



# KENYA INSTITUTE OF SPECIAL EDUCATION

## A Situational Analysis of Inclusive Education Practices in Technical and Vocational Training Institutions in Kenya



DECEMBER 2019



## ABBREVIATIONS AND ACRONYMS

HELB	Higher Education Loans Board
IE	Inclusive Education
KISE	Kenya Institute of Special Education
KUCCPS	Kenya Universities and Colleges Central Placement Service
MOE	Ministry of Education
SDG	Sustainable Development Goal
SNE	Special Needs Education
SNTVI	Special Needs Technical and Vocational Institutions
TTI	Technical Training Institute
TVC	Technical and Vocational Colleges
TVET	Technical Vocational Education and Training
TVETA	Technical Vocational Education and Training Authority
TWDs	Trainees with Disabilities
VTC	Vocational Training Centre

## FOREWORD

Kenya, as articulated in the Vision 2030 aspires to become a middle-income economy by 2030.

Among the pathways prioritized to achieve this dream is education, expanding expansion and quality of secondary schooling and revamping Technical and Vocational Education and Training (TVET). The expectation is that TVET would create a workforce that suits the demands of the rapidly changing labour needs, now and into the future.

While enrollment to TVET institutions has been on a sharp ascent over recent years, these gains may not be equitable across all categories of Kenyan youth. One such categories are youth with disabilities who, despite the clear constitutional promise of equity, continue to suffer persistent barriers, in both educational and occupational transitions. Yet, there is adequate evidence that TVET presents one of the few clear gateways to decent living for persons with disabilities.

This study is both handy and timely. Our dream is that the evidence in here will inform policy changes to accelerate inclusion in TVET. Second, we hope that the findings of the study will be of use to the TVET practitioners at all levels, in understanding the accommodations, the support and the advocacy necessary to make change a reality. Realizing inclusion and inclusive practice in TVET will support our Vision 2030 efforts, and help Kenya in accounting to the global community on the Sustainable Development Goals on the commitment to ‘leave no one behind’.

Lastly, the findings contained in this report build a case for **POLICY MARKERS TO ADDRESS** reverse integration in our Special Needs TVET Institutions, and support focused on the devolved Vocational Training Centres, where a bulk of the youth with disabilities are enrolled.



**DR JOHN K. MUGO**

**CHAIRMAN, KISE COUNCIL**

## **PREFACE**

The overall responsibility of the Ministry of Education (MOE) is to provide equal access to education and training to all children and youth. To realize this responsibility the ministry provides budgetary and technical support to schools and training institutions.

Technical and vocational training provides the youth with skills that are required in the labor market. After acquiring relevant skills, the youth enter into formal or informal sectors to serve in different capacities. In this regard they support economic growth and development of the country.

Despite of the various support provided by the ministry to technical and vocational training institutions youth with disabilities experience challenges to fully actualize the envisioned benefits. Youth with disabilities require extra support to access technical and vocational training. Such support will include specialized training and equipment, disability mainstreaming and environmental modification. In most technical and vocational training institutions, this support is minimal or absent.

This study on Situational Analysis of Inclusive Education Practices in Technical and Vocational Training Institutions in Kenya was undertaken to highlight the current enrollment of trainees with disabilities and the nature of support available for them. The findings herein provide useful information that may be used to design and develop suitable support for the trainees with disabilities.

On behalf of the Kenya Institute of Special Education, I wish to call upon the concerned institutions and stakeholders to take cognizance of the findings and recommendations in improving training for the youth with disabilities.



**MUTISO T. WAMBUA HSC**

**DIRECTOR, KISE**

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Firstly, we acknowledge the Directorate of Technical and Vocational Education in the Ministry of Education for their support in mapping of target institutions and providing personnel who supported our data collection, analysis and report writing process. We thank KISE management under the leadership of the director, Mr. Mutiso T. Wambua (HSC), for financing the survey and providing other logistical support to make this report possible.

Special thanks to members of the technical team for their professional input and working long hours to ensure that this report was complete within the specified timeframe.

Finally, the institute wishes to acknowledge Mr. Wambua Solomon Musembi for spearheading this survey



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## EXECUTIVE SUMMARY

Kenya Institute of Special Education in conjunction with the Ministry of Education conducted a situational analysis survey on inclusive education practices in technical and vocational training institutions in Kenya between September 2018 and June 2019. The purpose of this study was to assess uptake of technical education by persons with disabilities and evaluate inclusiveness in offering technical education in Kenya.

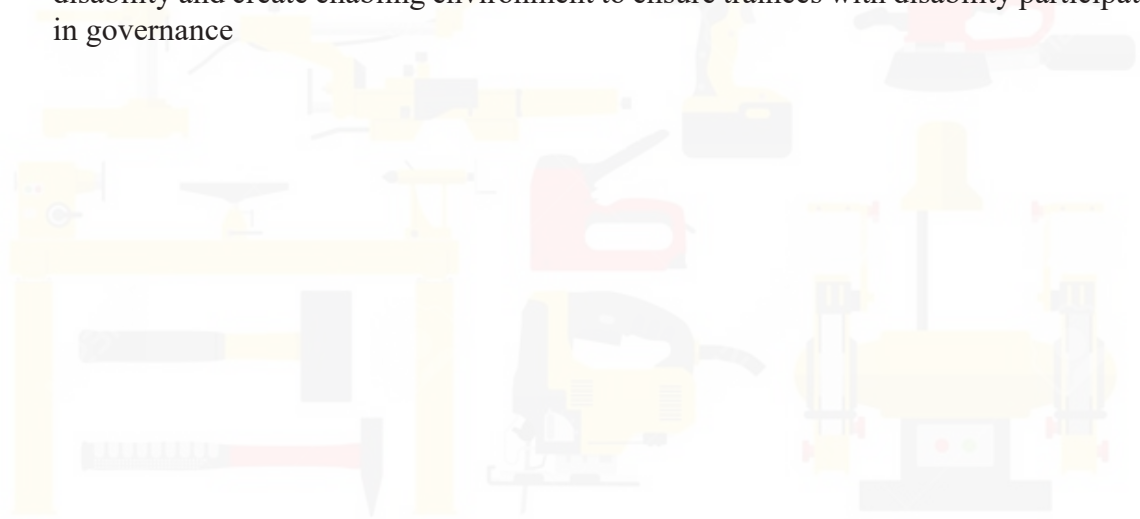
The survey targeted accredited public technical and vocational training institutions in Kenya as documented by the Directorate of Technical and Vocational Education. A cross-sectional survey design was adopted in which 11 national polytechnics, 60 technical training institutes and 94 vocational training centres were involved during data collection. A hybrid sampling scheme was adopted to select approximately 2/3 of Kenya's geographical representation (30 counties). Counties that had either a national polytechnic, a special needs technical training institute or both were purposively sampled, giving a total of 13 counties. Stratified sampling was then applied to sample 50% of the remaining 34 counties. In each county, random sampling was applied to select institutions to be included in the study except for National Polytechnics and Special Needs Technical Institutions which were involved without sampling. The target population was the head of institutions and trainees with disabilities in instances where they were present.

The findings of the study revealed that enrolment of trainees with disabilities in technical training requires deliberate revival. It was found that trainees with disabilities form less than 4 per cent of the total student's population, the worst enrolment being in National polytechnics. On the other hand, special needs training institutions which were established to specifically provide technical education to persons with disabilities enrol between 30 and 76 per cent of trainees without disabilities. The bulk of trainees with disabilities in technical education are found at vocational training centres, in fact there is no national polytechnic for trainees with disabilities in Kenya. Consequently, about 87 per cent of trainees with disabilities in technical institutions are pursue craft certificate level courses. It was also found that there is significant gender parity in enrolment, 56 per cent and 44 per cent female trainees with disabilities.

Despite the fact that technical institutions in Kenya are poorly resourced to accommodate trainees with disabilities, the study indicates that about 19 per cent of these institutions have found ways to make training of students with disabilities feasible. Such institutions were observed to provide physical assistance to especially blind students through provision of sighted guides while other would provide guidance and counselling. It was observed that other than direct applications to the institutes, trainees with disabilities are admitted into technical institutions by the help of NGOs, FBOs and CBOs. KUCCPS played an insignificant role in the admission of trainees with disabilities in technical institutions.

Based on the empirical evidence on enrolment status of trainees with disabilities in technical institutions, support services provided and challenges the institutions face in offering quality training to trainees with disabilities, the following recommendations are made;

- To enhance enrolment of trainees with disabilities in technical institutions, the state should consider enforcing the implementation of the Constitution of Kenya (2010), TVET Act 2013, CRPD, sector policy 2018 and the disability Act of 2003 on access to education in public institutions.
- The Directorate of Special Needs Education (DSNE) and the Directorate of Technical Education Vocational and Training to give a policy directive on reverse integration to avoid trainees without disabilities outweighing those with disabilities in Special technical and vocational training centres.
- The Directorate of Technical Education Vocational and Training and communities should provide facilities and materials required by trainees with disabilities. This will ensure that these trainees are trained using the appropriate facilities and materials
- Kenya Universities and Colleges Central Placement Service (KUCCPS) and the Directorate of Technical Education Vocational and Training to put measures to enhance placement of trainees with disabilities in all levels of technical institutions (National Polytechnic, Technical Institutes and Vocational Centres)
- The government to increase funding for TVET institutions for both students and infrastructure. This would promote equipping technical institutions with relevant materials, equipment and devices that support the training of TWDs
- Create awareness among trainees to embrace inclusivity in leadership and governance and also encourage trainees with disability to vie for leadership positions. For instance, the management of TVET institutions to eliminate discrimination of trainees with disability and create enabling environment to ensure trainees with disability participate in governance



# CHAPTER 1

## 1 INTRODUCTION

### 1.1 Background

Technical education is academic and vocational preparation of learners for jobs involving applied science and technology. Technical education can also be thought of as the type of education that provides special practical training, knowledge and skills to learners (Adnan et al., 2017; Kouega, 2018). It makes learners well-skilled in different fields such as agriculture, engineering, medical, carpentry, driving etc. A skilled workforce is a basic requirement for driving the engine of industrial and economic growth (Ogundele, Akingbade & Akinlabi, 2012). Technical education emphasizes the understanding and practical application of basic principles of science, technology and Mathematics. According to Sulaiman et al., (2015) the goal of technical education is to prepare graduates for occupations that are classified above the skilled crafts.

In the past, especially in Kenya, technical education was frequently seen as a placement option for learners who could not attain a grade to pursue academic courses at the university (Nyaga, Karanja & Kithae, 2017). The perception of vocational education was even worse as it was thought only to be for those who are unable to access college education and possible dropouts. However, since the year 2000, a fresh awareness of the critical role that Technical and Vocational Education and Training (TVET) can play in economic growth and national development in Kenya has dawned (Apunda, De Klerk & Ogina, 2017).

Technical and Vocational Education and Training (TVET), therefore, is one of the key priorities of the Government's development agenda. One of the most important features of TVET is orientation towards the world of work and the acquisition of relevant skills. The government of Kenya has put in place policies and strategies that has seen many students join technical and vocational education since 2017. Among these strategies include; Establishing and equipping of more training centres across the country, reduction of school fees in technical and vocational institutions, giving scholarships and bursaries and giving students in these institutions access to Higher Education Loans (HELB).

### 1.2 Purpose of the Study

The purpose of the study is to examine the uptake of technical and vocational education by trainees with disabilities in Kenya. The study findings are expected to give a more generalized picture on enrolment of trainees with disabilities, support offered to these trainees if any and challenges they face in pursuit of their training in TVETs. This study extends the previous work conducted by KISE between 2017 and 2018 on children below 21 years with disabilities and special needs in basic education. The findings from the 2017/2018 survey, revealed a gap on the focus given to trainees with disabilities in TVETs with regard to access to quality education and training. Evidence generated through this research is expected to inform improvement in the provision of training learners with disabilities in technical and vocational institutions in Kenya.

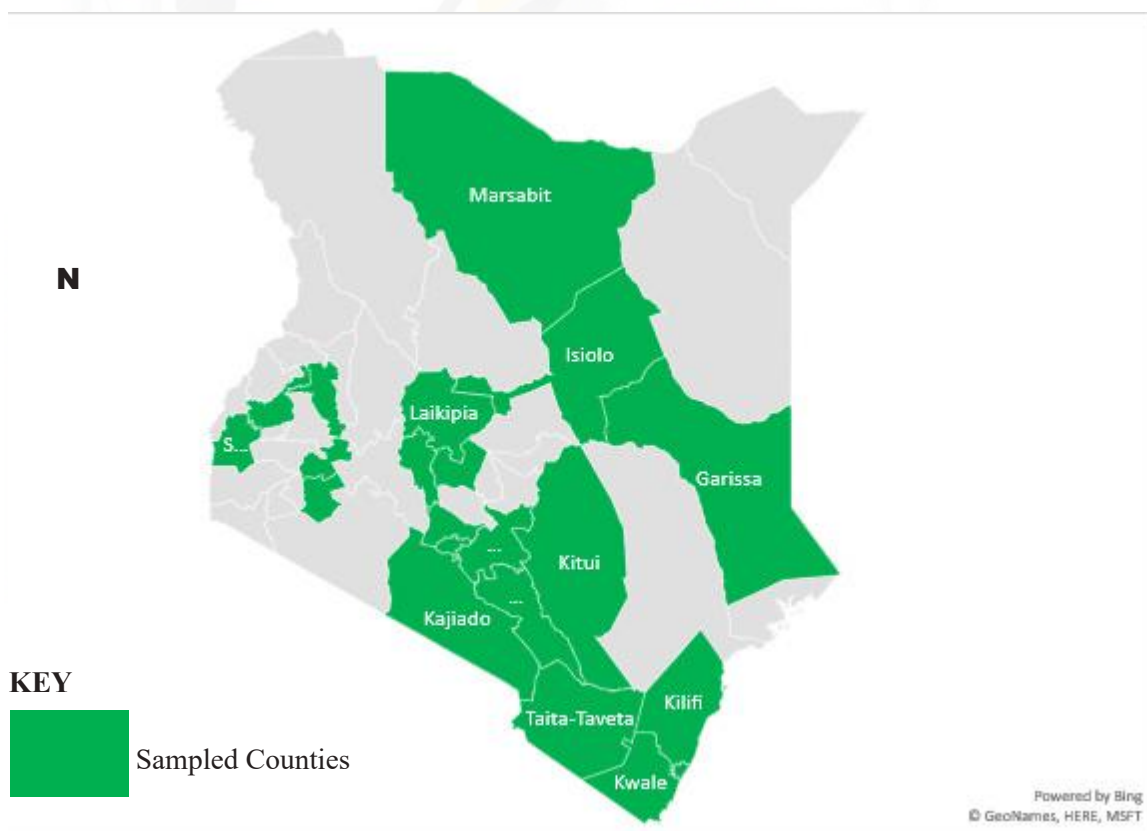
The research question guiding the study are;

1. What is the enrolment status of trainees with disabilities in technical and vocational training institutions in Kenya?
2. What is the nature of support offered to trainees with disabilities in technical and vocational training institutions in Kenya?
3. What are the main challenges facing trainees with disabilities in technical and vocational training institutions in Kenya?

### 1.3 Study Design and Sampling Procedure study involving

This was a cross-sectional study involving 11 National Polytechnics, 60 Technical and Vocational Institutes (TVCs) and 94 Vocational Training Centers (VTCs). The study covered 30 counties (Bomet, Busia, Embu, Garissa, Isiolo, Kajiado, Kakamega, Kericho, Kiambu, Kilifi, Kitui, Kwale, Laikipia, Machakos, Makueni, Marsabit, Meru, Mombasa, Murang'a, Nairobi, Nakuru, Nandi, Nyandarua, Nyeri, Samburu, Siaya, Taita-Taveta, Narok, Trans-Nzoia and Uasin Gishu). The selected counties included all counties with National Polytechnics and other randomly selected counties.

**Map 1: Map of Kenya Showing 30 Sampled Counties**



A list of accredited TVET institutions per county was obtained from TVETA. This list was used as a sample frame from which the 60 Technical and Vocational Institutes (TVCs) and 94 Vocational Training Centres (VTCs) were randomly selected. Proportional sample allocation was used to generate a nationally representative sample.

## 1.4 Survey Instruments

The study used questionnaires as data collection instruments. There were two types of questionnaires; Head of Institution Questionnaire and Questionnaire for Trainees with Disabilities. The questionnaire items were both open and closed ended that gathered both qualitative and quantitative data.

## 1.5 Data Collection

Enumerators visited the sampled institutions with a set of two questionnaires. Consent to collected any information was sought from the management and individual participants. Data was collected from all heads of institutions and all trainees with disabilities admitted in the institution.

## 1.6 Data Analysis

Descriptive and bivariate analysis techniques were used to summarize and analyse quantitative data with the help of SPSS software Version.25.0. Descriptive data analysis involved computation of arithmetic mean in enrolment of trainees in TVETs with respect to variables of interest such as sex, course, admission criteria and disability type among others. Bivariate analysis involved two-way cross-tabulation of variables of interests. Sampling, non-response and non-coverage weights were applied throughout the analysis process to generate accurate inferences at each level of institution.

Qualitative data was analysed thematically with the help of NVivo software version 12.0. Both quantitative and qualitative data were subjected to continuous triangulation during compilation of the findings presented in this report.

## CHAPTER 2

### 2 ENROLMENT OF TRAINEES WITH DISABILITIES

This chapter describes the state of enrolment of trainees with disabilities at different levels of technical and vocational institutions in Kenya. This examines different dynamics trainee admission and enrolment in these institutions with specific focus on enrolment at different level of institution, gender parity, type of disability, areas of specialization, level of training and placement options. The chapter also highlights a comparative analysis of the current practice of integration and reverse integration in TVETs in Kenya. Evidences presented in this chapter, therefore, explore the extent of inclusion of trainees with disabilities in TVETs in Kenya.

Equity in education is a measure of achievement and opportunities to access and transit in education. Educational equity as measure depends on two factors namely; fairness and inclusion. Fairness in the education and training context implies that an individual's state or condition be it physical, social, economic or otherwise should not interfere with their likelihood to access quality education and eventual academic success. Inclusion in education and training context refers to a comprehensive standard that applies to everyone in the education system regardless of their present state or condition.

#### 2.1 Disability and Career Choice

Making wise choices of what to study in college is one of the important decisions in life. The study revealed that having a disability may influence some of the career decisions students in technical institutions make. It was found that career decisions made by 60.4 per cent of trainees with disabilities in technical institutions was mainly based to their disability as opposed to 39.6 per cent who reported that disability did not influence their career choice. When asked about some of the ways in which disability influenced their career choices, it was found that there was lack of modifications to accommodate their disability in some of the training areas they would have preferred.

#### Students' Voices

*Student's Voice 1*, "I had done knitting first but I did not have a knitting machine and therefore chose massage because it does not need any cost"

*Student's Voice 2*, "According to my physical challenges, no any other course can be my choice."

*Student's Voice 3*, "Cannot be able to weigh ingredient use electronic equipment"

*Student's Voice 4*, "Because I have a disability with one of my hand it makes me not to do my work as required."

*Student's Voice 5*, "The physical disability i.e. lack of one hand has influenced the choice since tailoring is less demanding."



*Student's Voice 6*, “Because of my disability I got garment making instead of food and nutrition”

*Student's Voice 7*, “Standing too long during workshop. I feel pain and at times my legs swell.”

*Student's Voice 8*, “It affects because sometime he skips class hours and also the problem comes sometimes when he is carrying his practical.”

It was of interest to establish how trainees with disabilities got into their current areas of specialization/training. The study indicates that majority (57.3%) are pursuing the course as they applied themselves while 26.1 per cent reported to have changed from one area of training to the current one after admission. Other trainees said the course they are pursuing is due to random placement by KUCCPs and they had no influence over them. Some of the reasons that made trainees with disabilities change from their original areas of specializations to new areas include; desire to avoid theoretical classes, lack of equipment, limitation due to disability (mainly those with physical disability) and rejection by some course instructors due to poor performance.

## 2.2 The Practice of Integration in Technical Institutions in Kenya

In Kenya, Technical institutions are classified as National polytechnics (NP), Technical and Training Institutions (TTI) and Vocational and Training Centres (VTC). To increase provision and access to training facilities for trainees with disabilities in TVET, Special Needs Technical and Vocational Institutions (SNTVI) were established. However, most of these institutions have been established within special schools and thus are unclassified by TVETA. Table 2.1 below presents a comparison in enrolment between trainees with and without disabilities in regular technical institutions in Kenya.

Table 2.1: Enrolment of Trainees with Disabilities in TVET Institutions

Category of Institution	Weighted Average Enrolment			Proportion of Trainees with Disabilities
	Overall	Male	Female	
National Polytechnic	3,785	2,327	1,459	0.10%
Technical Training Institutions	1,397	806	549	0.20%
Vocational Training Centre	147	94	51	3.50%

From Table 2.1 above, enrolment is highest in National polytechnics with an average of 3,785 and lowest in Vocational Training Centres with an average of 147 trainees annually. It was found that trainees with disabilities constitute less than 4% of the total student population in TVET institutions in Kenya. Further, majority of trainees with disabilities are enrolled in Vocational Training Centres which is the lowest level among the technical

institutions in Kenya. National Polytechnics and Technical Training Institutions which have more specialized training programmes and equipment enrol less than 0.5% of trainees with disabilities.

Table 2.2 below presents a comparison in enrolment between trainees with and without disabilities in Special Needs Technical and Vocational Institutions (SNTVI) in Kenya. The purpose of establishing SNTVI was to increase provision and access to training facilities for trainees with disabilities in Kenya.

Table 2.2: Enrolment of Trainees without Disabilities in Special TVET Institutions

Category of Institution	Weighted Average Enrollment			Proportion of Trainees Without Disabilities
	Overall	Male	Female	
National Polytechnic	-	-	-	-
Technical Training Institutions	501	257	245	31.10%
Vocational Training Centre	82	42	40	76.20%

It was found that there is no National Polytechnic established and categorized at a Special Needs Training Institution in Kenya. From Table 2.2 above, Special Needs TTIs have the highest enrolment with an average of 501 while VTCs have relatively low enrolment rate of 82 trainees annually. Additionally, the proportion of trainees without disabilities enrolled in SNTVIs is significantly higher (31.1% in Special Needs TTIs and 76.2% VTCs) compared to the proportion of trainees with disabilities in regular training institutions. Clearly, a significant proportion of slots which could be possibly reserved for trainees with disabilities are taken away by their typically developing counterparts in both regular and Special Need TVETs.

### 2.3 Gender Disparities in Enrolment of Trainees with Disabilities in TVET Institutions

Gender disparities refer to one sex being disadvantaged over the other in experiences and outcomes. According to UNICEF report (2016), education disparities in Basic Education in Kenya has seen in differences in enrolment rates, dropout rates, and survival rates among the sexes. The UNICEF report (2016) also indicated that female shows slightly higher enrolment than their male counterparts at primary level, but the trend switches and widens at secondary level. This study confirms the findings by Stromquist (2014), a global study which makes a general conclusion that the male gender dominates the female in technical education across the globe. Table 2.3 below presents current situation in gender disparities in enrolment of trainees with disabilities in technical and vocational training institutions.

Table 2.3: Gender Differences in Enrolment of Trainees with Disabilities in TVETs

Category of Institution	Male	Female	Total
<b>Overall Enrolment</b>	<b>56</b>	<b>44</b>	<b>100%</b>
National Polytechnic	47	53	100%
Technical Training Institutions	60	40	100%
Vocational Training Centre	56	44	100%

Comparing the enrolment of trainees with disabilities in TVET institutions in Kenya, the survey reveals that there are more male trainees at 56% compared to their female counterparts at 44% as shown in Table 2.3 above. The trend of enrolling more males than female trainees with disabilities in TVET institutions was observed as being more noticeable at the technical training institutions and vocational training centres at 60% and 56% respectively. However, it was observed that more female trainees with disabilities were enrolled more in national polytechnics at 53% compares to males at 47%.

## 2.4 Trainee Enrolment per Disability Domain

There are many different types of disabilities that can affect the normal functioning of performance of an individual. However, most of these disabilities do not necessarily affect the learning ability of an individual, thus, given necessary support a person with disability has the potential to perform like any other person. This survey revealed that some of the most prevalent types of disabilities among trainees enrolled in TVET institutions include; physical disabilities, learning disabilities, mental disabilities, deaf, hard of hearing, low vision, blind and those with cerebral palsy as presented in Table 2.4 below. Other disabilities found in the field included epilepsy, dyslexia and albinism.

Table 2.4: Enrolment of Trainees with Different Disabilities in TVET Institutions

TYPE OF DISABILITY	NP	TTI	VTC	TOTAL
<b>Overall Enrolment</b>	<b>8.96</b>	<b>22.6</b>	<b>68.5</b>	<b>100.0%</b>
Physical Disabilities	12.1	21.2	66.7	100.0%
Learning Disability	6.1	36.4	57.6	100.0%
Mental Disability	3.7	25.9	70.4	100.0%
Deaf	11.1	27.8	61.1	100.0%
Hard of Hearing	7.1	21.4	71.4	100.0%
Low Vision	0	35.7	64.3	100.0%
Blind	14.3	0	85.7	100.0%
Cerebral Palsy	20	0	80	100.0%
Other	8.3	16.7	75	100.0%

*NP: National Polytechnic      TTI: Technical Training Institute      VTC: Vocational Training Centre*

From Table 2.4 above, it is clear that enrolment of trainees with disabilities is highest at vocational training centres and least in National polytechnics regardless of their type of

disability. It was found that over 68% of trainees with disabilities in technical institutions are enrolled in vocational training centres, 22.6% in technical training institutes and only 8% in national polytechnics. This implies that most trainees with disabilities have access to low level training which is available in vocational training institutions. National polytechnics and technical training institutions which are better equipped to train more specialized and diversified programmes seem to have a significantly low enrolment of trainees with disabilities.

While the nature and type of disability may affect enrolment rate, the philosophy of educational equity and fairness demand that each person is given equal opportunity to access quality education and training. Table 2.5 below presents a comparative enrolment of trainees with disabilities from the most to the least prevalent.

Table 2.5: Prevalent Disability in In TVET Institutions

TYPE OF DISABILITY	Average Enrolment			
	Overall	NP	TTI	VTC
Physical Disabilities	33.7	47.1	29.2	33.6
Learning Disability	16.8	11.8	25	14.5
Mental Disability	13.8	5.9	14.6	14.5
Deaf	9.2	11.8	10.4	8.4
Low Vision	7.1	0.0	10.4	6.9
Hard of Hearing	7.1	5.9	6.3	7.6
Blind	3.6	5.9	0.0	4.6
Cerebral Palsy	2.6	5.9	0.0	3.1
Other	6.1	5.9	4.2	6.9
	100%	100%	100%	100%

*NP: National Polytechnic    TTI: Technical Training Institute    VTC: Vocational Training Centre*

Comparing enrolment of trainees with different disabilities in TVET institutions in Kenya, it was observed that those with physical disabilities were enrolled more than the rest at 33.7%, followed closely by those with mental disabilities and learning disabilities at 16.8% and 13.8% respectively. Trainees who were blind and those with cerebral palsy had the least enrolment in technical institutions in Kenya. The large variations in enrolment of trainees with respect to the type of their disabilities as presented in Table 2.5 above reveals that some disabilities are at a disadvantage than others. The level of severity of a disability is likely to affect enrolment. In fact, most of the trainees with physical disabilities captured in study had mild and imperceptible motor difficulties.

## 2.5 Enrolment of Trainees with Disabilities in Specialized Programmes

Most Technical and Vocational Training Institutions (TVETs) in Kenya offer diversified variety of technical, technology and business courses. Some of these courses are offered at different levels primarily identified as craft certificate and diploma courses. Some national

polytechnics and TTIs offer higher national diploma courses. Table 2.6 below presents enrolment of trainees with disabilities into different areas of specialization.

Table 2.6: Enrolment of Trainees with Disabilities in Specialized Training

<b>COURSES</b>	<b>Craft Certificate</b>	<b>Diploma</b>	<b>Weighted Average</b>
Fashion Design & Garment Making	20.1	0.5	20.6%
Beauty & Hair Dressing	13.2	0.5	13.8%
Hospitality Courses	9.2	1.9	11.1%
Leather work	7.3	0.5	7.8%
Beadwork	4.6	2.8	7.3%
Plumbing	6.9	0.0	6.9%
Carpentry and Joinery	4.6	1.8	6.4%
Electrical Installation	3.7	2.2	6.0%
Business Courses	4.1	0.0	4.1%
Welding and Fabrication	3.7	0.0	3.8%
Building Construction	2.3	0.0	2.3%
Automotive Technology	2.3	0.0	2.3%
Social work & Community Development	0.9	0.5	1.4%
Information Communication Technology	0.9	0.0	0.9%
Other	4.1	1.4	5.5%
<b>TOTAL</b>	<b>87.9%</b>	<b>12.1%</b>	<b>100.0%</b>

From Table 2.6 above, it is clear that trainees with disabilities are enrolled mostly in craft certificate courses (87.9%) and only 12.1% are enrolled at diploma level. Additionally, it was also noted that majority of trainees with disabilities specialize in hospitality courses, fashion and design, garment making, beauty and hair dressing. It was also observed that trainees with disabilities were least enrolled in some areas such as Business Courses, Welding and Fabrication, Building Construction, Automotive Technology, Information Communication Technology, Social work and Community Development. It is important that the training in technical institution include all persons including those with disabilities so that this, previously marginalized group, could have a diversified skill. (See Appendix A)

## 2.6 Mode of Access into Technical Training Institutions

Kenya University and Colleges Central Placement Service (KUPPs) is mandated placement of students in various institutions of higher learning. The government of Kenya, through other programmes and institutions like the National Youth Service (NYS) target to empower the youth especially through the provision of access to quality education and Training. This study sought to establish how some of these initiatives play a role in the placement of trainees with disabilities in TVET institutions in Kenya. Table 2.7 presents a summary of placement options of trainees with disabilities into TVET institutions in Kenya.

Table 2.7: Placement of trainees with Various Disabilities in TVET Institutions

TYPE OF DISABILITY	KUCCPs Placement	Other Govt. Program	Direct Application to Institution	Other Means	TOTAL
<b>Overall Placement</b>	<b>9.1</b>	<b>0.1</b>	<b>72.6</b>	<b>18.2</b>	<b>100%</b>
Physical Disabilities	14.1	6.3	73.4	6.3	100%
Learning Disability	0.0	0.0	80.6	19.4	100%
Mental Disability	4.0	0.0	76.0	20.0	100%
Deaf	0.0	35.3	64.7	0.0	100%
Low Vision	7.1	7.1	78.6	7.1	100%
Hard of Hearing	7.1	0.0	85.7	7.1	100%
Blind	0.0	14.3	71.4	14.3	100%
Cerebral Palsy	0.0	0.0	80.0	20.0	100%
Other	6.9	6.4	75.5	11.2	100%

The survey revealed about 72.6% of trainees with disabilities get admission to TVET institutions by making direct applications to these institutions, majority of whom are those with learning disabilities and hard of hearing. Only 9.1% of those with disabilities are placed in TVETs by Kenya University and colleges' central placement authority (KUCCPs), majority of whom are those with physical disabilities. This implies that admission of trainees with disabilities into technical institutions in Kenya lacks adequate support and only those who are able to make direct application to the institution are likely to get a change.

Further, it was also revealed that a significant proportion of at least 18.2% of trainees with disabilities get their admission through other means. These other means of admission into TVETs were identified initiatives and interventions of educational partners as such as Non-governmental Organizations (NGOs) in various parts of the country, vibrant community-based organizations (CBOs) and/or Faith-Based Organizations (FBOs).

Finally, while it appears that other government programs contribute to only 0.1 per cent of total enrolment of trainees with disabilities in technical institutions in Kenya, it is important to note that some government programmes such as the National Youth Service (NYS) have increased placement of youth with disabilities into training institutions. For instance, admission of the deaf into technical institutions has increased significantly due to NYS interventions.

## CHAPTER 3

### 3 SUPPORT SERVICES FOR TRAINEES WITH DISABILITIES IN KENYA

#### 3.1 Provision of Support Services for Trainees with Disabilities

Provision of support services to trainees with disabilities improves the quality of education and skills acquired. Once a student with disability is enrolled in the educational mainstream programmes, support mechanisms need to be put in place to improve their learning and training experience. Some of these services may not necessarily involve financial implication to the institution. This study sought to establish the nature of support services given to trainees with disabilities in institutions where they are enrolled. Table 3.1 below presents some of the most common services offered to trainees with disabilities in different technical training institutions in Kenya.

Table 3.1: Nature of Available Support Services to Trainees with Disabilities

Support Service	Percentage of Institutions providing
Guidance & Counselling	5.8
Individualized Planning	1.4
Sighted Guide	6.9
Sign Language Interpretation	2.0
Braille Services	2.0
Teaching Aids	1.0
Care Givers	0.4
No Specific Support/Extra Support Staff	80.7
<b>Total</b>	<b>100.0%</b>

Evidence from the field indicates that only 19.3% of TVET institutions in Kenya offer some support services to trainees with disabilities. Availing of sighted guides to trainees with visual impairment was offered as a support service by most special needs training institutions while guidance and counselling by other regular TVETs. The rest (80.7%) of TVETs in Kenya did not offer any specific support service to trainees with disabilities despite enrolling them in various training programmes.

#### 3.2 Provision of Equipment and Assistive Devices for Trainees with Disabilities

Persons with disabilities require assistive devices to overcome some of their physical limitations and function optimally. Provision of special equipment and assistive devices to trainees with disabilities in technical institutions is fundamental in realizing quality training for all. This study sought to find out the nature and extent of provision of support services to trainees with disabilities in technical institutions in Kenya. Figure 3.1 below presents some special equipment and assistive devices offered to trainees with disabilities.

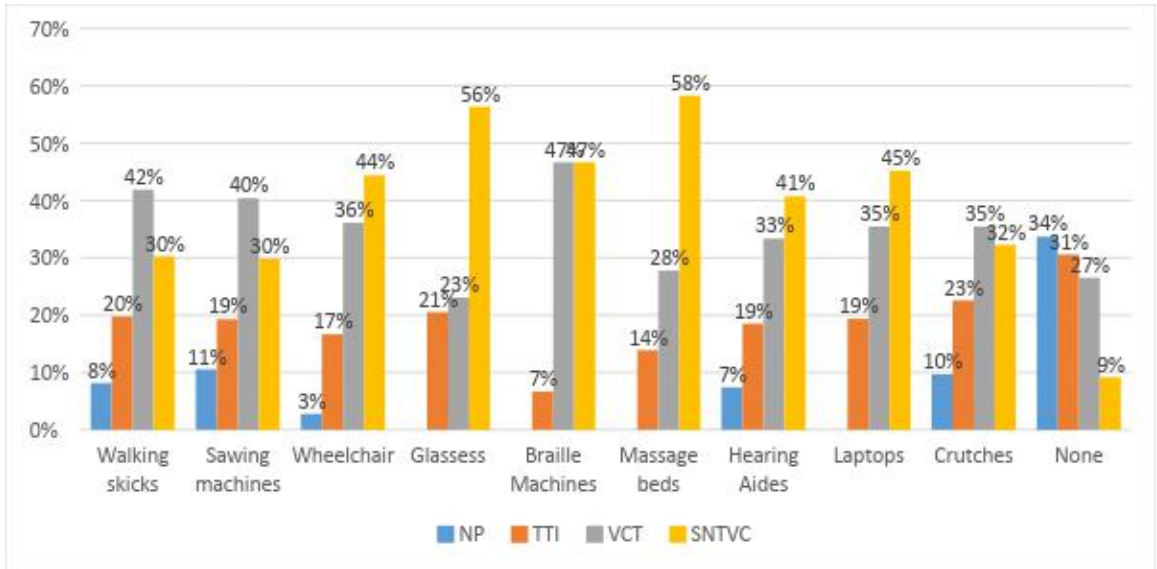


Figure 3.1: Equipment and Assistive Devices

As presented in Figure 3.1 above, Special Needs Technical and Vocational Institutions (SNTVI) offer a variety of support services to their trainees with disabilities. Wheelchairs, glasses, massage beds, hearing aids and laptops are among the mostly offered equipment and assistive devices. On the contrast, National Polytechnics have a very serious deficit in the provision of equipment and assistive devices to trainees with disabilities. Some devices such as massage beds, braille machines and laptops are none existent in most national polytechnics and technical training institutions. This implies that trainees with disability are rarely access quality education and training at these higher levels due to lack of assistive devices and equipment.

Further, it can also be deduced from Figure 3.1 above that among the three non-SNTVI institutions, VTCs are fairly well endowed with equipment and assistive devices for trainees with disability such as adapted sewing machines (43%) and walking sticks (39%). This may be attributed to the fact that the colleges offer training mainly at lower certificate levels. These colleges are also located within their neighbourhood in villages and estates, hence, easily accessed by trainees with disability and are also getting support from some county governments.

### 3.3 Representation of Trainees with Disabilities in Student Leadership

Student leadership is an important aspect of schooling just as excellence in academic and sports are. Some of the benefits of student leadership include learning and practicing building relationships, setting role models and mastering the art of motivating, directing and influencing people. The government of Kenya under the Ministry of Education embraced student leadership by instituting student councils in all learning institutions. Acquiring a leadership position in the student council ought to motivate and encourage democratic participation of all students where everyone is given an opportunity to seek a mandate to lead others. Figure 3.2 below presents different means through which trainees with disabilities get to be represented in student councils.



Figure 3.2: Representation of Trainees with Disabilities in Student Council

Evidence from the field indicate that 44.4% of TVET institutions have trainees with disabilities represented in their student council while 55.6% of these institutions do not have trainees with disabilities in the student leadership. It was found that 16.7% of TVETs have a reserved slot for trainees with disabilities in their student’s council and 13.5% allow representation only through election by popular vote. This may be a demonstration of positive endeavours towards the realization of embracing inclusive practices. On the other hand, some institutions allow students with disabilities to nominate their representative while in others, school administration plays a role in the nomination of representatives. This scenario implies that trainees with disability may not be taking active in student leadership.

To uncover more details in the nature of representation of trainees with disabilities in various institutions, each category of institutions was isolated and the details presented in Table 3.2 below.

Table 3.2: Trainee Representation in Different Levels of Technical Institutes

REPRESENTATION	NP	TTI	VTC	SNTVI	TOTAL
Nomination by the Administration	25.0	39.3	16.1	19.6	100.0%
Nomination by Others	29.2	22.9	2.1	45.8	100.0%
Election	14.9	33.3	13.8	37.9	100.0%
A reserved Slot	41.4	24.3	18.6	15.7	100.0%
No representation	10.1	38.4	43.5	8.0	100.0%

*NP: National Polytechnic    TTI: Technical Training Institute    VTC: Vocational Training Centre    SNTVI: Special Needs Technical and Vocational Institution*

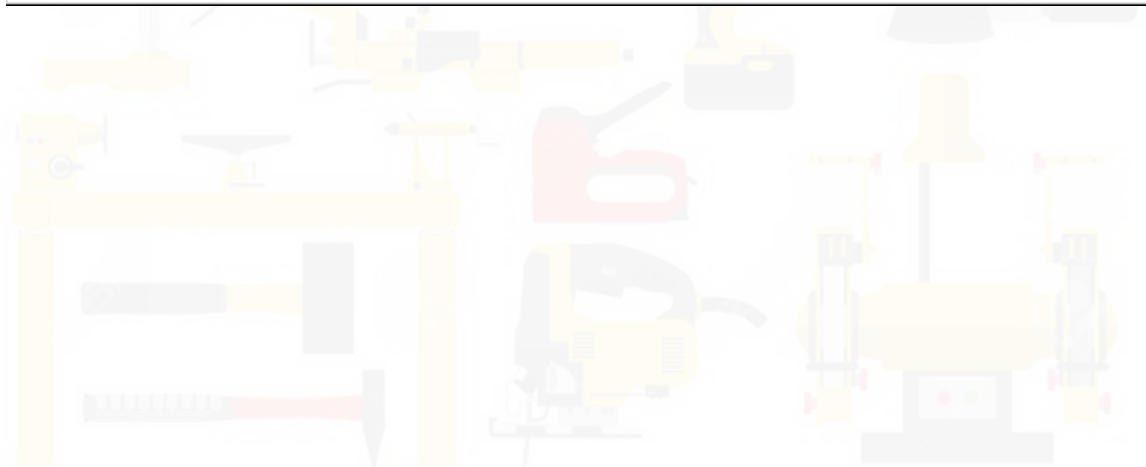
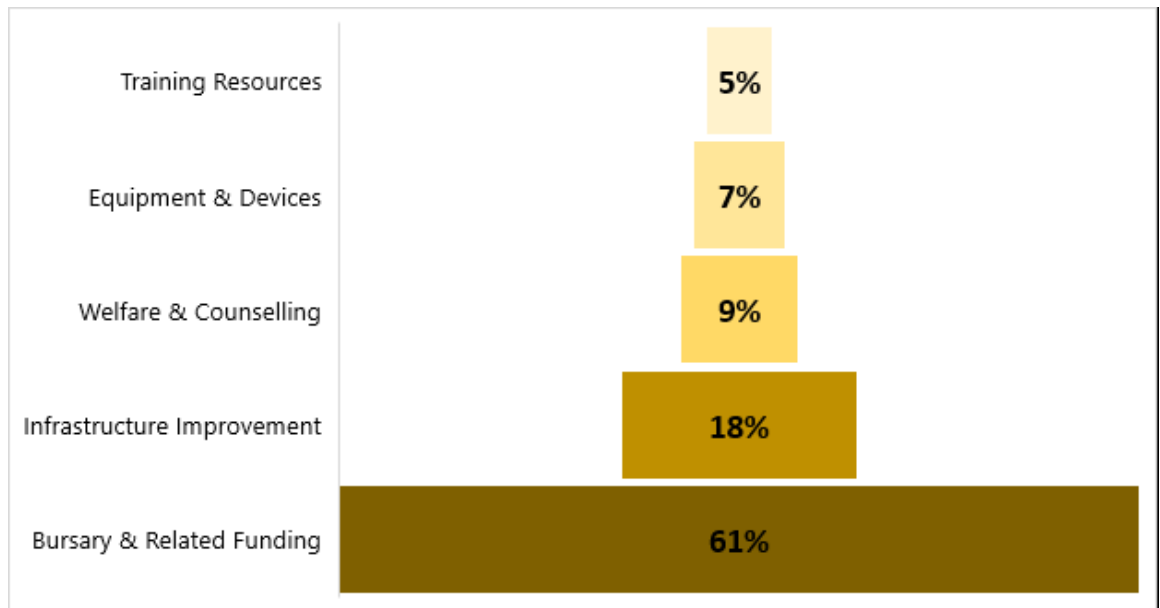
As presented in Table 3.2 above, Technical Training Institutes and National Polytechnics dominated where administration either nominates a student representative or create a reserved slot for a trainee with disability in the student council. It was also noted that special needs technical and vocational institutions and technical training institutions encourages representation of trainees with disabilities into the student’s council through election by popular vote. This implies that given conducive environment, trainees with disabilities would compete for elective positions in leadership and would enhance opportunities to articulate issues affecting them. Conversely the representation VTCs and some TTIs was relatively low and in some cases no representation at all.

### 3.4 Resource Management in TVET Institutions in Kenya

From the above chart, most of support goes towards bursary and related funding (61%) and least support went to training resources (5%), equipment and devices receiving (7%).

This implies that most institutions are likely to operate with inadequate training resources, equipment and devices thereby compromising the quality of training.

It also points to poor management of funds received as fees considering that most of the institutions were not well resourced even after receiving huge funding through bursary and related funding.



## CHAPTER 4

### 4 CHALLENGES IN THE PROVISION OF QUALITY TRAINING

#### 4.1 Trainees with Disabilities Response on Challenges they face in TVET Institutions

Previously, studies on challenges facing graduates from technical institutions by renown scholars and education practitioners have revealed that inadequate supply of instructional materials (Dasmani, 2011), inadequate training facilities, weak linkages with local industries for hands-on-experience (Woyo, 2013) for both instructors and trainees lead to ineffective and inefficient training of students while emphasis is placed on passing final examination. This inadequacy in preparation for the job market brought workplace challenges to the graduates (Dasmani, 2011; Woyo, 2013). This study sought to establish the kind of challenges that trainees with disabilities experience in technical and vocational education.

CHALLENGE IDENTIFIED	PERCENTAGE
Inadequate Equipment/ Devices to Support Training	45.30%
School Fees Challenges	34.40%
Inadequate Facilities e.g. Classrooms, Hostels, Workshops	32.90%
Communication with others	17.30%
Long Distance to School	15.60%
Poor environment	4.70%

In the above table, lack of equipment/devices for training purposes was cited as the greatest challenge at 30.2%. Specialized equipment and devices including adapted sewing machines, adapted computers, braille machines, wheel chairs, hearing aids, among others are important for supporting trainees with disabilities. Lack of the same has adverse effect on participation in the training programme.

Trainees identified lack of school fees as the second major challenge at 22.9%. School fees issues have the potential to disrupt the training programme leading to either dropout or delayed completion of the courses that explains why it is ranked high by trainees.

Inadequacy of facilities such as classrooms, laboratories and workshops were the third ranked challenge at 21.9 per cent. Availability and adequacy of training facilities may have been considered important by trainees due to its effect on trainee participation, learning and achievement. Trainees reported poor infrastructure created a barrier to learning especially hands on practical skills and impacted on the choice of course of specialization.

Communication challenge was significantly at 11.5 per cent. The use of sign language, braille, finger spelling, large prints and other alternative communication techniques is important in exchange of information and ideas with trainees with disabilities during the training.

The distance covered by the trainees to the institution and between facilities was a challenge reflected at 10.4%. Trainees with disabilities such as those with cerebral palsy, chronic

health impairments, physical disabilities and visual impairments experienced mobility challenges.

Although the challenge of poor school environment was reported at a low percentage of 3.1 per cent by trainees, a conducive school environment impacts positively on enrolment and training.

#### 4.2 Challenges faced by trainees while choosing the courses in Training Institutions

Trainees with disabilities reported facing various challenges in their quest for training. Their responses as to which challenges caused them to choose the courses, they took in view of the respective disabilities yielded the following data:

CHALLENGE FACED BY THE TWDS	PERCENTAGE
Theory in the program	24.30%
Ease of start up after training	23.93%
Constrained to the program	22.10%
Unfriendly training facility	11.70%
Inability to get instructions from the Lecturer	10.37%
Distance between facilities	8.68%
Teacher Unfriendly	5.29%
Need to prove themselves	4.90%
Acquired Disability	3.59%
Lack of tools related to course	3.20%
Lack of Medical support	2.59%

The concern of the demand the programs may place on the trainee, especially in theory skewed programs, was reported at 22.03 per cent and made them choose programs that were less demanding. The nature of examination and evaluation was also a matter of concern as was the ability to write and read the notes involved in the training. Ease of starting up or being productive after training influenced them at similar level of 22.03 per cent. Trainees considered whether the courses taken needed significant level of capital for start-up. They shunned courses that required heavy investment. This underscores the social pressure for them to be independent.

The learners indicated that the highest barrier to them pursuing their desired courses was being constrained to certain courses, deemed appropriate, given the type of disability with a frequency of 20.03 per cent. These choices were made for them by parents and institutions that considered ‘fitting the trainee’ into the facilities and institutions, no evidence was available that there were attempts to make any accommodations that would allow them take their preferred courses. Some trainees considered the inability to understand their instructors, with a frequency of 8.47 per cent, and further got influenced by the friendliness of their instructors at 3.39 per cent. Unfriendly training facilities was reported 8.47 per cent a challenge leading to trainees with disability to change their courses.

### 4.3 Challenges Reported by Heads of Special Needs Technical and Vocational Institutions

Challenge	TTI	VTC	Overall
Communication Challenges	29	22	25
Lack of Adequate Resources	29	22	25
Health Issues	14	11	13
Psycho-Social Issues	14	0	6
Lack of Exit Strategy	0	11	6
Lack of Awareness	0	11	6
Lack of Parental Support	0	11	6
Lack of Uniform	14	0	6
Lack of Trained Personnel	0	11	6
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Heads of special TVET Institutions identified communication challenges to be highest at 25%. Trainees with disabilities such as those with sensory impairments, cerebral palsy and intellectual challenge have an accompanying communication difficulty. The heads also indicated that staff are not proficient in alternative communication modes to accommodate diverse trainees.

The lack of adequate resources was ranked at the same level with communication challenges at 25 per cent by both heads' special technical institutes and heads of special vocational training centers. It was reported that allocated resources by the relevant levels of government was inadequate. In some cases, equipment for training was available but materials for course use were not available. In other cases, neither were the labs nor workshops were functional.

Health issues were reported at 13 per cent by heads of special TVET institutions. Health issues are a major concern in institutions with trainees with disabilities as many disabilities have accompanying health challenge. Some trainees with disabilities reported to suffer strains while undertaking prolonged practical lessons. The demand for therapy and regular medical attention enhance the reason for the high rank of this challenge.

Psycho-social issues and lack of uniforms were both placed overall at 6 per cent but they were reflected as major concerns to head of special TTI at 14 per cent. Heads of institutions reported that presence low self-esteem, lack of self-confidence, withdrawal and aggression were common among trainees with disabilities.

Equally, the challenges of lack of exit strategy from college to the world of work, lack of awareness especially on matters of management of disability, lack of parental support, and lack of trained personnel was each reported by heads of special VTCs at 11 per cent which was higher than the overall percentage at 6 per cent.

#### 4.4 Challenges faced by Regular Technical Training Institutions in training trainees with disabilities

Heads of regular Technical Training Institutions in response to the challenges they face in ensuring that trainees with disabilities are included, their responses are summarized in the table below:

Challenge Identified	NP	TTI	VTC	Overall
Lack of trained personnel	44	23	32	30
Lack of adequate resources	22	30	30	29
Unfriendly infrastructure	0	14	12	12
Lack of awareness	11	12	9	10
Communication challenges	22	7	7	8
Lack of fees	0	2	5	4
Absenteeism	0	9	1	3
Health issues	0	2	2	2
Psycho-social issues	0	0	3	2
	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Heads of regular Training Institutions indicated that the greatest challenge they face in provision of services and training to trainees with disability was lack of trained personnel and lack of adequate resources at 30 per cent and 29 per cent respectively. Other key challenges identified included unfriendly infrastructure at 12 per cent, lack of awareness on disability at 10 per cent and communication challenges at 8 per cent. They also cited lack of fees at 4 per cent, absenteeism at 3 per cent and health and psycho-social issues at 2 per cent as challenges affecting trainee participation.

The high ranking of the challenge of lack of trained personnel in Inclusive Education practices in TVET is an indicator of low uptake of training opportunities by staff in these Institutions while lack of adequate resources and unfriendly infrastructure raises the question of lack of reasonable accommodations.

## CHAPTER 5

### 5 SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents the summary of findings of the study, draws conclusions based on these empirical findings and proposes policy recommendations and further research. The chapter is made up of two sections; *Section 5.2* presents the summary of findings and conclusions and *Section 5.3* recommendations drawn from the findings of the study.

#### 5.2 Summary of Findings and Conclusions

- It was observed that regular TVETs admitted a negligible number of trainees with disabilities. From the study, only 0.1%, 0.2% and 3.5% are trainees with disabilities in national polytechnics, technical institutes and vocational training centres respectively.
- The study indicated that the number of trainees without disabilities outweighs the number of those with disabilities in Special Technical and Vocational Institutions. The study indicated that 31% and 76% are trainees without disabilities enrolled in Special technical institutes and special Vocation centres respectively.
- There is a significant gender disparity in the admission of trainees with disabilities in TVET institutions in favour of male gender. Overall, there were 56% male and 44% female trainees with disabilities in the technical and vocational training institutions in Kenya, 2019.
- A few technical training institutions offers some support such as guidance and counselling and availing of sighted guides for the blind trainees but majority of TVET institutions (80.7%) do not provide specific support services for trainees with disabilities.
- Much of support from partners come in form of bursary and related funding with least going towards training materials and infrastructure.
- There is serious lack and/or shortage of equipment, teaching and learning materials and essential facilities such as classrooms, hostels, workshops and unfriendly environment to support quality training for those with different disabilities
- National polytechnics are poorly resourced in equipment/devices for supporting TWDs.
- There are challenges of communication bordered on inadequate communication skills such as Kenyan sign language and other alternative communication modes on the part of the staff and trainees without disabilities
- Lack of trained personnel in inclusive education practices and related areas. Both the management and the trainees concurred that staff lack knowledge in Inclusive education, special needs education disability mainstreaming and total communication. These are especially materials that facilitate practical lessons like hair driers, blow dryers, clothing materials, wood, metals and metal rods, electric cables, stones and cement, computers among others. It meant that the trainees would not engage in practical and hence limits acquisition of skills. Personal assistive devices including but of limited to white canes, wheels chairs, clutches, magnifiers, hearing aids, laptops/tablets and white canes are likely to ease and encourage participation of TWDs.
- Further on infrastructure, it was noted that in some institutions, distances between classrooms, labs and workshops was cited to be vast for the trainees raising a challenge

that resulted in some of them opting out of some courses. It was noted that most of the facilities were not accessible to trainees with disabilities due to stairs, slippery floors, narrow doors, lack of modified sanitary facilities, ramps with poor gradients, inadequate lighting lack of signage and windows and doors that open into verandas.

- Unfriendly environment. This is in reference to especially the social environment, whereby trainees reported being ignored, shouted at, not represented in student leadership, bullied, labelled, being denied access to some courses and being treated as sick persons as a result of their disability.

### 5.3 Recommendations and Proposed Policy Advancement

- To enhance enrolment of trainees with disabilities in technical institutions, the state should consider enforcing the implementation of the Constitution of Kenya (2010), TVET Act 2013, CRPD, sector policy 2018 and the disability Act of 2003 on access to education in public institutions.
- The Directorate of Special Needs Education (DSNE) and the Directorate of Technical Education Vocational and Training to give a policy directive on reverse integration to avoid trainees without disabilities outweighing those with disabilities in Special technical and vocational training centres.
- The Directorate of Technical Education Vocational and Training should introduce measures to enhance enrolment of female trainees with disabilities in TVET education
- The directorate of TVET should capacity build staff in TVETs to be able to offer support required by trainees with disabilities
- The Directorate of Technical Education Vocational and Training and communities should provide facilities and materials required by trainees with disabilities. This will ensure that these trainees are trained using the appropriate facilities and materials
- The national polytechnic should be adequately resourced to serve as centres of excellence in TVET
- Kenya Universities and Colleges Central Placement Service (KUCCPS) and the Directorate of Technical Education Vocational and Training to put measures to enhance placement of trainees with disabilities in all levels of technical institutions (National Polytechnic, Technical Institutes and Vocational Centres)
- Organize fora to create awareness on special needs and disabilities within all TVET institutions.
- The government to increase funding for TVET institutions for both students and infrastructure. This would promote equipping technical institutions with relevant materials, equipment and devices that support the training of TWDs
- Provision of accommodation to support trainees with disabilities to address the issue of long distances to the TVET institutions
- Create awareness among trainees to embrace inclusivity in leadership and governance and also encourage trainees with disability to vie for leadership positions. For instance, the management of TVET institutions to eliminate discrimination of trainees with disability and create enabling environment to ensure trainees with disability participate in governance
- There is need to enhance inclusion in trainee leadership in TTIs and VTCs where the representation was very low and in some cases no representation at all



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## Appendices

### Appendix A: Area of Specialization for Trainees with Disabilities

Area of Specialization	Fashion Design & Garment Making	Beauty & Hair Dressing	Hospitality Courses	Leather work	Beadwork	Plumbing	Carpentry and Joinery	Electrical Installation	Business Courses	Welding and Fabrication	Building Construction	Automotive Technology	Social work & Community Development	Information Communication Technology	Other	Row Total
<b>Craft Certificate</b>	<b>20%</b>	<b>13%</b>	<b>9%</b>	<b>7%</b>	<b>5%</b>	<b>7%</b>	<b>5%</b>	<b>4%</b>	<b>4%</b>	<b>4%</b>	<b>2%</b>	<b>2%</b>	<b>1%</b>	<b>1%</b>	<b>4%</b>	<b>88%</b>
Physical disabilities	5%	2%	3%	0%	3%	0%	4%	2%	1%	1%	0%	0%	1%	0%	1%	24%
Learning disability	3%	4%	0%	3%	0%	1%	0%	1%	1%	0%	0%	0%	0%	0%	0%	15%
Hearing Impaired	4%	1%	0%	2%	0%	1%	0%	0%	0%	1%	1%	0%	0%	0%	1%	14%
Mental disability	2%	3%	0%	2%	0%	0%	0%	0%	0%	1%	0%	2%	0%	0%	1%	12%
Low Vision	1%	0%	2%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%
Blind	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%
Cerebral palsy	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%
Other	3%	1%	3%	0%	0%	2%	0%	0%	1%	1%	0%	0%	0%	0%	1%	13%
<b>Diploma</b>	<b>0%</b>	<b>0%</b>	<b>1%</b>	<b>0%</b>	<b>3%</b>	<b>0%</b>	<b>2%</b>	<b>2%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>2%</b>	<b>12%</b>
Physical disabilities	0%	0%	0%	0%	2%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	7%
Low Vision	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	1%
Hearing Impaired	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
Learning disability	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	2%
<b>Column Total</b>	<b>21%</b>	<b>14%</b>	<b>11%</b>	<b>8%</b>	<b>7%</b>	<b>7%</b>	<b>6%</b>	<b>6%</b>	<b>4%</b>	<b>4%</b>	<b>2%</b>	<b>2%</b>	<b>1%</b>	<b>1%</b>	<b>6%</b>	<b>100%</b>



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