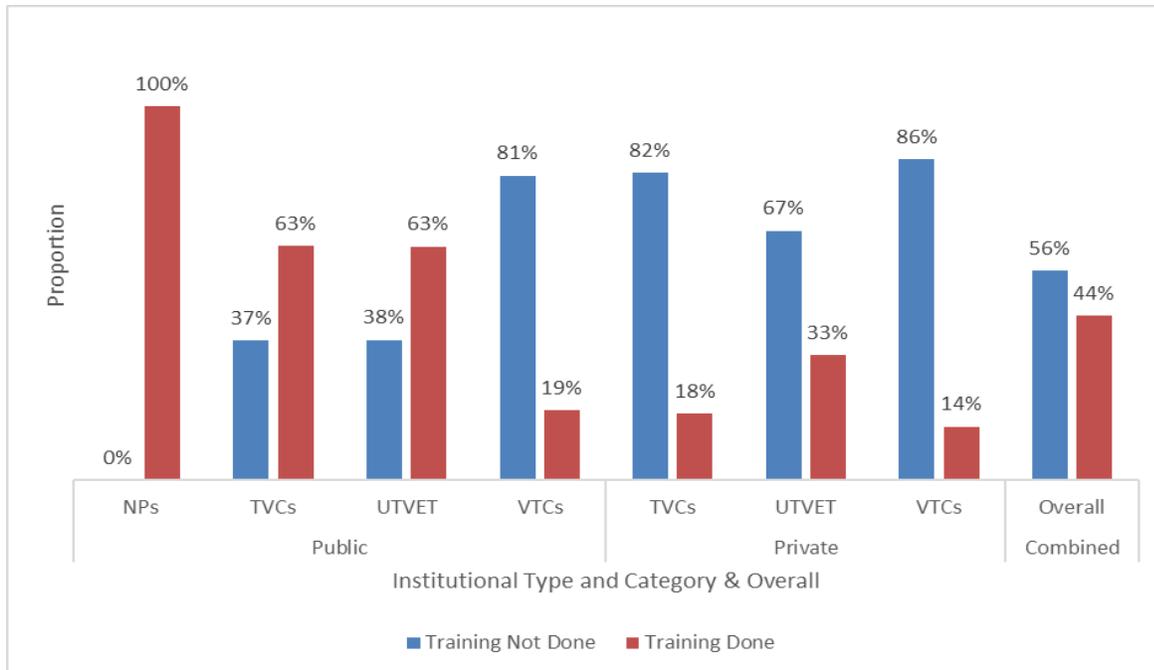


**Figure 11:** *Reasons for not Developing Disability Mainstreaming Policy*

A significant proportion of respondents (45%) cited lack of capacity to develop as the reason why they did not have a disability mainstreaming policy, 28% cited insufficient funds and twenty-six percent (26%) of respondents reported that they did not have a disability mainstreaming policy because they thought it was not necessary, other reasons given by the institutions constituted 31%. This could be due to the misconception that only institutions that have PWD trainees and staff should develop and implement the policy. Other reasons that were cited for not developing the disability mainstreaming policy include; lack of awareness of the requirement of the policy, institution sharing same disability mainstreaming policy with parent organization/institutions, disability matters incorporated/embedded other workplace policies, availability of unapproved disability mainstreaming policy and lack of sensitization of institution administrators on importance of the policy.

#### **4.6.4 Staff Training on Disability Issues**

Training staff on disability issues helps raise awareness on working towards building capacity among staff to strengthen and drive inclusion efforts. The proportion of institutions that had integrated staff training is shown in Figure 12.



**Figure 12:** Training of staff on disability issues

Most public institutions had trained staff on disability issues while most private institutions had not trained their staff on disability issues. Generally, it was noted that only 44% of the TVET institutions had trained their staff on how to work with PWDs. The main reasons that were cited by the administrators for not conducting training for staff on disability issues included lack of institutional capacity (39%) and insufficient funds (30%). A significant proportion (30%) felt that the training was not necessary since they did not have PWDs in their institutions. Other additional reasons included a lack of awareness; a lack of disability mainstreaming committee and a lack of a guiding policy. For the compliant institutions, the frequency of conducting the training on matters of disability is shown in Table 9.

**Table 9:** Frequency of staff training on matters of disability

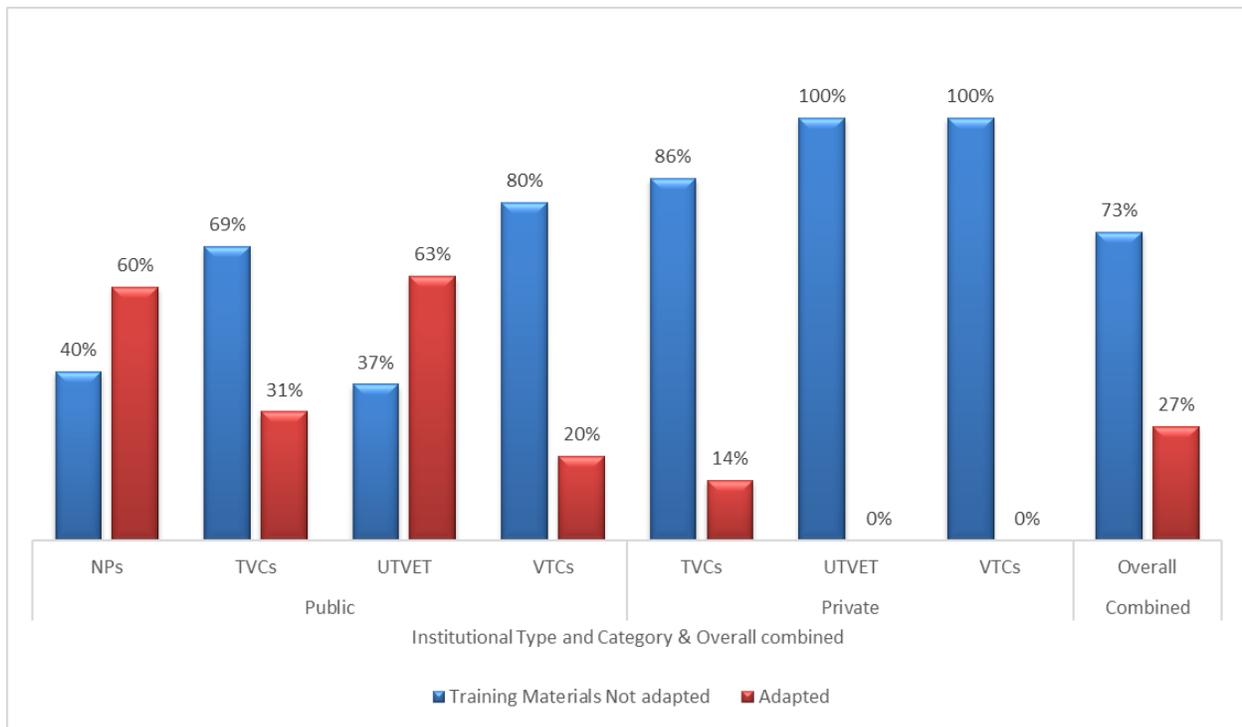
Frequency of staff training on disability	Proportion
3 months	37%
12 months	35%
6 months	21%
9 months	6%

Frequent staff training on disability matters is essential for creating an inclusive and supportive learning environment for all trainees, regardless of their abilities. The study revealed that 37% of the TVET institutions conducted training after every 3 months while 35% conducted the training annually. Conducting training every 3 months ensures that the institutions maintain a proactive

and responsive approach to fostering inclusivity, supporting trainees, and complying with legal obligations.

#### 4.6.5 Adapting Training and Learning Materials to Suit PWDs

Adapting training and learning materials to suit PWDs is not only a matter of legal compliance but also a demonstration of the institution’s values, commitment to inclusivity, and recognition of the diverse needs of trainees. It fosters a culture of accessibility, equity, and respect for all individuals within the learning institutions. This study sought to determine the extent to which the training institutions had adapted learning materials to suit PWDs. The results are presented in Figure 13.



**Figure 13:** Adapting training and learning materials to suit PWDs

The study found that 60% of NPs, 31% of Public TVCs, 63% of Public UTVET and 20% of Public VTCs had adapted training materials for PWDs, while only 14% of private TVCs had done so. The adaptation of PWD teaching and learning materials was lower in private institutions. It can also be noted that all private UTVETs and VTCs had not adapted training materials to suit PWDs. Overall, only 27% of the institutions had adapted training and learning materials to suit the needs of the PWDs. Low adaptation of training materials for PWDs can lead to the exclusion of PWDs from training and learning opportunities. This perpetuates barriers to participation and limits the ability of PWDs to develop their knowledge and skills alongside their peers. The study further established the type of training/ learning materials adapted by different institutions. Table 10 presents some of the learning materials adapted by different TVET institutions.

**Table 10:***The proportion of Institutions that have adopted Training/Learning Materials*

<b>Training/Learning Materials</b>	<b>Proportion</b>
Teaching Aids	57%
Audio and Digital Text	22%
Textbooks	13%
Curriculum	8%

The proportion of institutions that had adapted teaching aids, audio and digital text, textbooks, and curricula to accommodate the needs of PWD trainees were 57%, 22%, 13%, and 8%, respectively. The lower proportion in the adaptation of textbooks and curriculum could be attributed to the fact that trainees who required these services are mainly admitted to special institutions. Institutions could improve inclusivity and hence cater to the needs of PWDs by creating supportive environments that encourage active participation in learning. This would help in the provision of tailored teaching aids and materials, such as Braille books and magnifiers, large font handouts, audiobooks, and public address systems to accommodate different disabilities and ensure equal access to education and training.

#### **4.6.6 PWDs' Support Physical Structures in TVET Institutions**

Persons with disabilities require assistive devices to overcome some of their physical limitations and function optimally. The provision of special equipment and assistive devices to trainees with disabilities in TVET is fundamental to realizing quality training for all. This study sought to find out the nature and extent of the provision of support services to trainees with disabilities in TVET institutions. Table 11 presents the proportion of institutions that were offering special facilities and assistive devices to support PWDs.

**Table 11:***PWDs Support Physical structures*

<b>PWDs Physical Support Structures</b>	<b>NPs</b>	<b>TVCs</b>	<b>UTVET</b>	<b>VTCs</b>
Friendly Washrooms	90%	49%	91%	22%
Ramps	100%	63%	82%	56%
Wheelchairs	70%	13%	18%	3%
Accessible washrooms	90%	57%	91%	27%
Lifts/ elevators	0%	9%	45%	1%
Wide doors	90%	35%	55%	22%
Non-Slip Carpets	20%	4%	18%	1%
Tactile paving	20%	3%	0%	1%
Braille keyboards	10%	2%	27%	0%
Low placed handles	40%	10%	27%	9%
Saloon door hinges	0%	3%	18%	0%
Rails	60%	27%	64%	4%
Signages	90%	17%	27%	0%

Accessible parking lots	80%	37%	64%	27%
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The TVET institutions offered various support services to their trainees with disabilities. Wheelchairs, Accessible washrooms, PWD-friendly washrooms, and Accessible parking were the most offered equipment and assistive devices. Some devices such as Lifts/ elevators, Nonslip Carpets, Braille keyboards, and Saloon door hinges were not very common among the TVET institutions. The VTCs had a serious deficit in the provision of equipment and assistive devices to trainees with disabilities. This implies that trainees with disabilities could not access quality education and training at these institutions due to a lack of assistive devices and equipment. These findings contradict KISE (2019) which reported that VTCs were well endowed with equipment and assistive devices for trainees with disabilities. This could be attributed to the low funding levels and limited staff capacity development.

#### 4.7 Support Structures for Gender Mainstreaming

##### 4.7.1 Gender Mainstreaming Physical Facilities

To promote inclusivity in TVET, Institutions are expected to provide support structures for gender mainstreaming. These support structures include separate changing rooms, washrooms, hostels, nursing rooms, and sanitary bins among others. The respondents were requested to choose the support structures available at their institution for gender mainstreaming. The results are depicted in Table 12

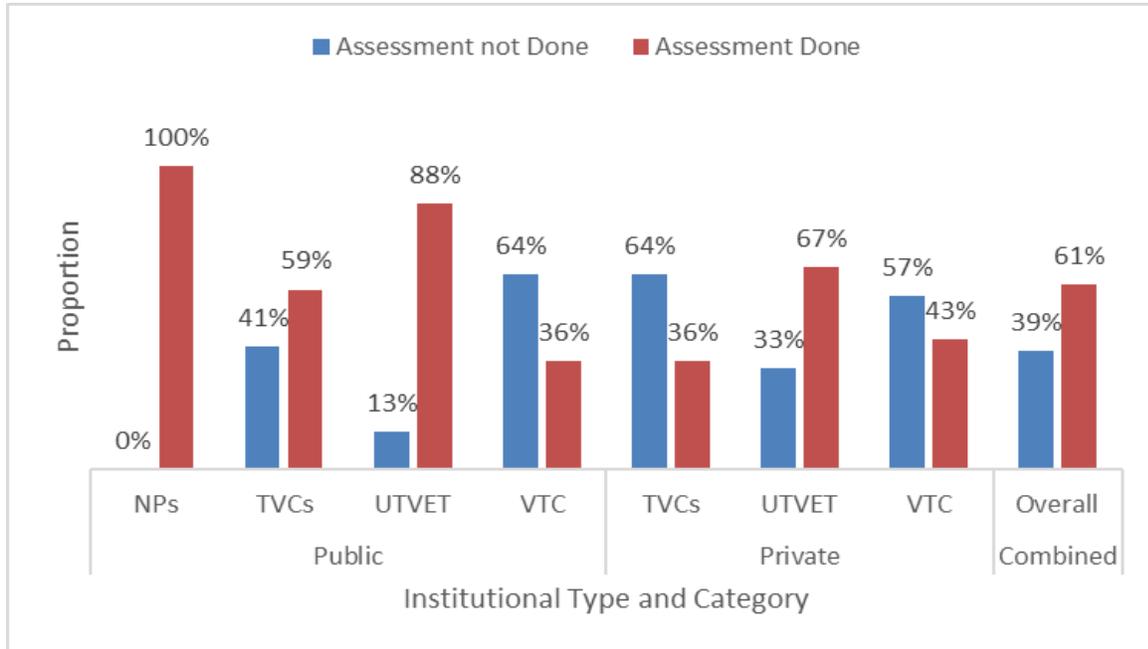
**Table 12:**  
*Gender Mainstreaming Physical Facilities in TVET*

<b>Support Facilities</b>	<b>NPs</b>	<b>TVCs</b>	<b>UTVET</b>	<b>VTC</b>
Separate changing rooms	50%	36%	55%	23%
Separate washrooms	100%	98%	100%	92%
Separate hostels	90%	45%	64%	36%
Step ladders available	40%	19%	27%	10%
Use of automated tools and equipment	30%	21%	9%	10%
PPEs available	70%	41%	55%	40%
Nursing rooms	50%	12%	36%	6%
Sanitary bins	100%	89%	100%	25%

The largest proportion of institutions had separate washrooms for each gender and sanitary bins for the female trainees. The low provision of sanitary bins by the VTCs could be attributed to the widespread use of pit latrines. The use of automated tools and equipment was the least support structure provided by the institutions. Other structures such as nursing rooms, step ladders, and separate changing rooms were not common among the institutions. The VTCs were lagging in terms of support structures for gender mainstreaming. This could be attributed to the limited budgetary allocations to vocational training by the County governments. The institutional management should increase investment in support structures for effective gender mainstreaming.

### 4.7.2 Periodic Gender-Based Assessments

Periodic gender-based assessments are critical in the determination and prioritization of issues affecting both male and female trainees in TVET institutions. The proportion of institutions that conducted periodic assessments on gender-based issues is shown in Figure 14.

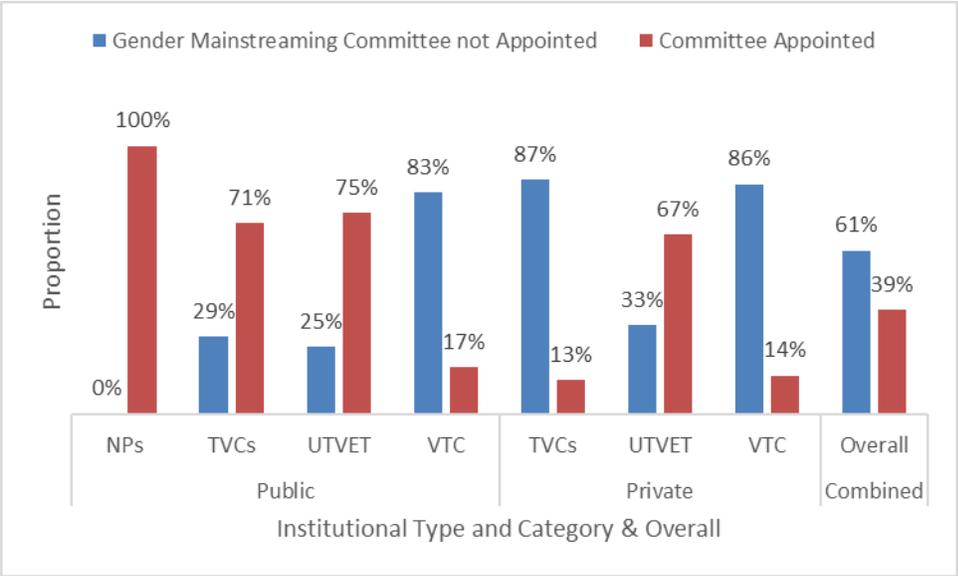


**Figure 14:** Periodic Assessment on Gender-Based Issues

A significant proportion of NPs, public TVCs, and UTVETs conducted gender-based needs assessments to determine the needs of both trainers and trainees. A relatively small proportion of VTCs were noted to be conducting gender-based assessments. This situation in VTCs could be attributed to a lack of awareness and capacity to conduct assessments. However, most private institutions do not conduct this assessment except private universities' TVET directorates. Generally, 61% of the TVET institutions conduct assessments on gender-based issues and there was evidence that most of them were implementing it. The gender-based assessment could be improved through sensitization of the TVET institutions.

### 4.7.3 Gender Mainstreaming Committee

The gender mainstreaming committee plays a crucial role in ensuring gender equality principles are integrated into all aspects of the institution's operation and culture. The TVET institutions are expected to ensure gender equality and inclusivity in education and training.

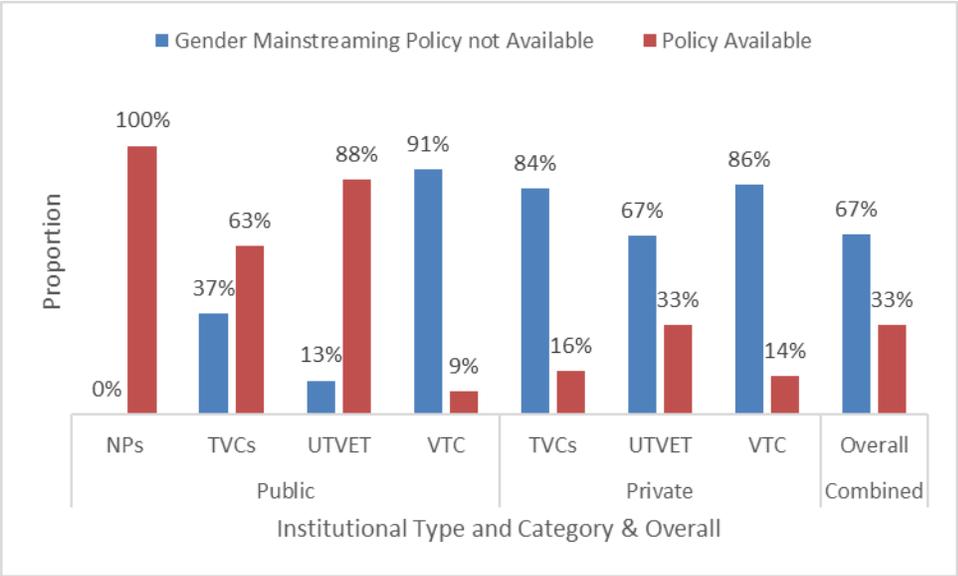


**Figure 15: Availability of Gender Mainstreaming Committee**

All the NPs had established gender mainstreaming committees. Most of the public UTVET directorates and TVCs had also established the committee. The higher proportion of NPs, public TVCs, and public UTVETs could be attributed to the introduction of PC indicators on gender mainstreaming. The lower proportion of VTCs and private TVET institutions that had established gender mainstreaming committees could be attributed to a lack of awareness and capacity to establish and operationalize the committees. Generally, a significant percentage of TVET institutions (61%) had no gender mainstreaming committee in place. This could explain why a significant proportion of institutions did not undertake an assessment of gender-based issues and establish support structures for gender mainstreaming.

**4.7.4 Gender Mainstreaming Policy**

The gender mainstreaming policy is a crucial document that guides gender inclusivity and equality in education and training. This study sought to establish the availability of the policy in TVET institutions. The proportion of institutions that had developed the policy is depicted in Figure 16.

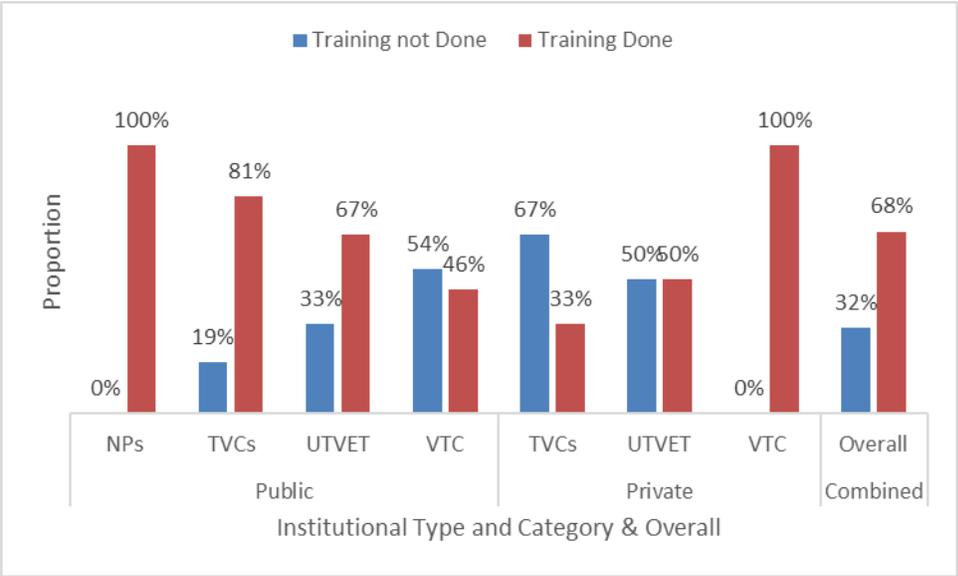


**Figure 16: Availability of Gender Mainstreaming Policy**

The majority of the public TVET institutions had Gender mainstreaming policies except the VTCs. However, most of the private institutions lacked the policy. This could be explained by the fact that most public VTCs and private institutions had not established a gender mainstreaming committee.

**4.7.5 Training on Gender-Based Issues**

The institutions that had appointed gender mainstreaming committees were asked whether the committee members had been trained. The results are depicted in Figure 17.

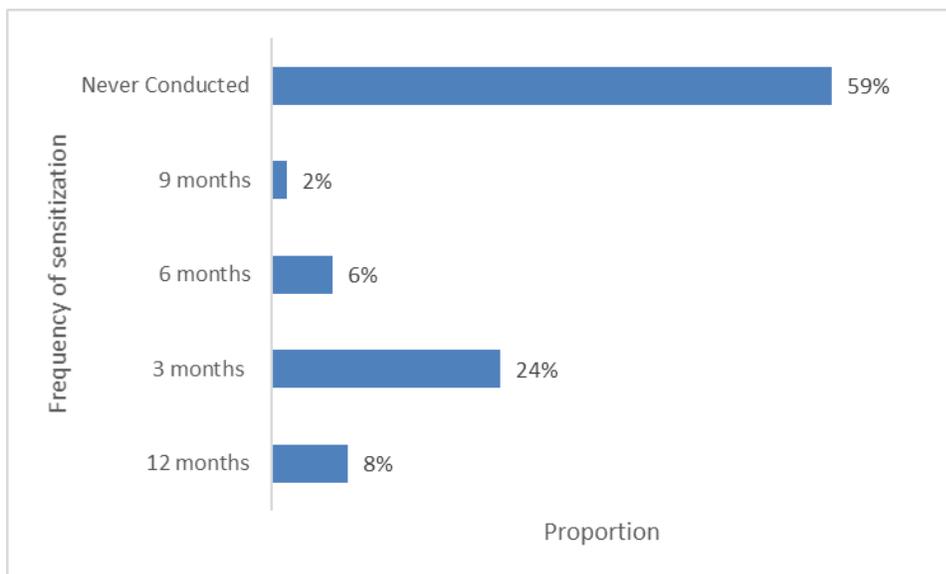


**Figure 17: Committee Training on Gender-Based Issues**

The proportion of institutions that trained their gender mainstreaming committees was lower than those that appointed them. This implied that some of the institutions had not trained their gender mainstreaming committees. All the NPs and private VTCs conducted training for their gender mainstreaming committees. The majority of public TVCs and UTVETs had also trained their committees. A big proportion of private TVCs and public VTCs had not conducted training for their committees.

#### 4.7.6 Gender Sensitization in TVET Institutions

Sensitization on gender issues involves creating awareness and promoting understanding of the importance of gender equality, challenges faced by different genders, and the benefits of creating inclusive training environments. Gender mainstreaming committees are expected to conduct periodic sensitizations of staff and trainees as part of their mandate. Figure 18 shows the proportion of institutions that conducted sensitizations at different intervals.



**Figure 18:** Frequency of Gender Sensitizations in TVETs

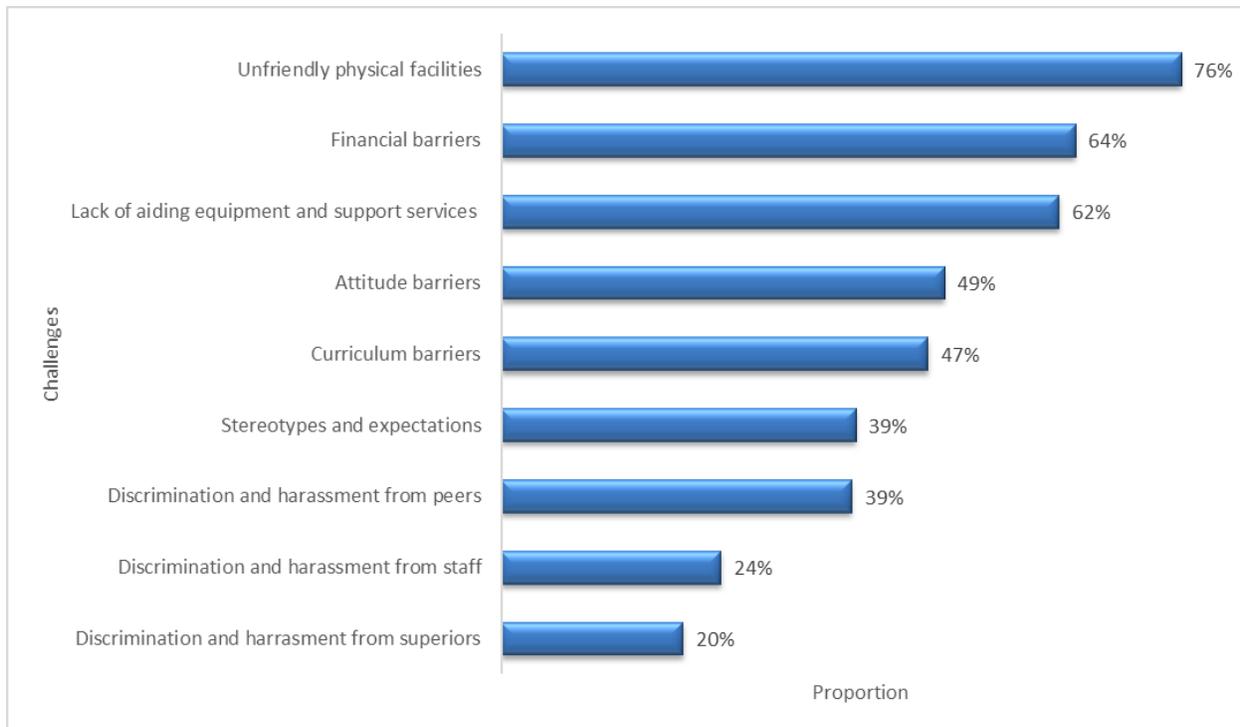
A slight majority (59%) of the TVET institutions had not conducted gender sensitization. It was also noted that 24%, 6%, 2%, and 8% conducted gender sensitization every three, six, nine, and twelve months respectively. Frequent sensitizations are important for creating awareness of gender issues and challenging existing stereotypes and discriminatory practices.

#### 4.8 Challenges Faced by PWDs in TVET Institutions and Mitigation Measures

The study sought to determine the challenges faced by PWDs in TVET institutions. Understanding these challenges faced by PWDs is a prerequisite to coming up with the most effective mitigation measures.

### 4.8.1 Challenges faced by PWDs

Respondents were asked to cite some of the challenges that could potentially affect PWDs in their institutions. The findings are depicted in Figure 19



**Figure 19: Challenges Affecting PWDs**

The administrators identified unfriendly physical facilities, financial barriers, and lack of aiding equipment and support services respectively as the most prevalent challenges that were faced by PWDs. The issues that presented the least challenges for PWDs included discrimination and harassment from peers, staff, and superiors.

### 4.8.2 Mitigation Measures/Strategies

The strategies that were proposed to help in mitigating the challenges faced by PWDs included:

- i. Periodic awareness creation and sensitization on PWD mainstreaming as well as assessment and registration of PWDs;
- ii. Guidance and counseling of PWDs in TVET institutions and providing easy access by adopting the open-door policy;
- iii. Conducting regular assessments to identify the needs of PWD staff and trainees;
- iv. Affirmative action to have inclusivity in student leadership through the nomination of PWD representative;
- v. Engaging strategic partners to support infrastructural improvement to accommodate PWDs;
- vi. Developing harmonized, inclusive, and flexible curriculum for all types of disabilities;
- vii. National and County governments to establish scholarship programs for PWDs;

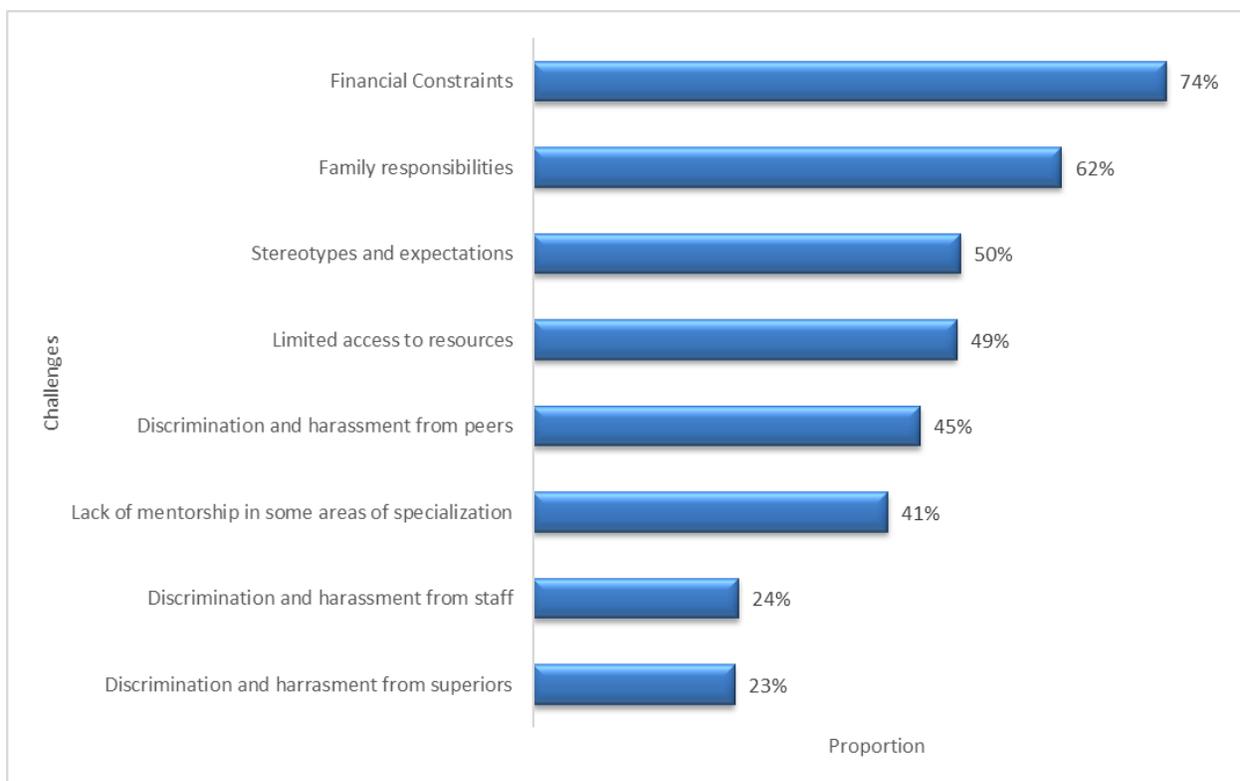
- viii. Responsible Agencies to enforce implementation of the Disability Policy and PWD Act;
- ix. Adherence to National policy on gender and disability mainstreaming;

#### 4.9 Gender-Based Challenges in TVET and their Mitigation Measures

The study sought to determine the Gender-based Challenges faced by Trainees in TVET Institutions. Understanding these challenges is a prerequisite to coming up with the most effective mitigation measures.

##### 4.9.1 Gender-based Challenges

Technical and Vocational Education and Training (TVET) institutions often experience gender-based challenges to trainees, which can hinder their educational experiences and career prospects. Figure 20 shows the proportion of challenges that were cited by administrators.



**Figure 20:** Gender-based Challenges Faced by Trainees in TVET Institutions

The study noted that the main gender-based challenges that were faced by trainees included financial constraints (74%), family responsibilities (62%), stereotypes and expectations (50%), limited access to resources (49%), discrimination and harassment from peers (45%), lack of mentorship in some areas of specialization (41%), discrimination and harassment from staff (24%) and discrimination and harassment from superiors (23%). Lack of mentorship in some areas of specialization could be attributed to the fact that some institutions had inadequate academic support systems in place as well as the involvement of private stakeholders who would mentor the trainees. Previous studies on challenges facing TVET institutions revealed similar challenges such

as inadequate training facilities and financial constraints (Woyo, 2013). The financial constraints could be attributed to limited access to financial assistance such as bursaries, scholarships, and loans which cut across both genders. According to the National Gender and Equality Commission (2015), family responsibilities affected trainee enrolment and retention with the impact more pronounced in female trainees due to the burden of care. Gender-based discrimination and harassment from peers and staff affected the confidence and overall performance of the trainees.

#### **4.9.2 Mitigation Measures/Strategies**

The strategies that were proposed for mitigation of the gender-based challenges included:

- i. Regular sensitization of staff on policies such as gender mainstreaming and gender-based violence;
- ii. Implementation of work-study programs and involvement of private stakeholders such as KCB, MASTERCARD Foundation, USAID Child Fund, and World Vision in offering scholarships and grants to needy trainees;
- iii. Provision of mentorship and support programs to address the needs of female trainees to offer guidance, networking opportunities, and career development support to empower and help them succeed in traditionally male-dominated fields;
- iv. Provision of career guidance and counseling to trainees to eliminate gender-based challenges such as stereotypes and attitudes towards the programs that are skewed towards gender. For instance, breaking female stereotyping in STEM courses by increasing the visibility of females already undertaking the courses to attract more girls to take up the courses.
- v. Creating a safe and supportive campus environment free from discrimination and harassment by providing resources for reporting and addressing such incidences through the installation of signage against GBV, open door policy, sexual harassment, and anonymous reporting tools;
- vi. Involvement of external stakeholders such as prospective employers and partners from the industry to promote gender diversity and inclusivity;
- vii. Involvement of staff in knowledge-sharing, peer-supporting, and working with trainees as an acknowledged channel for the integration of learning on gender equality into the TVET's functioning for instance through affirmative integration of student leadership.
- viii. Establishment of a comprehensive discipline system in individual institutions to address issues of indiscipline, gender-based violence, and sexual harassment.
- ix. Involvement of local government in the improvement of physical infrastructure to incorporate additional rooms such as nursing/lactation rooms and dorms to enhance gender responsiveness.
- x. Establishment of a flexible school calendar to increase retention and completion which could be affected by family responsibilities

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### Introduction

This chapter covers discussions of various objectives' findings from the study, recommendations, and conclusions.

#### 5.1 Summary and Conclusions

The overall enrollment of male trainees was slightly higher (51%) than that of the female trainees (49%). The private TVET institutions registered a higher proportion of female enrolment than male trainees while the public institutions had a higher proportion of male enrollment than female. The proportion of female trainees that were enrolled for STEM courses in private institutions was higher than that of male trainees since the institutions mainly offered Hospitality related STEM programs that are in most cases popular with female trainees. There was a higher number of male trainees than female trainees enrolling in STEM courses in public institutions.

The TVET institutions had enrolled PWD trainees with various types of disability in different proportions. The enrollment of PWDs in the institutions was, however, relatively low. Public VTCs had the highest proportion of PWD enrollment at 2.62% while the private VTCs had the lowest proportion at 0.176%. The overall proportion of PWDs that were enrolled in the TVET institutions was 0.904%. The most prevalent types of disabilities in TVET institutions were special learning disabilities, physical impairment, and deafness. The average proportion of male and female trainees with disability in TVET institutions was 1.15% and 0.86%, respectively. Private institutions generally had a lower proportion of trainees with disabilities.

The proportion of male teaching staff was higher than that of females in all categories of institutions except the university directorate of TVET. The overall proportion of both teaching and non-teaching male staff (57%) was slightly higher than that of the female staff (43%). This proportion satisfies the Kenyan constitution requirement (two-thirds gender principle). This can be attributed to enhanced advocacy by different agencies on gender mainstreaming. The findings further showed that 0.505% and 1.399% of the staff employed in private and public institutions respectively were PWDs. On average 1.279% of staff employed by the TVET institutions were PWDs.

Most public institutions were conducting assessments to determine the needs of PWDs except the public VTCs. A lower proportion of the private institutions were conducting needs assessments than the public institutions. All the NPs, most public University TVET directorates, and TVCs had established disability mainstreaming committees. A significant percentage of TVET institutions (55%) had no disability mainstreaming committee in place. This could explain why many institutions had not institutionalized disability mainstreaming to attract more PWDs. The public VTCs were lagging in the development of disability mainstreaming policy. This could be due to a

lack of awareness and capacity to develop the policy. There was a lower proportion of private institutions that had developed the policy. It was also noted that only 44% of the TVET institutions had trained their staff on disability mainstreaming. Overall, only 27% of the institutions had adapted training and learning materials to suit the needs of the PWDs. The TVET institutions offered various support services to their trainees with disabilities. wheelchairs, accessible and PWD-friendly washrooms, and accessible parking were the most available facilities. Some devices such as lifts/ elevators, nonslip carpets, braille keyboards, and saloon door hinges were not very common among the TVET institutions. The lower proportion in the adaptation of training and learning materials could be attributed to the fact that trainees who required these services were mainly admitted to special institutions.

The largest proportion of institutions had separate washrooms for each gender and sanitary bins for the female trainees. The use of automated tools and equipment was the least support structure provided by the institutions. The VTCs were trailing in terms of support structures for gender mainstreaming. This could be attributed to the limited budgetary allocations to vocational training by the County governments. Generally, 61% of the TVET institutions conduct assessments on gender-based issues and there was evidence that most of them were implementing it. In contrast, 61% had no gender mainstreaming committee in place. This could explain why a significant proportion of institutions did not undertake an assessment of gender-based issues and establish support structures for gender mainstreaming. The majority of the public TVET institutions had Gender mainstreaming policies except the VTCs. However, most of the private institutions lacked the policy. The majority of public TVCs and UTVETs had also trained their committees. A big proportion of private TVCs and public VTCs had not conducted training for their committees.

The most prevalent challenges that were faced by PWDs included unfriendly physical facilities, financial barriers, and lack of aiding equipment and support services. The least prevalent challenges for PWDs included discrimination and harassment from peers, staff, and superiors.

The main gender-based challenges that were faced by trainees included financial constraints, family responsibilities, stereotypes, and expectations. Other gender-based challenges were limited access to resources, discrimination, and harassment from peers, lack of mentorship in some areas of specialization, discrimination, and harassment from staff, and discrimination and harassment from superiors.

## **5.2 Recommendations**

Based on the findings from the study, the researchers recommend as follows:

1. Regular sensitization and advocacy on gender mainstreaming in the TVET institutions and provision of career guidance to promote gender equality in all programs;
2. Regular sensitization and advocacy on disability mainstreaming in the TVET institutions and provision of career guidance to promote equal opportunities for all;
3. Institutional management to progressively employ more PWDs to conform to the statutory requirements;

4. The institutional management to mobilize resources to support infrastructural improvement;
5. Institutions to develop and implement disability mainstreaming policy and build the capacity of trainers on PWD matters.
6. Capacity building of TVET institutions on gender mainstreaming
7. Institutions to develop strategies to sustain gender parity among the staff
8. Creating a safe and supportive campus environment free from discrimination and harassment by providing mechanisms for reporting
9. Establishment of a flexible school calendar to increase retention and completion rates
10. Implementation of work-study programs by TVET institutions and involvement of private stakeholders in offering scholarships and grants to needy trainees;

### 5.3 Recommendations Translation and Implementation Action Plan

No.	Recommendation	Actions to be taken	Responsibility	Timelines (Months)
1.	Regular sensitization and advocacy on gender mainstreaming in the TVET institutions and provision of career guidance to promote gender equality in all programs	Conduct regular sensitization on gender mainstreaming and career guidance	Outreach Services Department	Continuous
2.	Regular sensitization and advocacy on disability mainstreaming in the TVET institutions and provision of career guidance to promote equal opportunities for all	Conduct regular sensitization on disability mainstreaming and career guidance	Outreach Services Department	Continuous
3.	Institutional management to progressively employ more PWDs to conform to the statutory requirements	Analysis of annual returns and publication of TVET statistical handbook	Research TVET Institutions	Annual/ Continuous
4.	The institutional management to mobilize resources to support infrastructural improvement	Mobilization of resources from the government and partners	Respective TVET institutions	Continuous
5.	Institutions to develop and implement disability mainstreaming policy and build the capacity of trainers on PWD matters	Support institutions to develop disability mainstreaming policy	Strategy and Planning	Continuous
6.	Capacity building of TVET institutions on gender mainstreaming	Build capacity of trainers on gender mainstreaming	Outreach	Continuous

7.	Institutions to develop strategies to sustain gender parity among the staff	Develop and implement strategies to sustain gender parity	TVET Institutions	Continuous
8.	Creating a safe and supportive campus environment free from discrimination and harassment by providing mechanisms for reporting	Provide mechanisms for anonymous reporting	TVET Institutions	Continuous
9.	Establishment of a flexible school calendar to increase retention and completion rates	Implement CBET programs and RPL	TVET Institutions	Continuous
10.	Implementation of work-study programs by TVET institutions and involvement of private stakeholders in offering scholarships and grants to needy trainees;	Involvement of private stakeholders in funding training programs	TVET institutions and partners	Continuous

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## APPENDICES

### Appendix 1: QUESTIONNAIRE

Technical and Vocational Education and Training Authority (TVETA) is conducting a study on Gender and Disability Mainstreaming in Kenyan TVET institutions. The findings of the study will help in informed decision-making and policy formulation to support Gender and Disability Mainstreaming in the TVET institutions in the country. You have been identified as one of the respondents. Your honest response to the items of this questionnaire will remain confidential and the data will be used entirely for the intended purpose.

#### Part 1: Preliminary Information

101 Respondent

Administrator

102 Gender of the Respondent

Male

Female

103 Training experience

1 to 5 years

5 to 10 years

10 to 15 years

15 to 20 years

Over 20 years

104 Name of TVET provider: .....

105 County (Please select)

106 Type of Institution/ provider

Private

Public

107 Category of institution/ provider

Vocational Training Centre

Technical and Vocational College

National Polytechnic

KSTVET

#### PART 2: Gender and Disability Disaggregated Enrolment in TVET Institutions;

201 Gender disaggregated enrolment within the institution

202 Disability disaggregated enrolment within the institution (include the type and number of disabled trainees)

- Physical Impairment
- Learning Disability
- Mental Disability
- Hearing Impairment

- Visual Impairment
- Cerebral Palsy
- Other (List and number)

203 Gender disaggregated enrolment in STEM-related programs (Engineering, ICT, Applied and Health Science, Hospitality)

204 Gender disaggregated enrolment in non-STEM programs (Business Courses, Theology)

**Part 3: Gender and Disability Disaggregated Staffing Levels within the Institutions**

301 Number of Male and Female staff in your institution (teaching, non-teaching)

302 How many PWD staff are employed in your institution (Teaching and non-teaching, male, female, type of disabilities)

- Physical Impairment
- Learning Disability
- Mental Disability
- Hearing Impairment
- Visual Impairment
- Cerebral Palsy
- Other (List and number)

**PART 4: Support Structures Available in TVET Institutions for PWDs**

401 Does your institution conduct assessments to identify the needs of PWDs?

- Yes
- No

401 a) If Yes, after what period is the assessment conducted?

- 3 months
- 6 months
- 1 year
- 2 years
- Other (State) .....

401 b) If No, what are the reasons for not conducting the assessments?

- Not necessary
- No capacity available to conduct the assessments
- Inadequate funds to conduct the assessments
- Other (State) .....

402 Does your institution have an officially appointed disability mainstreaming committee?

- Yes
- No

403 Does your institution have a disability mainstreaming policy? (Check for evidence)

- Yes

No

403 a) If Yes, is the policy being implemented? (Check for evidence)

Yes

No

403 b) If No, why have you not developed the policy?

Insufficient funds

Lack of capacity

Not necessary

Other (State) .....

404 Does your institution provide training to staff on disability issues?

Yes

No

404 a) If Yes, how often is the training conducted?

- 3 months
- 6 months
- 9 months
- 12 months
- others (specify)

405 Has your institution adapted training and learning materials to suit the learning needs of PWD trainees?

Yes

No

405 a) If yes, provide the list of materials adapted (give options)

- Textbooks
- Training/Teaching Aids
- Curriculum
- Audio and Digital Text
- Others (specify)

406 What physical support structures has your institution put in place to support PWDs

- Ramps
- Wheelchairs
- Accessible washrooms
- Lifts/ elevators
- PWD-friendly washrooms
- Wide doors
- Non-Slip Carpets
- Tactile paving
- Braille keyboards
- Low-placed handles

- Saloon door hinges
- Rails
- Signage
- Accessible parking lots
- Others (State)

**Part 5: Support Structures Available in TVETs for Gender Mainstreaming**

501 Does your institution conduct gender-based assessments to identify the needs of trainees and staff? (Check for evidence)

- Yes
- No

501 a) If Yes, are the findings from these assessments implemented? (Check for evidence)

502 Does your institution have an officially appointed gender mainstreaming committee?

- Yes
- No

503 Does your institution have a gender mainstreaming policy?

- Yes
- No

503 a) If Yes, is the policy being implemented? (check evidence)

504 Does your institution provide training to committee members on gender issues? (check evidence)

- Yes
- No

505 a) How often is gender sensitization conducted? (evidence)

- 3 months
- 6 months
- 9 months
- 12 months
- others (specify)

506 Has your institution put in place the following gender-friendly physical facilities?

- Changing rooms in workshops,
- separate washrooms;
- separate hostels;
- step ladders available;
- easy-to-use tools and equipment;
- PPEs available;
- nursing rooms;
- Sanitary bins

## **Part 6: Gender-based Challenges in TVET Institutions**

601 Which of the following gender-based challenges are more likely to affect trainees and/or staff in your institution?

- Discrimination and harassment from peers
- Discrimination and harassment from staff
- Stereotypes and expectations
- Limited access to resources
- Family responsibilities
- Lack of mentorship in some areas of specialization
- Financial Constraints
- Others (please state)

602 What efforts/ strategies have been put in place to mitigate against the above challenges?

## **Part 7: Challenges faced by persons with disabilities in TVET institutions**

701 Which of the following challenges are more likely to affect persons with disabilities in your institution

Tick accordingly

- Discrimination and harassment from peers
- Discrimination and harassment from staff
- Unfriendly physical facilities
- Stereotypes and expectations
- Attitude barriers
- Lack of aiding equipment and support services
- Curriculum barriers
- Financial barriers
- Others (please state)

702 What strategies have been put in place to mitigate against the above challenges?

**Appendix 2: WORK PLAN**

<b>Activity</b>	<b>August</b>	<b>January</b>	<b>February</b>	<b>March</b>	<b>April</b>
Development of proposal and data collection tools					
Identification of target population and sampling					
Piloting					
Data collection					
Analysis, report writing, and dissemination					