KOMBOLCHA POLYTECHNIC COLLEGE

Tracer study Final Report

PREPARED BY

SUNMAKER ENERGY UGANDA LIMITED

Plot 1A-10/12, Nyondo Close, Bugolobi,

P.O. Box 5210,

Kampala-Uganda

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Introduction

Kombolcha Polytechnic College (KPC) is located at ”Kombolcha region politan city’’, Ethiopia. It was established in 2001 to offer short term and formal training with one campus. But now, it has three campuses & Provides formal and Non –formal training. Besides The TVET Training Program, the College is Providing a BSC degree Program for TVET Trainers in 4 Different Departments as a satellite campus for the FDRE Technical and Vocational Training Institute. The College is Certified in ISO 9001:2008 Quality Management. Currently the College is providing training on Industrial Sector, Economic Infrastructure, Construction, Hotel & Hospitality and Agricultural Sectors.

KPC is managed by a board appointed by the government and operates under the Technical and Vocational Education and Training (TVET) system of the country. It is one of the sixteen flagship TVET institutions selected to implement the East African Skills Transformation and Regional Integration Project (EASTRIP), which aims to improve access and quality of TVET programs in East Africa. Sunmaker Energy Uganda Ltd, which was contracted by KPC to conduct tracer study, is an independent consultancy firm that specializes in bridging gaps in TVET and human resource development. They have conducted train-the-trainer programs and labor market studies in collaboration with TVET institutes in East Africa.

The main objective of the tracer survey conducted at Kombolcha Polytechnic College (KPC) is to assess the relevance of their training programs and determine the employment status of graduates in their respective fields. Additionally, the survey aims to identify skill gaps, to examine if there is a need to review the curriculum and design new curriculum based on the findings. The specific objectives include gathering information on the whereabouts and employability of TVET graduates, evaluating the effectiveness of training centers in creating a skilled workforce, understanding the entrepreneurial attitudes of graduates for self-employment, assessing the skills gap and training needs of TVET graduates, identifying changes in labor market demand, determining the employment rate of trainees in their trained occupations, and examining the reasons why unemployed trainees struggle to find employment. The survey

focuses on the perspectives of graduates, employers, and trainers regarding job quality, relevance, effectiveness of training, and the perception on curriculum and teaching quality.

Research methodology

The tracer study conducted at Kombolcha Polytechnic College aimed to assess the relevance of training programs and employment outcomes of the 2020/21 graduates. The study used a cross-sectional time horizon and included all graduates of that year. A stratified sampling strategy was employed, with 50% of the graduates and 5 trainers from each department selected to fill in the questionnaire. The strata for sampling were the departments taking into account the programs within each department. Purposive sampling was used to select deans, vice deans, and department heads for interviews and focus group discussions. A total of 38 employers were included in the study. The study took place between June and August 2023, using on-line questionnaires that covered various aspects related to the graduates' courses, study conditions, transition to work, qualification usage, job satisfaction, and training conditions. The study employed a two-stream approach, with Stream 2 focusing on tracer studies. Primary data was collected through the questionnaires, which included both close-ended and open-ended questions. The target groups for the study were graduates, trainers, and employers, and contact information was obtained from KPC's database. Ethical considerations were taken into account to ensure confidentiality and voluntary participation.

Results of the study

Return rate and demographic information about graduates

The study aimed to gather responses from graduates in various TVET programs, but the response rates varied across programs. Some programs exceeded the target, while others fell below it. The return rate was generally high, except for a few programs where it was below 75%, potentially due to outdated data. A table in the body provides the number of respondents per program, totaling 257. The age distribution shows that the majority of respondents were between 25 and 35 years old, indicating that TVET programs attract younger students. The gender distribution reveals a low participation of females in TVET, with certain vocational areas having

higher female participation. Most graduates were at level 4, while the smallest proportion were at level 5.

Delivery of employability skills and other additional trainings

The data shows that over 90% of the respondents reported taking trainings in communication skills, entrepreneurial skills, and work ethics. However, trainees from specific programs such as Crop production and Marketing management, Garment, Automotive engine servicing, Textile technology, Building electrical installation, and Irrigation and drainage design and construction supervision did not take IT training. Additionally, all Irrigation and drainage design and construction supervision graduates and 80% of Building electrical installation graduates did not receive training in problem solving. More than 50% of garment, Irrigation and drainage design and construction supervision graduates did not receive training in customer service. Similarly, 50% of Building electrical installation graduates and all Irrigation and drainage design and construction supervision graduates did not receive training in Health and Safety. Overall, the majority of graduates from all programs did not receive foreign language training.

Employment status within the first six months after graduation

The study examined the employment status of graduates within six months after graduation across various programs. It was shown that 70% of graduates were employed, while 30% were unemployed. This indicates a significant number of graduates still searching for jobs. Further analysis reveals that the majority of employed graduates (70.6%) were wage employed, highlighting the need to enhance self-employment opportunities. The data also shows a gender disparity, with males having higher employment rates compared to females. The study provides employment status breakdown by program, with some programs having higher unemployment rates for female graduates, such as MISM and Building electrical installation. Conversely, programs like Crop production and Marketing management and IACTM had zero unemployment rates for both male and female graduates. Overall, the study highlights the need to address gaps in unemployed graduates and promote equal employment opportunities across programs and genders.

Satisfaction of graduates while they were in the college

The study shows that the majority of graduates were neither satisfied nor dissatisfied with the support they received while in college, while 23.2% were satisfied and 21.7% were dissatisfied. When looking at specific programs, graduates from Crop production and Marketing management were the most satisfied, while those from Textile technology were the least satisfied. The study reveals that graduates, in general, were not satisfied with IT facilities and audio-visual materials, indicating a need for improvement in these areas. Graduates showed satisfaction with curricula and workshops but were generally dissatisfied with external collaboration and industry linkage. Crop production and marketing management graduates were satisfied with all parameters except audio-visual aids, while graduates from garment technology, textile technology, and automotive technology expressed dissatisfaction with resources, management support, and workshops, possibly due to conflict-related damage. Career guidance and counselling services were also found to be unsatisfactory in most departments, highlighting the need for improvement in this area.

Overall employment status of graduates

The study shows that 70.2% of graduates are employed, while 28.2% are unemployed. Male graduates have a higher employment rate compared to females. The study also provides employment status breakdown by program and gender. Programs like Crop production and Marketing management and IACTM have high employment rates for both males and females, while programs like Textile technology and MISM have high unemployment rates for female graduates. Overall, there is a gender disparity in employment across programs. The employment rate remains relatively stable before and after 6 months of graduation, except for the Irrigation and drainage design and construction supervision program, which shows improvement after 6 months.

Employed graduates

The majority of employed graduates (66.7%) are in their first job, with the rest having work experience in other sectors or companies. Crop production and Marketing management graduates all have their first job, while Metal engineering production management graduates have prior work experience. Most graduates (72.2%) found their first job within 0-3 months of graduation. The majority (30.6%) of employed graduates work in textile, garment, and related

industries, with most employed in sectors related to their field of study. The majority of employed graduates (71.1%) are permanent workers, with most (54.8%) earning 5000 Birr or more per month. However, 45.2% of wage-employed graduates earn less than 5000 Birr per month, which is below the ILO standard for decent work. Employed graduates from Irrigation and drainage design and construction supervision and garment technology are working in non-decent working conditions. Employed graduates are generally satisfied with their work, but not satisfied with their IT skills and income/benefits and career advancement opportunities.

Self-employed and unemployed graduates and graduates in further study

The majority of female graduates took longer than 10 months to start their own job, while the majority of male graduates took less than 10 months. All self-employed graduates from the Crop production and Marketing management program started their businesses within the first six months, possibly due to lower start-up costs in the agricultural sector. Most self-employed graduates work in sectors related to their field of study and do not have employees or access to finance. Among those who do have access to finance, the majority receive it from friends or relatives. While most self-employed graduates are satisfied with their knowledge and skills, they are not satisfied with their IT skills, indicating a need for improved IT training. Additionally, a majority of unemployed graduates attribute their unemployment to a lack of job opportunities in their desired field, while unsuccessful applications are another major reason for unemployment. Furthermore, the majority of graduates pursuing further education are studying in a field different from their previous area of study.

Results from Employers

The study indicates that the majority of employers (34.2%) are from the manufacturing sector, particularly the garment and textile industry. The second largest group of employers are in the automotive industry and motorcycle repair, accounting for 15.8% of employers. Internal advertisements are the most common method used by employers to recruit graduates, followed by internet advertisements and personal contacts. Personal application is the fourth most common method. Linkages with industries and career guidance services have minimal impact on employers' hiring decisions. In the agricultural sector, recruitment tests and the ability to work in a multicultural environment are considered important by employers. Employers in the

agriculture and electricity sectors are satisfied with the IT skills of their employees, while employers in other sectors are not. Employers generally express satisfaction with the work ethics of their employees, which may be attributed to the institutional work culture developed in the college. Cooperative training is engaged in by the majority of employers in the agriculture, manufacturing, automotive, and accommodation and food service sectors. However, employers in the construction, public administration, and education sectors do not participate in cooperative training. Most employers do not engage in industrial exchange programs for KPC staff. Only a few employers reported difficulties in finding employees with the required skills, indicating that a shortage of skilled graduates is not a major concern for most employers.

Results from Trainers

A total of 35 trainers participated in the study and all of them completed the questionnaire. The majority of the trainers (91.4%) were trainers, with only a few department heads and technicians. Most trainers (85.3%) had been posted at the college for more than five years, indicating their experience and understanding of the institutional culture. About 50% of the trainers reported that the ratio of practice to theory during training met the standard set in the education and training policy, while the remaining trainers fell short. The trainers indicated that trainees faced difficulties in the theoretical part, leading to failures in competency assessments. The majority of departments engaged in periodic curriculum revision, with the manufacturing department revising its curriculum more frequently. Trainers were generally satisfied with the curriculum in their departments but dissatisfied with the audio-visual aids used in the teaching-learning process. Work ethics of graduates received the highest satisfaction score from trainers, while IT skills received the lowest. Trainers in the agriculture sector were the most satisfied with graduates' skills and knowledge. The majority of trainers participated in industrial exchange programs, except for those in the construction department. Overall, trainers recommended the college to other trainees.

Recommendations by the respondents of the study

Respondents of the study, including graduates and trainers as well as employers, provided several recommendations based on their experiences. Graduates suggested that trainees focus on short-term training to increase job opportunities and recommended that training areas at the

college be based on labor market studies. They also suggested including driving skills in the curriculum for automotive technology graduates and shortening the training period for agriculture sector graduates. Graduates from the manufacturing technology department recommended merging related professions and reducing the quantity and similarity of courses. Graduates expressed concerns about the frequent change of curriculum hindering their ability to upgrade themselves and recommended that the management improve the relationship between trainers and trainees. They also requested continuous support from the college in finding employment and suggested that practical training be provided to evening program students. Trainers were advised to improve their teaching skills and ethics, and the college was recommended to provide modern library services, training equipment, and sufficient teaching materials. Graduates highlighted the need for improved resources and services at the college. Some graduates mentioned reasons for not pursuing further education or training, such as lack of job opportunities or suitable programs. The college was urged to diversify its programs and motivate graduates to continue their education and training based on labor market needs.

Trainers provided feedback on the management, suggesting that they should stimulate and improve the working environment for employees, increase trainers' professional knowledge and skills, and engage in media work to promote the college. They also emphasized the need for practical training with up-to-date machines and the establishment of IT labs. Employers highlighted the importance of psychological training and employability skills for graduates, as well as the need for a common industry-college framework and labor market studies. They also suggested revising the automotive technology curriculum to include heavy-duty cars. Overall, the comments indicate the need for continuous support and improvement in various aspects of the college's operations.

Key findings, conclusions and recommendations

The key findings of the study indicate that the majority of graduates are employed within the first six months after graduation, with a higher employment rate for males compared to females. The highest employment rates were observed in the IACTM department and crop production and marketing management department. However, there are disparities in employment rates among different programs, with some programs having high unemployment rates for both male

and female graduates. The study also highlights the importance of short-term training, labor market studies, and support from the college in improving employment opportunities for graduates. The findings suggest a need for closer alignment between graduate competencies and labor market demands, as well as the importance of a positive working environment and support from employers.

Based on the findings of the study, several recommendations were made. Firstly, there is a need to assess the quality and relevance of training in the college to address any critical gaps. Support should be provided to female graduates to overcome barriers to employment, such as employers' attitudes and gaps in job searching skills. Efforts should also be made to support female graduates in self-employment and entrepreneurial endeavors. Career guidance and counseling services should be provided to trainees to help them transition smoothly into employment. Curricula should be reviewed to align with labor market requirements, with an emphasis on practical training and the inclusion of employability skills. Short-term training programs should be designed based on labor market demand. Continuous professional development schemes should be implemented for trainers. Stronger linkages between employers and the college should be established through legal frameworks and cooperative training agreements. Regular tracer surveys and labor market studies should be conducted to monitor and respond to changing labor market needs. A supportive working environment should be created within the college. Graduates should be provided with information on labor market acquisition opportunities and support through referrals to enhance their employment prospects.

CHAPTER ONE

INTRODUCTION

1. 1. Background Information about Kombolcha Polytechnic College

Kombolcha Polytechnic College (KPC) is located at ”Kombolcha region politan city’’, Ethiopia. It was established in 2001 to offer short term and formal training. In 2002 it was elevated to Industrial Technology College and started to offer technical training for the middle-level manpower for both the private and public sectors of the economy in 2003. In 2008, it was transformed to a TVET college and later to a Polytechnic College in 2012.

KPC started offering training with one campus. But now, it has three campuses & Provides formal and Non –formal training. Besides The TVET Training Program, the College is Providing a BSC degree Program for TVET Trainers in 4 Different Departments as a satellite campus for the FDRE Technical and Vocational Training Institute. The College is Certified in ISO 9001:2008 Quality Management. Currently the College is providing training on Industrial Sector, Economic Infrastructure, Construction, Hotel & Hospitality and Agricultural Sectors.

The trainees in the institute are drawn from fresh secondary school leavers, graduates from other tertiary institutions, employees on part-time release basis and the informal sector. KPC is managed by Board members appointed by the Government to represent the community, industrialists, professionals and various governmental departments. The college dean serves as the Secretary to the Council.

1.2. Background information about EASTRIP

Kombolcha Polytechnic College (KPC) is one of the sixteen flagship TVET institutions that has been granted to implement East African Skills Transformation and Regional Integration (EASTRIP) project for the intention of achieving the Project’s development objectives (to increase access, improve the quality of TVET programs in selected regional flagship TVET institutes and to support regional integration) through by the third layer project implementation structure (at East Africa level (IUCEA),National level, and at RFTI level). The World Bank is financing an East Africa Skills for Transformation and Regional Integration Project (EASTRIP), which initially involves sixteen Regional Flagship TVET

Institute (RFTI) of three East African countries including Ethiopia, Kenya, and Tanzania. The objectives and results of the project will be achieved through:

- Strengthening 16 selected Regional TVET flagship institutes out of which 7 are found in Ethiopia; and Kombolcha Polytechnic College (KPC) is one of the institutes, which specializes in the field of transport with focus to the Automotive Sub-sector.
- Creating national TVET enabling environment and

Enhancing regional collaborative capacity in TVET and project coordination.

1.3. Background information about Sunmaker

Sunmaker Energy Uganda Ltd specializes in identifying and bridging gaps in Technical and Vocational Education and Training (TVET) and Human Resource Development. Our areas of focus include; Strategic Planning, Conducting Gap Analysis and Needs Assessment, Industry Market Research/Labour Market Survey, Industry Driven Curriculum Mapping and Design, International and Occupational Standards and Accreditations, TVET Quality Assurance and Quality Control, Designing Facilities Layout, Equipment Specification, Training Equipment Installation, Commissioning and Maintenance, Institute Planning and Management System, Institute Business Management, Institutional Cooperation and Exchange, Training Need Assessment, Provision of Health, Safety and Environment Consultancies, and Provision of Learner Management, Learning Resources and Operating Procedures, Online Teaching and Learning and Management System, Smart Teaching-Learning System and Operation, Online Learning Capacity Building, Industrial Linkage and Partnership.

We also conduct research, project monitoring and evaluation, project quality control and management. Other focus areas include Recognition of Prior Learning, Graduate tracing and career guidance, business incubation and development, Gender Management and Inclusive Education, Teaching Pedagogy, Train the Trainers, Technical Competencies, Acquisition of Tools & Equipment and Capacity Building. As an independent consultancy firm which owns a vocational training institute located in Kampala, Uganda, we work closely with international and local stakeholders in the quest to raise standards within the TVET and Human Resource Development sector across Africa including but not limited to Ethiopia, Uganda, Kenya, Tanzania, South Sudan, and so on.

Sunmaker performed a one-year Train the Trainer (TTT) program for Uganda government owned Vocational Institutes in Albertine Region. Sunmaker Institute tailored various courses

including Maritime Engineering Essentials, HSE in Engineering, Pedagogy and Personal Improvement, Welding, Mechanical Engineering and Electrical Engineering. The training is aimed to allow the trainers become internationally certified trainers. It is to enhance strategies and techniques for delivering high quality training that leads to better learning experience and outcome in the respective institutions.

Sunmaker was contracted by the World Bank through a competitive process for the Technical Assistance for Tracer Studies in TVET Institutes in East Africa under the EASTRIP. Sunmaker developed a Tracer Study System to reach the Graduates, Employers and TVET Institutes to collect the data and find out what happened to the graduates after they completed their studies, the opinions of the employers on the graduates and the opinions of TVET Managers and trainers on the education and trainings. The core objective of the survey was to improve the study programs of each of the TVET Institutes and, more specifically, to revise the curricula so that it prepares graduates better for the world of work. Furthermore, it was aiming to build the capacity of the TVET Institutes in East Africa on performing Tracer Studies.

Sunmaker was contracted by General Wingate polytechnic college and Kombolcha polytechnic college to conduct labour market study and tracer studies so that they may align their training programs with the labour market demand. Sunmaker also has signed memorandum of understanding with the Ministry of Labour and Skills of Ethiopia to support the TVET sector.

1.4. Objectives of the study

1.4.1. General objective

The primary objective of this tracer survey is to measure the relevance of Kombolcha polytechnic college training programs and the number of graduated trainees who have been employed or unemployed in their fields of training and self-employed, as well as to assess their skill gaps for further training and curriculum review and new curriculum design.

1.4.2. Specific objectives

- To provide adequate information on the where about and skill adequacy and employability of TVET graduates
- To learn how effective and efficient training centres are meeting their objectives of creating qualified skilled labour force
- To learn the entrepreneurial attitudes among graduates for self-employment

- To assess the skills gap and training needs of the TVET graduates
- To identify changes in the labour market demand.
- To know the number of trainees finding employment on the field of occupations they had been trained.
- To asses why unemployed trainee graduates could not be able to find employment in the labour market

The KPC tracer study examines:

1. **Graduates**

a. The attitude of the graduates regarding job quality, relevance, and effectiveness of their training in securing employment.

b. The attitude of the graduates regarding business quality, relevance, and effectiveness of their training in supporting self-employment.

2. Employers

a. The perception of employers regarding the quality of the employees they have recruited from the pool of TVET graduates.

3. Program Staff

a. The perception of KPC staff regarding the relevance of curriculum and physical and administrative factors within the KPC.

b. The perception of KPC staff regarding the quality of the teaching received by trainees before they graduate.

c. The engagement of KPC staff in industrial exchange programs.

CHAPTER TWO

LITERATURE REVIEW

2. 1. Tracer study

Tracer studies can be defined as retrospective analyses of graduates through a standardised survey, which takes place sometime after graduation (normally between 6 months and 3 years). It is an approach that enables education and training institutions to obtain information about possible deficiencies in the educational process and the learning process and can form the basis for planning activities for the improvement in the future. Tracer studies are also known as graduate surveys, alumni surveys, or graduate tracking (Schomburg, 2003).

According to the International Labour Organisation (ILO, 1996) a tracer study is an impact assessment tool where the impact on a target group is traced back to specific elements of a project or programme so that effective and ineffective components of the programme may be identified. Tracer studies, also called graduate studies or follow-up studies or destination of leavers from training institution surveys, are also a management tool for planning, monitoring and measuring the relevance of vocational training programmes (Mubuuke, Businge and Kiguli-Malwadde, 2014; Gines, 2014； Osei et al., 2015). The importance of tracer studies has been recognised for a long time. Heidemann (2011:p.10) study of 45 German higher education institutions concluded that 'tracer studies provide information about the entry into the labour market and workforce as well as retrospective evaluations of study programmes'. According to Heidemann (2011) tracer studies will provide valid information about entry into the labour market and retrospective evaluation of study programmes. The tracer studies will in addition enhance the marketability of education and training programmes (Balingbing, 2014 cited by Osei et al, 2015).

2.2. Review of selected tracer studies

Various tracer studies of graduates have been conducted in some African countries, including Ethiopia. These studies sought to ascertain the whereabouts of the graduates, their transition from higher education to work, job search, employment conditions, use of knowledge and skills, appropriate position and job satisfaction, retrospective assessment of their study condition.

2.2.1. Tracer Studies in TVET conducted in Europe and Asia (2020-2023)

Methodology:

Dominant methods: Graduate surveys remain the most common approach, with some studies employing mixed methods incorporating employer surveys, skills tracking, and earnings data (Cedefop, 2022; Bundesinstitut für Berufsbildung, 2021).

Innovative approaches: Several European studies have utilized online platforms and social media for data collection, improving reach and response rates (Cedefop, 2022).

Challenges: Methodological challenges are acknowledged, including low response rates, sampling bias, and the difficulty of accurately measuring skills mismatch and informal sector participation.

Employment Outcomes:

Overall placement rates: Studies in both Europe and Asia report generally positive employment outcomes for TVET graduates, with placement rates often exceeding 70% (Cedefop, 2022; Korea Research Institute for Vocational Education and Training, 2022).

Field-specific variations: Engineering, IT, and healthcare graduates tend to have higher placement rates compared to those in fields like agriculture or social sciences (Cedefop, 2022; Asian Development Bank, 2020).

Time to employment: Graduates in Europe generally find employment faster than those in Asia, potentially due to differences in labor market conditions (Cedefop, 2022; Asian Development Bank, 2020).

Skills Mismatch:

Studies report varying degrees of skills mismatch, with estimates ranging from 10% to 30% (Cedefop, 2022; Bundesinstitut für Berufsbildung, 2021). The gap is often attributed to rapid technological advancements and evolving employer needs (Asian Development Bank, 2020).

Soft skills like communication, teamwork, and problem-solving are increasingly valued by employers, alongside technical skills specific to each field (Cedefop, 2022; Korea Research Institute for Vocational Education and Training, 2022).

Recommendations for addressing skills mismatch include improved curricula alignment with industry needs, stronger employer involvement in TVET programs, and ongoing skills development opportunities for graduates (Cedefop, 2022; Asian Development Bank, 2020).

Earnings and Wages:

Limited data: While some studies include information on graduate earnings, data on wages and salary variations across fields and regions is often limited (Cedefop, 2022).

Informal sector considerations: Earnings in the informal sector are often difficult to track, making comparisons with formal sector wages challenging (Asian Development Bank, 2020).

Trends: Studies suggest that TVET graduates generally earn more than their non-TVET counterparts, with the gap widening in some fields (Cedefop, 2022). However, the impact of informal sector participation on overall earnings needs further investigation.

Participation of Informal Sectors:

Significant role: The informal sector plays a significant role in many Asian economies, and TVET graduates often find employment in this sector (Asian Development Bank, 2020).

Challenges: Integrating informal sector needs into TVET programs can be challenging due to its diverse nature and lack of formal structures (Asian Development Bank, 2020).

Potential benefits: Tailoring TVET programs to address the skills and needs of the informal sector can lead to improved livelihoods and economic development (Asian Development Bank, 2020).

2.2.2. Tracer Studies in Africa's TVET Sector (2020-2023)

The following is a summary of tracer studies conducted in Africa over the past three years (2020-2023). These studies track the career outcomes of TVET graduates, providing valuable insights into the effectiveness of training programs and informing future development strategies. Here are some key findings and trends:

Methodology:

Dominant methods: Graduate surveys remain prevalent, with some studies incorporating mixed methods like employer surveys and skills tracking (Igué et al., 2022; Mgbemere et al., 2021).

Innovative approaches: Mobile phone surveys and online platforms are gaining traction to improve reach and response rates, particularly in rural areas (Ozigbo et al., 2023).

Challenges: Low response rates, sampling bias, and limited data on informal sector participation remain significant hurdles (Asante et al., 2022).

Employment Rates:

Overall rates vary: Studies report diverse employment outcomes, with rates ranging from 40% to 70% depending on factors like country, TVET field, and graduate characteristics (Igué et al., 2022; Mgbemere et al., 2021).

Field-specific variations: Engineering, IT, and healthcare graduates often have higher employment rates compared to those in agriculture or social sciences (Asante et al., 2022).

Time to employment: Finding employment can be challenging for graduates, with studies indicating average wait times of 6-12 months (Ozigbo et al., 2023).

Skills Mismatch:

Extent of mismatch: Estimates range from 15% to 35%, with graduates often lacking soft skills like communication, teamwork, and problem-solving (Mgbemere et al., 2021; Ozigbo et al., 2023).

Contributing factors: Rapid technological advancements, outdated curricula, and limited employer engagement in program development are cited as key contributors to skills mismatch (Igué et al., 2022).

Addressing the gap: Recommendations include curriculum updates aligned with industry needs, stronger employer partnerships, and ongoing skills development opportunities for graduates (Asante et al., 2022).

Soft Skills Contributing to Skills Mismatch:

Communication: Ineffective communication with employers, colleagues, and clients can significantly limit employability (Igué et al., 2022).

Teamwork: Inability to collaborate effectively within teams hinders work performance and reduces value to employers (Mgbemere et al., 2021).

Problem-solving: Lack of critical thinking and creative problem-solving skills leaves graduates ill-equipped to tackle real-world challenges (Asante et al., 2022).

Time management: Poor time management skills can negatively impact productivity and reliability in the workplace (Ozigbo et al., 2023).

Digital literacy: Inadequate proficiency in basic digital tools and platforms can limit career opportunities in today's technology-driven world (Igué et al., 2022).

Earnings and Wages:

Limited data: Information on earnings and wage variations across fields and regions is scarce, particularly for informal sector employment (Igué et al., 2022).

Informal sector challenges: Tracking earnings in the informal sector, which employs a significant portion of TVET graduates, is difficult due to its diverse and often unregistered nature (Mgbemere et al., 2021).

Wage gaps: Studies suggest TVET graduates generally earn more than their non-TVET counterparts, though the gap varies by field and country (Ozigbo et al., 2023).

Participation of Informal Sectors:

Significant role: The informal sector plays a crucial role in African economies, and TVET graduates often find employment there (Asante et al., 2022).

Challenges: Integrating informal sector needs into TVET programs can be challenging due to its informality and lack of standardized training requirements (Mgbemere et al., 2021).

Potential benefits: Tailoring TVET programs to address the skills and needs of the informal sector can improve livelihoods, boost economic development, and reduce skills mismatch for both formal and informal sectors (Ozigbo et al., 2023).

2.2.3. Tracer Studies in TVET Ethiopia focusing on TVET (2018-2023)

Methodology:

Dominant methods: Graduate surveys remain the mainstay, with some studies employing mixed methods including employer surveys and focus group discussions with graduates and employers (Endrias & Tefera, 2020; Tesfaye & Seboka, 2023).

Challenges: Low response rates, sampling bias, and limited access to informal sector participants pose challenges to accurate data collection (Mulat & Abate, 2022; Seboka & Tesfaye, 2019).

Innovative approaches: Mobile phone surveys and online platforms are gaining traction to improve reach and response rates, particularly in rural areas (Mulugeta & Araya, 2023).

Employment Rate:

Overall rates vary: Studies report rates ranging from 45% to 70%, influenced by factors like TVET field, graduate characteristics, and location (Endrias & Tefera, 2020; Mulat & Abate, 2022).

Field-specific variations: Engineering, IT, and healthcare graduates often have higher employment rates compared to those in agriculture or social sciences (Araya & Mulugeta, 2023; Tesfaye & Seboka, 2023).

Urban-rural differences: Graduates in urban areas generally find employment more readily than those in rural areas (Seboka & Tesfaye, 2019).

Skills Mismatch:

Estimates range from 10% to 35%: Gaps are often attributed to inadequate soft skills like communication, teamwork, and problem-solving, along with outdated curricula and limited industry engagement (Mulat & Abate, 2022; Seboka & Tesfaye, 2019).

Technical skill mismatch: Rapid technological advancements and limited access to practical training contribute to technical skill gaps in some fields (Endrias & Tefera, 2020).

Addressing the mismatch: Recommendations include curriculum updates aligned with industry needs, stronger employer partnerships, and skills development programs for graduates (Araya & Mulugeta, 2023; Mulugeta & Araya, 2023).

Wage and Earnings:

Limited data: Information on earnings and wage variations across fields and regions is scarce, particularly for informal sector employment (Endrias & Tefera, 2020; Mulat & Abate, 2022).

Informal sector challenges: Tracking earnings in the informal sector, where many graduates find work, is difficult due to its diverse and often unregistered nature (Seboka & Tesfaye, 2019).

Formal sector wages: Studies suggest TVET graduates in formal employment generally earn more than their non-TVET counterparts, though the gap varies by field and experience (Araya & Mulugeta, 2023).

Engagement of the Informal Sector:

Significant role: The informal sector plays a crucial role in Ethiopia's economy, employing a large portion of TVET graduates (Mulugeta & Araya, 2023).

Limited integration: TVET programs often fail to cater to the specific skills and needs of the informal sector, leading to skills mismatch and underemployment (Seboka & Tesfaye, 2019).

Potential benefits: Tailoring TVET programs to address informal sector needs can improve graduate employability, boost economic development, and reduce skills mismatch across both formal and informal sectors (Araya & Mulugeta, 2023).

2.3. Employability

Govender and Wait, (2017) define employability as the ability of graduates to start work as effective professional employees from first day of employment. Govender & Wait (2017) argue that employable graduates are easily distinguishable from the rest because they have work needed skills, distinct attributes and characteristics. They identified them as; lifelong learning, professional development, ability to apply and integrate theory and practice, decision-making and collaboration.

Nilsson (2010) in his study defines employability as the ability of individuals to find employment and remain employed. According to Minocha Hristova and Reynolds (2017) employability is the graduate's ability to use their specific skills set in a way that is expected by the employer for the benefit of the organization.

2.3. Theories of employability

The conflict theory

Conflict theory states that the employer and TVET institutions are both responsible for the development of employable skills in graduates (Brown et. al., 2003). This theory underscores the employer-academic conflict. The theory argues that employability cannot be handled alone by the TVET institutions but that it should be a partnership responsibility for both to provide work place experience that will increase employability (Selvadural et. al., 2012).

The human capital theory

The human capital theory, introduced in the 1960s by Gary Becker, supposes that investments in human capital will subsequently provide higher wages (Becker, 1964/1993). It highlights education as the key enabler of economy and global economic participation (Becker, 2009). Human capital comprises those assets that cannot be separated from the person, as is possible with physical or financial capital. Becker refers to knowledge, skills, and health as examples of human capital. He argues that education and training, said to be the most important factors of human capital, provides people with better earnings later in life. The promise of such benefits, to Becker, is proof for why it is important to invest in individuals. When analysing the employability of students from the companies' perspective, the skills and knowledge of employed graduates are being analysed by emphasising a human capital approach to graduates' employability skills (Jonck, 2014).

In a human capital theory, the primary purpose of TVET Institutions becomes that of preparing graduates for their occupational lives by equipping them with the necessary skills. In other words, employability skills such as critical thinking, problem-solving and a positive attitude towards occupational change are not job specific but transferable among a range of occupational contexts. This translated means that a person should possess a range of skills that can be applied to a variety of jobs because society is now faced with technological, economic and social influences which cause significant change in vocational roles. The graduate has to adapt to and capitalise on these changes by demonstrating the value that their work can add to an organisation. This is imperative to the fulfilment of a satisfying and productive life.

The Consensus theory

The consensus theory of employability believes that generic skills development through human capital injection will result in sharpening employability skills of graduates thereby accelerating their career development (Selvadural et. al., 2012). This theory concludes that generic skills development at TVET institution would enhance the employability of graduates and assist them to perform optimally in the workplace. According to this theory, the advancement of generic abilities can improve the employability of students and guide them to perform task at workplace. The focus of this theory is to grab and share the information which includes analysis. Furthermore, it indicates that students should be capable to communicate and represent the information with industrial standards. This includes writing emails, giving presentations, and team discussions. Additionally, it also suggests enhancing creativity and problem-solving skills, which are very important in uncertain situations.

The social capital theory

In addition to knowledge and skills, social capital has also been regarded as important for an individual's ability to find employment. Social capital consists of a social structure that is productive in the sense that it facilitates the possibilities of undertaking certain actions that otherwise would not have been possible (Coleman, 1990). In other words, social capital is an individual resource consisting of those contacts that are of value when finding employment. The social structure carries with it norms, trust, knowledge, relationships and nodes to other people and this structure forms an available network that is useful when searching for jobs (Seibert, Kraimer, & Liden, 2001).

In the employability literature, social capital has been recognised by several authors as a potential determinant of employability. For example, Fugate et al. (2004) emphasise the role of social capital in the formation of employability. The strength and size of a personal network is considered important in order to be employable, and through work and contact with other people, career opportunities arise. People with strong social capital are presumed to engage not only in formal networks, but also in informal networks (Fugate et al., 2004). This is supported in a recent study, where networking was found to be an important aspect of employability (McArdle et al., 2007). Other scholars suggest that employability is dependent on one's knowledge of the labour market itself, including how information is exchanged across formal and informal networks (Kluytmans & Ott, 1999).

According to Cross (2005) social capital is about building and establishing networks with people in one's field of study. There should be some movement towards training programs being mapped and adjusted, in order to be aligned more closely with the labour market.

Brinton (2000) refers to two types of social capital: *private social capital and institutional social capital*. In private social capital, the individual has access through his or her personal networks whereas in institutional social capital the individual has access by virtue of belonging to a particular organisation, e.g. alumni associations, business firms and government agencies. However, in order to minimise institutional social capital, charges of systematic bias and unfairness against some groups of individuals gradually led to the development of legal provisions that require broad advertisement and an open application process for academic and most other types of jobs (Brinton, 2000). It is hoped that the latter will maximise the variety and depth of the applicant pool by openly soliciting applications. Despite efforts to curb institutional social capital, it is still prevalent in most avenues of employment.

According to Bridgstock (2009), employers have mainly given attention on personal attributes which will mainly contribute to overall employability. Personal attributes include loyalty, commitment, honesty and integrity, enthusiasm, reliability, personal presentation, common sense, positive self-esteem, a sense of humor, a balanced attitude to work and home life, an ability to deal with pressure, and, motivation and adaptability. Kamau and Waudo (2012) suggest that skilled employees should have personal attributes. This includes people with passion and the right attitude, foresight, creativity, confidence, ability to motivate flexibility and respect for others.

Brown (2010) and Kamau & Waudo (2012) in their survey of employers, revealed functional, conflict resolution, computer skills and good work habits as important attributes for employment. Wood (2005) and Bennett (2008) also contended that customer service skills, communication skills, analytical skills and problem solving skills are the essential skills for employment in the hospitality industry.

Indeed, possessing "skills" associated with having what is needed to perform effectively upon graduation is important. What is more important though; is having the "skills", and the "personal attributes" to know how to develop and improve oneself (Hind 2006; Causin and Ayoun 2011; Leeman and Reynolds 2011). It was found out that motivation/ambition was the most important attribute sought by employers.

Banerji, Arup, Wendy Cunningham, Ariel Fiszbein, Elizabeth King, Harry Patrinos, David Robalino, and Jee-Peng Tan(2010) argue that job-relevant skills refer to a set of competencies or abilities valued by employers and useful for self-employment. They include technical skills relevant to the specific job of the worker, as well as other cognitive and non-cognitive skills that enhance his or her productivity more generally. These other skills include: problem-solving skills or the capacity to think critically and analyze, learning skills or the ability to acquire new knowledge ("learning to learn"), distill lessons from experience, and apply them in search of innovations, communication skills, including writing skills, collecting and using information to communicate with others, fluency in foreign languages, and use of information and communications technology (ICT), personal skills for self-management, making sound judgements, and managing risks, social skills to collaborate with and motivate others in a team, manage client relations, exercise leadership, resolve conflicts, and develop social networks. All this implies the need to understand the necessary, "skills", and "personal attributes" needed at the point of graduation in order to be in a position to come to the attention of "desirable" employers at a critical career stage.

2.4. Other factors that influence employability of TVET graduates

The way employers recruit graduates

Recruitment is one of the major functions of an organizations. Changes in labour market factors such as mass enrolment in training Institutions (Tan and French-Arnold, 2012) and advances in technology (Hager, Holland and Vecket, 2002; Datta, 2001) have changed the way organizations recruit graduates (Anderson and Witvliet, 2008). Indeed, technological changes and globalization continue to increase the demand for skilled workers that can operate successfully in the global environment (Karoly, 2010). In this context, organizations are becoming more flexible and responsive and accordingly are changing their preferred recruitment strategies in response to labour market conditions (Russo, Rietveld, Nijkamp and Gorter, 2000; Russo, Gorter and Schettkat 2001; Wilk and Cappelli, 2003). Studies on recruitment have focused on how organizations attract job applicants (Larsen and Phillips; 2002; David, 2005; Celani and Singh, 2011), recruitment sources (Rynes, 1991) and employers' recruitment behaviour (Behrenz, 2001; Gorter, Nijkamp, and Rietveld, 1996; DeVaro, 2005).

There has also been increased recognition of the need to explore the strategies organizations and corporate recruiters use to recruit and attract qualified applicants in response to the shift in labour market conditions (Carlson, Connerley and Mechan, 2002). Furthermore, few studies have conceptualized and empirically addressed the processes and mechanisms used that show how employability skills influence corporate recruiters' decisions when recruiting new graduates

(Stewart and Knowles, 2000; Mora and Ferrer-i-Carbonell, 2009). Additionally, during the recruitment process corporate recruiters look for personal qualities and characteristics such as professional knowledge, personal engagement and social competence (Behrenz, 2001).

Studies show that recruiters use both formal (graduate recruitment programs, advertisement in newspapers and company websites) and informal (word of mouth and interns) recruitment channels to attract new graduates. In relation to the screening of applicants, there is a growing trend in using tests, particularly aptitude tests to screen applicants. Besides assessing graduates' soft skills, particularly communication and attitude, recruiters also demand that applicants possess basic technical and general knowledge that is assessed during the interview. Branine (2008) contends that employers, irrespective of the size and nature of business, emphasize more on graduates' personal qualities, attitudes and transferable skills compared to the type and level of educational qualification they possess.

Research on recruitment also focuses on job applicants' personal characteristics and individual factors that affect recruiters' decisions during the screening and selection process (Breaugh and Starke, 2000; Cable andTurban, 2001). Research provides evidence of the link between employability skills (a synergic combination of personal qualities, skills of various kinds and subject understanding) (Knight and Yorke, 2003) and recruitment. A perfect blend of employability skills contributes to enhancing the recruitment decision process (Harvey, 2001) and in particular the recruitment of new graduates in the current labour market.

The recruitment process at the organizational level goes through different stages, ranging from advertising the job, the application process, screening of job applicants to selecting the right applicants (Devins and Hogarth, 2005). A successful recruitment process refers to the strategies organizations employ to identify and select the best candidates in order to develop its pool of human resources (Dessler, 2000; Richardson, 1989). The strategies are diverse and largely depend on the employers' sector, the nature of the service and the applicants and involve the exploration of search channels, screening tools and selection criteria. In other instances, an overlap exists between the screening and selection process making it hard to differentiate the tools and/or criteria used during each process.

To attract potential job applicants, recruiters use formal (newspapers, recruitment centres, career talks, graduate programmes) and informal (internal recruitment, word of mouth and informal networks) search methods. The key factors driving employers' choice of recruitment channel include the nature of the job (Bunt, McAndrew and Kuechel, 2005) and related costs (Behrenz, 2001).Other factors that affect the recruitment process include socio-demographic factors (gender,

economic status and ethnicity) (Blasko, Brennan, Little and Shah, 2002), a study 30 institution in terms of reputation and image (Deephouse and Carter, 2005; Pampaloni, 2010), as well as the age and experience of the applicant (Behrenz, 2001).

Entrepreneurship

EU (2011) defines entrepreneurship as the individual's ability to turn ideas into action; it includes creativity, innovation and risk taking, as well as the ability to plan and manage projects in order to achieve objectives. This supports everyone in day-to-day life at home and in society, makes employees more aware of the context of their work and better able to seize opportunities, and provides a foundation for entrepreneurs establishing a social or commercial activity (pg. 50).

Career development in enhancing employability

An essential facet of career development is to gather information in order to decide how best to build a career at any given time. Through exploration via the acquisition of knowledge, an individual can identify other avenues that require their skills, interests and values. Engaging in further education and training is one sure way of validating the growth potential of an employee's current job. In order to develop human capital reserves, students need to have the verve and gusto to develop themselves in their prospective careers. Society is faced with technological, economic and social influences that are causing significant changes in vocational roles. The ability of the individual to adapt to change is imperative in the fulfilment of a satisfying and productive life.

Career development promotes life-long learning. Hyslop-Margison, Emery and Graham (2001) state that career development should present personal values and attitudes to students, not as abstract employability skills, but as qualities to critically evaluate on the basis of their personal, workplace and social implications. Kaye and Farren (1996) suggest three simple steps towards career development:

a) Identify an organisational need or opportunity consistent with one's own career development

b) Prepare a plan to address the need by changing the nature of one's work

c) Start lobbying and building the necessary alliances for gaining support for one's ideas and new role in the organisation.

It is hoped that implementation of these steps may help a person's advancement in terms of career development. However, one can no longer assume that moving upward is the natural direction of career growth as opportunities for upward mobility are scarce. Horizontal career development is also to be considered as an option if the new position provides the employee with new goals and experience. It is therefore expected from graduates and employers in making sure that they invest in career development.

Support to enhance transition of graduates to the labour market

As can be noted in Quality TVET for the successful training-to-employment transition of Africa's youth (IIEP-UNESCO Dakar, 2020), experiences from other countries show that TVET institutions may have, or do have access to several types of resources to support learners' transition to the labour market. Many will have chosen to establish an in-house job-finding service or unit, in addition to possibly having access to high-level guidance on labour market opportunities through ministerial offices, local authorities, or sector and trade bodies. Where such units exist, they develop their own business plan, and ensure that their targets in terms of work placements, employment and self-employment are clearly reflected in the TVET Institutions performance contract. Material resources encompass the equipment and tools that add to the quality of training, and hence the employability of learners. Finally, three types of financial resource may be available, at the national, regional or TVET Institution level.

Very good examples of countries in Africa that provide supports related to job placement include Mali, Senegal, and Chad. In Mali, School-company liaison bureaux were created to revitalise the career services of training centres both by strengthening technical, organizational and financial capacities, and establishing partnerships between these units and the labour market. Senegal has established a career advisory unit, one of ten pilot units supported by the « promote employment » project financed by the European Union. The unit organizes learners into a cooperative set up from year one, and provides each class with petty cash to develop an income generating activity related to the trade being learnt.

In Chad, at the Ministry of Vocational Training, three departments support self-employment in the service and commerce sector : (i) The Directorate of Information and Educational and Vocational Guidance prepares youth for employment, job searches and self-employment ; (ii) The Directorate of Self-Employment promotes entrepreneurial spirit and culture for the setting up and development of micro, small and medium enterprises ; and (iii) The Directorate of Micro-finance focuses on providing access to micro-credit. The ministry grants micro-credit on behalf of the government,

DPs and NGOs, on the basis of written projects submitted by a young person, group of youths or women's association. To support the initiative, the government has created a single office for the setting up of small and medium businesses, and helps young people with the distribution of kits. The agro-silvo-pastoral sector entails long-term credit that is not viable. To better ensure the sustainable development of the sector, institutions that are able to provide micro-finance and technical support are needed, both of which require local-level support according to individual needs. (IIEP-UNESCO Dakar, 2020).

2.5. Empirical review of employability of TVET graduates

Pusriawan and Sunaryo (2019) in their study showed that becoming technically skilled alone cannot be a grant for employment (self/paid). In addition of being technically skilled TVET graduates need to develop the necessary soft (employability) and entrepreneurial skills to be employed (self/paid). Their study also shows that although both technical and employability skills are necessary for any position, employers peculiarly look for soft (employability) skills' among job applicants than technical skills. As to employers it is easier to train new employees in hard skills instead of training them in soft skills (Saemah et al. ,2011). This is also supported by a study conducted in Ethiopia by Genene and his colleagues (2019) which indicated that graduates' lack of work ethics is the biggest challenge to employers that lack of technical skills.

A study by Agmassie and Reda (2022) revealed that among 1579 TVET graduates that took CoC assessment in 2018/2019 only 654 were competent and among these competent graduates only 270 (41.28%) were employed whereas 384 (58.72%) were unemployed (both self and paid). Similarly, among 1508 graduates that took CoC assessment in 2019/2020 only 673 were competent and among these only 246 (36.55%) were employed while 427 (63.45%) were unemployed (self/paid) designating again the lower positive impact of employability and entrepreneurial skills on employment of TVET graduates.

Employability of TVET graduates (self/paid) and the reduction of youth unemployment depends on the extent of employability and entrepreneurial skills they developed in their colleges (Devin's & Hogarth, T. ,2005). Waidi (2021) reported the significant positive impact of entrepreneurial skills on job creation and self-employment.

Melaku (2017) in his study found out that most of the unemployed and employed respondents described as they did not learn entrepreneurship education hence, have no entrepreneurial skills. However, few respondents reported as they have heard the importance of entrepreneurship education from their major course teachers. But said the respondents the attention of major course

teachers is teaching only technical skills. Hence, graduates did not have the skills of creating their own jobs in their field and are seen to waste so many years in searching for jobs. Moreover, his study revealed that unemployed TVET graduates didn't learn entrepreneurship education by professionals and thus they lacked even basic entrepreneurial skills and thus they were unable to create their own jobs. Regarding TVET graduates' employment choice, Melaku (2017) found out in his study that government and NGO employments are the priority choices for most of them. That means, the concerns of Jones-Hendrickson (2014), and Lauglo (2010) about the incompatibility between government intentions and career choices of student still persisted in the study area. That is, despite the government's intention to enhance self-employment, more and more students rather prefer paid employment to self-employment.

According to Bedada (2010), the major factors that contributed to the inadequacies of TVET graduates in creating their own businesses or getting employment opportunities are the following: Inadequate experience regarding practical training on the part of the trainers, Existence of poor public-private partnership, Minimal stakeholders' involvement in the training programs, Prevalence of inadequate attachment between TVET institutions and the nearby companies and/or industries, Absence of follow-up studies of the graduates, and Availability of cheap labour in the black market.

According to Berhane (2017), inadequate allocation of relevant resource (shortage of teaching materials especially in occupational standards newly developed), scarcity of quality academic and support staff, increased enrolment and insufficient industrial internship bases have affected the successful implementation of competence-based training which, in turn, contributed to graduate unemployment and dissatisfaction of different categories of stakeholders. Berhane added that the low competence of TVET colleges to measure the actual skills needed in the labour market and predicting the number of graduates required from TVET colleges in terms of occupational categories, hinders the effective utilization of market opportunities.

2.6. Conceptual framework

It can be summarized from the review that employability of graduates is affected by competence (generic skills, technical (occupation-specific) skills, soft skills, personal attributes, sociability, entrepreneurial skills) of the graduates, career development endeavours, support graduates receive in search of job, and the way employers recruit graduates. Informed by the theoretical review, empirical review and experience, the following conceptual framework was proposed to guide the study. The framework indicates those variables which affect employability of TVET graduates and how they relate with the dependent variable.The main variables include Institutional support,

Employer support, Government support, Entrepreneurial training, and Socio-demographic factors. Institutional support includes providing outcome-based trainings that make graduates competent in the labour market in terms of technical skills, soft skills, personal attributes, and building social network; providing access to training resources and local industries; and providing them guidance and counselling services. Employer support includes giving access to trainees to industrial resources for training; supporting them during cooperative training; providing decent working environment for graduate employees; supporting graduate employees for career advancement; providing access to trainers to get industry experience, and making transparent recruitment process. Governments support employability by providing access to financial institutions that provide loans for business start-up and providing legal and regulatory environment such as minimum wage policy. Entrepreneurial support includes trainings related to motivation, opportunity identification, and entrepreneurial ability. Socio-demographic factors include gender, age, ethnic background, and disability, which may be used as screening criteria during recruitment.

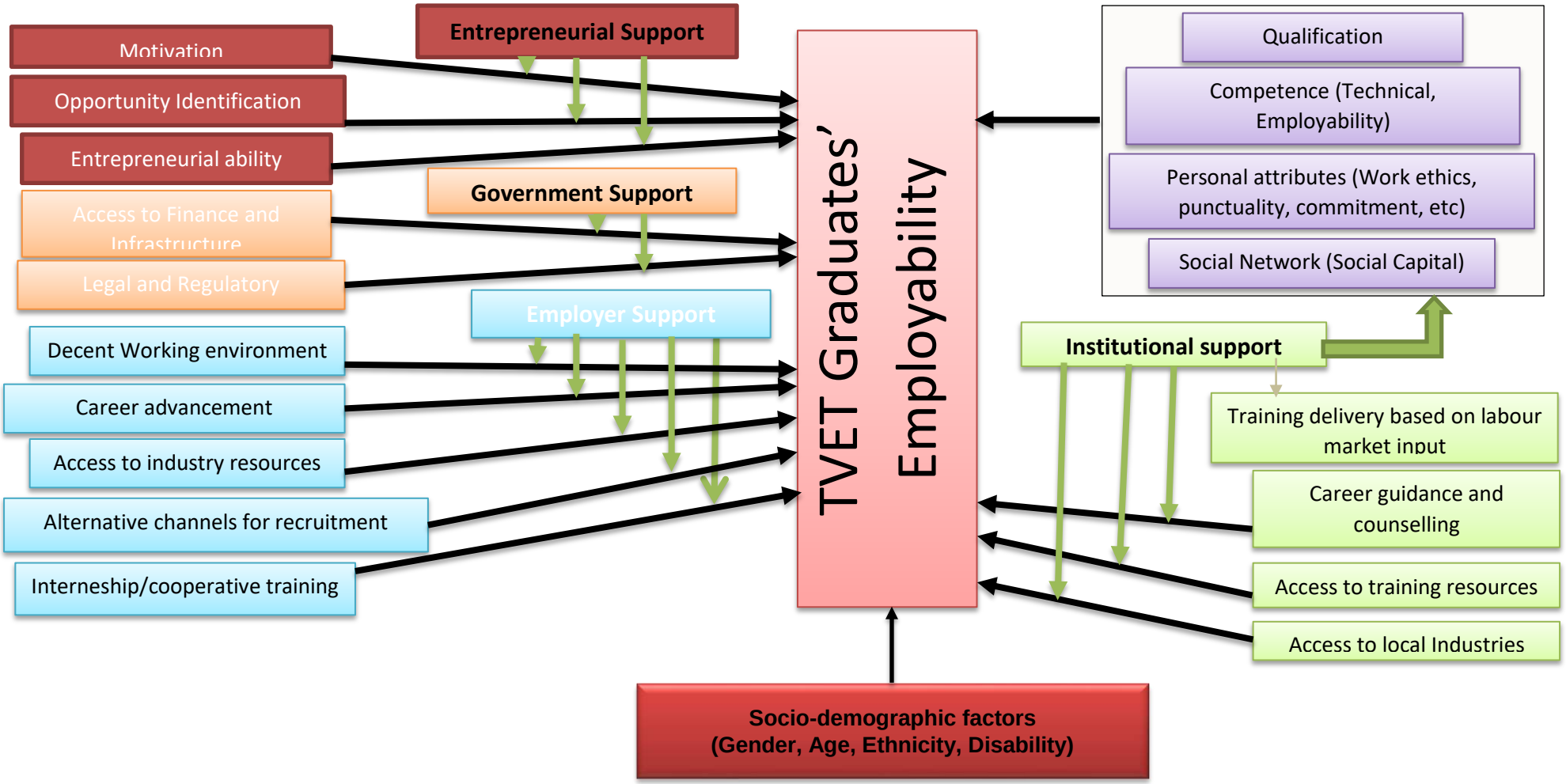

Fig.1. Conceptual model for the study

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction to the chapter

The KPC tracer study was conducted between June 2023 and August 2o23. It was conducted by using three self-administered questionnaires targeting graduates of 2020/21, trainers and Employers of KPC graduates. The questionnaires address many areas of study, including; course of study, assessment of study conditions, transition to work, qualification and usage of qualifications, relationship between studies and work, working conditions (salary, working hours, kind of contract), job satisfaction and training conditions. This chapter presents the Methodology, it covers (1) Methodology for Tracer Study, (2) Target tracer study groups, (3) Access to the People, (4) Survey instruments and tools, (5) Ethical Considerations, (6) Methodological challenges and mitigations, and (7) Advantages and Disadvantages of Preferred Method.

3.2. Approach for the Tracer Study

Sunmaker uses best practice principles when approaching project work in such a way that control can be maintained over direction, cost and risk from start to completion. This is done through breaking down projects into streams (of closely related task) with a logical flow of activities. During the process of delivering this assignment, several activities were undertaken within the fourteen weeks project duration. Sunmaker proposed to adopt a two-stream technical approach model. This ensured that key background activities are identified, executed and completed in an orderly and traceable manner, whilst, constantly engaging with the focal contact persons for this project.

The two (2) streams are:

Stream 1: Project Inception and Progress Report

Stream 2: Tracer studies

Two-stream Technical Approach

Multiple activities across the two streams will run concurrently, the end of each stream will see the completion of specific deliverables that are geared towards consolidating the project outputs.

Stream 1: Project Inception and Progress report

In Stream 1, Sunmaker tried to obtain a clear understanding of the KPC assignment requirements. Information was obtained via telephone conversation, review of existing documents, and discussions with focal contact persons within KPC. Stream 1, that is, Project Inception & Progress Reports, had three (3) objectives (1 to 3), three(3) deliverables (Deliverables 1 to 3) and eight (8) activities (Activities 1-8).Stream 1 was completed once the final Stream work had been completed and therefore ran for the duration of the project, or two months.

Stream 2: Tracer studies

In Stream 2, Sunmaker provided consultancy services to assist KPC develop tracer study (TS) questionnaires, methods and study protocols, and conduct one round of tracer studies, produce the TS report, and build counterpart capacity so that KPC could be able to routinely implement tracer studies and use the results for program development. The TS covered 2020/21 graduates of the college.

Information was obtained via face-to-face/group meetings, review of existing documents, communication (phone), interviews with deans and department heads, and discussions with focal contact persons for the KPC assignment. Stream 2 has three (3) Outputs, four objectives, nine (9) deliverables, and seventeen (17) activities. It took two months to finalize the tracer study.

The tracer study took a cross-sectional time horizon focusing on issues related to 2020/21 graduates. As a deductive research approach, data for the analysis of this work was based on primary and secondary sources. In terms of the primary data, a self-administered questionnaire with both close-ended and open-ended questions was used. The population of the study included a l l graduates of 2020/21. Totally 50% of the graduates and 5 trainers from each department were sampled to fill in the questionnaire by using stratified sampling strategy. The strata for sampling were the departments taking into account the programs within each department.The dean and vice deans were selected purposively for interview. Department heads were purposively selected for focus group discussion.

3.3 Target Groups for Kombolcha Polytechnic College

Three different groups (graduates, trainers and Employers of the graduates) were targeted in the survey. Contact information about the graduates was obtained from KPC consolidated database of the graduates. Telephone contacts were used to reach out the graduates of KPC. The database was obtained through the focal person from the EASTRIP project, reviewed and was used for purposes of the tracer study. The study targeted

graduates who were employed, unemployed, pursued further education, and self-employed.

Employers were identified based on the information obtained from employed graduates. Calls were made to target employers to ensure their willingness to participate in the study. The employers were made to fill a self-completed survey questionnaire for the tracer study.

A representative sample of trainers was drawn from each department and contacted. The participants included trainers and tool persons. They were also made to fill self-completed survey questionnaire for the tracer study.

3.4. The survey questionnaire

The main data collection instrument that was used in this tracer study is self-administered questionnaire. The questions for the tracer study were developed around key variables such as employment status of graduates, relevance of training to the workplace environment, employment satisfaction, employers' recruitment procedures and criteria, and employers' satisfaction with the performance of graduates from KPC. Both close ended and open-ended questions were used to collect the data using questionnaire. The questionnaire, which is originally designed in English, was translated into Amharic to give option for respondents to use any of the two versions for simplicity.

Three questionnaire surveys were designed for the tracer study: Graduate tracer study survey questionnaire (Appendix A1), Employer tracer study survey questionnaire (Appendix A2), and Staff tracer study survey questionnaire (Appendix A3). The questionnaires comprising of both closed- ended and open-ended questions were validated in previous studies.

3. 5. Ethical Considerations

Upon contacting a potential informant/respondent, the objectives of the study was explained to him/her, and then they were left to decide whether they wanted to participate in the study or not. The respondents and key informants were assured that all information collected would be treated in confidence and only used for the purpose of this tracer study.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Profile of graduate respondents

4.1.1 Graduates response rates

Initial target of graduate respondents was: Crop production and marketing management=32; Irrigation & Drainage Design & Construction Supervision.=7; Advanced Apparel Production=8; Intermediate Apparel Production=12; Apparel Fashion Designing And Technology Supervision=4; Textile Technology and Production=13; Weaving & Knitting Operation=8; Automotive Engine Servicing =24; Automotive Servicing Operation Management =22; Automotive Technology Management =5; IACTM=10; MISM=13; ICS=14; IMEDS=28; Metal Engineering Production Management=44; and Building Electrical Installation=7. However, 35 (109%) from Crop production and marketing management, 9 (128.6%) from Irrigation & Drainage Design & Construction Supervision, 13 (162.5%) from Advanced Apparel Production, 3 (25%) from Intermediate Apparel Production, 14 (350%) from Apparel Fashion Designing And Technology Supervision, 9 (69.2%) from Textile Technology and Production, 6 (75%) from Weaving & Knitting Operation, 24 (100%) from Automotive Engine Servicing, 23 (104.5%) from Automotive Servicing Operation Management, 4 (80%) from Automotive Technology Management, 5 (50%) from IACTM, 19 (126.7%) from MISM, 8 (57.1%) from ICS, 33 (117.9%) from IMEDS, 44 (100%) from Metal Engineering Production Management, and 8 (114.3%) from Building Electrical Installation responded to the questionnaire. As can be seen from the data, the return rate is high with the exception of respondents in intermediate apparel production, textile technology and production, IACTM, and ICS programs, which is below 75%. The low return rate in the aforementioned programs can be attributed to old data captured about the graduates.

Table 1. Number of graduate respondents per program

Program	**Target**	**Actual response** rate
Crop production and Marketing management	32	35
Advanced apparel production	8	13
Automotive engine servicing	24	24
Automotive servicing operation management	22	23
IACTM	10	5
Intermediate apparel production	12	3
ICS	14	8
IMEDS	28	33
Metal engineering production management	44	44
MISM	13	19
Textile technology and production	13	9
Apparel fashion designing and Technology supervision	4	14
Automotive technology management	5	4
Building electrical installation	7	8
Irrigation and drainage design and construction supervision	7	9
Weaving and knitting operation	8	6
Total	251	257

4.1.2 Number and ratio of respondents by age and gender

Information on respondents by age and gender is presented here to give insightful understanding of respondents to the study by these variables. The information could highlight the attractiveness of TVET by age and gender.

4.1.2.1 Response rate by age

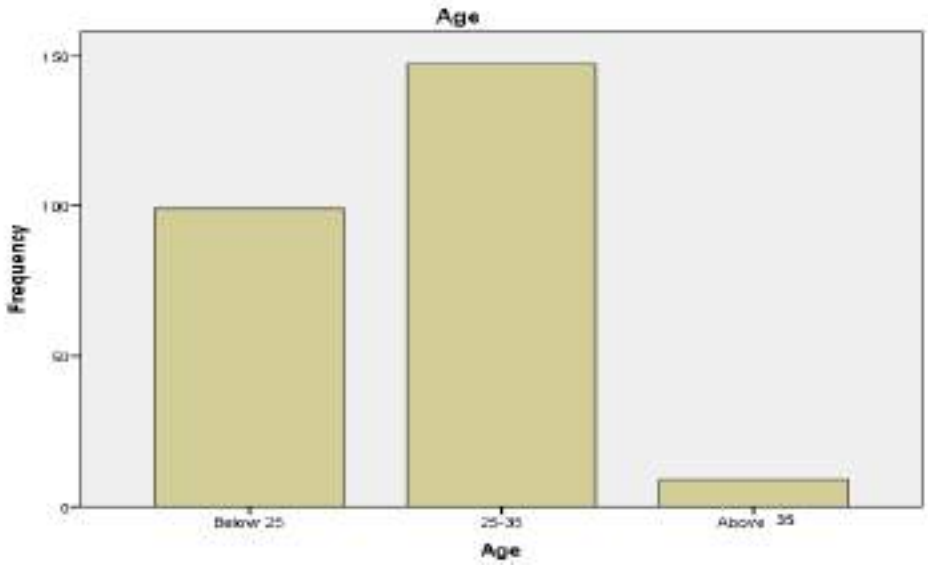

Figure 2: Percentage of respondents by age for the five departments

Figure 2 shows the distribution of respondents by age. Majority of respondents (57.2%) were aged between 25 and 35, ; a total of 38.5% were below 25, and only 3.5% were above 35 years old. This shows that TVET (the formal training which requires high school completion) attracts relatively younger students, more than adult learners.

4.1.2.1 Response rate by gender

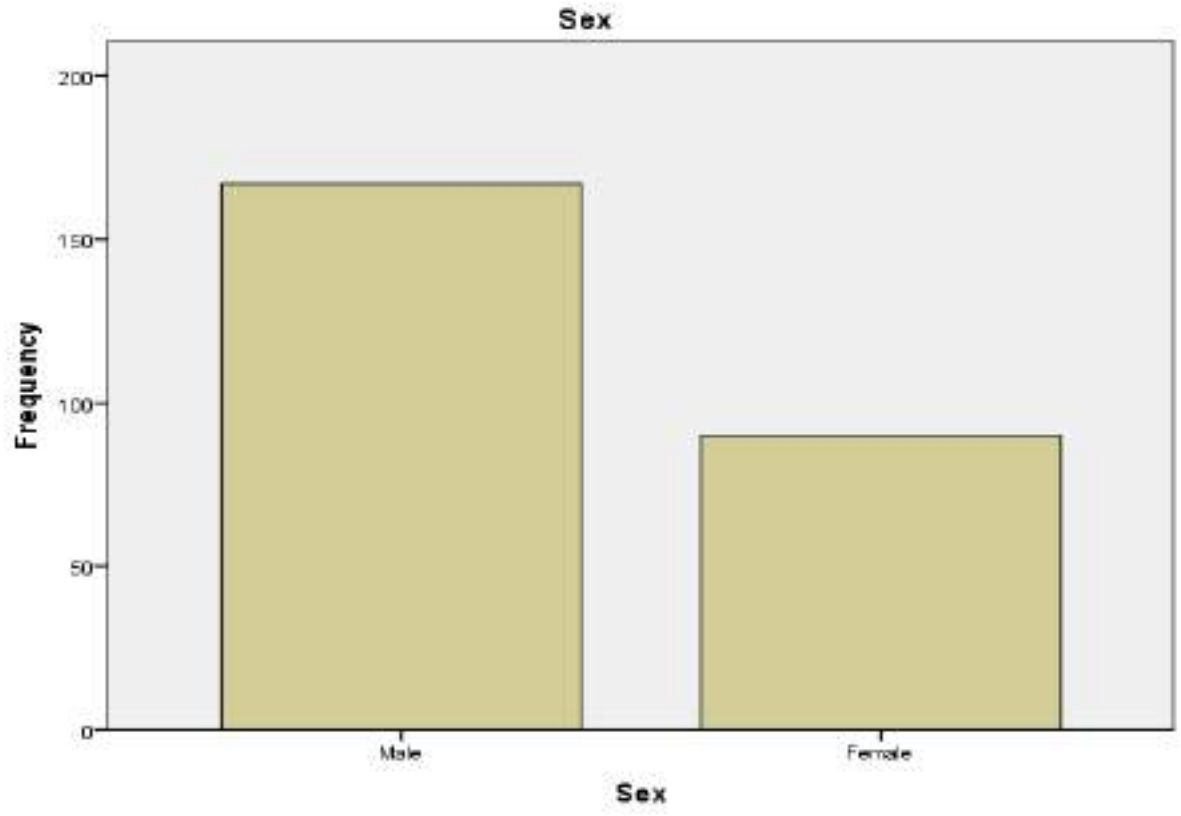

Figure 3: Percentage of respondents by gender/sex

Table 2. Graduates in terms of age, gender and Program

Program			Age			Total
			Below	25-35	Above 25	
Crop production and Marketing management	Sex	Male	1	20	0	21
		Female	0	11	1	12
	Total		1	31	1	33
Advanced apparel production	Sex	Male	0	3		3
		Female	3	7		10
	Total		3	10		13
Automotive engine servicing	Sex	Male	3	19	2	24
	Total		3	19	2	24
Automotive servicing operation management	Sex	Male	8	12	3	23
	Total		8	12	3	23
IACTM	Sex	Male		4		4
		Female		1		1
	Total			5		5
Intermediate apparel production	Sex	Female	3			3
	Total		3			3
ICS	Sex	Male	1	3		4
		Female	4	0		4
	Total		5	3		8
IMEDS	Sex	Male	4	17	1	22
		Female	5	6	0	11
	Total		9	23	1	33
Metal engineering production management	Sex	Male	17	16	1	34
		Female	8	2	0	10
	Total		25	18	1	44
MISM	Sex	Male	3	11		14
		Female	4	1		5
	Total		7	12		19
Textile technology and production	Sex	Male	0	2		2
		Female	4	3		7
	Total		4	5		9
Apparel fashion designing and Technology supervision	Sex	Male	1	3		4
		Female	9	1		10
	Total		10	4		14
Automotive technology management	Sex	Male	2	2		4
	Total		2	2		4
Building electrical installation	Sex	Male	4	1		5
		Female	3	0		3
	Total		7	1		8
Irrigation and drainage design and construction supervision	Sex	Male	1	1		2
		Female	7	0		7
	Total		8	1		9
Weaving and knitting operation	Sex	Female	4	1	1	6
	Total		4	1	1	6
Total	Sex	Male	45	114	7	166
		Female	54	33	2	89
	Total		99	147	9	255

Figure 3 shows the distribution of respondents by gender for the five departments in the study. Overall the number of males who participated in the study is 167 (62.5%) while the number of females is 90 (37.5%). This shows the low participation of females in TVET. This could be attributed to low enrolment of female trainees in some vocational areas.

When we look at , it can be seen that the participation of females in departments such as garment and textile from table 2, 36 (80%) of the total 45 graduates are females, which shows the high participation rate of females in garment and textile departments. On the other hand, when we look at automotive technology department, all the 51 graduates (100%) are males, which clearly shows gender disparity in the selection of occupational areas.

4.1.3 Respondents' qualification level by program

Table3. Qualification of trainees per program

		Qualification level					Total
		Level1	Level2	Level3	Level4	Level5	
Program	Crop production and Marketing management	0	0	0	35	0	35
	Advanced apparel production	0	0	13	0	0	13
	Automotive engine servicing	0	0	24	0	0	24
	Automotive servicing operation management	0	0	0	20	3	23
	IACTM	0	0	0	0	5	5
	Intermediate apparel production	0	3	0	0	0	3
	ICS	0	0	8	0	0	8
	IMEDS	0	14	0	19	0	33
	Metal engineering production management	0	0	3	37	4	44
	MISM	0	0	0	19	0	19
	Textile technology and production	0	0	3	6	0	9
	Apparel fashion designing and Technology supervision	0	0	0	8	6	14
	Automotive technology management	0	0	0	0	4	4
	Building electrical installation	0	8	0	0	0	8
	Irrigation and drainage design and construction supervision	0	0	0	9	0	9
	Weaving and knitting operation	0	5	1	0	0	6
Total		0	30	52	153	22	257

As can be seen in table 3, only 30 graduates (11.7%) are level 2; 52 graduates (20.2%) are from level 3; the majority of the graduates (59.5%) are level 4 graduates, and only 22 graduates (8.6%) are level 5 graduates. It can be seen that the majority of the graduates are level 4 graduates, and the least number of graduates are from level 5.

4.2. Delivery of employability skills and other additional training per departmnt

Table 4: Soft skills trainings taken

Additional Training (Soft skills)		Crop production and Marketing management	Garment	Automotive engine servicing	Electrical	Metal engineering production management	Textile technology	Building electrical installation	Irrigation and drainage design and construction supervision	Total
Communication	Taken	35	30	51	58	44	15	3	9	245
	Not taken	0	0	0	7	0	0	3	0	10
IT	Taken	12	3	12	58	43	4	2	4	138
	Not taken	23	27	39	7	1	11	4	5	117
Problem Solving	Taken	35	26	47	37	43	15	1	0	204
	Not taken	0	4	4	27	1	0	5	9	50
Work Ethics	Taken	35	26	42	63	43	14	3	9	235
	Not taken	0	4	9	2	1	1	3	0	20
Entrepreneurship	Taken	35	30	51	65	44	15	3	9	251
	Not taken	0	0	0	0	0	0	3	0	4
Customer Service	Taken	35	12	33	60	44	13	1	1	199
	Not taken	0	18	18	5	0	2	5	8	56
Health and Safety	Taken	35	26	37	61	43	14	3	0	219
	Not taken	0	4	14	4	1	1	3	9	36
Foreign Language	Taken	0	1	16	3	14	3	0	0	37
	Not taken	35	29	35	62	30	12	6	9	218

As can be seen from table4, almost all (above 90%) of the respondents in general replied that they took trainings in communication skills, entrepreneurial skills and work ethics. However, trainees from Crop production and Marketing management, Garment, Automotive engine servicing, Textile technology, Building electrical installation, and Irrigation and drainage design and construction supervision said that they did not take IT. All Irrigation and drainage design and construction supervision graduates and 80% of Building electrical installation graduates showed that they did not take training in problem solving. Similarly, more than 50% of garment, Irrigation and drainage design and construction supervision, and showed that they did not take training in customer service. Again 50% of Building electrical installation graduates and all Irrigation and drainage design and construction supervision graduates showed that they did not take training in Health and Safety. The majority of graduates from all programs showed that they did not take foreign language training.

4.3. Employment status within six months after graduation

4.3.1. Overall employment status within six months after graduation

Graduates were asked to indicate whether they were employed, self-employed, unemployed or attending further training within six months after their graduation.

Table 5 shows that the majority of graduates (70%) are considered employed and about 30% of them are unemployed within the first six months after graduation. Even though it is promising that the majority gets job within six months after graduation, it is still a significant number of graduates who are in search of job. Identifying the real gaps in the unemployed graduates and addressing those gaps needs attention from the college. The result generally shows that the majority of employed graduates (70.6%) are wage employed. This also calls for further effort to be exerted to enhance the self-employment capacity of the graduates.

Table 5: the employment status of graduates within the first 6months after graduation

Count

		EmploymentStatusafter6months							Total
		Employed	Self-employed with employees	Self-employed without employees	Pursuing further training	Neither employed nor self-employed	Employed and pursuing FT	self-employed with employees and pursuing FT	
Sex	Male	89	7	29	4	34	0	4	167
	Female	38	0	5	2	43	1	1	90
Total		127	7	34	6	77	1	5	257

As can be seen from table 6, the number of male graduates on employment (both wage and self-employed) is 129 (77.2% of male graduates) and that of unemployed graduates is 34 (20.4%). The rest are on further education. The number of employed female graduates on

employment (both wage and self-employed) is 45 (50 % of female graduates) and that of unemployed graduates is 43 (47.8 %). The rest 2 are on further education. Totally, 174 graduates (67.7%) secured job within the first six months of their graduation while 6 of them are on further education. When we compare the percentage of employed female graduates with their male counterparts, 45 (25.9%) are females and the remaining 129 (74.1%) are males.

Table 6 also depicts the employment status of graduates with in the first six months after graduation per department per sex. As can be seen from table 5, out of 35 graduates from Crop production and Marketing management, 19 males (86.4% of 22 males) and 12 females (92.3 % of 13 females) were employed within the first six months after graduation. Out of 13 graduates from Advanced apparel production, all males (100% of 3 males) and 9 females (90 % of 10 females) were employed within the first six months after graduation. As can be seen from the table, totally 38 (74.5%) graduates from automotive technology department, who are all males, are employed (Wage and self-employed), while 12 (23.5%) of them are unemployed. It can also be seen that only 1 student (2%) is pursuing further education. It can also be seen from the table that most of the employed graduates (28 of 38 employed graduates, that is, 73.7%) are wage employed. The result also shows that females are not interested to join the automotive technology department. It can also be seen from this table that all 4 male graduates and 1 female graduate from IACTM program are employed within the first six months after graduation.

It can also be seen from table 6 that all the graduates from intermediate apparel production who participated in the study are females. From 3 female graduates in the program, 2 of them (66.7%) are unemployed. Out of 8 graduates from ICS, all males (100% of 4 males) and 3 females (75 %) were employed within the first six months after graduation. Out of the 33 graduates from IMEDS, 15 males (68.2 % of 22 males) and 2 females (18.2 % of 11 females) were employed within the first six months after graduation. As can be seen from the table above, 8 females (72.7 % of 11 females) are unemployed, which shows that the majority of IMEDS female graduates are unemployed within the first six months after graduation.

Table6: Employment status of graduates with in the first six months after graduation per program per sex

Sex			Employment Status							Total
			Employed	Self-employed with employees	Self-employed without employees	Pursuing further training	Neither employed nor self-employed	Employed and pursuing FT	self-employed with employees and pursuing FT	
Male	Department	Crop production and Marketing management	14	1	4	0	0		3	22
		Advanced apparel production	3	0	0	0	0		0	3
		Automotive engine servicing	13	2	4	0	5		0	24
		Automotive servicing operation management	13	0	4	1	5		0	23
		IACTM	2	1	1	0	0		0	4
		ICS	3	1	0	0	0		0	4
		IMEDS	10	0	5	1	6		0	22
		Metal engineering production management	20	1	7	1	5		0	34
		MISM	5	1	2	1	5		0	14
		Textile technology and production	1	0	0	0	1		0	2
		Apparel fashion designing and Technology supervision	2	0	2	0	0		0	4
		Automotive technology management	0	0	0	0	4		0	4
		Building electrical installation	2	0	0	0	2		1	5
		Irrigation and drainage design and construction supervision	1	0	0	0	1		0	2
	Total		**89**	**7**	**29**	**4**	**34**		**4**	**167**
Female	Department	Crop production and Marketing management	11		0	0	0	1	1	13
		Advanced apparel production	8		1	0	1	0	0	10
		IACTM	1		0	0	0	0	0	1
		Intermediate apparel production	0		0	1	2	0	0	3
		ICS	3		0	0	1	0	0	4
		IMEDS	1		1	1	8	0	0	11
		Metal engineering production management	3		1	0	6	0	0	10
		MISM	0		0	0	5	0	0	5
		Textile technology and production	1		0	0	6	0	0	7
		Apparel fashion designing and Technology supervision	7		2	0	1	0	0	10
		Building electrical installation	0		0	0	3	0	0	3
		Irrigation and drainage design and construction supervision	2		0	0	5	0	0	7
		Weaving and knitting operation	1		0	0	5	0	0	6
	Total		**38**		**5**	**2**	**43**	**1**	**1**	**90**
Total	Depart ment	Crop production and Marketing management	25	1	4	0	0	1	4	35
		Advanced apparel production	11	0	1	0	1	0	0	13
		Automotive engine servicing	13	2	4	0	5	0	0	24

Automotive servicing operation management	13	0	4	1	5	0	0	23
IACTM	3	1	1	0	0	0	0	5
Intermediate apparel production	0	0	0	1	2	0	0	3
ICS	6	1	0	0	1	0	0	8
IMEDS	11	0	6	2	14	0	0	33
Metal engineering production management	23	1	8	1	11	0	0	44
MISM	5	1	2	1	10	0	0	19
Textile technology and production	2	0	0	0	7	0	0	9
Apparel fashion designing and Technology supervision	9	0	4	0	1	0	0	14
Automotive technology management	0	0	0	0	4	0	0	4
Building electrical installation	2	0	0	0	5	0	1	8
Irrigation and drainage design and construction supervision	3	0	0	0	6	0	0	9
Weaving and knitting operation	1	0	0	0	5	0	0	6
Total	127	7	34	6	77	1	5	257

Out of 44 graduates from Metal Engineering production management, 28 males (82.4 % of 34 males) and 4 females (40 % of the 10 female graduates) were employed within the first six months after graduation. It can be seen from the table that 6 females (60% of the 10 female graduates) are unemployed. This shows that the majority of female graduates in Metal Engineering production management are unemployed. Out of 19 graduates from MISM, 8 males (57.1 % of 14 males) and no females (0 % of the 5 female graduates) were employed within the first six months after graduation. This shows that female graduates from MISM are not employed within the first six months after graduation, which is the highest unemployment rate for female graduates. Out of 9 graduates from Textile technology and production, 1 male (50 % of the 2 males) and 1 female (14.3 % of the 7 female graduates) were employed within the first six months after graduation. As can be seen from table 6, totally 6 female graduates (85.7% of female graduates) from this program are not employed within the first six months after graduation. It can be seen from the table that the program is female dominated and that the majority of female graduates from this program are not employed. Out of 14 graduates from Apparel fashion design and technology supervision program, 4 males (100 % of the male graduates) and 9 females (90 % of the 10 female graduates) were employed within the first six months after graduation.

This shows that graduates in apparel fashion design are highly demanded in the labour market. Out of 8 graduates from Building electrical installation program, 4 males (80 % from 5 male graduates) and no females (0 % of the 3 female graduates) were employed within the first six months after graduation. This shows that female graduates from building electrical installation program are not demanded in the labour market which, in turn, shows gender disparity in employment in building electrical installation.

Out of 9 graduates from Irrigation and drainage design and construction supervision program, 1 male (50 % from 2 male graduates) and 2 females (28.6 % of the 7 female graduates) were employed within the first six months after graduation. This again shows that the majority of female graduates from irrigation and drainage design and construction supervision program are unemployed, showing that the employment opportunity in irrigation and drainage design and construction supervision program is low, at least for the first six months. Out of 6 graduates from weaving and knitting operation program, which are all females, only 1 female (16.7 % female graduates) were employed within the first six months after graduation. This shows the less job opportunity in weaving and knitting operation program, at least for the first six months.

In general, within the first six months after graduation, 42.2% of female graduates are wage employed; only 5 (5.6%) of the female graduates are self-employed; 2.2% of female graduates are pursuing further education; and 47.8% of them are unemployed, which is greater than the percentage of unemployed male graduates that is only 20.4%. The highest unemployment rate for female graduates was registered in MISM and Building electrical installation, in which case all the female graduates (100%) were unemployed. Also 83.3% of female graduates from Weaving and knitting operation program have not been employed. On the other hand, the least unemployment rate for female graduates was registered in Crop production and Marketing management and IACTM programs, in which case the unemployment rate is zero. This is followed by Apparel fashion designing and Technology supervision and Advanced apparel production programs, in which case only 10% of the female graduates were unemployed. The highest unemployment rate for male graduates was registered in Automotive technology management program, in which case all the male graduates (100%) were unemployed. On the other hand, the least unemployment rate for male graduates was registered in Crop production and Marketing management and IACTM programs, in which case the unemployment rate is zero. This is followed by Metal engineering production management program, in which case the unemployment rate is only 14.

4.4. Graduates' satisfaction with the resources and support in KPC

Using average mean score (μ), the scale has been interpreted as shown below:

INTERPRETATION OF THE AVERAGE MEAN SCORE					
Range	**1.0 – 1.4**	**1.5 – 2.4**	**2.5 – 3.4**	**3.5 – 4.4**	**4.5 – 5.0**
Verbalisation	**Not at all Satisfied**	**Somewhat not Satisfied**	**Neither Satisfied Nor Dissatisfied**	**Satisfied**	**Very Satisfied**
Colour Code					

Table7: Overall satisfaction of graduates with the support they got in the college per program

Program						Total
Crop production and Marketing management	0	0	0	20	15	35
Advanced apparel production	1	6	6	0	0	13
Automotive engine servicing	0	7	17	0	0	24
Automotive servicing operation management	1	10	12	0	0	23
IACTM	0	0	2	3	0	5
Intermediate apparel production	0	2	0	0	0	2
ICS	0	0	6	2	0	8
IMEDS	0	0	15	17	1	33
Metal engineering production management	0	14	24	5	1	44
MISM	0	0	11	8	0	19
Textile technology and production	0	7	2	0	0	9
Apparel fashion designing and Technology supervision	0	2	10	1	0	13
Automotive technology management	0	0	4	0	0	4
Building electrical installation	0	1	4	2	0	7
Irrigation and drainage design and construction supervision	0	5	4	0	0	9
Weaving and knitting operation	0	1	4	1	0	6
Total	2	55	121	59	17	254

As can be seen from Table 7, the majority of the graduates (47.6%) were Neither Satisfied nor Dissatisfied with the support they received while they were in the college. A total of 59 graduates (23.2%) showed that they were satisfied by the support they received, and 55 graduates (21.7%)

showed that they were dissatisfied by the support they received. Only 17 graduates (6.7%) were very satisfied and 2 graduates (0.8%) were very dissatisfied by the support they got while they were in the college. When we look into the programs, the most satisfied graduates are from Crop production and Marketing management program, among which 20 (57.1%) of them were satisfied and 15 (42.9%) of them were very satisfied by the support they received from the college. The least satisfied group are from Textile technology and production program where 77.8% of them are dissatisfied by the support they received from the college, followed by Metal engineering production management program where 31.8% of the graduates are dissatisfied.

Table 8: Graduates' satisfaction with the resources and support in KPC based on average mean scoreper department

Department	Resource Centre	Curriculum	External Collaboration	Workshops	Industry Linkage	IT Facilities	Audio Visual	Management support	Recreational Facilities	Career Guidance and Counselling
Electrical	3.9	4.0	3.6	4.0	3.3	3.4	2.4	3.3	3.7	2.6
Manufacturing	3.4	4.0	1.9	3.7	2.8	1.8	2.1	3.0	3.1	1.6
Agriculture (Crop)	4.2	5.0	4.8	4.5	4.9	4.0	2.8	4.1	4.2	5.0
Water Technology (Irrigation and Drainage design)	1.9	3.7	2.8	3.7	2.4	2.8	2.2	3.4	1.7	2.3
Building Electrical Installation	3.3	3.9	2.3	4.0	2.3	3.4	2.9	3.3	2.9	3.0
Textile	3.1	3.8	2.7	2.8	2.7	1.5	1.0	1.9	3.0	3.4
Garment	2.3	4.0	2.7	3.3	2.6	1.3	1.1	1.9	2.8	3.2
Automotive technology	3.0	3.8	2.7	2.6	2.9	1.1	3.0	2.6	2.5	1.3
Total	3.1	4.0	2.9	3.6	3.0	2.4	2.2	2.9	3.0	2.8

As can be seen from table 8, graduates from all the departments in general have shown that they are not satisfied with IT facilities (μ =2.4) and audio-visual materials (μ =2.2). The college should find a way to address shortages in IT facilities and audiovisual materials. On the other hand, graduates in general showed that they are satisfied with the curricula and workshops in the college. The majority of the graduates from almost all the departments, with the exception of crop production and marketing management and electrical departments, showed that they are not satisfied or else neither satisfied nor dissatisfied with external collaboration and industry linkage of the college. This also gives signal that the college still needs to work more in creating collaboration and linkage with key stakeholders as TVET is not effective without the engagement of external bodies.

When we consider level of satisfaction of trainees in specific departments, we see that crop production and marketing management graduates are satisfied or very satisfied with all the parameters with the exception of audio-visual aids. The college should work more to make sure that the department gets sufficient audio-visual aids to support the training process. Graduates from garment technology, textile technology and automotive technology showed that they were not satisfied with the resources and the management support they got from the college. Even their level of satisfaction with the workshops is not as expected. This could be attributed to the fact that most of the facilities and the workshops in these departments were destroyed during the conflict. Currently it was learned from the interview data and observation that the workshops and other facilities in the aforementioned departments are now in a better position.

It can be noted from table 8 that career guidance and counselling service is not at a satisfactory level with the exception of crop production and marketing management department. This also implies that the college should provide career guidance and counselling service to the trainees in all the departments. Studies show that career guidance and counselling service should be one important student service that should be provided for the students so that they can identify their occupational areas and get easily mixed into the world of work (Kok & Low, 2017).

4.5. Overall employment status of graduates

Table 9 shows the overall employment status of graduates after graduation. As can be seen from table9, a total of 179 (70.2%) graduates are employed and 72 (28.2%) are unemployed.

Table9: Overall employment status of graduates

		Employment status				Total
		Employed	Self-employed	Neither employed nor self-employed	Pursuing further training	
Sex	Male	92	38	34	3	167
	Female	41	8	38	1	88
Total		133	46	72	4	255

From the employed graduates, 49 (27.4%) of them are females and the remaining 130 (72.6%) are males. It can be seen from the result that the employment rate of males is far better than females, which could be attributed to gender disparity in employment.

Table 9 shows the overall employment status of graduates per department per sex.

Overall Employment status per program per Sex

Sex	Department	Employment status				
		Employed	Self-employed	Neither employed nor self-employed	Pursuing further training	Total
Male	Crop production and Marketing management	16	5	1	0	22
	Advanced apparel production	3	0	0	0	3
	Automotive engine servicing	14	6	4	0	24
	Automotive servicing operation management	13	4	5	1	23
	IACTM	2	2	0	0	4
	ICS	3	1	0	0	4
	IMEDS	10	5	6	1	22
	Metal engineering production management	18	9	7	0	34
	MISM	5	3	5	1	14
	Textile technology and production	1	0	1	0	2
	Apparel fashion designing and Technology supervision	2	2	0	0	4
	Automotive technology management	1	0	3	0	4
	Building electrical installation	2	1	2	0	5
	Irrigation and drainage design and construction supervision	2	0	0	0	2
	Total	**92**	**38**	**34**	**3**	**167**
Female	Crop production and Marketing management	13	0	0	0	13
	Advanced apparel production	6	2	2	0	10
	IACTM	1	0	0	0	1
	Intermediate apparel production	1	0	1	0	2
	ICS	3	0	1	0	4
	IMEDS	1	1	8	1	11
	Metal engineering production management	3	1	6	0	10
	MISM	0	0	5	0	5

	Textile technology and production	1	1	5	0	7
	Apparel fashion designing and Technology supervision	7	2	1	0	10
	Building electrical installation	0	0	2	0	2
	Irrigation and drainage design and construction supervision	4	1	2	0	7
	Weaving and knitting operation	1	0	5	0	6
	Total	**41**	**8**	**38**	**1**	**88**
Total	Crop production and Marketing management	29	5	1	0	35
	Advanced apparel production	9	2	2	0	13
	Automotive engine servicing	14	6	4	0	24
	Automotive servicing operation management	13	4	5	1	23
	IACTM	3	2	0	0	5
	Intermediate apparel production	1	0	1	0	2
	ICS	6	1	1	0	8
	IMEDS	11	6	14	2	33
	Metal engineering production management	21	10	13	0	44
	MISM	5	3	10	1	19
	Textile technology and production	2	1	6	0	9
	Apparel fashion designing and Technology supervision	9	4	1	0	14
	Automotive technology management	1	0	3	0	4
	Building electrical installation	2	1	4	0	7
	Irrigation and drainage design and construction supervision	6	1	2	0	9
	Weaving and knitting operation	1	0	5	0	6
	Total	**133**	**46**	**72**	**4**	**255**

As can be seen from table 10, out of 35 graduates from Crop production and Marketing management, 21 males (95.5% of 22 males) and 13 females (100 % of females) were employed. Out of 13 graduates from Advanced apparel production, all males (100% of 3 males) and 8 females (80 % of 10 females) were employed. As can be seen from table 10, totally 38 (74.5%) graduates from automotive technology department, who are all males, are employed (Wage and self-employed), while 12 (23.5%) of them are unemployed. It can also be seen that only 1 student (2%) is pursuing further education. It can also be seen from the table that most of the employed graduates (28 of 38 employed graduates, that is, 73.7%) are wage employed. The result also shows that females are not interested to join the automotive technology department. It can also be seen from this table that all 4 male graduates and 1 female graduate from IACTM program are employed.

It can also be seen from table 10 that all the graduates from intermediate apparel production who participated in the study are females. From 2 female graduates in the program, 1 of them (50%) is employed and the other 1 (50%) is unemployed. Out of 8 graduates from ICS, all males (100% of 4 males) and 3 females (75 %) were employed; one female graduate (25%) was unemployed. Out of the 33 graduates from IMEDS, 15 males (68.2 % of 22 males) and 2 females (18.2 % of 11 females) were employed. As can be seen from the table above, 8 females (72.7 % of 11 females) are unemployed, which shows that the majority of IMEDS female graduates are unemployed.

Out of 44 graduates from Metal Engineering production management, 27 males (79.4 % of 34 males) and 4 females (40 % of the 10 female graduates) were employed. It can be seen from the table that 6 females (60% of the 10 female graduates) are unemployed. This shows that the majority of female graduates in Metal Engineering production management are unemployed.

Out of 19 graduates from MISM, 8 males (57.1 % of 14 males) and no females (0 % of the 5 female graduates) were employed. This shows that female graduates from MISM are not employed, which is the highest unemployment rate for female graduates.

Out of 9 graduates from Textile technology and production, 1 male (50 % of the 2 males) and 2 females (28.6 % of the 7 female graduates) were employed. As can be seen from table10, a total of 5 female graduates (71.4 % of female graduates) from this program are not employed. It can be seen from the table that the program is female dominated and that the majority of

female graduates from this program are not employed. This was also evidenced from the qualitative data obtained from the graduates which was stated as follows: *"Although the salary is small, other sectors have better job opportunities than textile".* One textile graduate also said: *"I do not recommend anyone else to enter the sector because there is no work".*

Out of 14 graduates from Apparel fashion design and technology supervision program, 4 males (100 % of the male graduates) and 9 females (90 % of the 10 female graduates) were employed. This shows that graduates in apparel fashion design are highly demanded in the labour market. Out of 7 graduates from Building electrical installation program, 3 males (60 % from 5 male graduates) and no females (0 % of the 2 female graduates) were employed. This shows that female graduates from building electrical installation program are not demanded in the labour market which, in turn, shows gender disparity in employment in building electrical installation.

Out of 9 graduates from Irrigation and drainage design and construction supervision program, 2 males (100 % of male graduates) and 5 females (71.4 % of the 7 female graduates) were employed. This again shows that the employability of Irrigation and drainage design and construction supervision program graduates increased 6 months after graduation. Out of 6 graduates from weaving and knitting operation program, which are all females, only 1 female (16.7 % female graduates) was employed. This shows the less job opportunity in weaving and knitting operation program.

Overall, it can be seen that the employment rate of graduates before 6 months and after 6 months following graduation has not shown much variation, except in the case of Irrigation and drainage design and construction supervision program, which showed improvement after 6 months of graduation.

4.6. Employed graduates

4.6.1. Duration taken to find first job

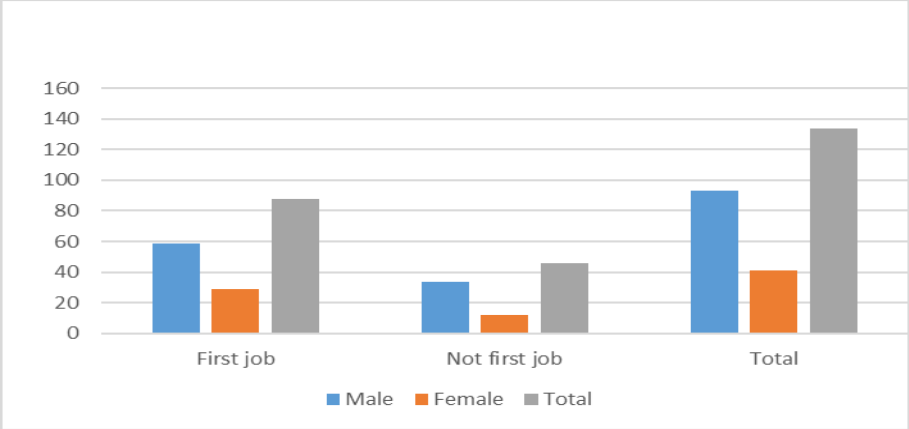

Fig4: Whether first job or not for employed graduates

As can be seen from fig 4, for the majority of both male and female graduates (66.7%), the current job is their first job. The remaining 33.3% of the graduates have work experience in other sector or similar sector in a different company.

When we look into the programs, we can see from table 11 that for all the graduates from Crop production and Marketing management program, the current job is their first job, meaning that they have never engaged in formal employment before.

Table 11: Whether first job or not per program

		First job	Not first job	Total
Program	Crop production and Marketing management	29	0	29
	Advanced apparel production	6	3	9
	Automotive engine servicing	13	1	14
	Automotive servicing operation management	7	6	13
	IACTM	1	2	3
	Intermediate apparel production	1	0	1
	ICS	0	6	6
	IMEDS	7	4	11
	Metal engineering production management	4	18	22
	MISM	1	4	5
	Textile technology and production	2	0	2
	Apparel fashion designing and technology supervision	7	2	9
	Automotive technology management	1	0	1
	Building electrical installation	2	0	2
	Irrigation and drainage design and construction supervision	6	0	6
	Weaving and knitting operation	1	0	1
Total		88	46	134

This may imply that employment in Automotive servicing may require work experience as compared with the other programs in automotive technology. When we look at Metal engineering production management program, 81.8% of the employed graduates have worked in another sector or company. This shows that employment in Metal engineering production management may require prior work experience.

4.6.2. Duration taken to find a job

Table 12: Time it took to find job per program

Program	Time it took to find the first job					Total
	0-3	4-6	7-9	10-12	Above 12 months	
Crop production and Marketing management	29	0	0	0	0	29
Advanced apparel production	7	0	0	0	0	7
Automotive engine servicing	11	2	0	0	1	14
Automotive servicing operation management	3	2	0	0	2	7
IACTM	1	0	0	0	0	1
Intermediate apparel production	0	0	1	0	0	1
IMEDS	2	4	0	0	1	7
Metal engineering production management	0	1	2	0	1	4
MISM	0	1	0	0	0	1
Textile technology and production	2	0	0	0	0	2
Apparel fashion designing and Technology supervision	7	0	0	0	0	7
Automotive technology management	0	0	0	1	0	1
Building electrical installation	1	0	1	0	0	2
Irrigation and drainage design and construction supervision	1	0	3	1	1	6
Weaving and knitting operation	1	0	0	0	0	1
Total	65	10	7	2	6	90

4.6.3. Employed graduates by industry sector

Table 13: Employed graduates by industry sector

Department	Industry sector WE																Total
	Agriculture, forestry, fishing	Mining, quarrying	Textile, garment, or related	Electricity or related	Water supply or related	Construction	Automotive industry, repair of motor cycles or vehicles	Transportation	Accommodation and food service	ICT	Financial or insurance activities	Professional, scientific or technical activities	Public administration and defence	Education	Human health and social work services	Other	
Crop production and Marketing management	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
Automotive technology	0	0	2	0	0	0	14	9	0	0	0	0	0	0	0	3	28
Garment Technology	0	0	15	0	0	0	0	1	2	0	0	0	1	0	0	0	19
Textile technology	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Electrical	0	1	10	1	1	1	0	1	0	1	1	5	0	2	0	1	25
Metal engineering production management	0	0	8	0	0	0	1	0	0	1	0	0	0	0	0	12	22
Building electrical installation	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Irrigation and drainage design and construction supervision	0	0	1	0	0	1	0	0	0	0	0	0	0	2	1	1	6
Total	29	1	41	1	1	2	15	11	2	2	1	5	1	4	1	17	134

It can be seen from table 12 that only 90 graduates properly replied to this question. As can be seen from table 12, the majority of the employed graduates (72.2%) took them 0 to 3 months to find their first job. It can also be seen that it took up to 6 months for 83.3% of the employed graduates to find their first job. When we see it in terms of programs, 100% of Crop production and Marketing management program and advanced apparel production program graduates secured their first jobs within the first three months after graduation. Only few graduates from Automotive engine servicing, Automotive servicing operation management, IMEDS, Metal engineering production management, and Irrigation and drainage design and construction supervision programs had to wait for more than 12 months to find their first jobs.

As can be seen from table 13, the majority of the graduates (30.6%) are employed in textile, garment and related industries which followed by agricultural sector and and automotive technology. This might be attributed to the fact that there are relatively larger number of garment and textile industries around Kombolcha town where the college is situated. It can also be seen that graduates from agriculture sector, automotive technology, garment and textile technologies are employed in sectors related to their field of study.

4.6.4. Means of securing employment

Table 14: Means of securing job per department

Department	Way of job search									Total
	Advertisement on mainstream Media	Advertisement on internet	Internal advertisement	Direct applications	Other contacts at HPTC	Personal contacts such as relatives	Public work administration	Private employment agency	Other	
Crop production and Marketing management	0	0	29	0	0	0	0	0	0	29
Garment technology	0	0	12	1	0	6	0	0	0	19
Textile Technology	0	0	3	0	0	0	0	0	0	3
Automotive technology	0	0	9	4	1	13	1	0	0	28
Electrical	10	1	7	1	0	3	2	1	0	25
Metal engineering production management	0	0	3	3	2	3	0	0	12	23
Building electrical installation	0	0	2	0	0	0	0	0	0	2
Irrigation and drainage design and construction supervision	0	0	3	0	0	3	0	0	0	6
Total	10	1	68	9	3	28	3	1	12	135

As can be seen from table 14, the majority of the graduate employees (50.4%) secured job through internal advertisement. A significant number of them (20.7%) got job through Personal

contacts such as relatives. When individual departments are considered, all graduates from crop production and marketing management (agriculture sector), textile technology and the majority of graduates from garment technology (92.3% of them) secured job through internal advertisement. All employed automotive technology department graduates secured job through personal contacts and relatives. This implies that employers rely only either on internal advertisement or personal contacts and relative. As was learned from interview data, most automotive technology related jobs are found in small garages and this might be the cause for the fact that automotive technology graduates secure jobs through personal contacts or relatives.

4.6.5. Decency of employment

Table 15: Decency of work for graduate employees per program

Department	Status of employment WE				Working hour per week					Salary				
	Contractual	Temporary	Permanent	Total	less than 16 hours	16-32 hours	33-48 hours	More than 48 hours	Total	Below 5000	5000-9999	10000-14999	15000 and above	Total
Crop production and Marketing management	0	0	29	29	0	0	29	0	29	0	28	1	0	29
Garment technology	3	1	15	19	0	1	16	2	19	15	3	1	0	19
Textile technology	0	0	3	3	0	0	3	0	3	1	1	1	0	3
Automotive technology	4	11	13	28	1	2	12	13	28	15	11	2	0	28
Electrical	3	4	18	25	0	3	15	7	25	10	7	7	1	25
Metal engineering production management	3	3	16	22	1	0	19	3	23	11	7	5	0	23
Building electrical installation	0	0	2	2	0	0	0	2	2	2	0	0	0	2
Irrigation and drainage design and construction supervision	5	1	0	6	0	0	2	4	6	6	0	0	0	6
Total	18	20	96	135	2	6	95	31	135	61	57	16	1	135

As can be seen from table 15, the majority of the graduate employees (71.1%) are permanent workers, the majority of them (70.4%) work between 33 to 48 hours per week, and still the majority of the employed graduates (54.8%) earn 5000 Birr and above per month. This aligns with the ILO standard for decent work. However, it can be seen from the table that a significant number of wage employed graduates (45.2%) earn below 5000 Birr per month, which is below 0.5 Dollar per hour. This is even below the minimum hourly wage of of some African countries such as South Africa ($1.39) and Kenya ($0.5). As a country, we don't have minimum wage

policy; but we can see in general that the majority of wage employed TVET graduates are working in a decent working environment. However, more has to be done to make sure that employed graduates work in a decent work environment.

When we look into individual departments, graduates from agricultural sector are working in a decent work environment with regards to status of employment, working hours per week and salary. However, 78.9% of employed garment technology graduates earn below 5000 Birr per month. That could be possible reason for high turn over of workers in garment industry as a country in general. Moreover, employed graduates from Irrigation and drainage design and construction supervision (water technology) are working at contractual basis with all of them earning below 5000 Birr per month. This also shows that graduates from this department are working in a non-decent working condition.

4.6.6. Relationship Between Study and Employment

Table 16: Relation between study area and employment per program

	There is relation		Total
	Yes	No	
Crop production and Marketing management	29	0	29
Advanced apparel production	6	3	9
Automotive engine servicing	12	2	14
Automotive servicing operation management	9	4	13
IACTM	3	0	3
Intermediate apparel production	0	1	1
ICS	3	3	6
IMEDS	9	2	11
Metal engineering production management	20	3	23
MISM	4	1	5
Textile technology and production	2	0	2
Apparel fashion designing and Technology supervision	9	0	9
Automotive technology management	1	0	1
Building electrical installation	0	2	2
Irrigation and drainage design and construction supervision	0	6	6
Weaving and knitting operation	1	0	1
Total	108	27	135

It can be seen from table 16 that the majority of the employed graduates (80%) are working in occupations related to their study area. When we see this department wise, all employed graduates from crop production and marketing management, Apparel fashion designing and Technology supervision, and textile technology and production, Weaving and knitting operation, ACTM, and Automotive technology management programs are working in occupations related to their field of study. On the other hand, all employed graduates of Irrigation and drainage design and construction supervision, Building electrical installation, and Intermediate apparel production programs are working in occupations which have no relation to their study area. This indicates

that departments running different programs should conduct labour market assessment and adjust their programs in accordance with the labour market demand.

4.6.7. Satisfaction of employed graduates with knowledge and skills aspects

Table 17 below shows the level of satisfaction of employed graduates with knowledge and skills aspects they received while they were at KPC.

INTERPRETATION OF THE AVERAGE MEAN SCORE					
Range	**1.0 – 1.4**	**1.5 – 2.4**	**2.5 – 3.4**	**3.5 – 4.4**	**4.5 – 5.0**
Verbalisation	**Not at all Satisfied**	**Somewhat not Satisfied**	**Neither Satisfied Nor Dissatisfied**	**Satisfied**	**Very Satisfied**
Colour Code					

Table 17: Level of satisfaction of employed graduates with knowledge and skill aspects while at KPC per department

Parameter	Mean value	Department					
		Crop production and Marketing management	Garment technology	Textile technology	Automotive technology	Electrical	Metal engineering production management
Knowledge		5.0	4.3	5.0	3.6	3.9	3.2
Practical skill		5.0	4.3	5.0	3.4	4.1	3.8
Communication skills		5.0	4.5	5.0	3.5	4.0	4.1
IT skills		4.1	1.8	2.0	1.1	3.7	2.1
Problem Solving skills		5.0	3.5	3.3	2.7	3.7	3.5
Work Ethics		5.0	4.3	3.7	3.9	3.9	4.5
Entrepreneurial skills		5.0	3.6	3.7	2.8	3.8	3.4
Customer service		5.0	3.9	4.0	3.6	3.9	4.0
Health and Safety		5.0	3.8	4.0	4.0	3.9	3.8
Performance at work		5.0	4.1	4.0	3.5	3.8	4.0

As can be seen from table 17, employed graduates from Crop production and Marketing management program are very satisfied with all the parameters with the exception of IT skills, in which case they indicated that they are satisfied. It can also be seen from the table that all employed graduates from all departments with the exception of those from Crop production and Marketing management program showed that they are not satisfied with their IT skills. This implies that the college should work more on equipping trainees with IT skills before they graduate.

4.6.8. Job Satisfaction for Employed Graduates

INTERPRETATION OF THE AVERAGE MEAN SCORE					
Range	**1.0 – 1.4**	**1.5 – 2.4**	**2.5 – 3.4**	**3.5 – 4.4**	**4.5 – 5.0**
Verbalisation	**Not at all Satisfied**	**Somewhat not Satisfied**	**Neither Satisfied Nor Dissatisfied**	**Satisfied**	**Very Satisfied**
Colour Code					

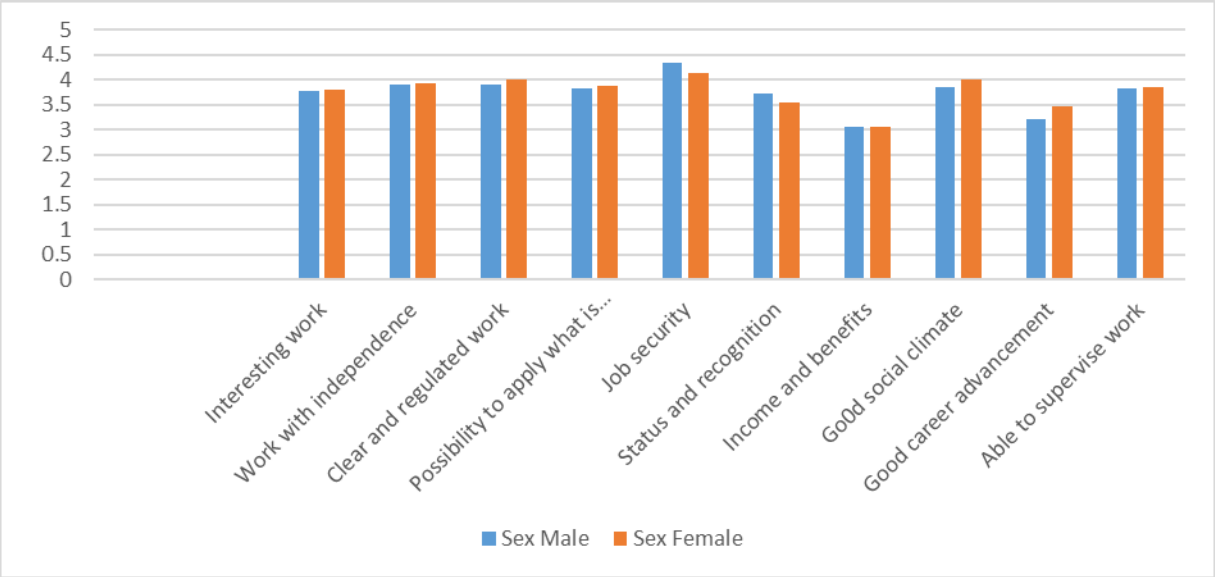

Fig. 5: Satisfaction of employed graduates in the work place

As can be seen from Fig.5, none of the employed graduates showed that they are very satisfied in their work place with the parameters indicated. However, the majority of employed graduates have shown that they are satisfied in the work place with the parameters indicated. On the other hand, it can be seen that the majority of the graduate employees are neither satisfied nor dissatisfied with income and benefits and with opportunity for career advancement. This shows the importance of minimum wage policy that dictates the minimum salary a person should earn in relation to his/her qualification. The result also implies that employers should give career advancement opportunities for their workers.

4.7. Self-employed graduates

4.7.1. Time taken to start own business per sex

As can be seen from table 17, it took 10 months and above for the majority of females (87.5%) to start their own job. However, it took less than 10 months for the majority of males (59.1%) to start their own job. This is consistent with findings in other studies in the country such as tracer studies conducted at Hawassa polytechnic college conducted this year.

Table 18: Time taken to start own job per program per sex

Department	Sex	Time taken to Start own job					Total
		0-3 months	4-6 months	7-9 months	10-12 months	More than 12 months	
Crop production and Marketing management	Male	4	1				5
Advanced apparel production	Female	1				1	2
Automotive engine servicing	Male	2	1	2		1	6
Automotive servicing operation management	Male	2		1	1		4
IACTM	Male				1	1	2
ICS	Male	1					1
IMEDS	Male	1	2			2	5
	Female	0	0			1	1
Metal engineering production management	Male	3	1	1		2	7
	Female	0	0	0		1	1
MISM	Male	1	1		1		3
Textile technology and production	Female					1	1
Apparel fashion designing and Technology supervision	Male	1			1	0	2
	Female	0			1	1	2
Building electrical installation	Male					1	1
Irrigation and drainage design and construction supervision	Female				1		1
Total	Male	15	6	4	4	7	36
	Female	1	0	0	2	5	8
	Total	16	6	4	6	12	44

The finding from table 18 shows that female graduates took more time to start self employment than male. When departments are considered with this regard, it can be seen that all the five self-employed graduates of Crop production and Marketing management program engaged in self-employment within the first six months. This could be attributed to the fact that the start up capital required for self-employment in agricultural sector in Ethiopia is less challenging as compared with other sectors.

4.7.2. Self-employed graduates per industry sector

Table 19: Self-employment sector per department

	Sector for Self-Employment									Total
	Agriculture, forestry, fishing	Textile, garment, or related	Electricity or related	Construction	Automotive technology, repair of motor cycles or vehicles	Transportation	Accommodation and food service	Education	Other	
Crop production and Marketing management	5	0	0	0	0	0	0	0	0	5
Garment technology	0	5	0	0	0	0	1	0	0	6

Textile technology	0	0	0	0	0	0	1	0	0	1
Automotive engine servicing	0	0	0	1	4	0	0	0	1	6
Automotive servicing operation management	0	1	0	0	1	0	0	0	2	4
Electrical	0	1	1	0	0	2	0	1	7	12
Metal engineering production management	0	0	0	0	0	0	0	0	8	8
Building electrical installation	0	0	1	0	0	0	0	0	0	1
Irrigation and drainage design and construction supervision	0	0	0	0	0	0	0	0	1	1
Total	5	7	2	1	5	2	2	1	19	44

As can be seen from table 19, the majority of self-employed graduates are engaged in sectors related to their area of study.

4.7.3. Business Size for Self-Employed Graduates

Table 20: Whether self-employed graduate has employees or not per program

		There are Employees within Self-Employment		Total
		Yes	No	
Department	Crop production and Marketing management	0	5	5
	Advanced apparel production	0	2	2
	Automotive engine servicing	2	4	6
	Automotive servicing operation management	1	3	4
	IACTM	1	1	2
	ICS	1	0	1
	IMEDS	0	6	6
	Metal engineering production management	2	6	8
	MISM	1	2	3
	Textile technology and production	0	1	1
	Apparel fashion designing and Technology supervision	0	4	4
	Building electrical installation	0	1	1
	Irrigation and drainage design and construction supervision	0	1	1
Total		8	36	44

As can be seen from table 20, the majority of self-employed graduates (81.8%) do not have other employees in their business.

4.7.4. Access to finance for self-employed graduates

Table 21: Access to finance for self-employed graduates per program

Program	Access to finance		Total
	Yes	No	
Crop production and Marketing management	5	0	5
Advanced apparel production	0	2	2
Automotive engine servicing	2	4	6
Automotive servicing operation management	2	2	4
IACTM	1	1	2
ICS	0	1	1
IMEDS	2	4	6
Metal engineering production management	3	5	8
MISM	0	3	3
Textile technology and production	0	1	1
Apparel fashion designing and Technology supervision	0	4	4
Building electrical installation	0	1	1
Irrigation and drainage design and construction supervision	1	0	1
Total	16	28	44

It can be seen from table 21 that the majority of self-employed graduates (63.6%) do not have access to finance.

4.7.5. Business financing options for self-employed graduates

Table 22: Financing options for self-employed graduates per program

Program	Financing Options				Total
	Mocro-finance	Friends and relatives	Other	Micro finance & Friends and relatives	
Crop production and Marketing management	0	5	0	0	5

Automotive engine servicing	0	0	0	2	2
Automotive servicing operation management	2	0	0	0	2
IACTM	1	1	0	0	2
IMEDS	1	1	0	0	2
Metal engineering production	0	3	0	0	3
Building electrical installation	0	0	1	0	1
Irrigation and drainage design and construction supervision	0	1	0	0	1
Total	4	11	1	2	18

As can be seen from table 22, the majority of self-employed graduates who have access to finance (61.1%) get their finance from friends or relatives.

4.7.6. Level of satisfaction of self-employed graduates with knowledge and skills aspects

Table 23: Satisfaction of self-employed graduates with knowledge and skill aspects per program

Knowledge and skill aspect	Crop production and Marketing management	Advanced apparel production	Automotive engine servicing	Automotive servicing operation management	IACTM	ICS	IMEDS	MISM	Apparel fashion designing and technology supervision	Building electrical installation
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
Knowledge	5.00	4.50	4.00	4.00	4.00	4.00	4.00	4.50	4.67	4.00
Practical skill	4.20	4.50	3.33	4.00	3.50	4.00	3.00	4.50	3.67	4.00
Communication skill	5.00	4.50	4.33	4.00	4.00	4.00	4.00	4.50	4.33	3.00
IT skill	3.80	2.00	1.33	1.00	3.50	3.00	3.50	3.50	1.33	4.00
Problem solving skill	5.00	3.00	3.00	3.00	3.50	4.00	3.00	4.00	3.67	4.00
Work ethics	5.00	4.50	4.33	4.00	4.00	4.00	4.00	4.00	4.33	4.00
Entrepreneurial skill	5.00	4.50	3.00	3.00	4.00	4.00	4.00	4.50	4.33	1.00
Customer service	5.00	4.00	3.67	4.00	4.00	4.00	4.00	4.50	4.33	2.00
Health and safety	5.00	4.00	3.67	4.00	4.00	4.00	3.50	4.00	3.67	1.00
Performance at work	5.00	4.50	4.00	3.00	4.00	4.00	3.50	3.50	3.67	5.00

It can be seen from table 23 that the majority of self-employed graduates are satisfied with the majority of knowledge and skill aspects. It can be seen from the table that almost all self-employed graduates with the exception of those from crop production and marketing

management are not that much satisfied with IT skills. This result is consistent with the result found from wage employed graduates presented earlier in this report. This is another indication that the college should work hard to make sure that trainees in the college get appropriate and adequate IT skills training.

4.8. Unemployed graduates

4.8.1. Reasons for Not being employed Nor Self-Employed

Table 24: Reason for unemployment per program

Program	Sex	Reason for Not Employed or self-employed									Total
		Family concern	Unsuccessful application	Lost previous job	No job opportunity in the desired field	Other	Unsuccessful app. & No job opp. in the field	Family Concerns & Unsuccessful Applications	10 "Family conc., Unsuccessful app. & No job opp. in the field"	Lost Previous job & No job opp. in the desired field	
Crop production and Marketing management	Male				1						1
Advanced apparel production	Female			1	1						2
Automotive engine servicing	Male			1	1						2
Automotive servicing operation management	Male	1	1		2						4
Intermediate apparel production	Female					1					1
ICS	Female				1						1
IMEDS	Male		0		3		3				6
	Female		3		4		1				8
Metal engineering production management	Male		3	1	0	0	1	1	1		7
	Female		1	0	3	1	0	0	0		5
MISM	Male		0		1	1	2			1	5
	Female		1		3	1	0			0	5
Textile technology and production	Male				1						1
	Female				5						5
Apparel fashion designing and Technology supervision	Female	1									1
Automotive technology management	Male		1		2						3
Building electrical installation	Male		1		1						2
	Female		0		3						3

Irrigation and drainage design and construction supervision	Female						1			1	2
Weaving and knitting operation	Female				5						5
	Male	1	6	2	12	1	6	1	1	1	31
Total	Female	1	5	1	25	3	2	0	0	1	38
		2	11	3	37	4	8	1	1	2	69

It can be seen from table 24 that the majority of unemployed graduates (53.6%) attribute their unemployment for absence of job opportunity in the desired field. Unsuccessful application is the other major reason for unemployment of graduates accounting 16% for unemployment.

4.9. Graduates Pursuing Further Training

4.9.1. Type of further education/training pursued by those who are pursuing further education

Table 25: Area pursued by graduates pursuing further training per program

Program	Sex	Type of Further Training for graduates pursuing further education			Total
		Further academic education in similar field	Further academic education in a different field	Further vocational education/training in similar occupational area	
Automotive servicing operation management	Male	1			1
Intermediate apparel production	Female			1	1
IMEDS	Male		1		1
	Female		1		1
Metal engineering production management	Female		2		2
MISM	Male			1	1
	Male	1	1	1	3
Total	Female	0	3	1	4
	Total	1	4	2	7

It can be seen from table 25 that the majority of graduates pursuing further education (57.1%) are engaged in a field different from their former study area.

4.10. Findings about employers

4.10.1. Employers' response rate

Totally 38 employers were included in the study and all of them returned the questionnaire.

4,10.2. Industry sectors of the employers

Table 26 shows that the majority of the employers (34.2%) are from the manufacturing sector, including garment and textile industry. This may imply that the largest number of industries found around KPC are manufacturing industries.

Table 26: Industry sectors of employers

Industry Sector	Frequency	Percent
Agriculture, forestry, fishing	6	15.8
Manufacturing, garment, textile	13	34.2
Electricity, gas, steam, air conditioning supply	4	10.5
Construction	1	2.6
Automotive industry, repair of motorcycle and cycle	6	15.8
Accommodation and food services	1	2.6
Public administration and defence	1	2.6
Education	4	10.5
Other	2	5.3

The second industries larger in number are the Automotive industry, repair of motorcycle and cycle which account for 15.8% of employers. These can be taken as the other sectors which have the potential to hire future graduates.

4.11. Employers' means of recruiting employees

The findings in table 27 show how employers find employees.

Table 27: How employers recruit employees

Means of recruitment	Industry Sector									
	Agriculture, forestry, fishing	Manufacturing, garment, textile	Electricity, gas, steam, air conditioning supply	Construction	Automotive industry, repair of motorcycle and cycle	Accommodation and food services	Public admin and defence	Education	Other	Total
TV, Radio, Newspaper	0	2	3	1	0	0	0	1	0	7

Internet	1	4	4	1	1	0	0	1	1	13
Internal advertisement	5	8	4	1	2	1	1	4	1	27
Direct Application	3	3	1	1	0	0	0	0	1	9
Career Guidance	1	0	0	0	0	0	0	0	0	1
Referral by KPTC	0	1	0	0	1	0	0	0	0	2
Personal Contacts	4	2	0	1	2	0	0	0	1	10
Public work Admin Placement	0	1	1	0	0	0	0	0	0	2
Private Employment Agencies	0	1	0	0	0	0	0	0	0	1
Linkage During Training	1	0	0	0	0	0	0	0	0	1

As can be seen from table 27, the majority of the employers use internal advertisement to recruit graduates. This is consistent with the result obtained from graduates themselves. They indicated that most of them secured job through internal advertisement. This is followed by advertisement on internet and through personal contact. Personal contact was found to be the second most used means of securing jobs for employed graduates. Personal application was the fourth widely used means of recruiting employees. This means of securing jobs for graduates may be supported by the college by providing training to the graduates in how to apply for a job. Linkage during training and career guidance service have insignificant roles for employers during hiring graduates. This shows that the support given to graduates by the college to enhance their employment through linkage with industries and through career guidance and counselling services is minimal.

4.12. Important parameters for recruitment

Fig. 6 presents the level of importance of different parameters for recruitment of employees. Using average mean score, the scale has been interpreted as shown below:

INTERPRETATION OF THE AVERAGE MEAN SCORE					
Range	**1.0 – 1.4**	**1.5 – 2.4**	**2.5 – 3.4**	**3.5 – 4.4**	**4.5 – 5.0**
Verbalisation	**Not at all important**	**Somewhat not not important**	**Neither important Nor unimportant**	**Important**	**Very Important**
Colour Code					

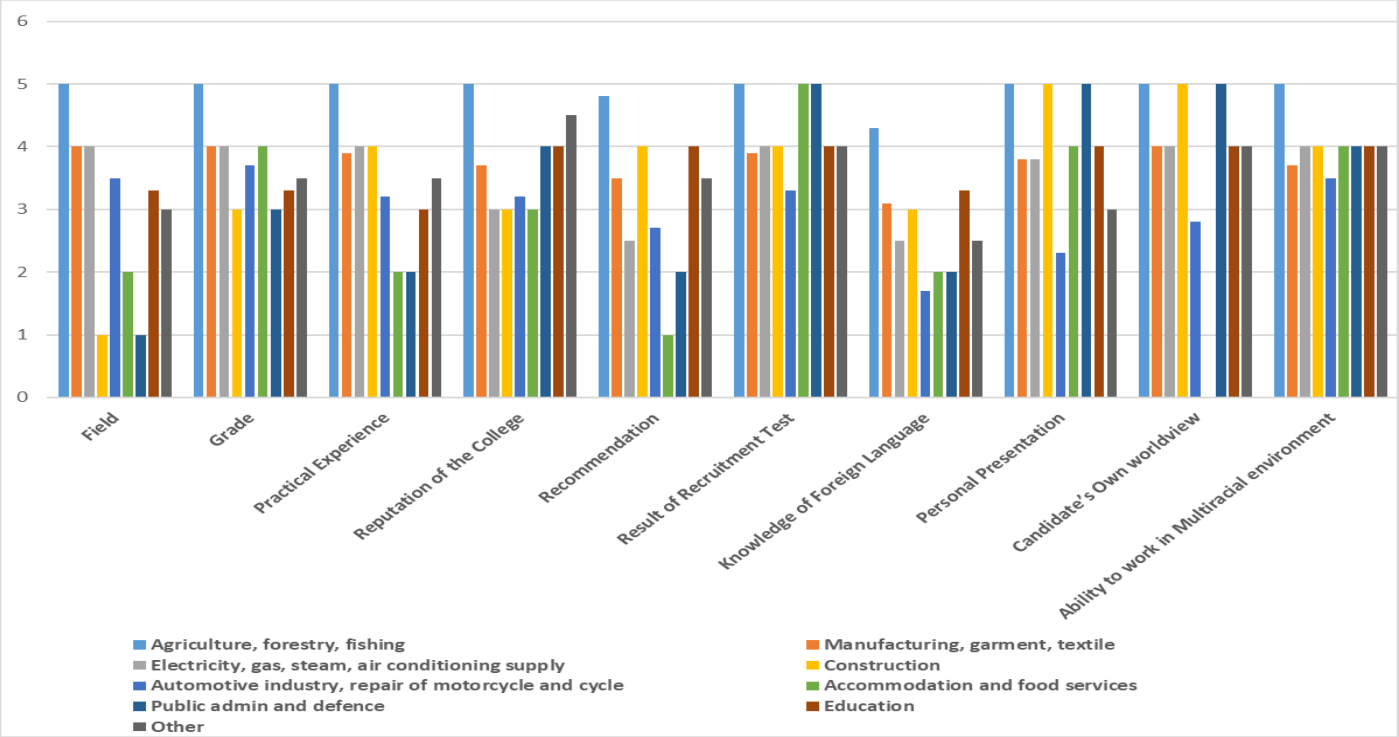

Fig. 6. Important parameters for employee recruitment

As can be seen from the graph, all the parameters are important and even some are very important for employers of agricultural sector to recruit employees. The most widely used and labelled as important by almost all the employers is result in a recruitment test, followed by ability to work in a multiracial environment. The result may have an implication that the customers of employers in the study area are growing to be from diverse cultural groups. It is therefore important to help trainees develop multicultural competencies and ability to respond during recruitment test.

4.13. Level of satisfaction of employers with their graduate employees

Table 28 presents the level of satisfaction of employers with their graduate employees. Using average mean score, the scale has been interpreted as shown below:

INTERPRETATION OF THE AVERAGE MEAN SCORE					
Range	**1.0 – 1.4**	**1.5 – 2.4**	**2.5 – 3.4**	**3.5 – 4.4**	**4.5 – 5.0**
Verbalisation	**Not at all satisfied**	**Somewhat not not satisfied**	**Neither satisfied Nor dissatisfied**	**Satisfied**	**Very satisfied**
Colour Code					

Table 28: Level of satisfaction of employers with their graduate employees

	Industry Sector								
	Agriculture, forestry, fishing	Manufacturing, garment, textile	Electricity, gas, steam, air conditioning supply	Construction	Automotive industry, repair of motorcycle and cycle	Accommodation and food services	Public admin and defence	Education	Other
Knowledge	5.0	3.8	3.8	4.0	4.0	3.0	2.0	4.0	3.5
Practical Job related skill	5.0	3.9	3.8	4.0	3.2	2.0	1.0	3.5	4.0
Communication skill	5.0	4.2	4.0	4.0	3.5	5.0	4.0	4.0	3.0
IT Skill	4.3	3.1	3.8	3.0	1.0	2.0	1.0	3.0	2.5
Problem Solving Skill	5.0	3.9	4.0	4.0	3.2	4.0	3.0	4.0	2.5
Work Ethics	5.0	4.1	4.3	4.0	3.7	5.0	4.0	4.0	4.0
Entrepreneurship skill	5.0	3.9	3.8	3.0	2.8	2.0	2.0	3.3	2.0
Customer Service	5.0	4.1	4.0	4.0	3.7	5.0	5.0	4.3	3.5
Health and Safety Skill	5.0	3.5	4.5	3.0	3.8	4.0	2.0	3.5	3.5

As can be seen from table 28, employers from the agriculture sector are very satisfied with the majority of the knowledge and skills, and satisfied with IT skills of their graduate employees. Only employers from the agriculture sector and electricity related areas are satisfied with the IT skills of the graduate employees. Employers from the other sectors are not satisfied with the IT skills of the employed graduates. The average mean score given by all the employers for IT skills of their employees is 2.6. This is consistent with the results from the graduate data. As can be seen from graduate data, the majority of the graduates showed that they are not satisfied with the IT skills they have. The mean score of the level of satisfaction of employers with the work ethics of the employed graduates shows that they are satisfied. This is against previous findings which show that employers are not satisfied with the work ethics of the employed graduates (Genene et al, 2023). This could be attributed to the institutional work culture developed in the college.

4.14. Engagement in cooperative training

Figure 6 shows whether the employers in the study engage in cooperative training or not.

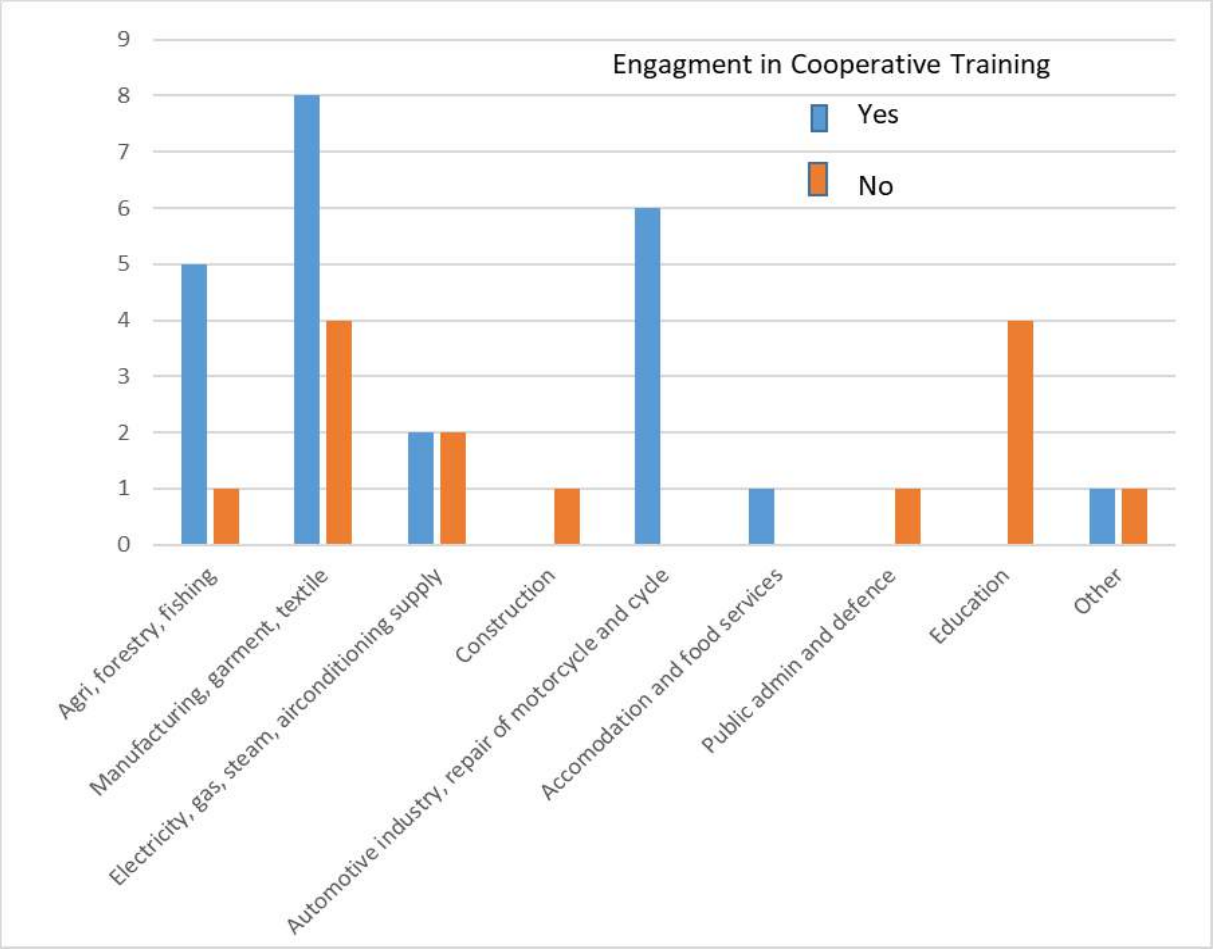

Fig. 7. Engagement of employers in cooperative training

As can be seen from fig. 7, the majority of the employers showed that they participate in cooperative training. It can be seen from the graph that 83.3% of employers in agriculture sector showed that they engage in cooperative training; 66.7% of employers in the manufacturing sector showed that they engage in cooperative training; all employers in the automotive technology and accommodation and food services also showed that they engage in cooperative training. Employers in the construction, public administration and education sector showed that they do not engage in cooperative training. Overall, the results show that there is disparity among employers in their engagement in cooperative training. The college should find a way to address all the employers to engage them in cooperative training.

4.15. Industrial Exchange Program for KPC Staff

Table 29 shows the level of engagement of the industry (employers) in Industrial Exchange Program for KPC Staff. As can be seen from the table, the majority of the employers do not engage in industrial exchange program for KPC staff.

Table 29: The engagement of employers in industrial exchange

		Industrial Exchange with KPC		Total
		Yes	No	
Industry Sector	Agriculture, forestry, fishing	1	5	6
	Manufacturing, garment, textile	2	11	13
	Electricity, gas, steam, air	0	4	4
	Construction	0	1	1
	Automotive industry, repair of	0	6	6
	Accommodation and food services	0	1	1
	Public admin and defence	1	0	1
	Education	1	3	4
	Other	0	2	2
Total		5	33	38

As can be seen from table 29, only finger counted number of employers in agriculture sector, manufacturing, public administration and education sectors showed that they engage in industrial exchange programs for trainer.

4.16. Ease of Finding Employees with Needed Skills

Table30: Finding employees with needed skills

Industry sector	There is problem in finding Employees With Skills Needed		Total
	Yes	No	
Agriculture, forestry, fishing	0	6	6
Manufacturing, garment, textile	2	11	13
Electricity, gas, steam, air conditioning supply	0	4	4
Construction	0	1	1
Automotive industry, repair of motorcycle and cycle	1	5	6
Accommodation and food services	1	0	1
Public admin and defence	0	1	1
Education	0	4	4
Other	0	2	2
Total	4	34	38

As can be seen from table 30, a total of 34 (89.5%) employers showed that they don't have problems in getting employees with the required skills. Only employer from accommodation and food service sector, 18.2% of employers from the manufacturing sector, and 20% of employers from the automotive technology sector reported that they have problems in getting employees with the skills needed. This implies that shortage of skilled graduates is not a big issue for most of the employers.

4.17. Findings about trainers

4.17.1. General Information about trainers in the study

Totally 35 trainers were included in the study and all of them returned the questionnaire. Table 31shows the general information about trainers who participated in the study.

Table 31: Trainer per position

Position	Department									Total
	Auto	Textile &Garment	Manufacturing	Electrical Electronics	Agriculture	Irrigation	Water supply	Surveying	Construction	
Head of department	0	0	0	0	1	1	0	0	0	2
Course Instructor	5	5	5	5	4	1	2	1	4	32
Technician	0	0	0	0	0	0	1	0	0	1
Total	5	5	5	5	5	2	3	1	4	35

It can be seen from the table that the majority of the trainers (91.4%) who participated in the study are trainers. Only two department heads and one technician participated in the quantitative study. The dean, one vice dean, and 7 department heads participated in interview and focus group discussion.

4.17.2. Year trainers are posted at KPC

Table 32 shows the year the trainers were posted at KPC.

Table 32: Year trainers were first posted at KPC

Department	Year First Posted		Total
	Between 3 and 5 years	More than 5 years	
Auto	0	5	5
Textile &Garment	0	5	5
Manufacturing	2	3	5
Electrical Electronics	0	4	4
Agriculture	3	2	5
Irrigation	0	2	2
Water supply	0	3	3
Surveying	0	1	1
Construction	0	4	4
Total	5	29	34

It can be seen from table 32 that the majority of the trainers (85.3%) were posted at the college more than five years ago. This shows that the majority of the trainers are well experienced and have good understanding of the institutional culture.

4.18. The ratio of theory to practice

Table 33 shows the ratio of theory (T) to practice (P). As can be seen from the table, about 50% of the trainers showed that the ratio of practice to theory during the training is 70:30, which is the standard set in the education and training policy.

Table 33: Ratio of practice to theory

Department	Balance b/n Theory and Practice						Total
	20P:80T	30P:70T	40P:60T	50P:50T	60P:40T	70P:30T	
Auto	0	0	1	1	0	3	5
Textile &Garment	0	0	1	0	0	4	5
Manufacturing	0	2	0	0	0	3	5
Electrical Electronics	1	1	0	0	1	2	5
Agriculture	0	0	1	0	0	4	5
Irrigation	0	0	0	1	0	1	2
Water supply	0	0	1	2	0	0	3
Surveying	0	0	1	0	0	0	1
Construction	0	0	0	2	2	0	4
Total	1	3	5	6	3	17	35

However, the remaining 50% plus trainers showed that the ratio of practice to theory is less than what is indicated in the policy. It is therefore important for the college to make sure that the standard is met with this regard.

On the other hand, data obtained from interview and focus group discussion showed that the trainees have difficulties in the theoretical part. It was learned during the discussion that most of the trainees fail in the competency assessment in the theoretical part. This also shows that both the practical and theoretical trainings need to be given emphasis and should be delivered with quality.

4.19. The frequency of curriculum revision

Table 34 shows how frequently curricula are revised.

Table 34: Periodic revision of curricula

Department	There is periodic Curriculum Revision		Total
	Yes	No	
Auto	5	0	5
Textile &Garment	2	3	5
Manufacturing	2	3	5
Electrical Electronics	3	2	5
Agriculture	4	1	5
Irrigation	1	1	2
Water supply	3	0	3
Surveying	1	0	1
Construction	4	0	4
Total	25	10	35

As can be seen from table 34, the majority (71.4%) indicated that there is periodic curriculum revision. Mainly all Auto, water supply, surveying and construction department trainers showed that there is periodic curriculum revision. As TVET is a dynamic sector due to frequent change in technology, curricula have to be revised accordingly.

4.20. How long a curriculum serves before revision

Table 35 shows how long a curriculum serves before its revision.

As can be seen from table 35, the majority of the trainers (85.7%) showed that most of the departments revise their curriculum after it serves for a maximum of 48 months (4years). Especially manufacturing department revises its curriculum within two years.

Table 34: How long a curriculum serves before it is revised

Department	Curriculum Reviewed				Total
	Less than 24 months	25 to 48 months	49 to 60 months	More than 60 months	
Auto	2	3	0	0	5
Textile &Garment	0	1	0	1	2
Manufacturing	2	0	0	0	2
Electrical Electronics	0	3	1	0	4
Agriculture	0	5	0	0	5
Irrigation	0	1	1	0	2

Water supply	0	3	0	0	3
Surveying	0	0	1	0	1
Construction	0	4	0	0	4
Total	4	20	3	1	28

Especially in TVET, it is well known that the curriculum must meet the needs and current demands of the culture, the society, and the expectations of the employers. As a result, it is believed that curriculum revision can be made as frequently as possible based on the labour market demand and change in technology.

4.21. Satisfaction of trainers with the resources and management of HPTC

Table 36 shows the level of satisfaction of KPC trainers with the resources and management of KPC.

INTERPRETATION OF THE AVERAGE MEAN SCORE					
Range	**1.0 – 1.4**	**1.5 – 2.4**	**2.5 – 3.4**	**3.5 – 4.4**	**4.5 – 5.0**
Verbalisation	**Not at all satisfied**	**Somewhat not not satisfied**	**Neither satisfied Nor dissatisfied**	**Satisfied**	**Very satisfied**
Colour Code					

Table 36: Satisfaction of trainers with the resources and the college management

Resource and management	Auto	Textile &Garment	Manufacturing	Electrical Electronics	Agriculture	Irrigation	Water supply	Surveying	Construction	Total
Resource Center	2.2	1.4	2.8	3	4	2	3.7	5	2.8	3
Curriculum	3.4	2.2	3.8	3.6	4.4	4	3.3	4	3.3	3.6
Collaboration	2.8	1.4	2.2	2.6	4.2	1.5	1.7	4	2	2.5
Workshop and Tools	2.6	2.8	2	2.8	3.8	1	1	5	1.3	2.5
Industrial Linkage	3.2	2	3	3.2	4.2	1.5	3.3	3	2.8	2.9
IT Facilities	2.2	1.4	1.8	2	2.8	2	1.3	3	1.8	2
Audio Visual Aids	2.4	1.4	1.6	1.8	2.2	1.5	1.3	3	1.8	1.9
College Management	3	1.8	2.6	2	3.8	2	2	3	2	2.5
Recreational Facilities	2	1.8	1.4	1.8	3.8	1	1	4	1.8	2.1
Career Guidance	1.8	1.8	2.6	2.4	4.4	1	1.3	3	2.3	2.3
Total	2.6	1.8	2.4	2.5	3.8	1.8	2	3.7	2.2	2.6

As can be seen from table 36, trainers in general are satisfied only with the curriculum used in their department (μ=3.6). Trainers in general are not satisfied with audio-visual aids used in the teaching-

learning process (μ=1.9). When it comes to specific department, those trainers from agriculture sector are the most satisfied ones (μ=3.8) followed by Surveying department trainers (μ=3.7) with the resources and the management. The most dissatisfied groups with the resources and the college management are those from textile & garment departments and those from irrigation department (μ=1.8). These are followed by trainers from water supply (μ=2) and construction departments (μ=2.2).

4.22. Satisfaction of trainers with the competencies of graduates (Departments)

Table 37: Satisfaction of trainers with the knowledge and skills of graduates

Knowledge and skills	Department									Total
	Auto	Textile &Garment	Manufacturing	Electrical Electronics	Agriculture	Irrigation	Water supply	Surveying	Construction	
Knowledge	3.6	2.8	3.8	4	4.8	2	3.3	4	3.5	3.5
Practical Skills	3.2	2.4	4	3.2	4.8	3.5	3.3	4	2.8	3.5
Communication Skills	3.6	3	2.4	4.4	4.8	3.5	4	4	3.5	3.7
IT Skills	2.6	1.4	2	3.8	4.2	2	1.7	4	3.3	2.8
Problem Solving	2.8	1.8	2.2	3.8	4.8	2.5	3	3	3	3
Work Ethics	3.6	3	3.4	4.2	4.6	3.5	4.3	4	4.5	3.9
Entrepreneurial Skill	2.5	2.2	2.6	4	4.8	2.5	2.7	4	2.8	3.1
Customer Service Skills	2.8	2.6	2.8	4.2	4.8	3	3.3	4	4	3.5
Health and Safety	3	1.8	3.8	3.6	4.4	2.5	3.3	5	2.3	3.3
Total	3.1	2.3	3	3.9	4.7	2.8	3.2	4	3.3	3.5

It can be seen from table 37 that the overall highest mean score trainers gave is for work ethics of graduates. This is consistent with the result obtained from employers' data. Employers also gave high score for graduates' work ethics. This is, however, inconsistent with the result obtained in previous studies (Genene et al, 2023). This could be attributed to the institutional work culture developed in the college. The least mean score was given to graduates' IT skills. This result is also consistent with the result obtained from graduates themselves and from the employers. It is now clear that the college should work hard to enhance the trainees' IT skills. The most satisfied trainers with the graduates' skills and knowledge are trainers in the agriculture sector. Surprisingly, this result is also consistent with the result obtained from graduates of agriculture sector and employers

in the agriculture sector. It is therefore important to learn best practices for the department of agriculture sector (Crop production and marketing management). The least dissatisfied group are trainers from garment department. This could be attributed to the fact that garment workshops were robbed during the conflict time and that might have affected the overall training in the department. This is also supported by the result from the data obtained through focus group discussion, interview and observation.

4.23. Participation of trainers in industrial exchange

Table 38 shows the level of participation of trainers in industrial exchange programs.

Table 38: Participation of trainers in industrial exchange programs

Department	Participation in Industrial Exchange program		Total
	Yes	No	
Auto	5	0	5
Textile &Garment	3	2	5
Manufacturing	1	4	5
Electrical Electronics	3	2	5
Agriculture	5	0	5
Irrigation	1	1	2
Water supply	3	0	3
Surveying	1	0	1
Construction	0	4	4
Total	22	13	35

As can be seen from the table, the majority of the trainers (62.9%) have indicated that they participated in industrial exchange program. Especially all the automotive technology and agriculture (crop production and marketing management) department trainers showed that they participated in industrial exchange program. This is inconsistent with the result obtained from employers. The majority of the employers showed that they did not participate in industrial exchange programs. This could be attributed to the possibility that the employers who participated in the study could be those who, by chance, did not participate in the industrial exchange program. Trainers from the construction department are the only who showed that they all did not participate in industrial exchange program.

4.24. Trainers' recommendation for learners to join KPC

Trainers were asked whether they recommend trainees to join the programs in the college. Table 38shows the result from the trainers' response.

Table 39: Recommendation of trainers to learn in KPC

Department	Recommend Learner to KPC		Total
	Yes	No	
Auto	5	0	5
Textile &Garment	5	0	5
Manufacturing	5	0	5
Electrical Electronics	4	1	5
Agriculture	5	0	5
Irrigation	2	0	2
Water supply	2	1	3
Surveying	1	0	1
Construction	3	1	4
Total	32	3	35

As can be seen from the table, the majority of the trainers (91.4%) recommend other trainees to learn in the college.

4.25. Comments and recommendations from the respondents

4.25.1. Comments and recommendations by graduates

Graduates gave recommendations with regards to unemployment. As was seen in the status of employment of graduates, some of them found it difficult to secure jobs. One of the recommendations forwarded from the graduates is read as follows: *"It is good if trainees try to focus on short term training to get employment".* This is congruent with the Education and Training policy which states that more focus has to be given to short term training to maximize job opportunity for citizens. Another graduate recommends the following:

> *It would be good if training areas were opened at Kombolcha Polytechnic College based on labour market study because there are many trainees who studied with me and did not get jobs.*

This implies that there are programs running in the college which are in fact not based on the labour market demand. It is, therefore, important to make sure that the programs given in the college are in accordance with the labour market demand. Graduates from Automotive technology department suggested to include driving in their curricula. For example, one graduate said: *"It would be better if the driving skill is given along with the learning process."*

Graduates from the agriculture sector also suggested the following for consideration: *"The training period should be shortened". "If there are better demos/model plots." "Agro-processing should start with agricultural product processing training"* Graduates from manufacturing technology also forwarded the following comments: *"It is good if related professions are merged into one." " It is good if course quantity and similarity is reduced. During our training, similar courses were given with different names."* These types of comments suggest the need for curricular revision and the college should consider if there is really a need to revise the existing curricula.

With regards to upgrading, graduates indicated that the frequent change of curriculum is becoming obstacle on them not to upgrade themselves. The following was taken from one respondent: *"The frequent change of the curriculum has become a big challenge for the trainees who are doing the upgrade".* Although unnecessary change of curriculum is not encouraged, it is inevitable as long as the labour market demand changes.

As to the support graduates get from the management, some graduates raised their concern that the management should revisit the relationship between trainers and trainees. One graduate said: *"If there is a system in which the management checks the relationship between teachers and trainees."* If there is no positive relationship between trainers and trainees, it is obvious that this hampers the quality of the training and, in turn, affects the employability of the graduates. The management should,, therefore, pay attention to it and provide support to create positive social environment in the college. Graduates also requested the college to make follow up and support graduates to get employment. For example, one graduate said:

> *It would be good if the college continuously monitors and supports the status of graduates, if the college coordinates with the relevant bodies to organize and train graduates to get them employed in the occupational they have been trained in, and if the monitoring and support work is done continuously.*

As per the comment, the college should not stop supporting the graduates only up to their graduation, it should also support them continuously through different graduate tracking systems.

Graduates from the evening program raised that they could not properly take practical training due to shortage of time. One of the graduates from the evening program said: *"I studied in evening program, so there was a lack of time during the training, especially in practical training."* The other student said: *"It would be better if industrial training is given to evening students"* It should be noted that, whether trainees graduate from the evening or regular program, they compete for the same labour market. It is therefore very important for the college to make sure that both regular and evening trainees receive similar practical training.

With regards to trainers, the following comments were given: *"There are some trainers who make fun of us and don't really help us." "If teachers teach us the skills they can, if we don't learn the full level from one trainer; Some trainers don't care about us." "If the teaching skills and ethics of some trainers are improved." "It would be nice if the teaching skills and ethics of some trainers are improved". "It is good for the teaching process if training is provided by qualified teachers." "If a trainer at every level is well skilled/ It is important to empower trainers".* These comments tell us that trainers should also look into themselves and support the trainees as required. Trainers should also be supported by the college to engage in continuous professional development activities.

The following comments were given with regards to resources and services. *"The college should have a complete and standardized modern library service". "There should be Modern training equipment and workshop, and laboratory aided by digital technology". "There are no enough machines as compared with the number of trainees"." The provision of services and accommodation of the college has been below our expectation and I suggest if it could provide efficient services in the future." "I suggest if the machines in the college are repaired and put back into use, it would be better if the damaged machines are repaired and made ready for training." "It is good to have adequate teaching materials, as there is a problem of supply of materials, adequate materials should be provided for training."*

Others also suggested: "The use of time in teaching and learning needs to be improved; the training needs support and monitoring, and it would be better if the superior body accepts some suggestions and gives a solution immediately." "The training is good but the material/training resource should be improved; It is good to provide computer-assisted training using up-to-date technologies". All these and other comments by the graduates show that there is shortage of resources and the services given in the college need to be improve.

With regards to pursuing further education/training, those who have not continued their education attributed different reasons for that. One graduate indicated that he is not motivated to pursue further education/training due to the fact that he couldn't get job after graduation. He said: *"My desire to learn has decreased because I did not earn the job I studied",* while the other said: *"There are no job opportunities in the field of training I want". Another graduated said: "The program I am looking for is not in the nearby area". Still another gradate said: "I want to learn*

but there is no suitable system for the training". Such excuses may be genuine and the college should diversify its programs and devise strategies to motivate graduates to pursue their education and training, as long as the program is need in the labour market.

4.25.2. Comments and recommendations by trainers

The following comments were given by the trainers with regards to the management:

"It would be good if people from the management do the job of stimulating the employees by considering incentive mechanisms." "The management should think that they have to improve the working environment for KPC workers by providing different benefits". "It is necessary to increase the professional knowledge and skills of the trainers and to provide the technology required." "There should be a continuous media work to better promote the college with the industry and the community and should find a sister city to help from outside." Another trainer said: *"First of all, it is necessary to develop the work motivation of all employees----"*. One of the trainers also commented: *"The college has stagnated in many ways compared to what it was five or six years ago and needs immediate solutions."* These comments show that the college management should work hard to support and motivate trainers in different ways and to create partnership with the industry and other institutions to be able to provide quality training to the trainees.

With regards to practical training, one of the trainers said: *"We should be able to deliver practical training to the trainees with the use of up-to-date machines that are compatible with the industry".* Another trainer said *"It is necessary to establish IT labs for the trainees to practice and develop their IT skills".* These comments are in line with the results obtained from the quantitative data and the comments given by the graduates. The comment implies that there are no sufficient machines which are compatible with the industry and that the college should work hard to provide up-to-date machines to deliver relevant practical training.

4.25.3. Comments and recommendations by employers

With regards to graduates' readiness for work, one of the employers said: *"It is interesting where they are now (their potential), but it would be better if they had psychological training, customer service training prepared in terms of the work they do."* The other employer added: "Staff management, ethics, customer management, if they receive training because these are related to the job". The comments are in line with the results of the quantitative data. It has become clear that only technical skill is not sufficient to satisfy the requirements of the employers. Psychological readiness and other employability skills should be integrated in the training process.

One of the challenges faced by employers with regards to the graduates in lack of work ethics. This was explained by one of the employers as follows: *"Lack of interest in work or lack of motivation and focusing on limited knowledge will not go along with the times and graduates should be trained in such a way that they work hard."* This is not consistent with the result obtained from the quantitative data. This could be due to the fact that sometimes people tend to reply to quantitative questions without paying much attention. The other possibility could be that the employer who replied to this qualitative question may have a different experience than the other employers, which is expected in qualitative study.

Employers also raised the importance of a common framework that guides the activities carried out by the two parties. One of the employers said: "I think there is a lack of agreement on many issues that need to be worked on for a common industry-collegiate framework." "*I think there is a problem with the college and the industry in developing a joint plan",* contended by the other employer. These comments show that the college and the industries should sit together, plan together and work together for the development of relevant workforce for the industry.

With regards to program development, employers emphasized on the importance of labour market study. One of the employers said: “A complete labour market study should be done before training is given.” Another employer said: *“It would be good if the college had a way to monitor and support the graduates after training and graduation, and if the college did enough research before starting the training.”.* These two comments focused on the importance of labour market study before launching a program. The second comment stressed the importance of monitoring and supporting trainees after their graduation.

With regards to automotive technology, employers indicated: *“Since the college provides training only for light cars, it should prepare a curriculum that includes both light cars and heavy duty cars.”* This has be considered by the automotive technology department to revise their curricula so as to focus on skill areas needed in the market.

CHAPTER FIVE

KEY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1. Key Findings

1. Employment Status and Gender Disparity:

- Approximately 70% of the graduates were employed within the first six months after graduation, while 30% were unemployed.
- Male graduates had a significantly higher employment rate (74.1%) compared to female graduates (25.9%).

2. Types of Employment:

- The majority of employed graduates (70.6%) were wage-employed, with a preference for permanent positions.
- Self-employment was relatively low, with 5.6% of female graduates and an unspecified percentage of male graduates being self-employed.

3. Variation by Departments:

- Employment rates varied by department, with the highest employment rates in the IACTM department (100%), crop production and marketing management department (97.1%), and Apparel fashion designing and Technology supervision (92.9%).
- Some departments, like MISM and Building electrical installation, had high unemployment rates for female graduates.

4. Duration to Find First Job:

- The majority of employed graduates found their first job within 0 to 3 months (72.2%), but for some, it took up to 6 months (83.3%).

5. Sectors of Employment:

- The textile, garment, and related industries employed the largest percentage of graduates (30.6%).
- Personal contacts, such as relatives, played a significant role in helping graduates secure jobs (20.7%).

6. **Satisfaction with IT Skills:**

- Graduates, except those from the Crop production and Marketing management program, were dissatisfied with their IT skills.

7. **Self-Employment and Access to Finance:**

- Most self-employed graduates were engaged in fields related to their studies, and a majority lacked access to finance or received it from friends or relatives.

8. **Reasons for Unemployment:**

- The main reasons for graduate unemployment were the absence of job opportunities in their desired field (53.6%) and unsuccessful applications (16%).

9. **Further Education and Field Alignment:**

- A significant percentage of graduates pursuing further education (57.1%) studied in fields different from their previous area of study.

10. **Graduate Satisfaction with College Support:**

- A large proportion of graduates (47.6%) were neither satisfied nor dissatisfied with the support they received while in college.

11. **Challenges in Practical Training:**

- Evening program graduates faced challenges in taking practical training due to a shortage of time.

12. **Employer Engagement:**

- Most employers participated in cooperative training but did not engage in industrial exchange programs for KPC staff.

13. **Satisfaction with Training Ratio:**

    - About 50% of trainers mentioned that the ratio of practice to theory during training did not align with the standard set in the education and training policy.

14. **Curriculum Revision and Facilities:**

    - Many departments revised their curriculum after it served for a maximum of 48 months (4 years).
    - Trainers expressed dissatisfaction with audio-visual aids, IT facilities, and career guidance and counselling services.

15. **IT Skills Deficiency:**

    - Graduates, employers, and trainers all indicated that graduates lacked IT skills.

5.2. Conclusions

The findings of this study lead to the following conclusions:

1. There is a need for improvement in several areas, including addressing gender disparity, enhancing employability skills, and providing better support to graduates.
2. Gender disparities are evident in both participation rates and employment rates.
3. The delivery of employability skills varies among programs, with some lacking essential training in critical areas such as IT, problem-solving, customer service, health and safety, and foreign languages.
4. Areas requiring attention for improvement include IT facilities, audio-visual materials, external collaboration, industry linkage, and career guidance/counselling services.
5. Graduates exhibit varying levels of satisfaction with college support, and specific programs display differing satisfaction levels.
6. Graduates require ongoing support in their quest for employment and practical training opportunities. Concerns have been raised about below standard working conditions in certain programs.

7. Self-employed graduates predominantly rely on financial assistance from friends and relatives. Unemployed graduates attribute their situation to a scarcity of job opportunities and unsuccessful job applications.
8. Graduates pursuing further education often opt for fields unrelated to their initial training.
9. From an employer's perspective, the manufacturing sector serves as the largest employer, with internal advertisements being the primary method of recruitment.
10. Employers are content with graduates' work ethics but highlight the need for enhancements in IT skills.
11. Cooperative training is prevalent in specific sectors but lacks implementation in others.
12. Trainers advocate for improvements in audio-visual aids, industry exchange programs, and teaching materials.

Moreover, the feedback and recommendations from graduates, trainers, and employers in the study have yielded the following insights:

13. Employability skills are of paramount importance. Technical skills alone are inadequate for graduates to meet the job market's demands. Integrating employability skills such as customer service, work ethics, staff management, and psychological readiness into the training process is crucial.
14. Aligning training programs with labour market demands is essential. Graduates stress the significance of this alignment, emphasizing the need for labour market studies to ensure that curricula remain up-to-date and meet industry requirements, a point further highlighted by employers.
15. The need for curriculum revision and maintaining training program quality is apparent. Graduates express the necessity of revising curricula, including merging related professions and reducing course redundancy, underscoring the importance of providing high-quality and relevant training programs.
16. Graduates' recommendations for continuous support, including graduate tracking systems, emphasize the importance of sustained assistance beyond graduation to enhance employability.
17. The college should enhance practical training opportunities for both regular and evening program students to create an equitable job market environment.
18. There is a pressing need for teacher training and improved resources. Trainers' comments regarding enhanced teaching skills and ethics, as well as the availability of up-to-date equipment

and IT labs, highlight the significance of supporting trainers and providing modern resources for effective education.

19. Collaboration between the college and the industry is vital. Both employers and trainers underscore the importance of partnership to develop a common framework for workforce development, bridging the gap between academia and the job market.
20. The college should diversify its programs. Graduates' reasons for not pursuing further education reveal the necessity for the college to diversify its programs and implement strategies to motivate graduates to continue their education and training, particularly when aligned with labor market needs.
21. Feedback from employers suggests expanding the college's automotive technology program to include both light and heavy-duty vehicles, aligning with current industry demands.

In conclusion, findings from graduates, trainers, and employers collectively points to the importance of aligning training programs with labour market needs, integrating employability skills into the curriculum, and establishing strong partnerships with industry. The study also suggested the need to focus on providing ongoing support to graduates, enhancing teacher training, and ensuring access to modern resources.

5.3. Recommendations

Based on the findings of the study, the following recommendations were made:

1. **Assess and Improve Training Quality, Prioritizing Employability Skills:**
    - Regularly evaluate the effectiveness of the training programs to ensure they meet industry standards.
    - Place a strong emphasis on equipping graduates with skills that make them highly employable in their chosen fields, such as communication, problem-solving, and IT skills.
    - Focus on instilling motivation, work ethics, and commitment in the work place.
2. **Provide Targeted Support to Female Graduates to Overcome Employment Obstacles:**
    - Identify and address specific challenges that female graduates face in entering the job market, which may include gender bias or unequal opportunities.
    - Offer tailored support programs to empower female graduates and help them overcome these obstacles.

3. **Foster an Entrepreneurial Mind-set and Encourage Self-Employment among graduates:**
    - Cultivate a culture of innovation and entrepreneurship within the college.
    - Encourage graduates to consider self-employment and start their own businesses by providing relevant training and resources.
4. **Deliver Comprehensive Career Guidance and Counselling Services:**
    - Provide trainees with access to a wide range of career guidance resources, including one-on-one counselling, aptitude testing, and workshops.
    - Help students make informed career decisions based on their strengths, interests, and market demand.
5. **Align Curricula with Labour Market Requirements, Emphasizing Practical Training:**
    - Ensure that the curriculum is up-to-date and directly relevant to the skills demanded by the job market.
    - Expand automotive technology program to include both light and heavy-duty vehicles, aligning with current industry demands.
    - Increase the practical, hands-on training to better prepare students for real-world work environments.
    - Diversify program offerings to cater to various interests and career aspirations.
    - Adjust curricula by consolidating related courses.
    - Explore reducing training periods without compromising quality.
6. **Consider termination of some programs:**
    - Programs such as intermediate apparel production, MISM, Textile technology and production, weaving and knitting operation program, and Automotive technology management program showed high unemployment rates. It is, therefore, very important to Conduct an in-depth analysis of these programs and terminate them if necessary.
7. **Offer Short-Term Training Programs in High-Demand Fields:**
    - Introduce specialized short-term programs in fields with high job demand.
    - Enable students to quickly acquire skills that are currently in demand, improving their employability.
    - Encourage trainees to explore short-term programs that enhance employability.
8. **Enhance Trainer Skills Through Ongoing Professional Development:**

- Support trainers in improving their teaching methodologies and subject expertise.
- Encourage continuous learning and professional growth among the college's trainers.

9. **Strengthen Partnerships Between Employers and Colleges for Placement and Training:**
    - Collaborate closely with local businesses and industries to create internships, apprenticeships, and placement opportunities for students.
    - Ensure that the training provided aligns with the needs of the job market.
10. **Ensure Well-Equipped Departments and Workshops:**
    - Invest in state-of-the-art equipment and resources to provide students with hands-on training.
    - Maintain well-equipped facilities in departments and workshops for effective practical learning.
11. **Regularly Conduct Labour Market Surveys and Tracer Studies:**
    - Continuously monitor changes in the job market and employment trends.
    - Track the career paths of graduates to evaluate the effectiveness of the college's programs.

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Annexes

I. Graduates' Survey Questionnaire for a tracer study on Graduates of Kombolcha Polytechnic College

This section presents two (2) documents that were utilised during the graduates Tracer study. The documents include:

- Graduate Tracer Studies Survey Introductory Letter
- Graduates Questionnaire

1.1. Graduate Tracer Studies Survey Introductory Letter

Dear Graduate,

As head of the research group, I kindly request your participation in a survey of Kombolcha Polytechnic College (KPC) graduates who completed their studies in 2020/21. We would like to find out what happened to you after you completed your studies at KPC. Did you find a job or are you still looking for a job, did your studies prepare you well for the workplace, and do you use the knowledge and skills you have learned during your studies? These are the major questions that you will be asked during the study.

The core objective of the survey is to improve the training in different departments and, more specifically, to guide the revision of the curricula. Your information will be treated in strict confidence. The results will be published in such a way that identification of individual respondents is excluded. Results of this survey will be published on the website of the KPC. Kindly complete the questionnaire and return it to our data collectors.

You will need about half an hour (30 minutes), depending on the kind of experiences you have undergone during recent years. We have developed a highly standardised questionnaire, which mainly asks you to mark (□) boxes which refer to relevant answers. With this approach we hope that we have made it easy for you to answer the questions. Please answer all questions applicable to you. In some cases, you will note that the questionnaire suggests you disregard some questions not applicable to you (e.g. Please go to Q).

The content of the questionnaire includes the following sections:

Section 1 - Demographic Information
Section 2 - Physical and Administrative Factors
Section 3 - Employment Status
Section 3.A - Employed Graduates
Section 3.B - Self-Employed Graduates
Section 3.C - Pursuing Further Training/Education
Section 3.D - Neither Employed Nor Self-Employed Graduates
Section 4 - Comments and Recommendations

If you have any questions or require further clarifications, please send them to the email address mentioned below.

Name: Dr. Genene Abebe
Phone: 09 11 46 15 26
E-mail: geneneabebetd@gmail.com

Thank you very much in advance for your kind support.

Yours sincerely,

Genene Abebe (PhD)

Team Leader of the project

1.2. The Survey Questionnaire

Section 1 – Demographic Information

1. Name: ----------

1.1 Gender: ( ) Male ( ) Female

1.2 Civil Status: ( ) Single ( ) Married

1.3 Age (years): ( ) Below 25 ( ) 25– 35 ( ) Above 35

1.4 Country of Residence: ---------- Wereda/Kebele: ----------

1.5. Do you have disability? (Circle your choice) A. Yes B. No----------

1.6. If your answer to 1.5 is yes, what is your disability? (Circle your choice)

A. Sight problem B. Hearing difficulty C. Mobility difficulty D. Other

1.7 Mobile Phone Number (*Optional, for future consultations*) ----------

1.8 Mobile Phone Number for Next of Kin (*Optional, for future consultations*) ----------

2. Your department (Occupation) during the training at KPC: *(Write the department)*

3. Your Qualification Level

A. ( ) Level 1
B. ( ) Level 2
C. ( ) Level 3
D. ( ) Level 4
E. ( ) Level 5

4. Which of the following additional Subjects/Units have you studied? (*Check all that apply*)

A. ( ) Communication skills *(speaking, writing, listening, reading)*
B. ( ) IT skills *(use of computers)*
C. ( ) Problem-solving skills *(being able to analyse a problem and find creative solutions)*
D. ( ) Work ethics *(such as, attendance at work, reliability, punctuality, team work)*
E. ( ) Entrepreneurship skills *(such as, market research, business planning, financial management, leading others)*
F. ( ) Customer service skills *(such as, personal presentation, being polite, understanding a customer's needs and being able to meet these)*
G. ( ) Health and Safety skills *(such as, safety and emergency awareness, emergency preparedness, working in a safe way)*
H. ( ) Foreign Languages (*such as, English, Frence, Italian, Spanish, Germany, Chinese*)
I. ( ) Other (please specify):

……

5. What applied to your situation in the first six months after leaving KPC? *(Multiple answers possible.)*

A. ( ) Employed
B. ( ) Self-employed with employees
C. ( ) Self-employed without employees
D. ( ) Pursuing further training/ education *(higher education, certificate, etc)*
E. ( ) Neither employed nor self-employed

Section 2: Physical and Administrative Factors

During your study time at KPC, to what extent were you satisfied with the Educational, Physical and Administrative factors? Please respond to each of the ten (10) factors on the five-point scale, as shown below:

Range	**1**	**2**	**3**	**4**	**5**
Verbalisation	**Not at all Satisfied**	**Somewhat not Satisfied**	**Neither Satisfied Nor Dissatisfied**	**Satisfied**	**Very Satisfied**

Physical and Administrative factors	1	2	3	4	5
Resource Centre with reference materials (such as industry journals, recommended text books)	( )	( )	( )	( )	( )
Relevant Course Curriculum	( )	( )	( )	( )	( )
External collaborations (such as, external assessors, guest lecturers, industry experts, exchange program)	( )	( )	( )	( )	( )
Practice Workshops/laboratories with tools and equipment (including Simulators)	( )	( )	( )	( )	( )
Industrial linkages (such as, Internship Programme and cooperative training with industry)	( )	( )	( )	( )	( )
IT facilities (such as, computers, online learning technologies)	( )	( )	( )	( )	( )
Audio-Visual Aids	( )	( )	( )	( )	( )
Management of the KPC	( )	( )	( )	( )	( )
Recreational facilities in the compound	( )	( )	( )	( )	( )
Careers advice and guidance (such as, help in finding a job)	( )	( )	( )	( )	( )

Section 3 - Employment Status

1. What is your present employment status?

( ) Employed *(go to 3.A)*
( ) Self-employed *(go to Section 3.B)*
( ) Neither employed nor self-employed *(go to Section 3.D)*
( ) Pursuing Further education/training *(go to Section 3.E)*

Sub-section 3.A – Employed Graduates

3.A1 Details of Employment

1. Is this your first job after leaving KPC?

( ) Yes (*go to Q 1.1*) ( ) No (*go to Q 1.2*)

1.1 How long did it take you to find your first job after leaving KPC?

( ) 0-3 Months
( ) 4-6 Months
( ) 7-9 Months
( ) 10-12 Months
( ) More than 12 Months

1.2 How long did it take you to find your present job *(Do not answer if this is your first job)*?

( ) 0-3 Months
( ) 4-6 Months
( ) 7-9 Months
( ) 10-12 Months
( ) More than 12 Months

2. What is the name of your current employer? ----------

2.1 Address of your employer here?

City ----------

Country ----------

Telephone ----------

3. In what industry sector are you employed in?

( ) Agriculture, forestry and fishing
( ) Mining and quarrying
( ) Manufacturing (textile Factory, Garment Factory, or other related)
( ) Electricity, gas, steam and air conditioning supply
( ) Water supply; sewerage, waste management and remedial activities
( ) Construction
( ) Automotive industry, repair of motor vehicles and motorcycles
( ) Transportation and storage *(such as, road, rail, water and air)*
( ) Accommodation and food service activities
( ) Information and communication
( ) Financial and insurance activities
( ) Real estate activities
( ) Professional, scientific and technical activities
( ) Administrative and support service activities
( ) Public administration and defence
( ) Education
( ) Human health and social work activities
( ) Arts, entertainment and recreation
( ) Other service activities
( ) Other, please specify: ----------

4. In what way did you find your job? (*Tick all that apply*)

( ) Advertisements of vacancies in newspapers/television/radio (*such as, daily papers, special periodicals*)
( ) Advertisements on the Internet *(e.g. government websites, company websites)*
( ) Internal advertisements of vacancies
( ) Direct applications
( ) Through Career Guidance and Counselling Service in the College
( ) Referral/ Endorsement by KPC
( ) Other contacts at the KPC
( ) Personal contacts (*Relatives, friends or/and colleagues*)
( ) Public work administration (*such as, public placement services, manpower allocation system*)
( ) Private employment agencies
( ) Industry Linkages during training *(e.g. apprenticeship, on the job training)*
( ) Social networks *(e.g. Facebook, LinkedIn)*
( ) Binding students by scholarships
( ) Other (please specify): ……

5. What is the status of your employment? *(Tick only one box)*

( ) Part-time ( ) Contractual ( ) Temporary ( ) Permanent

6. State number of working hours per week *(Tick only one box)*

( ) Less than 16 Hours ( ) 16 to 32 Hours ( ) 33 to 48 Hours ( ) More than 48 Hours

7. How much is your salary (per month) of your present job? *(Tick only one box)*

( ) Below Birr 5,000
( ) Birr 5,000 – Birr 9,999
( ) Birr 10,000 – Birr 14,999
( ) Birr 15,000 and above

8. Are you facing any challenges in relation to your present job?

( ) Yes *(go to Q 8.1)* ( ) No

8.1 What employment challenges are you facing? *(Check all that apply)*

Please specify----------

3.A2 Relationship Between Study and Employment *(Demonstration of Knowledge and Skills)*

1. Is your present work related to the area/field you studied at KPC?

( ) Yes (*go to Q 1.1*) ( ) No (*go to Q 1.2*)

1.1 If **YES**, based on your studies and your present work, to what extent are you satisfied with the Knowledge and Skills you acquired at KPC? Please respond to each of the ten factors on the five-point scale, as shown below.

Range	**1**	**2**	**3**	**4**	**5**
Verbalisation	**Not at all Satisfied**	**Somewhat not Satisfied**	**Neither Satisfied Nor Dissatisfied**	**Satisfied**	**Very Satisfied**

KNOWLEDGE AND SKILLS ASPECTS	1	2	3	4	5
Knowledge (*theoretical training related to my specialization and occupation*)	( )	( )	( )	( )	( )
Practical, job-related skills (*such as, use of tools, equipment and machinery, use of materials and parts, equipment maintenance*)	( )	( )	( )	( )	( )
Communication skills (*speaking, writing, listening, reading*)	( )	( )	( )	( )	( )
IT skills (*use of computers*)	( )	( )	( )	( )	( )
Problem-solving skills (*being able to analyse a problem and find creative solutions*)	( )	( )	( )	( )	( )
Work ethics (*such as, discipline, attendance at work, reliability, punctuality, team work*)	( )	( )	( )	( )	( )
Entrepreneurship skills (*such as, market research, business planning, financial management, leading others*)	( )	( )	( )	( )	( )
Customer service skills (*such as, personal presentation, being polite, understanding a customer ' s needs and being able to meet these*)	( )	( )	( )	( )	( )

Health and Safety skills *(such as, safety and emergency awareness, emergency preparedness, working in a safe way)*	( )	( )	( )	( )	( )
Performance (*such as, understanding and producing drawings, doing measurements at work, use of written instructions and working guides*)	( )	( )	( )	( )	( )

1.2 If **NO**, what are the reason/s? (*Tick all that apply*)

( ) I didn't find a job opportunity related to my course of study
( ) I found something not related but had better salary and benefits
( ) Personal reason(s)
( ) The workplace is close to where I live
( ) Others, please specify----------

3.A3 Job Satisfaction for Employed Graduates

1. To what extent are you satisfied with the following aspects of your present job? Please respond to each of the ten factors on the five-point scale, as shown below.

Range	**1**	**2**	**3**	**4**	**5**
Verbalisation	**Not at all Satisfied**	**Somewhat not Satisfied**	**Neither Satisfied Nor Dissatisfied**	**Satisfied**	**Very Satisfied**

Job Satisfaction	**1**	**2**	**3**	**4**	**5**
Interesting work tasks	( )	( )	( )	( )	( )
Being able to work with some independence	( )	( )	( )	( )	( )
Clear and regulated work tasks	( )	( )	( )	( )	( )
Possibilities for applying what you learned when studying	( )	( )	( )	( )	( )
Job security	( )	( )	( )	( )	( )
Social status and recognition	( )	( )	( )	( )	( )
Income and benefits	( )	( )	( )	( )	( )
Good social climate / work setting	( )	( )	( )	( )	( )

Good career advancement prospects	( )	( )	( )	( )	( )
Being able to coordinate/supervise work	( )	( )	( )	( )	( )

3.A4 – Further Training for Employed Graduates

1. Did you participate in further training since you graduated?
( ) Yes (*go to Q 1.1 & 1.2*) ( ) No (*go to Q 2*)

1.1 If **YES**, what type of further training did you participate in *(Tick only one box)*
( ) Further academic education *(higher education, for example degree)*
( ) Further vocational education/training *(such as, certificate, diploma, advanced diploma)*
( ) Further professional certification/license to practice

1.2 What courses did you study while pursuing further training?
( ) Course 1----------
( ) Course 2----------
( ) Course 3----------

2. If **NO**, why did you not pursue further training? (*Tick all that apply*)
( ) No relevant course available
( ) No need for further training
( ) No money to pay for training
( ) No time to attend training
( ) Others, please specify ----------

3. Would you like to pursue further training?
( ) Yes (*go to Q 3.1*) ( ) No (*go to Section 4*)

3.1 If **YES**, what further training do you need? please specify.....
.....

Sub-section 3.B – Self-Employed Graduates

3.B1 Details of Business Activities for Self-Employed Graduates

1. How long did it take you to start your present business *(Do not answer if this is your first business)*?
( ) 0-3 Months
( ) 4-6 Months
( ) 7-9 Months
( ) 10-12 Months
( ) More than 12 Months

2. In what industry sector are you engaging in?
( ) Agriculture, forestry and fishing
( ) Mining and quarrying
( ) Manufacturing (textile, garment or other related)
( ) Electricity, gas, steam and air conditioning supply
( ) Water supply; sewerage, waste management and remediation activities
( ) Construction
( ) Wholesale and retail trade, repair of motor vehicles and motorcycles
( ) Transportation and storage *(such as, road, rail, water and air)*
( ) Accommodation and food service activities
( ) Information and communication
( ) Financial and insurance activities
( ) Real estate activities
( ) Professional, scientific and technical activities
( ) Administrative and support service activities
( ) Public administration and defence; compulsory social security
( ) Education
( ) Human health and social work activities

( ) Arts, entertainment and recreation
( ) Other service activities
( ) Other, please specify: ----------

3.B2 Business Size and Financing for Self-Employed Graduates

1. Do you have employees?
( ) Yes, I am Self-employed with employees
( ) No, I am Self-employed without employees

2. Were you able to access financing for your business?
( ) Yes *(go to Q 2.1)* ( ) No *(go to Q 3)*

2.1 Which business financing options were you able to access *(Check all that apply)*
( ) Microfinance
( ) Bank loan
( ) Government sources
( ) Friends & Relatives
( ) Business Incubation
( ) Others, please specify----------

3. Are you facing any challenges in relation to your business?
( ) Yes *(go to Q 4.1)* ( ) No

3.1 What business challenges are you facing? *(Check all that apply)*
( ) Cashflow
( ) No qualified workers
( ) No Customers/clients
( ) Others, please specify----------

3.B3 Relationship Between Study and Self-Employment (Demonstration of Knowledge and Skills)

1. Is your present business related to the occupational area you studied at KPC? *(Tick only one box)*
( ) Yes (*go to Q 1.1*) ( ) No (*go to Q 1.2*)

If **YES**, based on your studies and your present business, to what extent are you satisfied with the Knowledge and Skills you acquired at KPC? Please respond to each of the ten factors on the five-point scale, as shown below.

Range	**1**	**2**	**3**	**4**	**5**
Verbalisation	**Not at all Satisfied**	**Somewhat not Satisfied**	**Neither Satisfied Nor Dissatisfied**	**Satisfied**	**Very Satisfied**

KNOWLEDGE AND SKILLS ASPECTS	1	2	3	4	5
Knowledge (*theoretical training related to my specialization and occupation*)	( )	( )	( )	( )	( )
Practical, job-related skills (*such as, use of tools, equipment and machinery, use of materials and parts, equipment maintenance*)	( )	( )	( )	( )	( )
Communication skills (*speaking, writing, listening, reading*)	( )	( )	( )	( )	( )

IT skills (*use of computers*)	( )	( )	( )	( )	( )
Problem-solving skills (*being able to analyse a problem and find creative solutions*)	( )	( )	( )	( )	( )
Work ethics (*such as, discipline, attendance at work, reliability, punctuality, team work*)	( )	( )	( )	( )	( )
Entrepreneurship skills (*such as, market research, business planning, financial management, leading others*)	( )	( )	( )	( )	( )
Customer service skills (*such as, personal presentation, being polite, understanding a customer ' s needs and being able to meet these*)	( )	( )	( )	( )	( )
Health and Safety skills *(such as, safety and emergency awareness, emergency preparedness, working in a safe way)*	( )	( )	( )	( )	( )
Performance (*such as, understanding and producing drawings, doing measurements at work, use of written instructions and working guides*)	( )	( )	( )	( )	( )

1.2 If **NO**, what are the reason/s?

( ) There was no business opportunity related to my course of study
( ) I found an unrelated business opportunity which had better returns
( ) Personal Reason(s)
( ) The business is close to where I live
( ) Others, please specify----------

3.B4 – Further Training for Self-Employed Graduates

1. Did you participate in further training since you graduated?

( ) Yes (*go to Q 1.1 & 1.2*) ( ) No (*go to Q 2*)

1.1 If **YES**, what type of further training did you participate in *(Tick only one box)*

( ) Further academic education in similar field*(higher education degree)*
( ) Further academic education in a different field*(Higher education degree)*
( ) Further vocational education/training in similar occupational area *(higher level or degree)*
( ) Further vocational education/training in a different occupational area *(Higher level or degree)*
( ) Further professional certification/license to practice (such as vocational certificate)

1.2 What courses related to your previous study did you take while pursing further training to help you in your employment?

( ) Course 1----------
( ) Course 2----------
( ) Course 3----------

2. If **NO**, why have you not pursued further training?

( ) No relevant course available
( ) No need for further training

( ) No money to pay for training
( ) No time to attend training
( ) Others, please specify ----------

3. Would you like to pursue further training?
( ) Yes (*go to Q 3.1*) ( ) No (*go to Section 4*)

3.1 If **YES**, what further training do you need? please specify .....
.....

Sub-section 3.C – Neither Employed Nor Self-Employed Graduates

3.C1 – Reasons for Not being employed Nor Self-Employed

1. If you are not employed, please tick (□) the reason (s) (*Tick all that apply*).
( ) Family concerns
( ) Opted not to look for a job
( ) Unsuccessful application
( ) Lost previous job
( ) No job opportunity in the desired field
( ) No professional certification
( ) Other reasons, please specify----------

3.C2 – Further Training for Graduates who are Neither Employed Nor Self-Employed

1. Did you participate in further training since you graduated?
( ) Yes (*go to Q 1.1*) ( ) No (*go to Q 2*)

1.1 If **YES**, what type of further training did you participate in (*Tick all that apply*)
( ) Further academic education in similar field*(higher education degree)*
( ) Further academic education in a different field*(Higher education degree)*
( ) Further vocational education/training in similar occupational area *(higher level or degree)*
( ) Further vocational education/training in a different occupational area *(Higher level or degree)*
( ) Further professional certification/license to practice (such as vocational certificate)

1.2 What courses related to your previous study did you take while pursing further training to help you in your employment?
( ) Course 1----------
( ) Course 2----------
( ) Course 3----------

2. If **NO**, why did you not pursue further training? (*Tick all that apply*)
( ) No relevant course available
( ) No need for further training
( ) No money to pay for training
( ) No time to attend training
( ) Others, please specify ----------

3. Would you like to pursue further training?
( ) Yes (*go to Q 3.1*) ( ) No (*go to Section 4*)

3.1 If **YES**, what further training do you need? please specify.....
.....

Sub-section 3.D Graduates Pursuing Further Training

1. If you are presently pursuing further training (*university*, *evening classes*, *short courses*), what type of further training have you participate in? *(Tick only one box)*
( ) Further academic education in similar field*(higher education degree)*
( ) Further academic education in a different field*(Higher education degree)*
( ) Further vocational education/training in similar occupational area *(higher level or degree)*
( ) Further vocational education/training in a different occupational area *(Higher level or degree)*
( ) Further professional certification/license to practice (such as vocational certificate)

2. What courses related to your previous study did you take while pursing further training to help you in your employment?
( ) Course 1----------
( ) Course 2----------
( ) Course 3----------

3. Would you like to attend any further training courses?

( ) Yes (*go to Q 3.1*) ( ) No (*go to Section 4*)

3.1 If **YES**, what further training do you need? please specify.....

.....

Section 4 - Comments and Recommendations

4.1. What important changes would you recommend for the Program of study you attended at the KPC? (*Please share your opinion on the areas that require improvement*.)

.....……

……

…….....

4.2. Would you recommend a prospective learner to pursue the department you attended at the KPC?

( ) Yes *(go to Q 3)* ( ) No *(go to Q 2.1)*

4.3. If **NO**, please specify .....

.....

4.4. Do you have any comments/suggestions regarding this survey?

( ) Yes *(go to Q 3.1)* ( ) No

4.5. If **YES**, please specify.....

.....

Thank you for your cooperation!

II. Trainers' Survey Questionnaire for a tracer study on Graduates of Kombolcha Polytechnic College

This section presents two (2) documents that were utilised during the Tracer study. The documents include:

- Trainers Tracer Studies Survey Introductory Letter
- Trainers Questionnaire

2.1. Trainers Tracer Studies Survey Introductory Letter

Dear KPC staff member,

As head of the research group, I kindly request your participation in a survey of Kombolcha Polytechnic College (KPC) graduates who completed their studies in 2022. We would like to find out what happened to them after they completed their studies at KPC. Did they find a job or are they still looking for a job, did their studies prepare them well for the workplace, and do they use the knowledge and skills they have learned during their studies? These are the major questions that you will be asked during the study.

The core objective of the survey is to improve the training in the departments and, more specifically, to guide the revision of the curricula. Your information will be treated in strict confidence. The results will be published in such a way that identification of individual respondents is excluded. Results of this survey will be published on the website of the KPC. Kindly complete the questionnaire and return it to our data collectors.

You will need about half an hour (30 minutes), depending on the kind of experiences you have undergone during recent years. We have developed a highly standardised questionnaire, which mainly asks you to mark (□) boxes which refer to relevant answers. With this approach we hope that we have made it easy for you to answer the questions. Please answer all questions applicable to you. In some cases, you will note that the questionnaire suggests you disregard some questions not applicable to you (e.g. Please go to Q).

The content of the questionnaire includes the following sections:

Section 1: Demographic Information
Section 2: Details of the program
Section 3: Physical and Administrative Factors
Section 4: Demonstration of Knowledge and Skills.
Section 5: Industrial Exchange Program
Section 6: Comments and Recommendations

If you have any questions or require further clarifications, please send them to the email address mentioned below.

Name: Dr. Genene Abebe
Phone: 09 11 46 15 26
E-mail: geneneabebetd@gmail.com

Thank you very much in advance for your kind support.

2.2. KPC Teaching Staff/Trainer Questionnaire

Section 5: Demographic Information

Which of the options below best describes your Role/Position at the KPC? *(Tick only one box)*

( ) Head of Department

( ) Deputy Head of Department

( ) Course Instructor

( ) Workshop Technician

What is your department? ----------

When were you first posted to (or employed at) KPC*? (Tick only one box)*

( ) Less than 3 years ( ) Between 3 and 5 years ( ) More than 5 years

Section 1: Details of the program

Is the program/department you belong to internationally accredited? *(such as, City & Guilds, ICM, Edexel,*)

( ) Yes (*go to Q 1.1*) ( ) No (*go to Q 2*)

1.1 If YES, please list up to three International Awarding Boards

( ) Awarding Board 1----------

( ) Awarding Board 2----------

( ) Awarding Board 3----------

2. Which of the options below best describes the balance/ratio between Practical competences and theoretical Knowledge requirements for the training program? *(Tick only one box)*

( ) 10 percent Practical, 90 percent Theory

( ) 20 percent Practical, 80 percent Theory

( ) 30 percent Practical, 70 percent Theory

( ) 40 percent Practical, 60 percent Theory

( ) 50 percent Practical, 50 percent Theory

( ) 60 percent Practical, 40 percent Theory

( ) 70 percent Practical, 30 percent Theory

( ) Other (Please specify)…….. ……

3. Is the program curriculum periodically reviewed?

( ) Yes (*go to Q 3.1*) ( ) No (*go to Q 3.3*)

3.1 How often is the program curricula reviewed? *(Tick only one box)*

( ) Less than 24 Months

( ) 25 Months to 48 Months

( ) 49 Months to 60 Months

( ) More than 60 Months

3.2 How is the program curricula reviewed? *(Tick all that apply.)*

( ) Directly checking with employers

( ) Using occupational standards

( ) Other (please specify): ……

3.3 If NO, why not?

( ) Please specify…….. ……

Section 2: Physical and Administrative Factors

While you teach at KPC, to what extent are you satisfied with the ten (10) Physical and Administrative factors? Please respond to each of the ten factors on the five-point scale, as shown below.

Range	**1**	**2**	**3**	**4**	**5**
Verbalisation	**Not at all Satisfied**	**Somewhat not Satisfied**	**Neither Satisfied Nor Dissatisfied**	**Satisfied**	**Very Satisfied**

Physical and Administrative factors	1	2	3	4	5

Resource Centre with reference materials (such as, industry journals, recommended text books)	( )	( )	( )	( )	( )
Relevant Course Curriculum	( )	( )	( )	( )	( )
External collaborations (such as, external assessors, guest lecturers, industry experts, exchange program)	( )	( )	( )	( )	( )
Practice Workshops/laboratories with tools and equipment (including Simulators)	( )	( )	( )	( )	( )
Industrial linkages (such as, Internship Programme and industrial visits for students)	( )	( )	( )	( )	( )
IT facilities (such as, computers, online learning technologies)	( )	( )	( )	( )	( )
Audio-Visual Aids	( )	( )	( )	( )	( )
Management of the KPC	( )	( )	( )	( )	( )
Recreational facilities	( )	( )	( )	( )	( )
Careers advice and guidance (such as, help in finding a job)	( )	( )	( )	( )	( )

Section 3: Demonstration of Knowledge and Skills

If you trained graduates, to what extent are you satisfied with their demonstration of the following Knowledge and Skills aspects? Please respond to each of the ten factors on the five-point scale, as shown below.

Range	**1**	**2**	**3**	**4**	**5**
Verbalisation	**Not at all Satisfied**	**Somewhat not Satisfied**	**Neither Satisfied Nor Dissatisfied**	**Satisfied**	**Very Satisfied**

KNOWLEDGE AND SKILLS ASPECTS	1	2	3	4	5
Knowledge (*theoretical training related to my specialization and occupation*)	( )	( )	( )	( )	( )
Practical, job-related skills (*such as, use of tools, equipment and machinery, use of materials and parts, equipment maintenance*)	( )	( )	( )	( )	( )

Communication skills (*speaking, writing, listening, reading*)	( )	( )	( )	( )	( )
IT skills (*use of computers*)	( )	( )	( )	( )	( )
Problem-solving skills (*being able to analyse a problem and find creative solutions*)	( )	( )	( )	( )	( )
Work ethics (*such as, discipline, attendance at work, reliability, punctuality, team work*)	( )	( )	( )	( )	( )
Entrepreneurship skills (*such as, market research, business planning, financial management, leading others*)	( )	( )	( )	( )	( )
Customer service skills (*such as, personal presentation, being polite, understanding a customer ' s needs and being able to meet these*)	( )	( )	( )	( )	( )
Health and Safety skills *(such as, safety and emergency awareness, emergency preparedness, working in a safe way)*	( )	( )	( )	( )	( )
Performance (*such as, understanding and producing drawings, doing measurements at work, use of written instructions and working guides*)	( )	( )	( )	( )	( )

Section 4: Industrial Exchange Program

Have you participated in an **Industrial Exchange** program? *(Tick only one)*

( ) Yes *(go to Q 1.2)* ( ) No *(go to Q 3)*

1.2. If Yes, when was the last time that you participated in an **Industrial Exchange** program? *(Tick only one)*

( ) 0 - 6 Months
( ) 7 - 12 Months
( ) 13 - 18 Months
( ) 19 - 24 Months
( ) More than 24 Months

2. Did you experience any challenge while participating in the **Industrial Exchange** program**?**

( ) Yes *(go to Q 2.1)* ( ) No *(go to Q 3)*

2.1 If **YES**, please specify.....
.....

3. If you have not participated in an **Industrial Exchange** program, what are the decisive reasons for this?
Please specify: .....
.....

Section 6: Comments and Recommendations

1. What important changes would you recommend for the department/ program of study that you are part at the Kombolcha Polytechnic College? (*Please share your opinion on the areas that require improvement.*)

( ) Yes *(go to Q 1.1)* ( ) No *(go to Q 2)*

1.1 If **YES**, please specify.....
.....

3. Would you recommend a prospective learner to pursue the program at the KPC?

( ) Yes *(go to Q 3)* ( ) No *(go to Q 2.1)*

2.1 If **NO**, please specify .....
.....
Do you have any comments/suggestions regarding this survey?
( ) Yes *(go to Q 3.1)* ( ) No
3.1 If **YES**, please specify.....
.....

Thank you very much for completing the questionnaire!

III. Employers' Survey Questionnaire for a tracer study on the Graduates of Kombolcha Polytechnic College

This section presents two (2) documents that were utilised during the Tracer study. The documents include:

- KPC Employers Tracer Studies Survey Introductory Letter
- KPC Employers Survey Questionnaire

3.1. KPC Employer Tracer Studies Survey Introductory Letter

Dear Employer,

As head of the research group, I kindly request your participation in a survey of Kombolcha Polytechnic College (KPC) graduates who completed their studies in 2022. We would like to find out what happened to you after you completed your studies at KPC. Did they find a job or are they still looking for a job, did their studies prepare them well for the workplace, and do they use the knowledge and skills they have learned during their studies? These are the major questions that you will be asked during the study.

The core objective of the survey is to improve the training in departments and, more specifically, to guide the revision of the curricula. Your information will be treated in strict confidence. The results will be published in such a way that identification of individual respondents is excluded. Results of this survey will be published on the website of the KPC. Kindly complete the questionnaire and return it to our data collectors.

You will need about half an hour (30 minutes), depending on the kind of experiences you have undergone during recent years. We have developed a highly standardised questionnaire, which mainly asks you to mark (□) boxes which refer to relevant answers. With this approach we hope that we have made it easy for you to answer the questions. Please answer all questions applicable to you. In some cases, you will note that the questionnaire suggests you disregard some questions not applicable to you (e.g. Please go to Q).

The content of the questionnaire includes the following sections:

Section 1 - Identification of the Company/Organization
Section 2 - Demographic Information
Section 3 – Employment of the Program Graduates
Section 4 - Participation in cooperative training
Section 5 – Industrial Exchange for training Staff
Section 6 – Ease of Finding Employees with Needed Skills
Section 7 - Comments and Recommendations

If you have any questions or require further clarifications, please send them to the email address mentioned below.

Name: Dr. Genene Abebe
Phone: 09 11 46 15 26
E-mail: geneneabebetd@gmail.com

Thank you very much in advance for your kind support.

Yours sincerely,
Genene Abebe (PhD)
Team Leader of the project

3.2. Questionnaire for Employers of KPC Graduates

Section 1 - Identification of the Company/Organization

1. Enterprise name ----------
1.1 City ----------
1.2 Country ----------
1.3 Telephone ----------

In what industry sector are you operating?

( ) Agriculture, forestry and fishing
( ) Mining and quarrying
( ) Manufacturing (such as garment, textile or related)
( ) Electricity, gas, steam and air conditioning supply
( ) Water supply, sewerage, waste management and remedia1n activities
( ) Construction

( ) Automotive industry, repair of motor vehicles and motorcycles
( ) Transportation and storage
( ) Accommodation and food service activities
( ) Information and communication
( ) Financial and insurance activities
( ) Real estate activities
( ) Professional, scientific and technical activities
( ) Administrative and support service activities
( ) Public administration and defense
( ) Education
( ) Human health and social work activities
( ) Arts, entertainment and recreation
( ) Other service activities
( ) Other, please specify: ----------

3. What advertising media does the company/organization use to recruit employees? *(Tick all that apply.)*

( ) Advertisements of vacancies in newspapers/television/radio (*such as, daily papers, special periodicals*)
( ) Advertisements on the Internet *(e.g. government websites, company websites)*
( ) Internal advertisements of vacancies
( ) Direct applications by graduates
( ) Career guidance and counselling office at the KPC
( ) Referral/ Endorsement by KPC
( ) Other contacts at the KPC
( ) Personal contacts (*Relatives, friends or/and colleagues*)
( ) Public work administration (*such as, public placement services, manpower allocation system*)
( ) Private employment agencies
( ) Industry Linkages during training *(e.g. apprenticeship, on the job training)*
( ) Social networks *(e.g. Facebook, LinkedIn)*
( ) Binding students by scholarships
( ) Other (please specify): …….....

Section 2: Demographic Information

1. Which of the options below best describes your Role/Position in the Company/Organization?

( ) Director or Deputy Director
( ) Human Resource Manager or Deputy Human Resource Manager
( ) Head of Department or Deputy Head of Department
( ) Supervisor

Section 3 - Employment of KPC Graduates

1. Have you employed graduates from the KPC? *(Include Permanent and Casual employees)*

( ) Yes (*go to Q 2*) ( ) No (*go to Q 7*)

2. How many male and/or female graduates have you employed from KPC? *(Include Permanent and Casual employees)*

( ) ..... Male …….., Female…….....

3. How important in general are the following aspects for the recruitment of Graduates? Please respond to each of the ten factors on the five-point scale, as shown below**.**

Range	**1**	**2**	**3**	**4**	**5**
Verbalisation	**Not at all Satisfied**	**Somewhat not Satisfied**	**Neither Satisfied Nor Dissatisfied**	**Satisfied**	**Very Satisfied**

Recruitment of Graduates	**1**	**2**	**3**	**4**	**5**

Field of study and specialization	( )	( )	( )	( )	( )
Grades of examinations at the college	( )	( )	( )	( )	( )
Practical experience acquired during course of study	( )	( )	( )	( )	( )
Reputation of the college	( )	( )	( )	( )	( )
Recommendations/references from third persons	( )	( )	( )	( )	( )
Results of recruitments tests	( )	( )	( )	( )	( )
Knowledge of foreign language	( )	( )	( )	( )	( )
Personal presentation	( )	( )	( )	( )	( )
Candidate's own world view	( )	( )	( )	( )	( )
Ability to work in multiracial environment	( )	( )	( )	( )	( )

4. If you employ graduates from KPC, to what extent are you satisfied with their demonstration of the following Knowledge and Skills aspects? Please respond to each of the ten factors on the five-point scale, as shown below.

Range	**1**	**2**	**3**	**4**	**5**
Verbalisation	**Not at all Satisfied**	**Somewhat not Satisfied**	**Neither Satisfied Nor Dissatisfied**	**Satisfied**	**Very Satisfied**

KNOWLEDGE AND SKILLS ASPECTS	1	2	3	4	5
Knowledge (*theoretical training related to my specialization and occupation*)	( )	( )	( )	( )	( )
Practical, job-related skills (*such as, use of tools, equipment and machinery, use of materials and parts, equipment maintenance*)	( )	( )	( )	( )	( )
Communication skills (*speaking, writing, listening, reading*)	( )	( )	( )	( )	( )

IT skills (*use of computers*)	( )	( )	( )	( )	( )
Problem-solving skills (*being able to analyse a problem and find creative solutions*)	( )	( )	( )	( )	( )
Work ethics (*such as, discipline, attendance at work, reliability, punctuality, team work*)	( )	( )	( )	( )	( )
Entrepreneurship skills (*such as, market research, business planning, financial management, leading others*)	( )	( )	( )	( )	( )
Customer service skills (*such as, personal presentation, being polite, understanding a customer ' s needs and being able to meet these*)	( )	( )	( )	( )	( )
Health and Safety skills *(such as, safety and emergency awareness, emergency preparedness, working in a safe way)*	( )	( )	( )	( )	( )
Performance (*such as, understanding and producing drawings, doing measurements at work, use of written instructions and working guides*)	( )	( )	( )	( )	( )

5. Do Graduates from KPC need additional training to do their work well in your company? *(Tick only one box)*
   ( ) Normally they are fully prepared to do the work well
   ( ) They need only an introductory training
   ( ) They need to learn some additional skills (Please specify----------
---
   ( ) They need serious skills upgrading to start working
   ( ) They need completely new training

6. Are you experiencing any challenge(s) with the KPC graduates you have employed**?**
   ( ) Yes *(go to Q 6.1)* ( ) No (*go to Section 3*)

6.1 If **YES**, please specify.....
.....

7. If you do not employ any graduates from KPC, what are the decisive reasons for this?
   Please specify: .....

Section 4 - Engagement in cooperative training

1. Do you participate in cooperative training program ?
( ) Yes *(go to Q 2)* ( ) No *(go to Section 4)*
2. Are the trainees from KPC undergoing cooperative training in your company/organization ?
   ( ) Yes ( ) No
3. How many male and/or female trainees are undergoing cooperative training in your company?
   ( ) ..... Male …….., Female…….....
4. Are you experiencing any challenge(s) with the trainees enrolled in cooperative training program**?**
   ( ) Yes *(go to Q 6.1)* ( ) No (*go to Section 4*)

4.1 If **YES**, please specify.....
.....

5. If your cooperative training program does not include any trainees from KPC, what are the decisive reasons for this?

Please specify: .....

.....

Section 5: Industrial Exchange Program for KPC Staff

1. Do you have an **Industrial Exchange** program with trainers from KPC?

( ) Yes *(go to Q 2)* ( ) No *(go to Section 4)*

2. How many male and/or female Staff are participating in the Industrial Exchange program?

( ) ..... Male ……., Female…….....

3. Are you experiencing any challenge with the Staff participating in your Industrial Exchange program**?**

( ) Yes *(go to Q 3.1)* ( ) No (*go to Section 4*)

3.1 If **YES**, please specify.....

.....

4. If your Industrial Exchange program does not include Staff from KPC, what are the decisive reasons for this?

Please specify: .....

.....

Section6 – Ease of Finding Employees with Needed Skills

1. Is your company/organization experiencing problems finding employees with the skills that you need?

( ) Yes *(go to Q 2)* ( ) No (*go to Section 6*)

2. In which occupations does your company/organization commonly experience skills shortages?

( ) Occupation 1----------

( ) Occupation 2----------

( ) Occupation 3----------

( ) Occupation 4----------

( ) Occupation 5----------

Section 7: Comments and Recommendations

1. What important changes would you recommend for the program of study at the KPC? (*Please share your opinion on the areas that require improvement.*)

Specify.....

.....

2. Would you recommend a prospective learner to pursue the Program at the KPC?

( ) Yes *(go to Q 3)* ( ) No *(go to Q 2.1)*

2.1 If **NO**, please specify .....

.....

4. Do you have any comments/suggestions regarding this survey?

( ) Yes *(go to Q 3.1)* ( ) No

3.1 If **YES**, please specify.....

.....

Thank you very much for completing this questionnaire.

IV. Kombolcha Polytechnic College Employer Respondents to Graduates Survey Questionnaire

No	Name of Firm	Address	Tell.	Remark
1.	Saint Agriculture Bureau	Saint	0334420020	
2.	Debub Wollo Kalu Agriculture Bureau	Harbu	—	
3.	Debub Wollo Tenta Ajibar Agriculture Bureau	Tenta	—	
4.	Wogdi Agriculture Bureau	Wogdi woreda	—	
5.	Debub Wollo Legambu Agriculture Bureau	Akesta	—	
6.	Mekane Selam ketema Agriculture Bureau	Mekane Selam	—	
7.	Muluwongel Atsede Hitsanat School	Kombolcha	0335510508	
8.	Family Atsede Hitsanat School	Kombolcha	0335510508	
9.	Yegof Mekakelegna Clinic	Kombolcha	0338518800	
10.	Ermi Photo Bet	Kombolcha	0930286470	
11.	Yosef Kahsaye Private Contractor	Kombolcha	0911414273	
12.	Yekeretit Mamrecha Fabrika	Kombolcha	0948856269	
13.	Mare PP Madaberia Keretit Mamirecha Fabrika	Kombolcha	0925033694	
14.	ET Wood	Kombolcha	0921038304	
15.	IPDC	Kombolcha	0928495542	
16.	Ethiopian Electric Utitlity	Kombolcha	0933466801	
17.	Ethiopian Electric Utitlity	Tenta	0913793635	
18.	Amare Biretabiret	Kombolcha	+251713142125	
19.	Amar PP	Kombolcha	0914269484	
20.	Wollo University Kombolcha Campus	Kombolcha	0968004026	
21.	Kombolcha Polytechnic College	Kombolcha	0965882821	
22.	Girum Abdu (Textile & Garment)	Kombolcha	0936739661/0919468754	

23.	Netsane Amsalu kelemework(Textile & Garment)	Kombolcha	0939395922	
24.	Seyfu Mekonnen Garage	Kombolcha	0914712570	
25.	Amhara Water Works Construction Organization	Kombolcha	0335513569/0335510230/0082	
26.	Alimehamed Garage	Kombolcha	0930072325	
27.	Tikur Abay Transport	Kombolcha	0335510630/0335510631/0923353729	
28.	Amhara Biretabiret	Kombolcha	0335514731	
29.	Amare Wosen PP Bag Factory	Kombolcha	0335511198	
30.	Amhara Biretabiret Technology Kombolcha Ersha Mesariawoch	Kombolcha	03355114731	
31.	BGI Ethiopia Beer Factory	Kombolcha	0335510283	
32.	Almi Industrial Engneering	Kombolcha	0909661575	
33.	BGI Ethiopia	Kombolcha	__	
34.	Kmobolcha Textile	Kombolcha	0777717686	
35.	Ethiopian Electric Utility	Kombolcha	0920491838	
36.	Wollo University	Kombolcha	0912331745	
37.	Amare Biretabiret	Kombolcha	0921143539	
38.				