TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING AUTHORITY

TRENDS IN ENROLLMENT AND STAFFING IN KENYAN TVET INSTITUTIONS

October, 2019

VISION

Competitive market-driven TVET system delivering a competent workforce for sustainable National development

MISSION

To develop a TVET system that meets the needs of stakeholders and National aspirations

CORE MANDATE

The core mandate of the Authority is based on four distinct strategic areas:

- Quality and Relevance
- Access and Equity
- Governance and Management
- Funding and Financing

CORE VALUES

- Integrity
- Professionalism
- Accountability
- Public Participation
- Teamwork
- Efficiency

LIST OF ACRONYMS

CDACC	Curricula Development, Assessment and Certification Council
CS	Cabinet Secretary
HND	Higher National Diploma
KASNEB	Kenya Accountants and Secretaries National Examinations Board
KNEC	Kenya National Examinations Council
KNQA	Kenya National Qualifications Authority
MTP	Medium Term Plan
NITA	National Industrial Training Authority
NP	National Polytechnic
NPSEB	National Police Service Examinations Board
R & D	Research and Development
TVC	Technical and Vocational College
TVET	Technical and Vocational Education and Training
TVETA	Technical and Vocational Education and Training Authority
VTC	Vocational Training Centre
SDG	Sustainable Development Goals
STEM	Science, Technology, Engineering and Mathematics
UNICEF	United Nations Children's Fund

FOREWORD

Technical and Vocational Education and Training (TVET) Authority, established under the TVET Act, 2013 is mandated to regulate and coordinate TVET in Kenya through accreditation of TVET institutions, trainers and programs. The Authority was established to address the emerging trends and reforms in the education and training sector in Kenya and act as an overall regulatory body for all TVET institutions in the Country. The Authority is also responsible for Collection, analysis and publication of information relating to training; Approving introduction of new and reviewing existing training programs in TVET institutions and Establishing training system which meets the needs of both the formal and informal sectors. These functions can only be readily achieved through establishment of an updated database and a streamlined TVET research system.

TVET plays a significant role in human skills development initiatives and promotion of necessary skills, knowledge and expertise needed for more sustainable societies and greener economies as highlighted in the SDGs numbers 4 and 8. It is therefore imperative to ensure that this sector undergoes continual reforms and rebranding to cope with current trends in technological development. A strong and innovative TVET system is therefore essential in mitigating widespread societal problems such as negative effects of climate change, crime, youth unemployment and poverty through formulation of policies and development of strategies on quality of TVET programs, relevance of training offered and ways of increasing employability by providing a close linkage between training institutions and industry.

Despite the important contribution of TVET in Kenya's development, no comprehensive database on TVET institutions has been developed and there is limited and fragmented information on various aspects in this sector. The data provided in this report includes distribution of public TVET institutions in various parts of the Country, trends in enrollment, staffing and staff qualifications. The information in this database provides valuable information that can be used to identify gaps in the labor market demands and make informed decisions on ways of improving training in TVET. This document shall therefore act as a fundamental source of information for government, private sector organizations and researchers. The document shall be regularly updated to capture new developments in the institutions.

The availability of data in TVET can stimulate research and hence create new knowledge on ways of developing the sector. In this survey, TVETA officers visited 130 Public TVET institutions (TVCs and National Polytechnics), both under the Ministry of Education and other line ministries to collect data on enrollment and trainers. The data was analyzed, discussed and appropriate recommendations and conclusions made.

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INTRODUCTION

1.1 Background information

Technical and Vocational Education and Training (TVET) and skills development plays a vital role in the development of both human and social capital as well as promoting necessary skills, knowledge and expertise needed for sustainable societies and green economies. TVET provides a strategic entry point for ensuring appropriate supply of skilled workforce for the world of work and contribute to social cohesion by promoting environmentally sound and sustainable development. Improving access to TVET can greatly enhance attainment of sustainable development goals and enable the country to achieve both its short and long term development plans.

The TVET system in Kenya has suffered greatly from historical perspective of poor image, negative perception and low attractiveness due to societal bias towards academic degrees. TVET has generally been viewed as an inferior second alternative to the academic education that is suited for students with lower intellectual capabilities. However, recent Government initiatives of re-engineering the image of TVET through rebranding and increased funding to both trainees and institutions has led to a shift in the way the sector is viewed by the Kenyan Society. The Government has provided increased funding for construction of new and existing institutions, procurement of new training equipment, and provision of capitation and loans for TVET trainees. These initiatives have led to improved interest and enrolment in the various programs offered in the TVET institutions.

The Kenyan Medium Term Plan (MTP) III has prioritized inclusive and quality education and training to provide globally competitive workforce for driving industrial and economic growth. This shall be achieved through the ongoing reforms in the education and training sector by ensuring that graduates are equipped with the 21st century labour market skills. Other additional measures that have been put in place include expansion and modernization of TVET institutions to increase the pool of middle level workforce, aligning curriculum with the needs of the labor market by establishment of Curricula Development, Assessment and Certification Council (CDACC) to improve youth employability. The advancement of TVET infrastructure, equipment and integration of ICT, innovation and research in education and training is expected to greatly expand digital literacy as well as inclusive and quality TVET.

The regulation of TVET sector has improved tremendously since the establishment of TVET Authority five years ago as the overall regulatory body. Prior to its establishment, the regulation of training was basically fragmented under different line Ministries and County Governments. The creation of the Department of Research and Development (R & D), establishment of TVETA Research Advisory Committee and takeover of management of Kenya Journal of TVET by TVETA is expected to provide renewed impetus on research and innovation in the TVET sector. The TVET research and surveys shall also provide essential information for appropriate decision making in the sector.

1.2 Classification of TVET institutions

The Kenyan TVET institutions are classified into three main categories, Vocational Training Centers (VTCs), Technical and Vocational Colleges (TVCs) and National Polytechnics (NPs). The classifications are based on the levels of courses offered. VTCs offer training at basic levels up to Artisan (KNQA Level 3), TVCs offer training up to Diploma (KNQA Level 6) while NP are permitted to offer training up to Bachelors degree (KNQA Level 8).

1.3 Kenyan TVET landscape

There are approximately 2,700 TVET institutions within the country, comprising of 1,200 VTCs, 44 TVCs under parent ministries, 1300 private TVCs, 11 NPs and 132 TVCs under Ministry of Education located in various parts of the Country. The institutions offer various TVET programs at different levels of training that are examined by approved National and Foreign examining bodies such as NITA, KNEC, KASNEB, NPSEB, CDACC, City and Guilds. Since its inception, TVET Authority has accredited approximately 2,000 TVET institutions in different parts of the Country. Additionally, the Authority periodically conducts Quality Audit of the accredited TVET institutions to ensure compliance with the established training standards.

The Authority has developed numerous training standards, including those for NPs, Centres of Excellence (CE), Trainers' Qualifications, Curricula development, Assessment, Assessment Centres and Prior Learning Assessment and Recognition (PLAR). It is expected that more Public and Private TVET institutions, that satisfy these standards shall be elevated to the level of NPs and CE. The PLAR standard shall enable workers and trainees who have acquired skills in the informal sector to be awarded Nationally recognized qualifications in their areas of specialization while the other standards shall result in improved standards of training and acquisition of skills.

Table 1 below shows the distribution of accredited TVET institutions in various Counties:

Table 1.1: Number of Accredited TVET institutions per County

No.	County	National Polytechnics	Public TVCs	Private TVCs	VTCs	Total TVET institutions
1.	Mombasa	1	5	44	12	62
2.	Kwale	0	3	5	15	23
3.	Kilifi	0	2	15	29	46
4.	Tana River	0	1	1	1	3

5.	Lamu	0	0	0	0	0
6.	Taita Taveta	0	4	5	23	32
7.	Garissa	1	1	6	0	8
8.	Wajir	0	1	0	0	1
9.	Mandera	0	1	0	1	2
10.	Marsabit	0	2	0	7	9
11.	Isiolo	0	0	2	2	4
12.	Meru	1	12	7	21	41
13.	Tharaka Nithi	0	0	3	18	21
14.	Embu	0	2	11	6	19
15.	Kitui	0	1	8	62	71
16.	Machakos	0	3	28	38	69
17.	Makueni	0	3	7	33	43
18.	Nyandarua	0	3	2	15	20
19.	Nyeri	1	7	24	10	42
20.	Kirinyaga	0	2	10	12	24
21.	Murang'a	0	4	5	58	67

22.	Kiambu	0	4	78	34	116
23.	Turkana	0	1	3	7	11
24.	West Pokot	0	0	2	2	4
25.	Samburu	0	0	1	1	2
26.	Uasin Gishu	1	4	41	13	59
27.	Trans-Nzoia	1	3	11	31	46
28.	Elgeyo-Marakwet	0	2	3	11	16
29.	Nandi	0	5	3	11	19
30.	Baringo	0	3	5	9	17
31.	Laikipia	0	1	4	13	18
32.	Nakuru	0	12	43	21	76
33.	Narok	0	3	8	6	17
34.	Kajiado	0	4	22	5	31
35.	Kericho	0	4	10	7	21
36.	Bomet	0	4	10	19	33
37.	Kakamega	1	8	10	67	86
38.	Vihiga	0	1	1	25	27

39.	Bungoma	0	4	6	62	72
40.	Busia	0	3	2	13	18
41.	Siaya	0	5	8	17	30
42.	Kisumu	1	5	24	22	52
43.	Homa Bay	0	4	2	18	24
44.	Migori	0	1	8	15	24
45.	Kisii	1	3	12	42	58
46.	Nyamira	0	3	3	20	26
47.	Nairobi	2	26	247	18	293
Total		11	170	750	872	1803

The eleven NPs were distributed in ten counties, one NP per county with the exception of Nairobi which had two NPs. Additionally, Nairobi county also had the highest number of TVET institutions which constituted 16.25% of total accredited TVET institutions in the 47 counties. This could be attributed to the high population, better infrastructure and increased demand for skilled personnel from the large number of industries and organizations within the city. Marginalized Counties with basically poor infrastructure and lower number of industries such as Mandera, Wajir, Isiolo and Tana River had the lowest number of institutions. The number of accredited NPs, Public TVCs, Private TVCs and VTCs accounted for 0.6, 9.4, 41.6 9.4 and 48.4% respectively. Whereas the private TVCs were mainly concentrated within the town centres, the VTCs were widely distributed and therefore more accessible to the rural communities.

1.4 Methodology

The TVETA research team developed a data collection tool that was used to collect the required information from the TVET institutions (Shown in Appendix 1). The information included institutional particulars, gender disaggregated enrollment of trainees in each course and level of training from 2014 to 2018, dropout and graduation rates, trainers' gender, training area,

employer, age and qualifications. Four teams, each composed of three research officers, visited the accredited 119 Public TVCs and 11 NPs in various parts of the country to collect the data. The institutional administrators were briefed on the nature of data that were required and were then given one week to compile the data in the prescribed format and send them to the team leaders. All the 11 NPs and 117 public TVCs sent their data on enrollment and trainers, representing an overall response rate of 98.32%. The high response rate showed that the data obtained in this survey and the conclusions made represent a true reflection on the general status of the institutions on the issues that were under study. The information was summarized, analyzed, discussed and recommendations proposed.

2.0 NATIONAL POLYTECHNICS

The eleven National Polytechnics were distributed in various parts of the country as shown in Table 2 below:

Table 2.1: Distribution of NPs within the Counties

No	Name	County
1	Eldoret	Uasin Gishu
2	Kabete	Nairobi
3	Kenya Coast	Mombasa
4	Kisii	Kisii
5	Kisumu	Kisumu
6	Meru	Meru
7	North Eastern Kenya	Garissa
8	Nyeri	Nyeri
9	Sigalagala	Kakamega
10	Kitale	Trans Nzoia
11	Kenya Technical Trainers College	Nairobi

The 11 NPs are located in only 10 Counties and this could result in reduced access for trainees from certain marginalized counties without the NPs. Additionally, since the NPs are expected to offer diverse solutions to problems facing local communities, the lack of these institutions in particular counties could also lead to reduced economic growth. However, the development of standards for National Polytechnics and centers of excellence by TVET Authority is expected to provide mechanisms for elevation of more TVET institutions to National Polytechnics and Centers of excellence and hence ensure regional balance.

Although most of the NPs mainly offered various programs up to Higher National Diplomas examined by KNEC, the legal order creating the NPs allows them to develop their own syllabi, award internal certificates and offer programs up to degree level. Most of the NPs have not exploited these options. This could be attributed to lack of sensitization or capacity to develop their own programs. The option of developing their own curricula is expected to enable the NPs to develop programs that are geared towards solving common challenges in their areas of operation.

2.1 Enrollment

The total enrollment in the 11 NPs increased drastically from 20338 in 2014 to 65289 in 2018 over the five-year period, representing a percentage increase of 221.02%. The highest increase in enrollment was recorded between 2017 to 2018 with the exception of North Eastern National Polytechnic which showed no significant increase. This could be attributed to the intensified initiatives put in place by the government over the same period to improve access to training. Some of these initiatives included introduction of Government Capitation and provision of HELB loans to TVET trainees. The construction of new institutions and equipping of both new and existing institutions with state of the art equipment also led to improved interest from various trainees to enroll in the TVET institutions. In a similar trend, there have been reported cases of students opting for TVET programs despite them qualifying for university programs.

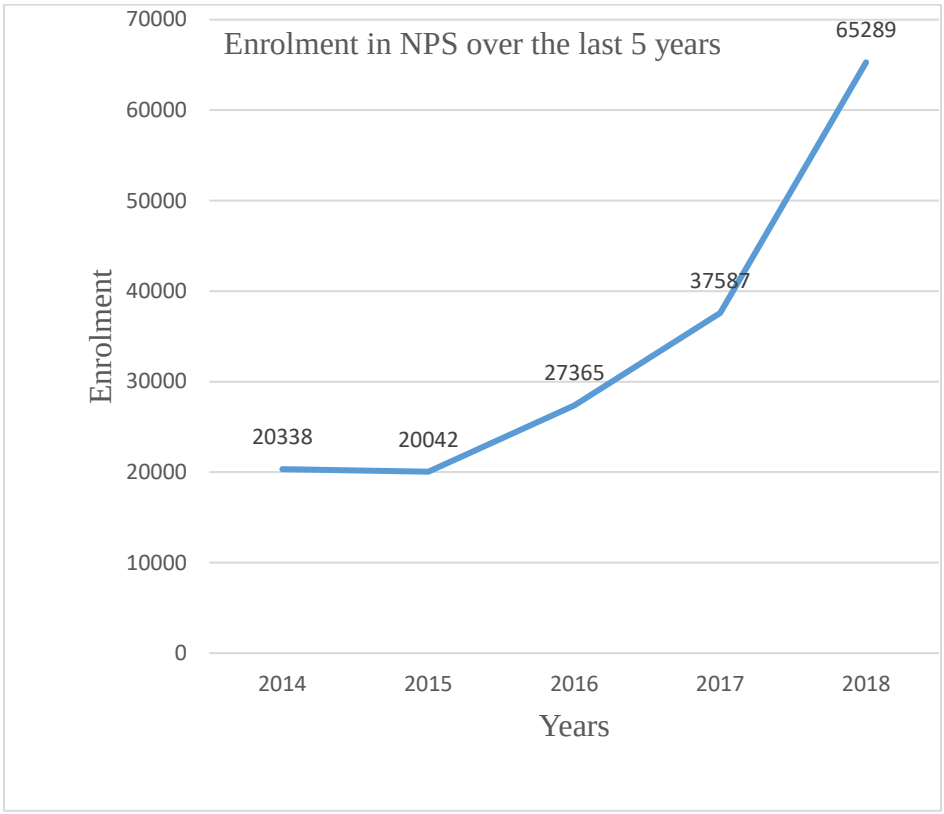
Sigalagala NP recorded the highest increase in enrolment of 250% during the five year period while North Eastern NP registered the lowest growth of 19%. Figures 1 and 2 summarizes the variation in the total overall enrolment in the 11 NPs and individual enrollment for each NP from 2014 to 2018.

Table 2.2: Trends in enrollment in TVET institutions

	ENROLMENT					% INCREASE IN ENROLMENT			
NPS	**2014**	**2015**	**2016**	**2017**	**2018**	**2015**	**2016**	**2017**	**2018**
Meru	1635	1797	2975	4442	7861	9.91	65.55	49.31	76.97
Kisumu	4549	4564	4253	4474	7984	0.33	6.81	5.20	78.45
Kenyan coast	1785	979	2079	2829	3932	-45.15	112.36	36.08	38.99
North Eastern	912	532	750	1035	1234	-41.67	40.98	38.00	19.23
Nyeri	1667	1818	1510	1923	4682	9.06	-16.94	27.35	143.47
Sigalagala	1227	833	933	1855	6507	-32.11	12.00	98.82	250.78
Kitale	751	597	1826	2824	4858	-20.51	205.86	54.65	72.03
Eldoret	2461	3065	3515	4772	7249	24.54	14.68	35.76	51.91
Kabete	1352	1624	4156	6095	10444	20.12	155.91	46.66	71.35
Kisii	2312	2340	3168	4819	7409	1.21	35.38	52.11	53.75

KTTC	1687	1893	2200	2519	3129	12.21	16.22	14.50	24.22

Fig 2.2



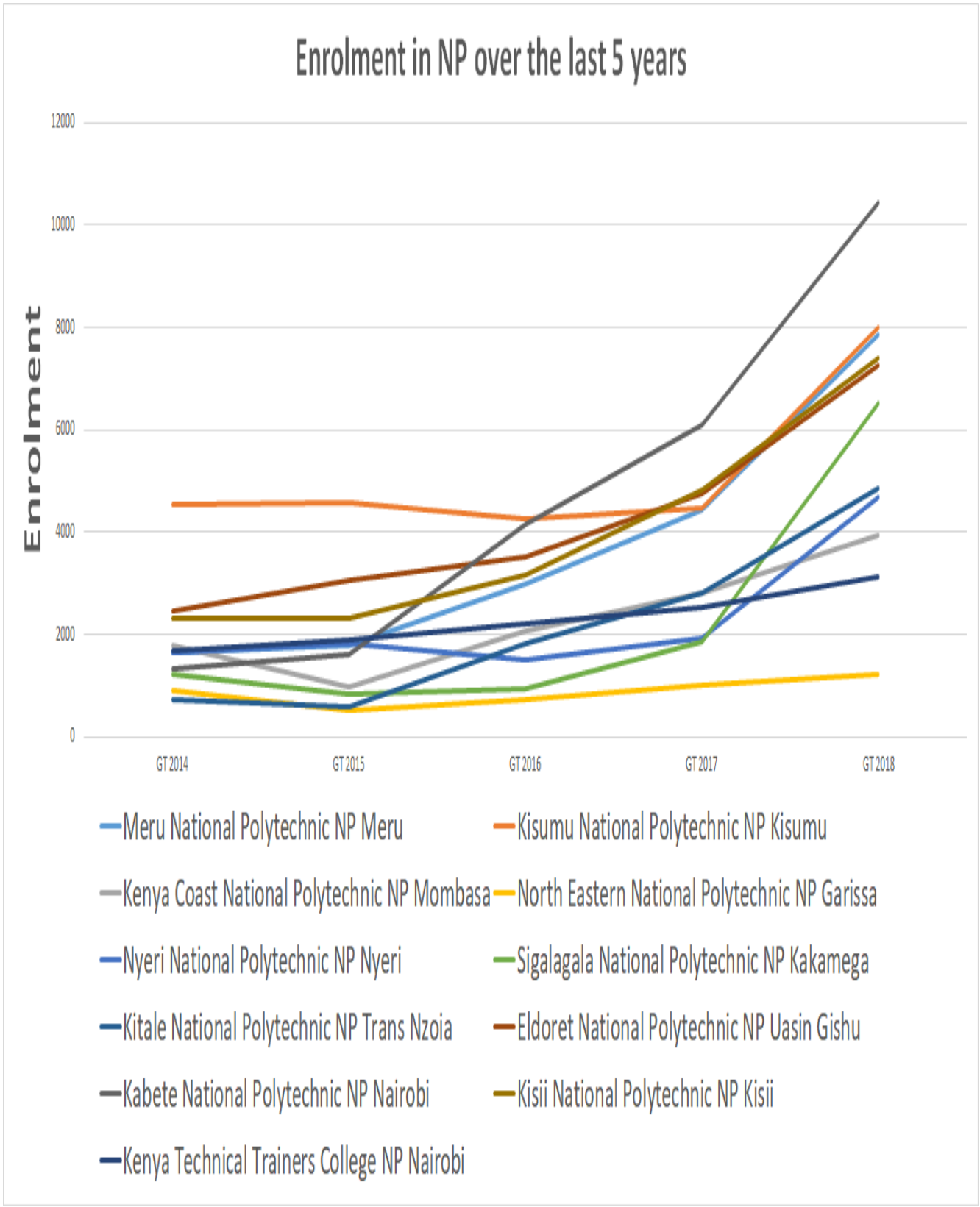

Enrolment in NP over the last 5 years
Enrolment
12000
10000
8000
6000
4000
2000
0
GT 2014
GT 2015
GT 2016
GT 2017
GT 2018
Meru National Polytechnic NP Meru
Kisumu National Polytechnic NP Kisumu
Kenya Coast National Polytechnic NP Mombasa
North Eastern National Polytechnic NP Garissa
Nyeri National Polytechnic NP Nyeri
Sigalagala National Polytechnic NP Kakamega
Kitale National Polytechnic NP Trans Nzoia
Eldoret National Polytechnic NP Uasin Gishu
Kabete National Polytechnic NP Nairobi
Kisii National Polytechnic NP Kisii
Kenya Technical Trainers College NP Nairobi

Figure 2

2.1.1 Enrollment in STEM and Business in National Polytechnics

A steady increase in enrollment was recorded in STEM as compared Business in TVCS over the five-year period. The increase in enrollment in STEM programs was generally higher than that in the BUSINESS courses over the period as depicted in Figure 3 below. There is need for National polytechnics to absorb more business students.

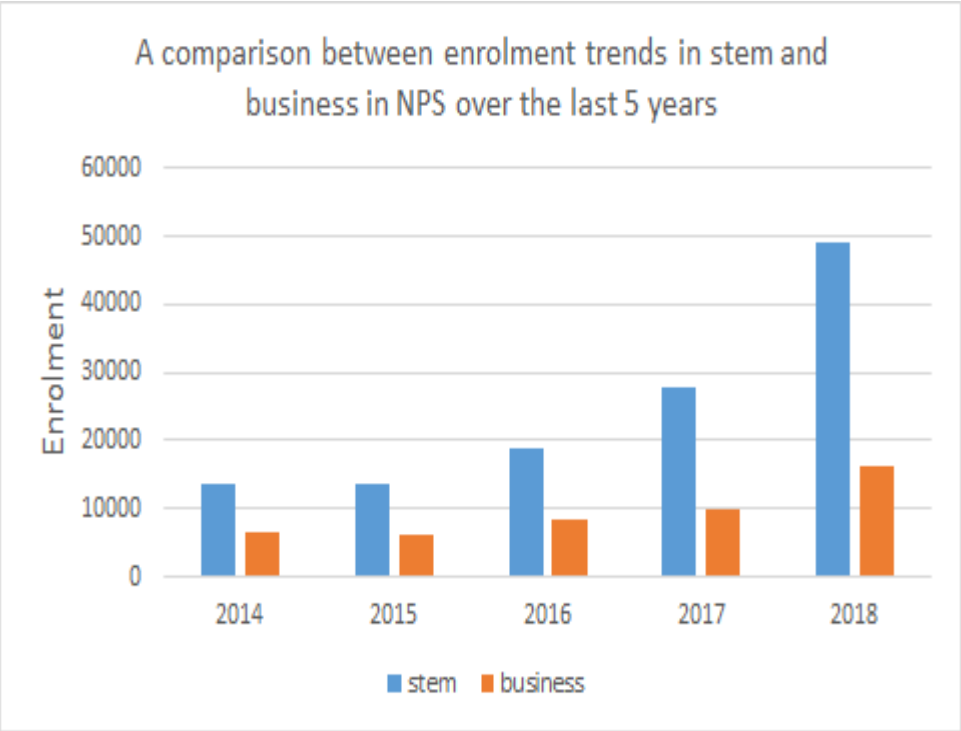
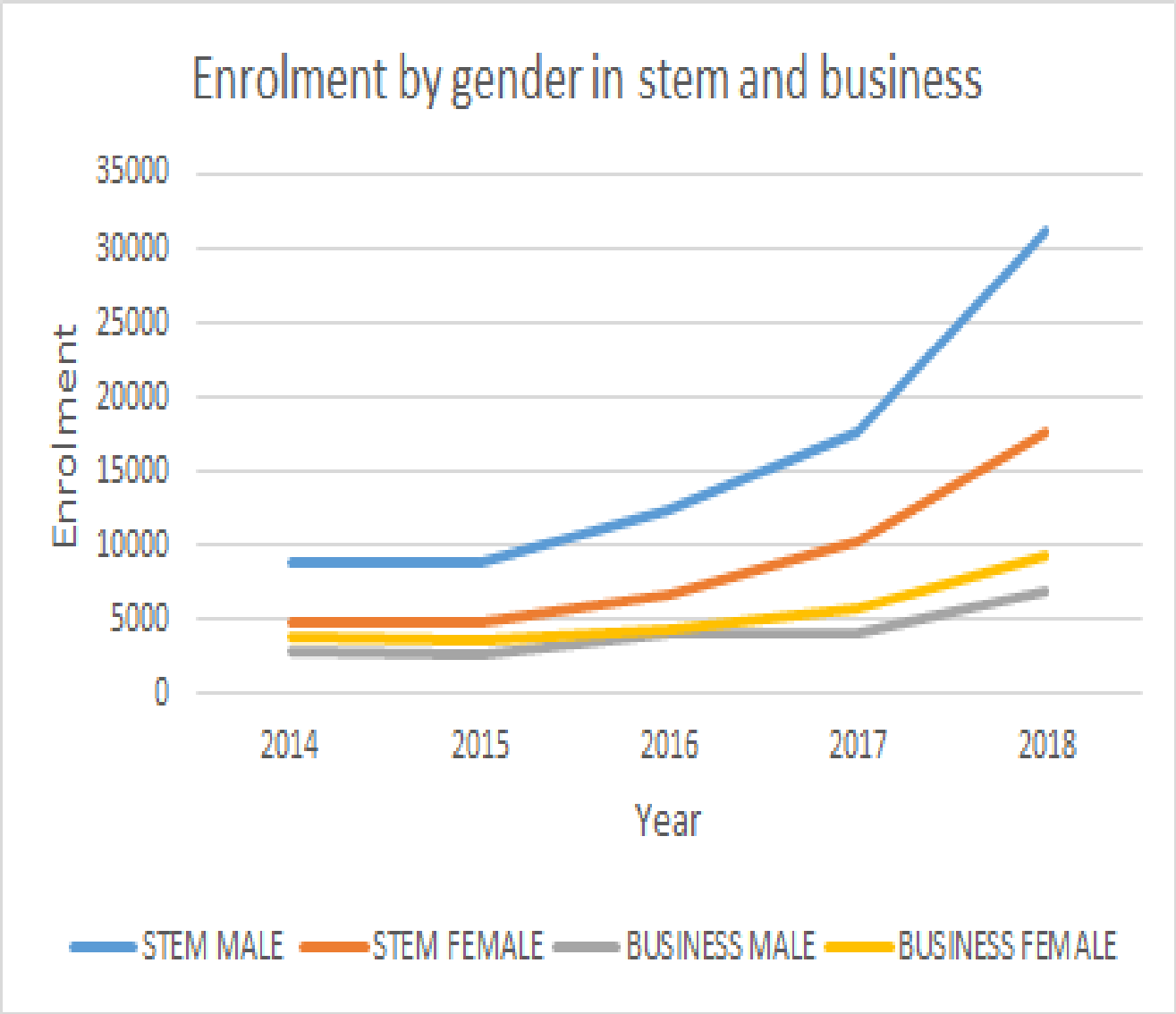


Figure 3

The higher increase in enrollment in the STEM courses could be attributed to both the market demands and the fact that the graduates from these programs can easily establish their own enterprises without relying on established organizations for employment.

Despite females having higher enrolment in STEM based courses compared to Business, they seem to lag behind their male counterparts in enrollment in STEM based courses as shown in **Figure 4** below. There was need therefore to enhance gender mainstreaming initiatives in National polytechnics to ensure both genders are fairly represented across the board.



In the area of Business, the male to female representation seems to be fair at 4:5. (**Refer to Fig 5**) Female trainees have a slight advantage in business related disciplines in terms of enrollment than their male counterparts.

Fig 5

Category	Enrolment
STEM	123131
Business	47490
Ratio B to S	4:5

2.2 Trainers

The adequacy of qualified and competent trainers determines the quality of training in the TVET institutions. The current shift to CBET requires that a suitable balance between trainers and trainees should be maintained in order to ensure that essential skills required by the labor market are imparted on the graduates at various levels of training.

2.2.1 Trainer Qualifications

The trainer's qualifications in the National polytechnics ranged from Craft certificate to PhD as shown in the **table 2.2.2 below**. Majority of the trainers had Bachelors' degree followed by Masters' degree, Diploma and HND qualifications respectively. The percentage of trainers with Craft Certificate qualifications were basically insignificant. Table 2 summarizes trainers' highest qualifications in the 11 national Polytechnics.

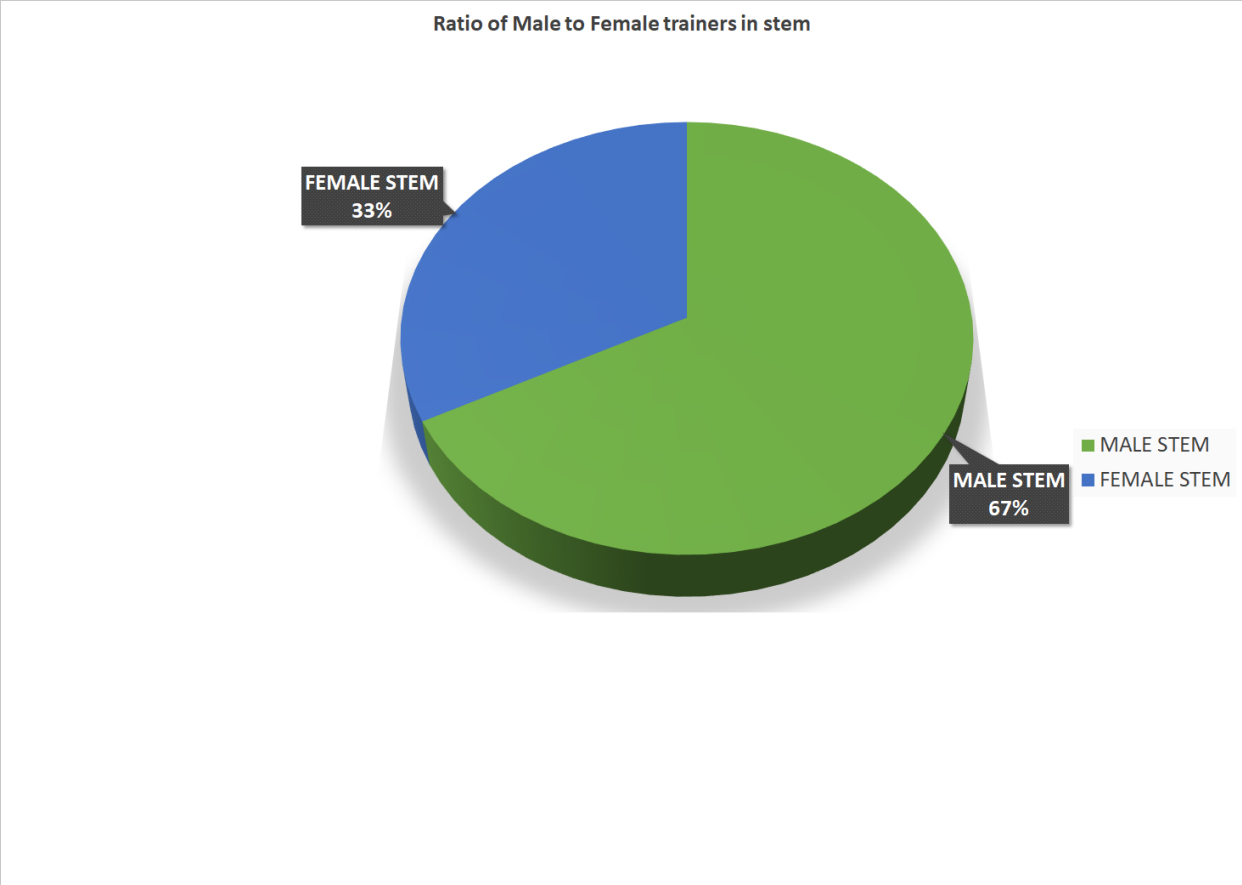
Table 2.2.2

Qualification	PhD	Masters	Bachelors	HND	Diploma	Craft	Below Craft	No Details
No of Trainers	21	421	929	128	286	9	2	8
Percentage %	1.16	23.34	51.50	7.10	15.85	0.50	0.11	0.44

Since the NPs are required to concentrate on Diploma and higher qualifications, all trainers should possess a HND and above as required by the TVET regulations 2015. Additionally, the legal order creating NPs gives them mandate to offer training up to Degree level in collaboration with Technical Universities. In order to achieve this mandate, the NP trainers should consider enrolling for higher qualifications. As seen in the table above, only 23.34% of the trainers deployed at the National Polytechnics have the requisite qualifications to train up to this level. Trainers who hold Diploma qualification and above form between 98% to 100% of the trainers in National Polytechnics.

2.2.2 Trainers Gender Distribution in STEM and Business

The ratio of male: female trainers in STEM courses was 2:1 as shown in Pie chart below which is exactly reflected in student enrollment. This disparity might be due poor Enrolment of females students in STEM courses. To alleviate such differences there is a need for government to sensitize female on the importance of Stem courses.



The highest disparity being at North Eastern National Polytechnic at 5:1 (**see table 2.2.2 below**) with Nyeri and Kabete National Polytechnic almost striking the balance in gender.The ratio of male:female in Business is 1:1 the highest disparity being seen at Kenya Technical Trainers College found to be 8:1. The highest flip being seen at Kisii National Polytechnic with the ratio of male to female being 4:1

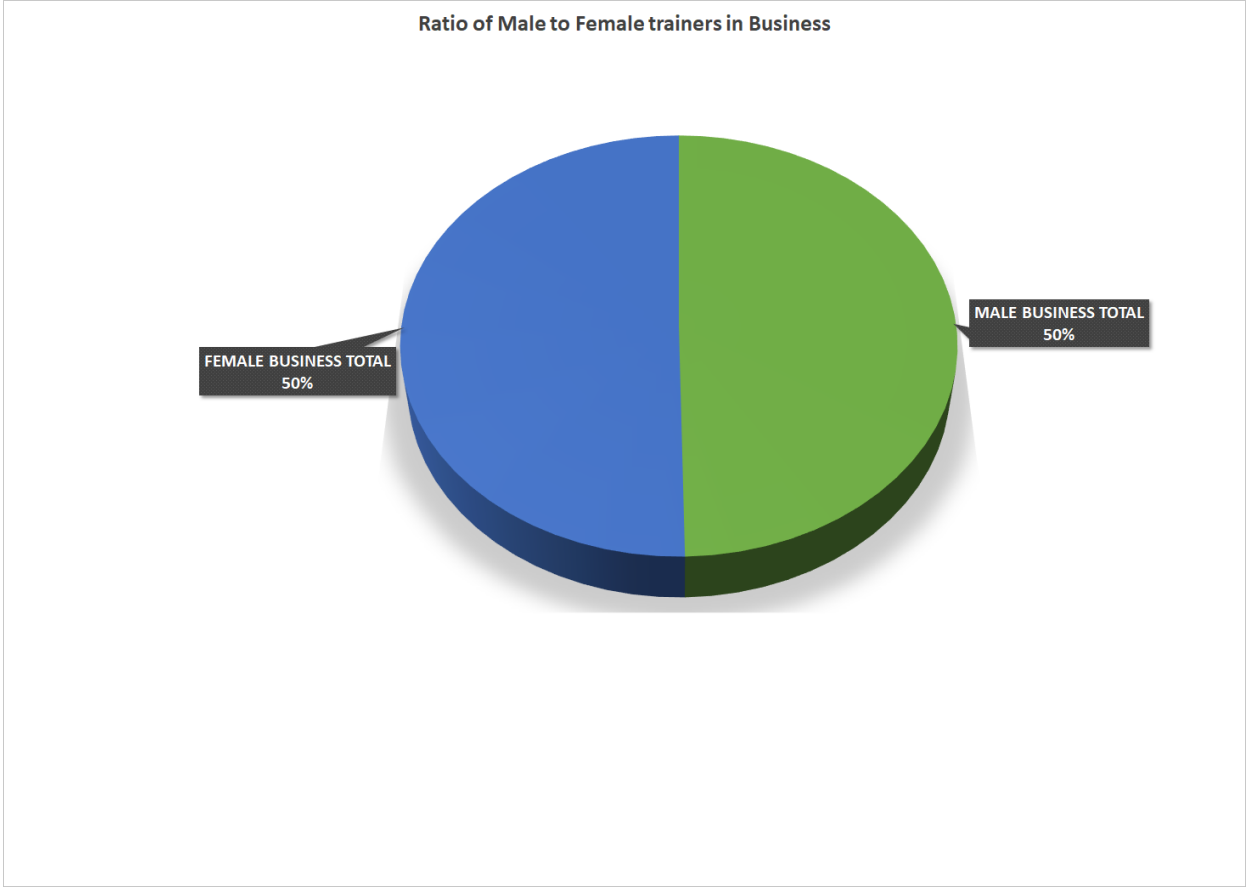
Table 2.2.2

National polytechnic	STEM		Business		STEM Ratio	Business Ratio
	M	F	M	F	M to F	M to F
Meru	132	53	25	29	2:1	1:1
Kisumu	73	17	31	19	4:1	2:1
Kenyan coast	104	53	27	12	2:1	2:1
North Eastern	24	5	15	6	5:1	3:1
Nyeri	93	66	13	34	1:1	1:3
Sigalagala	0	0	0	0	0.00	0.00
Kitale	114	34	23	24	3:1	1:1

Eldoret	112	65	33	23	2:1	1:1
Kabete	122	82	33	50	1:1	1:2
Kisii	120	59	30	7	2:1	4:1
KTTC	36	17	4	33	2:1	1:8
TOTALS	930	451	234	237		

The ratio of Male to female trainers in business courses was found to be 1:1 as shown in the figure 2.2.2 below which also reflects in the student enrollment.

Fig 2.2.2.



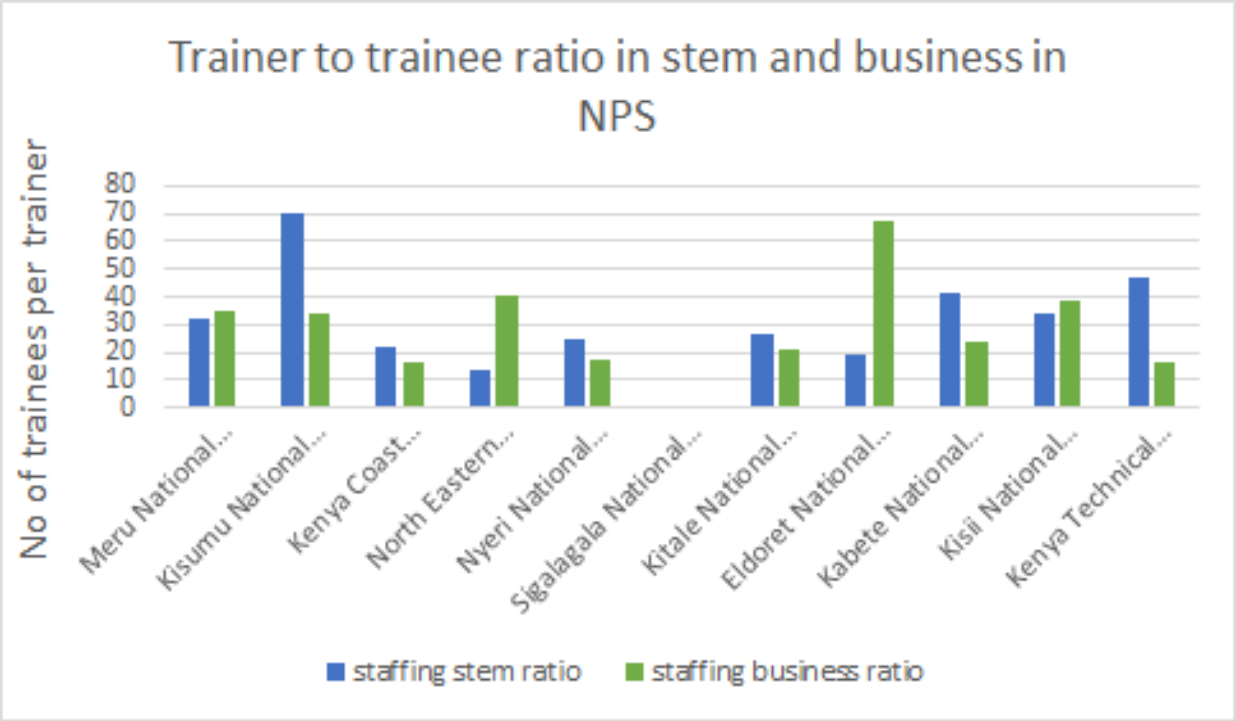
2.2.3 Trainer to Trainee ratios in STEM and Business

The trainer levels in the National polytechnics was found to be lower than the recommended ratios. In the case of STEM courses it was found that the staff to trainee ratio is 1:33 against the recommended ratio of 1:25. **Figure 2.2.3** below shows the trainer to trainee ratios in the area of STEM in reference to the enrolment in 2018

For business related courses, the trainer to trainee ratio was found to be 1:31 which is also above the recommended ratio of 1:30. The average trainer to trainee ratio for both STEM and Business in national polytechnics is 1:32. Table 2.2.3 below summarizes trainer to trainee ratio in all the 11 NPs.

Table 2.2.3

National polytechnics	Enrolment 2018		Trainers 2018		Trainer to Trainee Ratio	
	STEM	Business	STEM	Business	STEM	Business
Meru	6002	1859	185	54	32.44	34.43
Kisumu	6296	1688	90	50	69.96	33.76
Kenyan coast	3307	625	157	39	21.06	16.03
North Eastern	386	848	29	21	13.31	40.38
Nyeri	3876	806	159	47	24.38	17.15
Sigalagala	4792	1715	0	0	0.00	0.00
Kitale	3902	974	148	47	26.36	20.72
Eldoret	3468	3781	177	56	19.59	67.52
Kabete	8449	1995	204	83	41.42	24.04
Kisii	5996	1413	179	37	33.50	38.19
Kenya Technical trainers college	2507	622	53	37	47.30	16.81
TOTALS	48981	16326	1381	471	329.32	309.02
AVERAGE					32.93	30.9

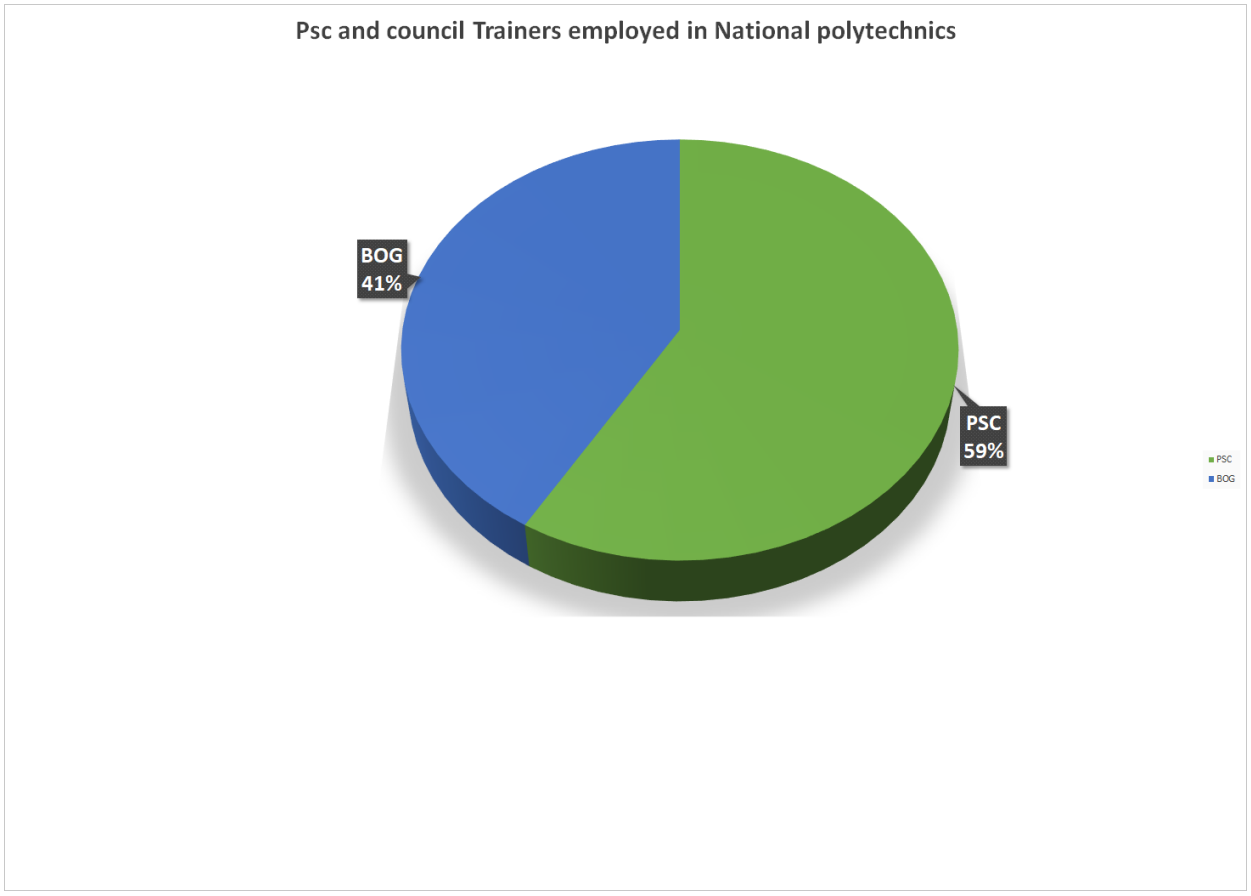


From the figure above Kisumu National had worst trainer to trainee ratio. i.e from the figures above 1 tainer in STEM is training a total of 70 trainees there is a need for the polytechnic to employ more trainers to alleviate Stem shortage shortage.

In business Eldoret National Polytechnic had also worst trainer to trainee i.e 1 Trainer in Business is training 68 trainees there is an urgency for the polytechnic to employ more business trainers to alleviate this shortage.

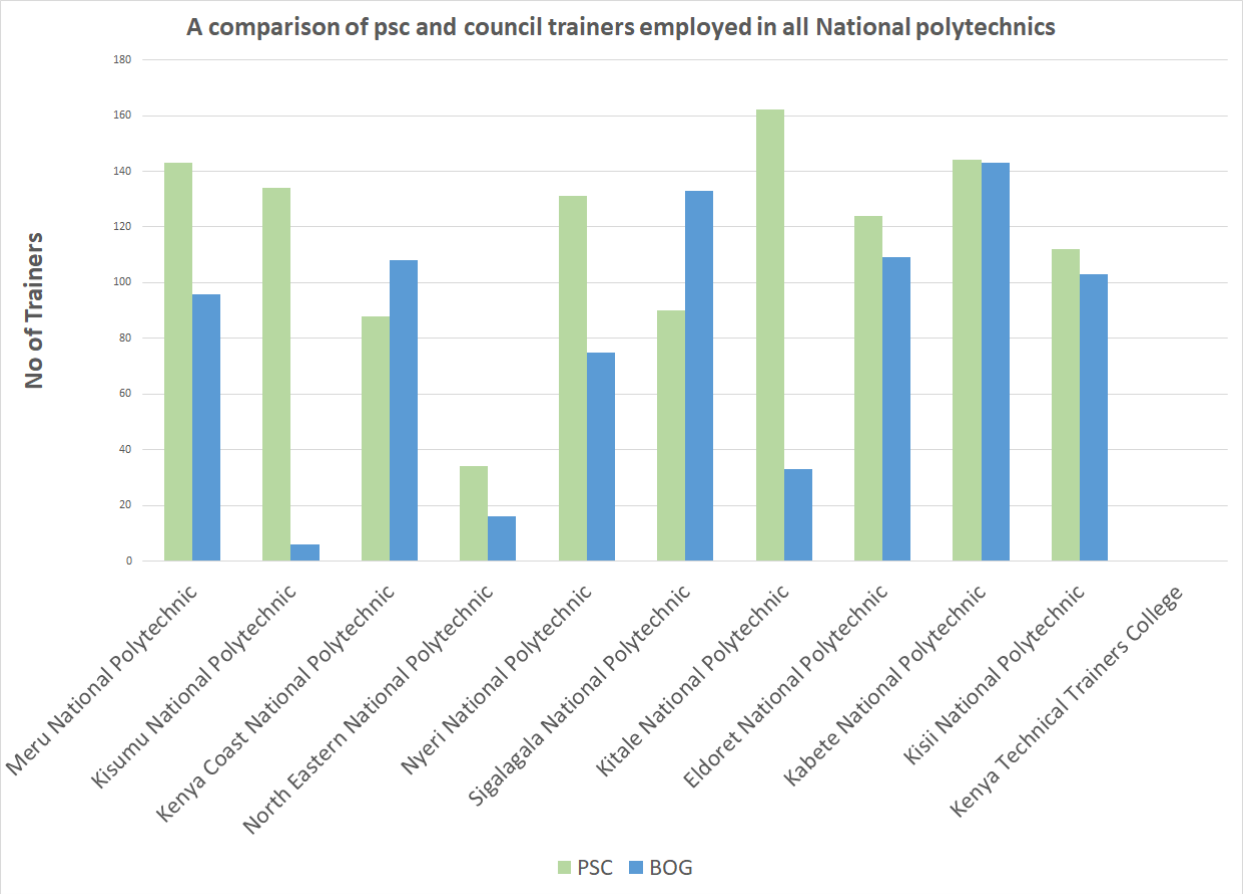
The Kenya Coast NP had the best average trainer to trainee ratio and this is courtesy of their initiative to hire more council trainers to alleviate the would be staff shortage.

The ratio of Male to female trainers in Business was found to be 1:1 which also reflects in the student enrollment. This fact confirms that enrollment of students into different disciplines is greatly influenced by the gender of staff in those areas among other factors. It is also important to note that out of the staff in NPs, 41% of them are employed on a temporary basis by their respective councils.



2.2.4 Trainers Terms of Service

Bar graph 2.2.4



It was found that staffing levels in the National Polytechnics is still very low as discussed in section 2.2.3 above. Most of the staff are employed on contract terms by the respective Councils.

The case is worse at Kenya Coast and Sigalagala National Polytechnics where the Council employed staff outnumber the ones on permanent and pensionable terms. Kisumu National polytechnic was identified to have the least number of Council employed trainers even though their overall trainer to trainee ratio is 1:81 which is way below that of other National Polytechnics. Kabete National Polytechnic strikes the balance between council employed trainers and the permanent ones (**See bar graph 2.2.4 above).** There was an immediate need for both the government and Council of Kisumu NP to recruit additional trainers to address the high trainer: trainee ratio and enhance both the quality of training and acquisition of essential skills.

3.0 PUBLIC TECHNICAL AND VOCATIONAL COLLEGES

The number of public TVCs, especially those under the Ministry of Education drastically increased since 2010 from 40 to 132 due to the implementation of the Government's TVET policy of constructing and equipping one TVET institution in every Constituency.

The table below provides a summary of the accredited public TVCs in the country based on the line ministries.

No.	Ministry	Number of Accredited institutions
1	Education	132
2	Transport, Infrastructure, Housing, Urban Development and Public Works	3
3	Labor and Social Protection	3
4	Tourism and Wildlife	1
5	Energy	1
6	Lands and Physical Planning	2
7	Petroleum and Mining	1
8	Public Service, Youth and Gender	8
9	Agriculture, Livestock, Fisheries and Irrigation	2
10	Interior and Coordination of National Government	2
11	Defense	1
12	Information Communication and Technology	1
13	National Treasury and Planning	2
14	Environment and Forestry	2
15	Water and Sanitation	1
Total		

3.1 Enrollment

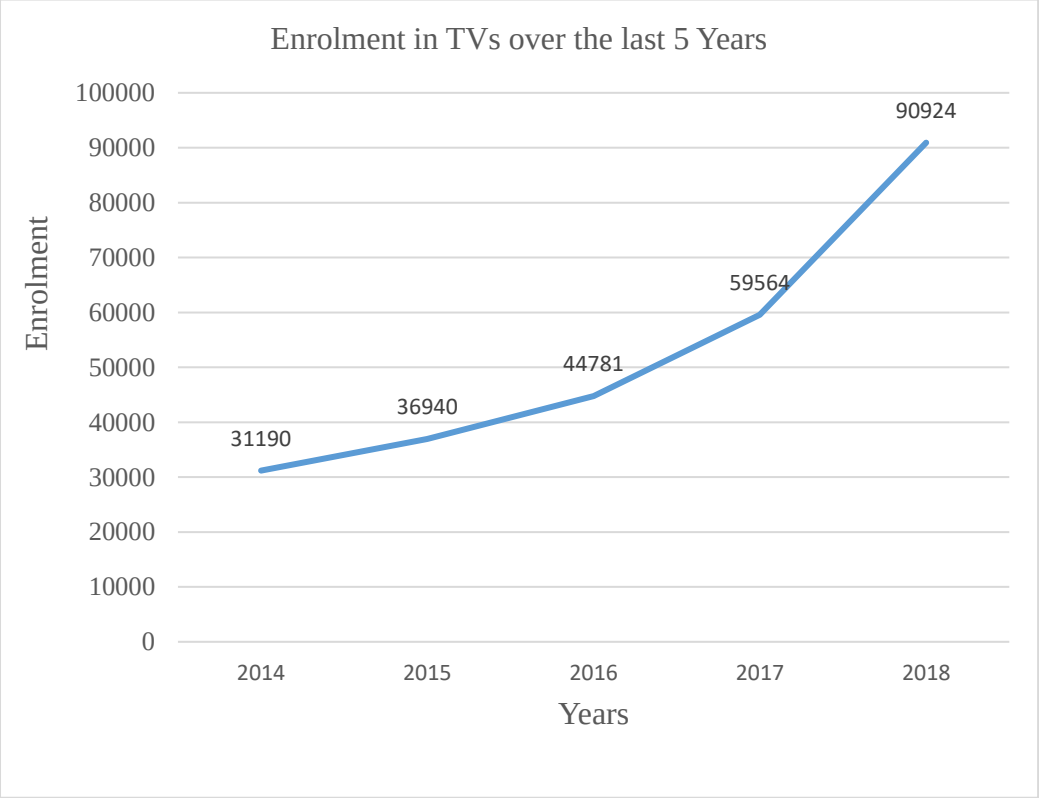
TVCs have exhibited continuous growth in enrollment since the year 2014 as shown in figure below. The highest enrollment rate of 52.65% was witnessed in 2018 compared to the previous years which registered 33.01%, 21.23% and 18.44% respectively (**Refer to table 3.1**). The rapid growth rate in 2018 may have been attributed to the various government intervention programs which include establishment of new TVCs in each constituency, access to HELB loans to TVET trainees, capitation programs among other measures which have been applied in strengthening the sector. In relation to the operationalization of the TVET Act in 2014, the enrollment has tripled

up from 31190 in 2014 to 90924 in 2018. This may imply the key role of the TVET Act, which may have influenced a lot in the revitalization of training in the country.

Percentage increase in Enrolment of TVCs over the last 5 Years

Table 3.1:

Year	2014	2015	2016	2017	2018
% increase	-	18.44	21.23	33.01	52.65

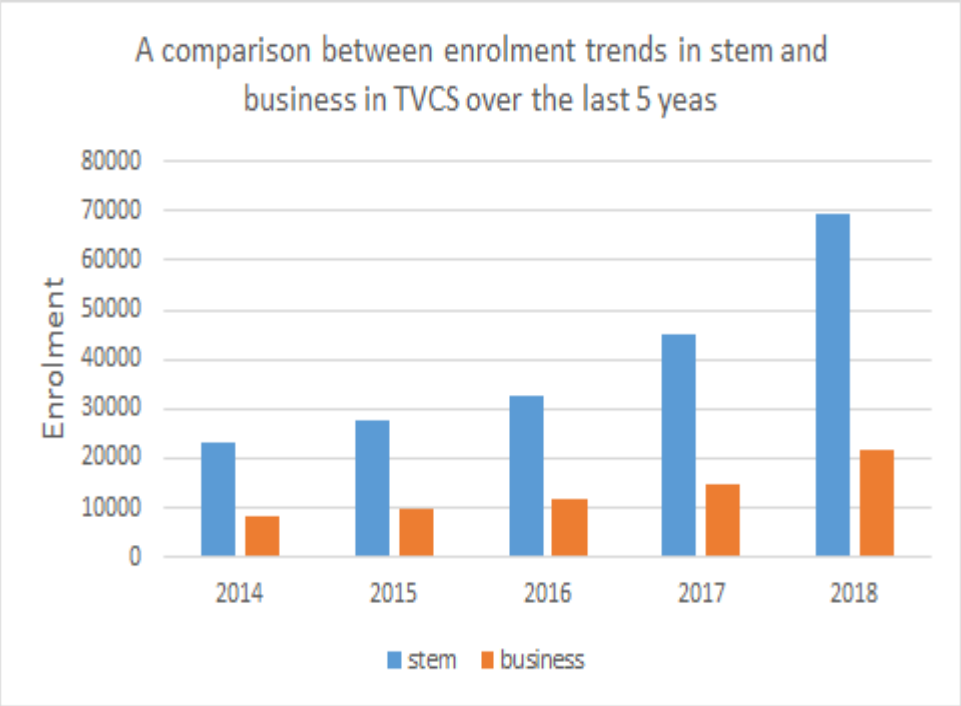


The graph above also shows there is a steady increase in enrolment from 2014 to 2017. A sharp increase was witnessed from 2017 to 2018.

The figures below summarize the variation in staffing levels and qualifications in the TVCs from 2014 to 2018.

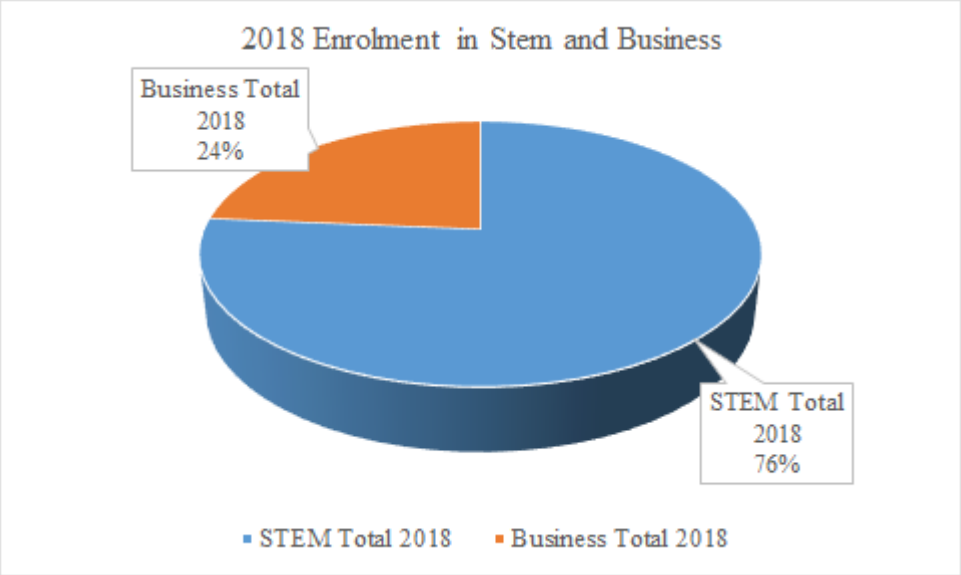
3.1.1 Enrollment in stem and Business in TVCs

From the data received for the Public TVCs, it is clear that the enrollment in STEM courses was higher than those of BUSINESS courses. Every year, since 2014, there was an increase in enrollment for both STEM and BUSINESS courses as shown in the bar graph below However, the rate of enrollment in subsequent years was higher in STEM courses compared to that of BUSINESS courses. This is a changing trend, unlike in previous years when Business courses were popular among trainees. Various factors may be contributing to this trend, for instance: strategies that have been implemented in order to induce excellence in STEM/TVET. Some of the strategies include massive recruitment of trainers in STEM as well as facilitating TVCs with the state of the art equipment.



During the year, 2018, enrollment in STEM courses was 76% compared to 24% in BUSINESS courses and it coincided with the period when the government in collaboration with strategic partners had been focusing on TVET financing, equipping and recruitment of more trainers. It is at the same period when various policy changes were witnessed across the education sector, including the introduction of CBET programs and increased involvement of industry players (**Refer to pie 3.1.1**)

Pie 3.1.1



The locations of TVCs are almost evenly distributed across the country since most of the constituencies had at least one institution. The enrollment in various locations were, however, not uniform which might be attributed to the uniqueness of each institution. Some of the possible reasons could be; period of existence, unique intervention programs in respective regions, the nature of catchment area (source of trainees), the specific training programs among other factors.

3.2 Staffing

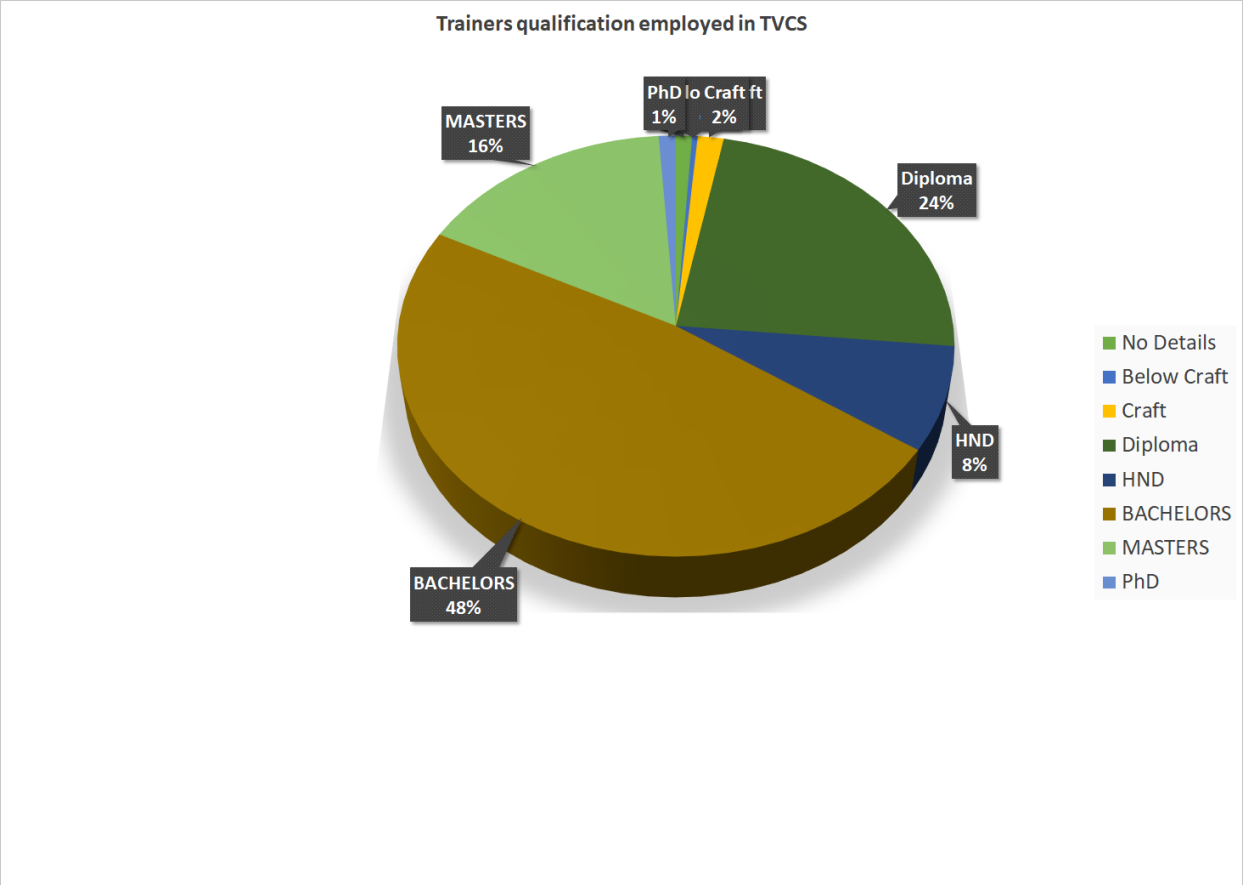
TVCs are mandated to offer programs up to Level 6 (Diploma) and as required by the KNQF, which also dictates that a trainer can train a program up to a level below trainer's qualification. Most of the TVCs offer Artisan, Certificate and Diploma programs. Trainers in most TVCs, therefore, had varied qualifications as shown in table 3.2.1. The pie chart illustrates the variation in staffing levels and qualifications at the time of data collection from all the TVCs

3.2.1 Trainers qualification

The trainer qualification in table below range from craft to PhD. Majority of trainers in Technical and vocational colleges have Bachelor degree which accounts to 48.03% followed by diploma, Masters degree, Higher diploma, craft and finally PhD

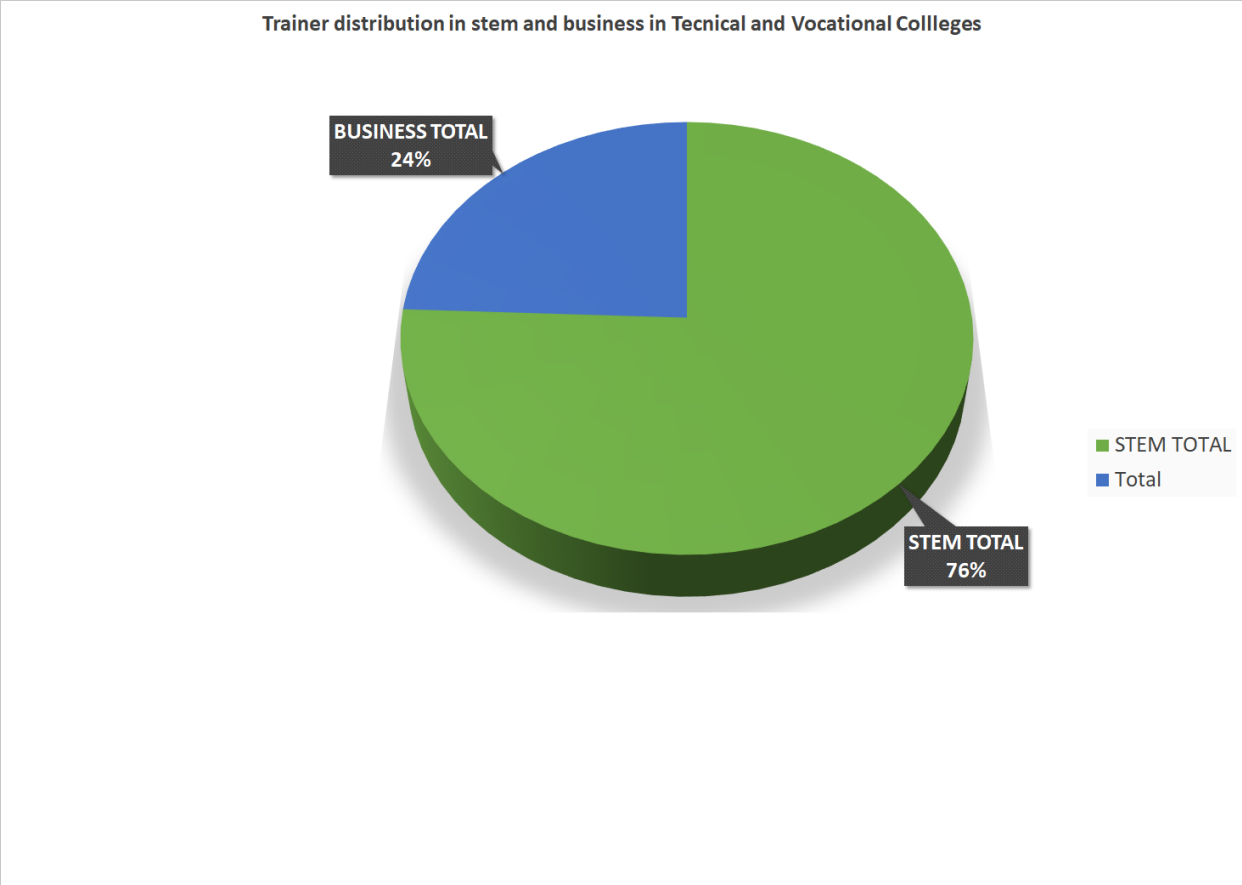
Table 3.2.1

Qualification	PhD	Masters	Bachelors	HND	Diploma	Craft	Below Craft	No Details
No of trainers	59	889	2610	434	1277	90	19	56
Percentages	1.09	16.34	48.03	7.99	23.5	1.66	0.35	1.03



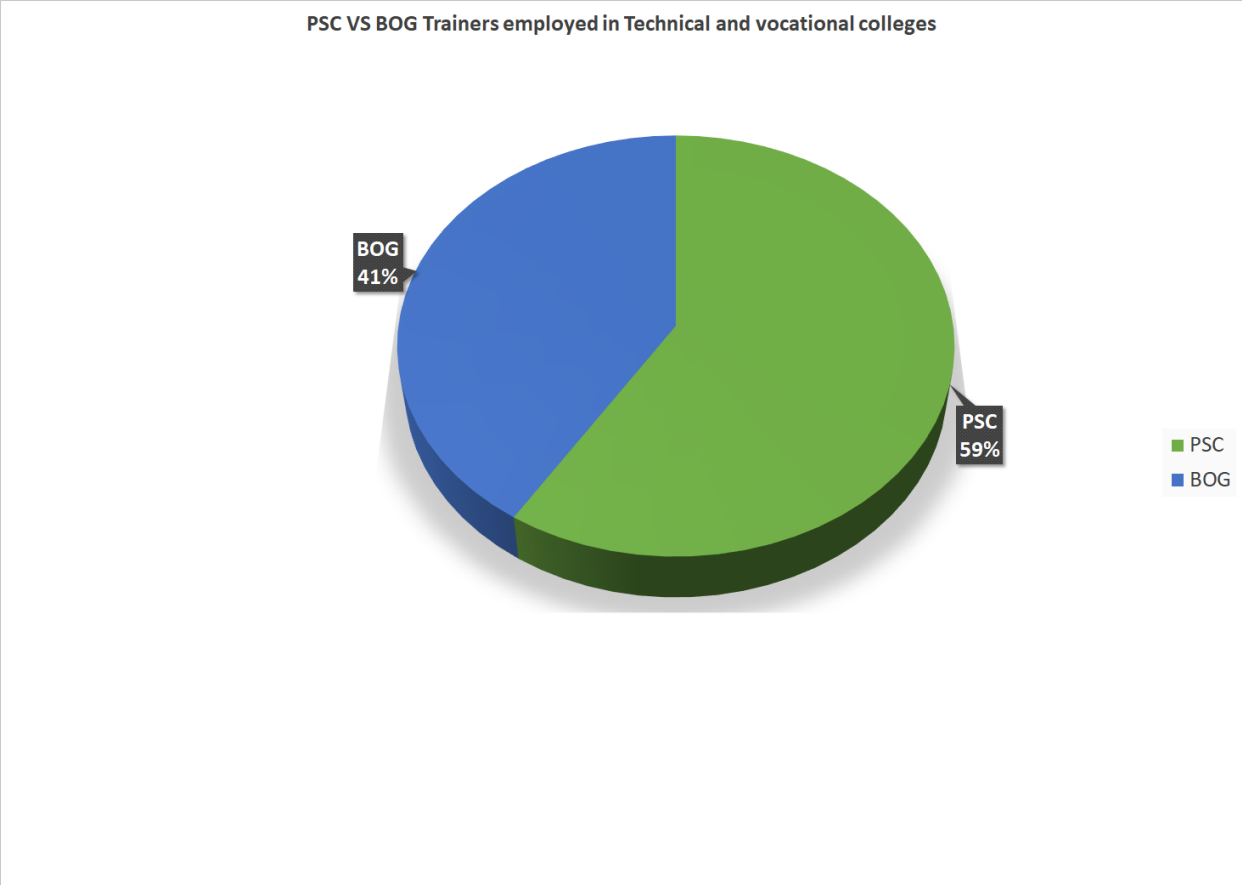
3.2.2 Trainer distribution in stem and Business

The figure below shows the distribution of trainers in Stem and Business it is evident that there is more trainers in Stem which accounts to 76% as compared to business which accounts to 24% this might be due to poor enrolment of students in business courses, there is a need for motivation of students to take business courses in Technical and vocational colleges and also there is a need for Kenya technical training colleges to absorb more business trainers.



3.2.3 Trainer terms of service

The Pie chart below shows the percentages of trainees employed by PSC and BOG in TVCs, the figure below shows that the number of trainees employed in public service commission is more than the number of trainees employed by the Board of Governors. There is need to employ more trainers in Public service commission.



CONCLUSION

The increase in the number of TVET institutions have led to improved access to training for secondary school graduates. Although all the institutions had employed part time trainers, the trainer: trainee ratios were still higher than the recommended ratio. Most of the TVCs are under enrolled hence are not operating optimally. This is evidenced by the fact that the more than 100 TVCs in the Country have a total enrollment of 90924 compared to the 11 NPs which have a total enrollment of 65289 trainees.

REFERENCES

1. Executive office of the President, Presidential Policy and Strategy Unit and UNICEF, Kenya (2019). Youth Education, Training and Employment Initiatives in Kenya: Rapid Baseline and Situational Analysis. Nairobi, Kenya.
2. Ministry of Education, State Department of Science and Technology (2014). TVET Policy.
3. Strategic Plan (2018 - 2022). Technical and Vocational Education and Training Authority (TVETA)
4. The National Council for Law Reporting with the Authority of the Attorney-General (2013). Technical and Vocational Education and Training Authority Act No. 29.