KENYA COAST NATIONAL POLYTECHNIC

RESEARCH, INNOVATION AND ALUMNI COMMITEE

TRACER STUDY REPORT FOR FY 2022/2023

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EXECUTIVE SUMMARY

Kenya Coast National Polytechnic (KCNP) formally Mombasa Technical Training Institute (Mombasa TTI) is located in the coastal town of Mombasa. It was established in 1950 as a Technical High School. Upon the introduction of the 8-4-4 system of education, it was elevated to a middle level technical college in 1984 to provide technical training for the middle level man power for both the private and public sectors of the economy.

Kenya Coast National Polytechnic is managed by Council appointed by the Cabinet Secretary for Education to represent the community, industrialists, professionals and various governmental departments. The Chief Principal serves as the Secretary to the Council. The Institution operates under the TVET Act No. 9 of 2013.

KCNP hierarchy of operations comprises ten academic departments (Applied Sciences, Business and Entrepreneurship Studies, Building and Civil Engineering, Computing and Informatics, Electrical and Electronic Engineering, Fashion Design and Cosmetology, Hospitality and Institutional Management, Mechanical and Automotive Engineering, Medical Sciences and Liberal Studies) and six non-academic departments namely Administration, Library and Information, Procurement and Supplies, Accounts and Audit, Dean of Students (student affairs) and Registry. The polytechnic has also established service coordination offices like ILO, Performance and Contracting, Research and Innovation, Career guidance and placement, short courses and linkages, sports office and other support offices. The institution manages a restaurant that serves students, staff and outside customers with meals and refreshment at a fee. The academic departments are headed by Heads of Department who coordinate affairs of the departments.

KCNP is ISO 9001:2015 quality management system certified for effective operation and aligns with TVETA Quality Assurance training standards. The system is an essential management tool in implementing better process control and flow of activities. As an element of performance contracting which was introduced primarily for improving efficiency and effectiveness in public institutions, ISO has contributed to provision and satisfaction of customers. KCNP emphasizes the importance of integrity and merit in their services.

The World Bank through GoK is funding East Africa Skills for Transformation and Regional Integration Project (EASTRIP). This is a 5-year transformational project conceptualized to transform the growing youth bulge into a growth dividend through the provision market-driven skills and knowledge that promote employment and entrepreneurship. The Project is being implemented in three East African Countries, Kenya, Tanzania and Ethiopia.

The project is pursuing two broad intended results to complement the Kenya Government efforts in repackaging TVET. EASTRIP aims to increase access, improve quality of technical and vocational education and facilitate regional integration. Over the last

financial year, KCNP through the project benefited from a staff exchange program, conducted training and certification to students from South Sudan, Tanzania and Uganda who are also forming the integral part of respondents in this survey. The project is implemented through three key project development objectives (PDOs).

The Tracer Study Team is implementing the PDO 2 of the project that aims at improving quality and relevance of TVET programs through annual tracer study for KCNP graduates and building capacity of trainers for all the departments in the polytechnic to continue conducting tracer study annually.

The 5 cycles of the tracer study reports have had far-reaching impact on curriculum implementation over the last 5 years of the project implementation. In this financial year, 2022/2023 the study emphasized on students who completed studies between **July 2021** and **November 2022** in the **EASTRIP Priority Programs**.

Under PDO 2, the project aimed at improving quality and relevance of TVET programs through annual tracer study for KCNP graduates and built capacity of trainers for all other departments in the polytechnic to continue conducting tracer study. In the FY 2022/2023, the **overall employability rate was 81.30%**, N = 121, broken down as either employed under formal employment terms which accounted for 31.08% of the graduates, self-employed graduates translating to 31.61% of the graduates or unemployed but pursuing further studies comprised 18.30% of the graduates. Graduates pursuing further studies are considered employed by World Bank classification of employment statuses.

The objectives of this graduate survey were to;

 i. Assess attitude of the KCNP graduates regarding job quality, relevance, and effectiveness of their training in securing employment;

 ii. Examine the attitude of the KCNP graduates regarding business quality, relevance, and effectiveness of their training in supporting self-employment.

 iii. Assess the adequacy of KCNP training to enable employability in the job market;

 iv. Develop and update KCNP graduate database for future tracer studies.

The population of the tracer studies included KCNP graduates and KCNP program staff. A total of one hundred and forty-eight (148) KCNP graduates and fifteen (20) KCNP program staff participated in the survey. According to the target population of 330, the minimum sample size with a 5% margin error and a confidence level of 99% was found to be exhaustively representative with 168 respondents.

Summary of Findings

Graduate Findings (148 Respondents)

The objective of the study was to track the effectiveness of the KCNP training in equipping her graduates with the necessary skills to successfully gain employment, self-employment, pursue further academic or vocational training, to assess adequacy of the curriculum implementation and develop and update KCNP graduate database. To do so, the study traced the whereabouts of KCNP graduates and assessed how successful they had been able to integrate into the labour market after completing their learning program, between 2021 and 2022. The study was conducted between December 2022 and May 2023. The study broadly covered graduate responses, curriculum implementers who included trainers and management team and industry responses to provide information on readiness of the TVET graduates they employ.

The objectives of this graduate survey were to;
   i. Assess attitude of the KCNP graduates regarding job quality, relevance, and effectiveness of their training in securing employment;
   ii. Examine the attitude of the KCNP graduates regarding business quality, relevance, and effectiveness of their training in supporting self-employment.
   iii. Assess the adequacy of KCNP training to enable employability in the job market;
   iv. Develop and update KCNP graduate database for future tracer studies.

The key findings of this survey are presented as per the main study objectives as detailed below:

Methodological Issues

During the implementation of the study, a number of shortcomings were experienced by the tracer study team as follows;

   i. Inconsistent and partial data on the lists of graduates were retrieved in the ABN MIS System;
   ii. No Pre-field work awareness and sensitization meetings between field research staff and relevant stakeholders was carried out due to the time limitation;
   iii. Low percentage of graduates willing to participate in the survey;
   iv. Low Study Completion and Pass Rates among graduates;
   v. Remoteness and Unreliability of Mobile Network in some areas;
   vi. Lack of commitment by the respondents;
   vii. Document approval and turnaround time took too long;
   viii. Multiplicity of tasks among the program staff.

Actions to remedy methodological challenges

i. The survey team employed multiple approaches like comparison with graduation contacts and attachment records were employed. ABN MIS should on continuous basis update their databases;

ii. An introductory letter to familiarize the study was provided on the questionnaire to sensitize the respondents in cases where there were no pre-visits;

iii. The field data enumerators made reminder calls and texts to ensure response in cases where there were issues with submission of the questionnaires. Where necessary they made walk-ins or guided the respondents on phone;

iv. Reasons for low study completion and pass rates were compiled and presented as areas for improvement by the management;

v. Future studies should ease the workload on the tracer study team to enable them make maximum concentration on the assignment. Delays on data collection affected the timeline of this assignment.

vi. Polytechnic should be swift in giving necessary approvals to enable efficient processes.

Approach and Design

The overall sampling strategy was to generate large and representative samples for all the groups. Thus, a scientific method based on statistical techniques was applied involving selection of a random sample of the respondents. The Survey adopted a mixed design methodology that entailed use of structured questionnaire triangulated per category. The survey questionnaire was transcribed into electronic format to enable respondents with reliable internet to fill up their responses electronically and submit back.

Graduate Demographic Data

i. The sample size aimed to be representative of graduates and their department staff with a target sample of approximately 363 graduates. The achieved sample was 167, which accounted for a 50.61% *(n = 167) response rate. The response rate was sufficient to gather the feedback of the respondents and make adequate recommendations.

ii. The results showed that 48.63% of the respondents were female while 49.32% of the respondents were male. Out of this 21.28 % (N=30) graduated with Diploma, 59.57 % (N=84) graduated with Craft qualification while 19.15% (N=27) graduated with Artisan Certificates. Majority of the respondents who were between 25 – 35 years accounting for 60.27%, followed by those below 25 years of age at 38.36%.

iii.   The results of this survey categorized by areas of specialization showed that 17 respondents studied Shipping and Logistics which represented 12% of the total respondents, 77 respondents or 54% studied Cruise Service and Management and 36 respondents that represented 25% of the total respondents studied marine engineering. In addition, the survey reported that 12 respondents from other program areas not related to EASTRIP priority programs also submitted responses accounting for 9% of the total respondents.

Study Conditions, Provisions and Experiences

Despite the findings of the study, this survey needed to acquire deeper understandings about the factors affecting success and course completion rates amongst the EASTRIP priority programs in order to bring out the aspects of training quality, relevance and adequacy. The most commonly used indicators for measuring graduate relevance and quality are completion rates and time to completion, drop-out rates, especially after the first year, and graduation rates as well as destinations and employment rates of graduates in specific fields of study.

i.   **In terms of duration of study completion**, 39% of the respondents completed their studies in the last 1 – 6 months, 24% completed their studies in the last 7 – 12 months, 23% completed their studies in the last 13 – 24 months and 11% completed their studies over 24 months ago. At the same time, 3% had dropped out of studies. "*One respondent said that her parents separated, they both left her with her young sister. She had to start hustling to cater for their needs*".

ii.   **Based on reasons for the choice of career**, the survey report further indicated that 82.50% of the respondents who pursued the EASTRIP priority programs were driven by the strong passion for the programs, 28.70% were inspired by role models and opportunity for employment abroad respectively. 19.60% considered prospects for immediate employment as a motivating factor while 18.90% considered prospects for career advancement. In addition, 7.00% pursed the programs since they were placed by the placing agency KUCCPS. Other factors that influenced choice of the programs included, 13.3% due to availability of the program at KCNP, 8.4% due to influence by parents or relatives and good grades in High School, 4.9%.

iii.   **Graduate Professional Registration**, The survey results showed that 70.92% of the graduates had not pursued additional training to obtain professional licenses while only 29.08% have pursued professional trainings in their areas of specialization with professional bodies.

Employment outcomes and occupation of KCNP graduates

i. The **overall employability rate was 81.30%**, N = 121, broken down as either employed under formal employment terms which accounted for 31.08% of the graduates, self-employed graduates translating to 31.61% of the graduates or unemployed but pursuing further studies comprised 18.30% of the graduates. Graduates pursuing further studies are considered employed by World Bank classification of employment statuses.

ii. The "situation of the traced KCNP graduates who undertook the EASTRIP priority programs in the first six months after graduating" from the polytechnic revealed that the *Overall employability rate six months after completion of study was 71.76%* broken down as follows; 28.67 per cent were "*Employed*" within the first six months after graduating. 28.61 per cent were "*Self-Employed*". 14.41 per cent were pursuing "*Further Academic Education*" in vocational centres, undertaking sea time and pursuing degree programs. Up to about 3 per cent pursued "*internship*" programs.

iii. **Female employability rates;** the *proportion of female graduates employed 6 months after study completion in the current study was 72.99%* distributed as 42.25% in formal employment, 20.31% of the graduates had started their own means of self-employment and 10.43% of the female graduates were pursuing further education. This resulted to an overall female employability rate of 72.99% six months of study completion.

iv. **Based on participation in Further Education that results to higher qualification;** the results of the survey revealed that 18.61 percent (26 graduates) had *"Participated in Further Training".* 78.59 percent (113 graduates) *"did not participated in further training".* 2.8 percent (4 graduates) "*did not disclosed if they had (or had not) participated in further training"* after graduation. The 26 graduates who participated in further training were broken down as follows; 1 graduate participated in *"Further academic education".* 8 graduates participated in *"Further vocational education/training".* In addition 11 graduates participated in *"Further professional certification/license to practice".* While the remaining 3 joined Kenya School of TVET for pedagogy training.

v. **The nature wage employment the graduates secured;** the results of the study indicated that up to 8.10% graduates were employed on casual terms, 11.78% were employed on contract and 4.20% were employed on part-time. In addition, 7.00% of the graduates were employed on permanent terms while 31.61% were engaged on self-employment.

vi. **In terms of employment classification by economic sectors;** the results suggested that 68.33% of the graduates were employed in the private sector, being

the biggest employer. Under public sector employment, only 5.00% of the graduates secured opportunity while 1.67% were employed under SAGAs otherwise known as the Parastatals. Proportion of the graduates in self-employment accounted for 16.67% while other unspecified sectors accounted for 8.33% of the graduate responses.

vii. **On transition rates by level of qualification;** Craft graduates had the highest level of employability at 17.48% followed by artisan certificate graduates with 10.49% and finally diploma with 9.09%. There was a clear negative relationship between the incidence of unemployment and the level of one's education, with craft certificate graduates being the most employed. The attractiveness of Craft Certificate holders by virtue of the majority of them being employed on a fulltime basis could indicate that the learning outcomes at this level are what are required by employers. Diploma graduates stay longer at in training to acquire their diploma certificates, which could have further refined their level of skill and competency to the desire of employers.

viii. **Considerations in making Career choice;** Apart from the already discussed results with regard to graduate employability rates, 85.80% of the graduates considered as a top priority the job security, salaries and benefits as the driving factors for the jobs they applied for. Further statements that provide a good insight into the quality and nature of the employment of KCNP graduates: 34.7% of the graduates who applied for jobs because it related to their skill areas; 28.6% of the graduates applied for the jobs because it had relationship with their program areas of study; 16.3% of the graduates wanted a career challenge; 10.2% considered proximity to their residence.

ix. **In terms of Wage Employment of KCNP graduates by industry sector;** for purposes of this survey, the graduates were employed in 11 sectors. The survey findings revealed that accommodation and food services employed 27.60%, (n=16) graduates. 8.60%, (n=5) were employed in the Electricity, Steam, Gas and Air-conditioning sector. 12.10% (n=7) of the graduates were employed in transportation and storage sector. Manufacturing, Mining and Quarrying Sectors employed 5.10%, (n=3) graduates, while human health and social work activities employed 6.90% (n=4). 44.80% of the graduates are employed in other economic and service sectors.

Occupational mobility of the KCNP graduates, the means by which graduates acquired employment and income of the graduates

i. **Time lag between graduation and securing employment;** the lag time between graduation and employment, can also be informative with regard to the easiness and/or difficulties by graduates in finding employment after graduation. Graduates

were asked to state the length of time they have been looking for jobs after graduation. The results indicated that 74.14% of the graduates took at most 6 months to get their first employment while 18.97% of the graduates took between 6-12 months. Overall, 93.11% of the graduates got their first job within 12 months after graduation. This further supported by that only 6.90% of graduates identified the length of time it takes to get a job as the main difficulty they experienced when job hunting. This could indicate that where jobs are available, the lag time between graduation and employment could be at most a year.

ii.   **Methods used and easiness of securing employment;** The methods used by companies for recruiting and looking for workers could be critical in linking polytechnic to available jobs. The study showed that 34.48% of the graduates were recommended by other people to secure employment, 17.24% secured employment through door to door and walk-in applications. 13.79% of the graduates used their social connections while 6.90% responded to a job advert. The results obtained can potentially reveal a number of crucial issues for review in the implementation of the apprenticeship model and enhancement of industry linkages. Note that there were no referral by the polytechnic Career Services office. It can also reflect that employer may not take the process of apprenticeships seriously enough or do not train students in occupations related to their study.

iii.   **Employers Contacted;** in this study, the graduates were asked to state the number of contacts they made before their first employment and the general difficulties in finding a job. Majority of the graduates (50.00%) made between 0-5 contacts before securing a job. This shows that where jobs are available, it did not take a large amount of effort to secure a job for the majority of those employed. However, a significant proportion of graduates (20.69%) made at least 6 – 10 contacts before securing a job.

iv.   **Graduates mobility;** this study also intended to establish graduates mobility across area of specialisation, between jobs within the same area of specialisation and reasons for such movement. In doing so, the study established that 62.3% of the graduates were employed in their areas of specialisation in training while 36.2% sought employment in other areas not related to the training they received from the polytechnic. It was further noted that majority of respondents (62.3%) could easily change jobs within their areas of specialization. This indicated that they had acquired adequate skills that are in demand within their areas of specialization

v.   **Employment income of graduates;** the income offered by employment for TVET graduates could determine its attractiveness. The survey report indicated that majority of employed graduates (61.82%) earned below Kshs. 20,000/month, while

38.18% earned between Kshs. 20,000 – 50,000/month. In addition, 23.64% who engaged in self-employment made at least Kshs.10,000/month and 7.27% made between Kshs. 10,000 – 50,000/month. Overall, the earnings were not relatively bad compared to other sectors employing semi-skilled and skilled personnel. The Kenya National Bureau of Statistics (KNBS) data show that the average monthly income for Kenyans rose at the fastest pace in six years to Sh20,123 following recovery from Covid-19 economic hardships in changes that reflect the growing pay inequality.

The relevance and effectiveness of learning at KCNP in relation to employability (Skills Mismatch)

i. **Relevance of the acquired competencies at KCNP;** majority of the respondents (60.00%) were of the view that the training they received at the polytechnic was very relevant; while only 0.77% said they were not relevant. This is further corroborated by the type of jobs graduates apply, 98.2.8% of the graduates apply jobs related to their area of training.

ii. **Adequacy of KCNP Training and Work Competency;** In the context of this tracer study survey, 39.66% strongly agreed that the training they undertook at KCNP adequately prepared them well for the world of work. 56.07% also strongly agreed that they could easily be trained to improve their level of skill at work and this anchors well with the CBET curriculum delivery objectives. In addition, 36.17% agreed that the training they undertook at KCNP could easily enable them to change employers within their areas of specialization. 39.78% of the graduates also strongly agreed that they found themselves to be very effective in their current or previous jobs. Furthermore, 39.81% strongly agreed that the entrepreneurial skills imparted adequately prepared them for self-employment.

iii. **Employer Considerations;** the graduands were asked on what they considered important as they lodge their job applications. The study related quality and relevance of training to the expected outcome of the industry. The graduates considered the following factors to be **Very Important** when applying for employment;

    a. Reputation of the TVET College, 65.52%
    b. Matching study program with professional qualification, 62.50%
    c. Basic skills on social and individual competencies, 63.41%
    d. Relations and connections, 62.03%
    e. Better grades in the chosen area of study, 59.04%

The graduates also considered the following factors to be **Somewhat Important** when applying for employment;

    a. Deficit of employees in their profession, 29.63%

TVD Data capture for KCNP Alumni

Data available in the KCNP ABN MIS system shows that since the year 2010, the polytechnic has made considerable number of admissions beyond 20,000 students. Considering student completion rate of 84.2% as indicated in the graduation trends for the past four graduations, the database of alumni can be appropriated at a lower limit of 16840.

In this survey, at least 472 graduates have been updated in the [Tvet-tracer | TVET Versatile Database System (education.go.ke)](). Out of this, 460 graduates are awaiting ministry approval to enable them enjoy the online job search and matching of skills through the system, 11 graduates have been approved and are active in the versatile system. At least 306 programs, both long term and short-term courses have also been uploaded in the system.

This TVET Versatile database system will be useful for:

i. Recording personal details of graduates and employment status;
ii. Retrieval for analysis and generating reports for planning and information for various stakeholders;
iii. Tracing graduates and assessment of the impact of training;
iv. Serving as a point of contact between graduates and employers;
v. Graduates will be able to receive updates on employment opportunities available;
vi. Graduates will also post their CVs for potential employers and;
vii. Create a virtual environment to link up graduates with their former classmates.

Recommendations

a. Maritime specialisations offered by KCNP. The polytechnic needs to;
   i. Introduce IMO model courses.
   ii. Implement the reports of the benchmarking visits to international/world-class education & Training organisations conducted during the formative stages of the EASTRIP project.
b. Recruitment of appropriately qualified staff (trainers and workshop technicians). The polytechnic needs to;
   i. Build the capacity of the available KCNP staff (trainers and workshop technicians). This may include STCW training, Training of Trainers (ToT) and Health, Safety and Environment (HSE) Management courses.
   ii. Bond the KCNP staff (instructors and workshop attendants) who participated in staff attachments, exchange programs and long term trainings for a certain duration of time.

iii. Obtain partnerships and collaborations with employers, so as to guarantee industrial exchange and training for program staff.

c. Educational attainment. The polytechnic needs to;

i. Ensure that the KCNP staff (instructors and workshop attendants) have at least a first degree and above training in the relevant specialties.

ii. Introduce Maritime Conversion programs for staff with diploma and degrees from other fields to enable them get necessary Certificates of Competencies to train MET programs.

iii. Send the KCNP staff (instructors and workshop attendants) to short training courses in the related field in order to keep up to date with latest development in the industry to improve their teaching skills.

iv. The pedagogy training and relevant (such as, maritime) advance training should be conditional.

v. Blend the training at the polytechnic by inviting and allocating units to teaching supervisors (such as, academic experts or active officers of merchant ships) to gain from their experience.

d. Work experience at sea. The polytechnic needs to;

Ensure that KCNP program staff handling maritime related programs (such as cruise animation, marine welding, Artisan in Seafarers and Craft Certificate in Marine Engineering) have at least 3 months experience at sea.

e. Human resource recruitment challenges. The polytechnic needs to;

i. Use the "Industry Advisory Board to get referrals on suitable human resource persons."

ii. Enhance "linkages with relevant (such as, maritime) stakeholders and associations to get relevant human resource persons."

f. Practical training challenges experienced by KCNP. The polytechnic needs to;

i. Obtain partnerships and collaborations with relevant (such as, maritime) stakeholders.

ii. Enter into partnerships and collaborations with other local and international education and training organisations.

iii. Make necessary installations to utilize the simulations already procured for all training needs.

Collaborations and Partnerships

g. Training (Theory and Practical). The polytechnic needs to;

i. Enter into collaborations and partnerships with relevant (such as, maritime) stakeholders who can participate in Training (Theory and Practical) by taking up part-time lecturer roles at KCNP and sharing their equipment and facilities.

ii. Enter into collaborations and partnerships with relevant (such as, maritime) stakeholders who will allow KCNP students to access their facilities during field visits.

h. Industrial exchange for program staff. The polytechnic needs to;
   i.   Enter into collaborations and partnerships with maritime stakeholders who are willing to take staff for industrial exchange.
   ii. Work closely with government agencies who are supporting industrial attachment by linking the KCNP with employers.

i. Internship programs. The polytechnic needs to;
   i.   Enter into collaborations and partnerships with employers who are willing to recruit student under their internship programs.
   ii. Work closely with Government agencies who are supporting internship programs by linking graduates of relevant KCNP programs with employers.

j. Access to equipment and simulators. The polytechnic needs to;
   i.   Enter into collaborations and partnerships with employers who are willing to grant access to their equipment and simulators.
   ii. Work closely with the government agencies who are available to offer guidance to ensure the simulators comply with the required standards and the simulators instructors are duly qualified."

k. On-board training. The polytechnic needs to;
   i.   Enter into collaborations and partnerships with employers who are willing to grant access to their ships and vessels for on-board training.

Training areas for improvement

Significant Proportion of training that deserves 100% Improvement
   i.   67.71% of the graduates feel that workshop equipment need 100% improvement;
   ii. 63.16% of the graduates feel that training in practical skills 100% improvement;
   iii. 58.49% of the graduates suggested that industrial attachments needs 100% improvement;
   iv. 50.60% of the graduates feel that instructors practical knowledge needs 100% improvement;

Significant Proportion of training that deserves 75% Improvement
   i.   31.40% of the graduates feel that teaching and delivery methods need 75% improvement;
   ii. 26.19% of the graduates feel that provision of textbooks need 75% improvement;
   iii. 23.94% feel that equipping trainers' laboratory skills needs 75% improvement.

Significant Proportion of training that deserves 0% Improvement (no improvement)
   i.   37.29% of the graduates feel decreasing training duration needs no improvement;

Changes recommended by graduates for KCNP study/programme

Area of need	Comments and Suggestions from the Graduates
Infrastructure, Equipment and Necessary Expansion needs	i. Additional workshops for practical training; ii. Introduce a Marine workshop for marine engineering training; iii. Extension of the Library to accommodate more trainees; iv. Need to add more classroom spaces and seats; v. Addition of Kitchen equipment for hospitality students; vi. Introduction of Marine Engineering Simulators;
Training and Curriculum Delivery needs	i. Addition of qualified teaching staff; ii. Allocation of more practice sessions; iii. Enough practical, Materials and equipment; iv. Find master mariners to teach marine engineering not mechanical engineering teachers; v. I feel there should some practical training or industrial training offered to the students to better their skills; vi. Improve on technical skills; vii. Improve teaching method and find a way of students access shipyards for practical, the bus will have something to do; viii. Improvement in practical training facilities; ix. Lecturers should always avail themselves in classes. x. Students should be committed in their studies xi. Syllabus coverage is often disregarded but crucial that. A marathon way of covering class lessons was not good so I recommend better class timetable management; xii. The lectures teaching EDD should be committed to their work, many students fail because of the lectures not attending the lessons.
Curriculum Development Needs	i. Introduce STCW studies ii. Introduce diploma in marine engineering for progression iii. We need advancement in some courses like specially in cosmetology in diploma iv. Offer short courses mostly in field of cosmetology and also introduce diploma v. Offer higher diploma because no one is going to give us a job with just a certificate
Management and Leadership	i. Advice the security staff not to overuse their power ii. Attitude of the entire staff should improve iii. Registration for students during KNEC exams should be made favourable especially on fee. iv. The terms are too short hence there's a rush to finishing the syllabus

	v.	Stop frustrating students when they come to collect their certificate or during graduation, especially those administration, exam offices and many more;
	vi.	In case of graduate with extra remaining school fee's. It's better if the fees will be transferred to short course like STCW that graduates may need to increase their qualifications in their area of study;
	vii.	Unity among tutors;
	viii.	Teachers should be monitored on class attendance especially languages;
Concern for collaborations	i.	Creating more partners with international companies to get sea time
	ii.	I could recommend, for practical training as well (internship) to be considered
Career support and placement	i.	I would recommend you to help the graduates finding jobs and internship. That will be a big help.
	ii.	Just view market needs
	iii.	They should improve the allocation of attachments for students to gain practical skills in the field of study
	iv.	Marketing of their student in the career
	v.	More resources input for practical skills and more exposure to the industrial set up

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I would also like to thank KCNP graduates and staff for providing data on the thematic areas which have been analysed in this report and for working closely with the polytechnic to validate the data so that the report captures accurately all the information they shared.

Last but certainly not least, I would like to express my deepest appreciation to the time and expertise devoted to reviewing of the document by the Tracer Study Technical Committee for their hard work and commitment to the task of producing this important report.

Michael Njogah
Principal Researcher

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ABBREVIATIONS

AAK	Architectural Association of Kenya
AKLMSO	Association of Kenya Medical Laboratory Scientific Officers
APS-K	Associate in Procurement and Supply of Kenya
CBET	Competency Bases Education and Training
CCNA III	Cisco Certified Network Administrator Level III
CCTV	Closed Circuit Television
CDACC	Curriculum Development Assessment and Certification Council
CICT	Certified Information Communication Technologists
CNC	Computer Numerical Control
CPA	Certified Public Accountant
DLI	Disbursement Link Indicator
EABL	East African Breweries Limited
EASTRIP	East Africa Skills for Transformation and Regional Integration Project
EBK	Engineers Board of Kenya
ECDE	Early Childhood Development Education
EPZ	Export Processing Zone
FTC	Fixed Term Contract
FY	Financial Year
HFG	HIV-Free Generation
HIV	Human Immunodeficiency Virus
IAB	Industry Advisory Board
ICPAK	Institute of Certified Public Accountants of Kenya
ICS	Institute of Certified Secretaries, Institute of Chartered Shipbrokers
ICT	Information Communication Technology
IEEE	Institute of Electrical and Electronics Engineers
IEK	The Institution of Engineers of Kenya
IET	The Institution of Engineering Technologist and Technicians of Kenya
ILO	International Labour Organization
ISCED	International Standard Classification of Education
ISIC	International Standard Industrial Classification
ISK	Institution of Surveyors of Kenya
ITU	International Telecommunication Union
KARLO	Kenya Agricultural and Livestock Research Institute
KBC	Kenya Broadcasting Corporation
KCNP	Kenya Coast National Polytechnic
KEBS	Kenya Bureau of Standards
KEMFRI	Kenya Marine and Fisheries Research Authority
KEMRI	Kenya Medical Research Institute
KenGen	Kenya Electricity Generation Company

KENHA	Kenya National Highways Authority
KERRA	Kenya Rural Roads Authority
KETRACO	Kenya Electricity Transmission Company
KETRB	Kenya Engineers and Technologists Registration Board
KICD	Kenya Institute of Curriculum Development
KISM	Kenya Institute of Supplies Management
KMLTTB	Kenya Medical Laboratory Technicians and Technologists Board
KNBS	Kenya National Bureau of Statistics
KNQA	Kenya National Qualification Authority
KPA	Kenya Ports Authority
KPLC	Kenya Power and Lighting Company
KPSGA	Kenya Professional Safari Guides Association
KTTC	Kenya Technical Trainers' College
KUCCPS	Kenya Universities and Colleges Central Placement Service
KURA	Kenya Urban Roads Authority
LAN	Local Area Network
MIS	Management Information System
MOU	Memorandum of Understanding
MRM	Mabati Rolling Mills
MTP	Medium Term Plan
MTTI	Mombasa Technical Training Institute
NA	Not Applicable
NCA	National Construction Authority
NCPB	National Cereal and Produce Board
NGO	Non-Governmental Organization
NHIF	National Hospital Insurance Fund
NNAK	National Nurses Association of Kenya
NSE	Non-Standard Employments
NYS	National Youth Service
OEC	Open-Ended Contract
PDOs	Project Development Objectives
PPB	Pharmacy and Poisons Board
PSS	Private Security Services
RCE	Regional Centre of Excellence
RFTI	Regional Flagship TVET Institutes
SAGAs	Semi-Autonomous Government Agencies
SDGs	Sustainable Development Goals
SPSS	Statistical Packages for Social Sciences
STCW	Standard of Training Certification and Watch-keeping
STEM	Science, Technology, Engineering and Mathematics

TPA	Tourism Professional Association
TS	Tracer Studies
TVD	TVET Versatile Database
TVET	Technical Vocational Education and Training
UNESCO	United Nations Education, Scientific and Cultural Organization
	UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training

INTRODUCTION

1.1 Background

The World Bank through GoK is funding East Africa Skills for Transformation and Regional Integration Project (EASTRIP). This is a 5-year transformational project conceptualized to transform the growing youth bulge into a growth dividend through the provision market-driven skills and knowledge that promote employment and entrepreneurship. The Project is being implemented in three East African Countries, Kenya, Tanzania and Ethiopia.

The project is pursuing two broad intended results to complement the Kenya Government efforts in repackaging TVET. EASTRIP aims to increase access, improve quality of technical and vocational education and facilitate regional integration. The project is implemented through three key project development objectives (PDOs).

Under World Bank Expenditure Framework, Tracer Study is part of the DLIs that support and incentivize the implementation of the EASTRIP Project. The Tracer Study Team is implementing the PDO 2 of the project that aims at improving quality and relevance of TVET programs through annual tracer study for KCNP graduates and building capacity of trainers for all the departments in the polytechnic to continue conducting tracer study annually.

The 5 cycles of the tracer study have had far-reaching impact on curriculum implementation over the last 5 years of the project implementation. In this financial year, 2022/2023 the study laid emphasis on students who completed studies between **July 2021** and **November 2022** in the **EASTRIP Priority Programs**.

Kenya Coast National Polytechnic (KCNP) is one of the five TVET institutions competitively selected by the World Bank and government of Kenya to be RFTI in January 2018 under EASTRIP. KCNP is therefore developing a regional centre of excellence in Marine Transport & Port Logistics, a centre which aims to develop competent graduates for the maritime sector.

The polytechnic endeavours to offer market relevant and industry driven curriculum to the graduates and to enable feedback on the training outcome, the polytechnic is tracking the response of the graduates in the industry as well as their employers through an annual tracer study to determine the status of their graduates in the industry. The polytechnic draws from a pool of qualified staff who have undergone vigorous training to carry out the tracer study survey in their programs and make recommendations that can have impact.

The tracer study team was expected to;

i. Track 343 students who completed studies between July 2021 and November 2022 and studied in EASTRIP priority programs in the areas of marine engineering, shipping and cruise service management;

ii. Collect data from 25 program in the priority areas for quality of training based on identified gaps, both long term and short term, general program management and governance and;

This report is an input to the transformation of the polytechnic into RFTI and Regional Centre of Excellence (RCE) in Marine Transport & Port Logistics. The report will also enable KCNP to develop industry-recognized TVET programs that are demand driven, highly specialized and offer industry-oriented skills.

The general objective of this project was be to track KCNP TVET graduates and establish the impact of employment opportunities.

1.2 Tracer Study Framework
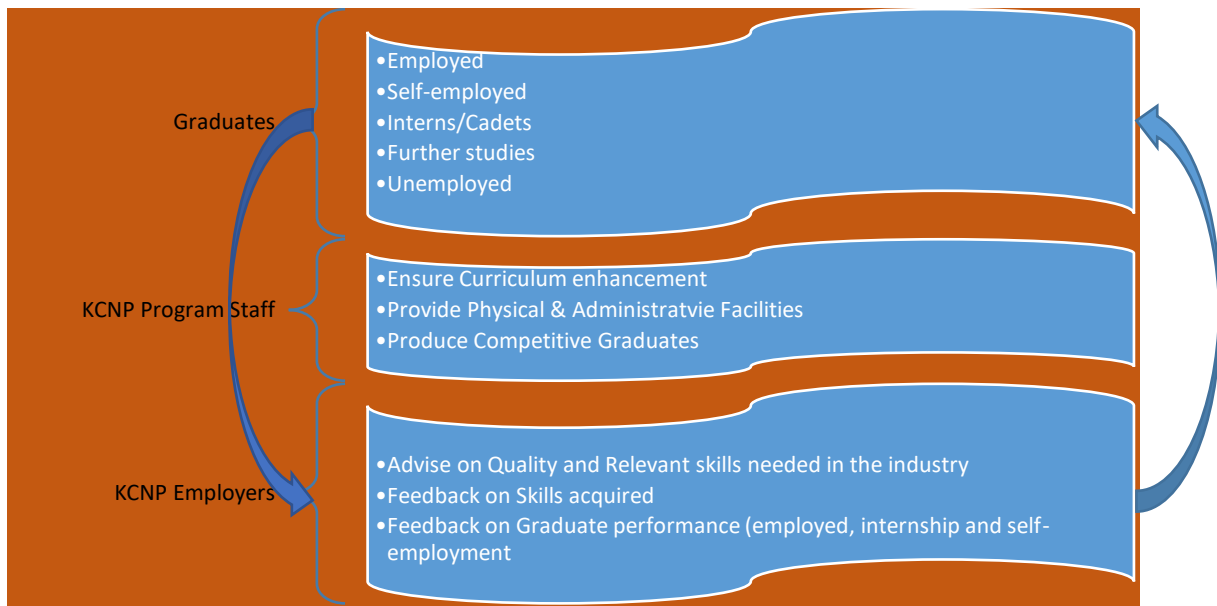
Figure 1; Tracer Study Framework
Source, TS 2022/2023

This study was premised on the fact that KCNP graduates have to be appraised relative to the skills they acquired from their training. How they perform in the labour market after graduation holds an important aspect in determining the relevance and quality of the curriculum. The knowledge and skills acquired coupled with linkage of the polytechnic with the labour market will make the graduates competitively employable.

1.3 Evidence on Employability Trends from Previous KCNP Tracer Studies to inform Policy

Under Project Development Objective II, the project aims at Improving Quality and Relevance of TVET programs through annual tracer study for our graduates and building capacity of trainers from all other departments in the polytechnic to continue conducting tracer study. Abridged version of employment trends over the past three Financial Years is as indicated;

1.3.1 Tracer Study FY 2018/2019

The employment status of this baseline survey in the FY 2018/2019 showed that since completion of studies in the stated calendar; 26% *(n = 54) of the graduands had secured employment, 70% *(n =145) were unemployed and 4% (n = 8) were in self-employment. The graduands further responded that 21.3% had secured employment in their relevant areas of training, 25.6% had secured employment but in other areas that did not match their study areas while 53.1% had no knowledge about their exact deployment. 68% confirmed that they were not employed where they had their attachment, 21% were employed at the attachment place and finally 11% did not know. The graduands also noted that they were aggressively pursuing employment.

1.3.2 Tracer Study FY 2019/2020

TVET Graduates' situation in the first six months post-graduating in the FY 2019/2020 was analysed and results were as follows;

Table 1; Tracer Study FY 2019/2020

Employment Status		Frequency	Percent
i.	Employed	7	17.5%
ii.	Self Employed	13	32.5%
iii.	Further Academic Education (higher education, for example degree)	7	17.5%
iv.	Further vocational education/training (such as, certificate, Craft, advanced diploma)	9	22.5%
v.	Other	4	10%
	Total	**40**	**100%**

Source; TS Report FY 2019/2020

However, during the FY, "Employment Status" of the traced TVET graduates after graduating from Kenya Coast National Polytechnic were as follows; 20 per cent were "Employed". None were "Self-Employed with Employees". 23 per cent were "Self-

Employed without Employees". While, 57 per cent were "Neither Employed nor Self-Employed" (unemployed).

1.3.3 Tracer Study FY 2020/2021

The employment status of traced graduates during the FY 2020/2021 from a sample size of 1432 graduates were tabulated as shown below;

Table 2; Tracer Study FY 2020/2021

S/No.	Employment Status	Gender			
		Male		Female	
		Frequency	Percentage, %	Frequency	Percentage, %
i.	Employed	169	11.8%	125	8.7%
ii.	Self-employed	307	21.4%	244	17.0%
iii.	Further Education	57	4%	25	1.7%
	TOTAL	**533**	**37.5%**	**394**	**27.4%**
	GROSS EMPLOYMENT RATE				**64.6%**

Source; TS Report FY 2020/2021

The employment rate for FY 2020/2021 was 64.6% disaggregated by gender. Twenty-one (21) percent were "employed", Thirty-eight (38) percent were "self-employed", Thirty (30) percent were "unemployed", Two (2) percent were engaged in "internship programs", Six (6) percent were pursuing "further education/training", three (3) percent "did not disclose their employment status". Employed graduates accounted for 294 graduates from both the gender.

Duration taken to find the first job; Twenty (20) percent took "up to 3 months" to find their first job, twenty-one (21) percent took "between 4 and 6 months" to find their first job, twenty-four (24) percent took "between 7 and 9 months" to find their first job, nineteen (19) percent took "between 10 and 12 months" to find their first job.

With assistance of the Industry Advisory Board, KCNP developed 7 market driven Competency Based Curriculum against the expected target for year 3. Nineteen (19) members of staff were sent to industrial attachment to enable us to improve our quality of training. Further to this, the flagship centre has entered MOUs with 6 industries to support internship and also employment of our graduate.

1.3.4 Comparative literature based on findings of TS FY2021/2022

A total of three hundred and fifty-eight (358) KCNP graduates, twenty-eight (28) employers of KCNP graduates and eighty-one (81) KCNP program staff participated in

the tracer study. 45.0 % of traced graduates were Male while 54.5% of traced graduates were Female;

The average employability rate for those gaining direct entry into formal employment accounted for 41.19%, n = 148 graduate disintegrated as (M = 26.99%, n = 95 and F = 14.20%, n = 50) while 57.67% were unemployed;

The **overall employability rate** was **77.75%,** N = 225, classified either as employed under formal contract terms, 41.19% of the graduates, self-employed, 14.06% of the graduates or unemployed but pursuing further studies, 22.50%. **13.01% of the KCNP graduates** had secured employment within the first 6 months either through formal employment, in self-employment or pursuing further education.

27.3 %, n= (96) out of the total response of 352 represented **EASTRIP Priority Programme Courses**. From this, 25%, n = 24 were Employed 7.29%, n= 7 self-employed, and the rest 55.21%, n= 53 were unemployed. It was also noted that from the sample of EASTRIP priority programme courses, (27.3%, n=96), Female accounted 69.8%, n=67, while 30.2%, n= 29 accounted for male respondents. Compared against overall employment outcome of 41.19%, the proportion of female who secured employment under the priority programmes was 29.15%, n=28, while male was 15.64%, n=15 on either case.

The overall employability rate when tallied against the total number of respondents who pursued **EASTRIP priority programmes accounted 44.79%, n=43**. However, when compared against the overall response rate across all the programmes, the rate obtained was 12.22%.

On the question of Skills Acquired, Quality and Relevance of Training, the survey findings revealed that 61.99% of the graduates worked in an area related to the course they studied. However, 38.01% of the graduates were formally employed in other sectors not related to the area of study. From the survey findings, 47.68% of the graduates said that the training they received at KCNP were very relevant and another 32.82% acknowledged that the training was relevant. In total, 80.50% acknowledge that training offered was relevant. At the same time, 2.17% and 3.41% said the training was slightly relevant and irrelevant respectively. 13.93% of the graduates felt that the training was fairly relevant.

On Adequacy of KCNP Training, Graduate Employability and Work Competency 30.18% strongly agreed that the training they undertook at KCNP adequately prepared them well for the world of work. 42.75% also strongly agreed that they could easily be trained to improve their level of skill at work. In addition, 42.81% agreed that the training they undertook at KCNP adequately prepared them well for the world of work. 38.04% also agreed that they could easily be trained to improve their level of skill at work. The graduate's relative ability to perform at work account of the adequate training received at

KCNP was 72.99% and on account of being easily trained to improve their level of skill was 80.79%. This confirms the work readiness and adequacy of the training at KCNP.

Furthermore, 34.39% strongly agree that the entrepreneurial skills imparted adequately prepared them for self-employment. The graduates considered the following factors to be Very Important when applying for employment;

  i.   Matching study program with professional qualification, 52.05%
  ii.   Better grades in the chosen area of study, 50.81%
  iii. Basic skills on social and individual competencies, 49.74%
  iv.   Reputation of the TVET College, 47.78%
  v.   Relations and connections, 47.74%

The graduates also considered deficit of employees in their profession, 23.37% to be Somewhat Important when applying for employment.

1.4 Tracer Study Deliverables and Roll out Strategy FY 2022/2023

The delivery of this report was broken down into 12 stages with specific timelines, outcomes, responsible personnel and budget attached to achievement to each deliverable. The survey was expected to take a duration of 66 days. Detailed Work plan is attached in the Appendix. The stages were outlined as follows;

  i.   Compilation of the Tracer Study Database
  ii.   Development of data collection tools
  iii.   Collection of secondary data
  iv.   Compilation of introductory pages
  v.   Piloting of data Collection and Data collection
  vi.   Data cleaning and coding
  vii.   Data Entry
  viii. Data Analysis and Interpretation
  ix.   Development of first draft report
  x.   Tracer Study Report Validation
  xi.   Development of final report
  xii.   Reproduction and packaging of the Report

1.5 Graduation Trends for the past four Graduations

The polytechnic is mandated as per the Polytechnic Order of 2016 as published in the Legal Notice No. 88 and in conformity with the TVET Act No. 29 of 2013 to graduate students who have successfully completed their studies annually. Through this, the Polytechnic ensures that the Institutional priority areas, policies and strategies are in line

with National Priorities and aligned to the Big Four Agenda, Vision 2030, Mitigation of COVID 19 pandemic and SDGs.

Number of Graduates vs. Year of Graduation

▲ Number of Graduates   — Trendline for Number of Graduates R² = 0.842
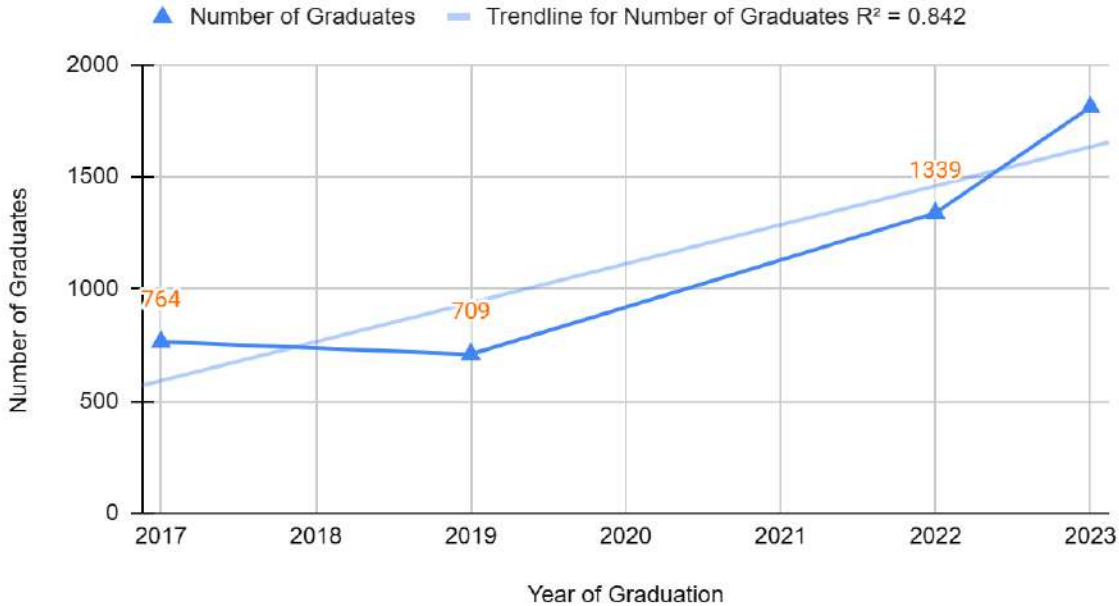
Figure 2; Graduation Trend for past 3 graduations
Source, TS 2022/2023

Table 3; Graduation Trend for past 3 graduations

S/No.	Year of Graduation	Number of Graduates
1.	2017	764
2.	2019	709
3.	2022	1339
4.	2023	1811

KCNP graduations have been hinged on four thematic areas that include Gender disintegration, Level of Award (Artisan, Craft or Diploma), Grading of Awards (Pass, Credit or Distinction) and Domain of Award which classifies graduands per department. The number of graduands during the academic calendar 2017/2018 were 764 distributed against the four thematic groupings. During the academic calendar 2018/2019, the number of graduating candidates went down by 55 candidates compared to 2017/2018 academic calendar. However, in the year 2020 and 2021, the learning cycle was affected due by Covid-19 pandemic which pushed essential activities to be conducted much later. In the academic calendar 2021/2022, the number of graduating candidates went up to 1339. In this FY, 2022/2023, the graduating candidates again went up to 1811 accounting

to partly the backlog of the years 2021 and 2022 candidates. The average graduation rate over the past four graduations, as indicated in the R^2 trendline was 84.2% compared to the previous rate of 75.4% after three graduation an increase of 8.8% in graduation rate.

1.6 Objective of the Tracer Study

The objective the study was to track the effectiveness of the KCNP in equipping her graduates with the necessary skills to successfully gain employment, self-employment or pursue further academic or vocational training. To do so, the study traced the whereabouts of KCNP graduates and assessed how successful they had been able to integrate into the labour market after completing their learning program, between 2021 and 2022. The study was conducted between December 2021 and May 2022. The study was disintegrated to cover graduate responses, curriculum implementers who include trainers and management team and industry responses to provide information on readiness of the TVET graduates they employ.

The objectives of this graduate survey were to;

i. Assess attitude of the KCNP graduates regarding job quality, relevance, and effectiveness of their training in securing employment;

ii. Examine the attitude of the KCNP graduates regarding business quality, relevance, and effectiveness of their training in supporting self-employment.

iii. Assess the adequacy of KCNP training to enable employability in the job market;

iv. Develop and update KCNP graduate database for future tracer studies.

SURVEY METHODOLOGY

This survey was conducted within the framework of the EASTRIP project FY 2022/2023, financed by EASTRIP and to be implemented by KCNP. The main objective was to provide information on the KCNP TVET graduates' job search methods and current employment statuses, employment conditions and on the job training, as well as the quality of the TVET education including the conditions of KCNP curriculum implementation by the program staff and industries where they get internships, employments or self-employments.

This Tracer Study tracked students who completed studies between July 2021 to November 2022 and studied in EASTRIP priority programs. The objective was to evaluate the graduate's progress up to the time they got a job and beyond in order to minimize any possible deficits in a given program in terms of content, delivery and relevance and for further development by the institution in the context of quality assurance.

2.1 Research Design

The overall sampling strategy was to generate large and representative samples for all the groups. Thus, a scientific method based on statistical techniques was applied involving selection of a random sample of the respondents. The Survey adopted a mixed design methodology that entailed use of structured questionnaire triangulated per category. The survey questionnaire was transcribed into electronic format to enable respondents with reliable internet to fill up their responses electronically and submit back. The secondary data relied on previous tracer study surveys, data of staff from human resources office, records of previous graduation obtained from the graduation booklets and academic affairs office. The Survey also benefited from review of past similar Surveys at KCNP, Kenya and other Countries.

With respect to academic programmes, the International Standard Classification of Education (ISCED) developed by UNESCO was adopted. It classifies programmes offered in academic setting into ten clusters and provides a means for comparison of education statistics and indicators across countries through uniform and internationally agreed definitions (UNESCO Institute for Statistics, 2014).

The tool captured database of KCNP graduate responses disaggregated by gender, academic level, marital status, country and county of origin and disability. For academic staff, data on designation, role in the polytechnic, staff establishment and tenure (i.e., whether full time or part time) were captured in the tool.

2.2 Sampling

A sampling frame refers to, for instance, groups from which respondents were drawn. It also refers to targeted respondents' lists obtained from KCNP for the survey. The sample size used were as follows:

Table 4; Rate of Response

RESPONDENTS	Targeted	Achieved	Response Rate (%)
Students	300	147	49.0%
Staff	30	20	66.67%
TOTAL	**330**	**167**	**50.61**%

Source, TS 2022/2023

All the respondents were given equal opportunity to participate in the survey within the survey data collection timeframe. In order to effectively capture the differences by category from the study population, stratified random sampling technique was adopted in the survey design. The benefit of stratification was that it allowed the sampler to control the stratum and ensured a defined level of statistical precision and comparability. Therefore, a sample size of 330 respondents were then drawn cutting across graduates from all the academic departments, Staff from the departments. The **response rate** was **50.61%,** for 167 responses. The response rate was sufficient to gather the feedback of the respondents and make adequate recommendations.

2.3 Sampling frame

A stratified sampling methodology was adopted with staff and students being the first level with departments being the Primary Sampling Units. A sample of 330 respondents was estimated for the Survey.

The respondents targeted for the survey included graduates who finished their studies in the EASTRIP priority programs between July 2021 and November 2022 in the program areas of marine engineering, shipping and cruise service management and teaching staff who offered the teaching services. The respondents were given equal opportunity to participate in the survey within the survey data collection timeframe.

Quantitative data was collected using semi-structured questionnaires while qualitative data was obtained by short clarification interviews/discussions with respondents during data collection to validate responses to the questionnaire. Secondary information was obtained from the website and previous reports.

Table 5; Key Survey Characteristics

1.	Sample Frame	Disintegrated Data on Curriculum Implementers
2.	Target Population	KCNP EASTRIP Priority Programs KCNP Program Staff in the priority courses
3.	Sample size	363 respondents
4.	Clustering	Year of Completion, Level and Program of Study (Graduates) Department, Designation and Years of Service (Program Staff) Industry Sector and Ownership (Employer)
5.	Non-Response	Random substitution
6.	Confidence Level	99%
7.	Design factor	3.2
8.	Absolute precision	1%
9.	P value	Conservatively at 0.5

Source, TS 2022/2023

According to the target population of 363, the minimum sample size with a 5% margin error and a confidence level of 99% was found to be exhaustively representative with 167 respondents.

2.4 Data Collection and Analysis

Semi-structured questionnaires were used to collect the data. Data coding and entry was done concurrently with data collection in the field. The questionnaire was transcribed into online platform to ease the process of filling up questionnaire and submitting. After which the researcher embarked on analysis of the data, comments and observations obtained from field visits and secondary sources.

Database of past graduates were compiled by the survey team from different sources including past student attachment schedules, graduation records and Polytechnic MIS Archiving records.

Up to two call backs were used to reach selected respondents who may not have been available at the time of the call. In some cases, enumerators made walk-ins to industries.

The researcher carried out data coding, framework development for data entry and analysis of data using Ms Excel Pivot Table Platforms and SPSS.

2.5 Methodological Difficulties

Identification of graduates was mainly expected to begin through the use of databases. Identified graduates from the databases were expected to help identify other graduates who could participate in the study, by snowballing. Employers were also to be contacted

to establish if they employed KCNP TVET graduates or generally TVET with the intention of using the identified employees to identify other graduates. Whereas program staff accepted to provide response, they had other of tasks which may brought methodological challenges. While these approaches were expected to generate a significant number of respondents, fieldwork indicated otherwise. The main limitations were that;

Table 6; Methodological Difficulties

S/No.	Limitation	Description and Mitigation
1.	*Inconsistent and partial data on the lists of graduates retrieved in the MIS System*	The list of graduates obtained from the MIS ABN for KCNP TVET graduates mainly included phone numbers of the parents. The Polytechnic archives registered only home phone number or mobile phone number of one parent at the beginning of the education of the student.
		This of course resulted in the enumerator not being able to reach the graduates directly but had to make the double number of calls instead, in order to obtain the mobile phone number of the graduate.
		The lists provided had a high percentage of phone numbers which were disconnected and not active anymore.
		Multiple approaches like comparison with graduation contacts and attachment records were employed.
2.	*No Pre-field work awareness and sensitization meetings between field research staff and relevant stakeholders due to the time limitation*	It was not possible to have meetings with the graduates, staff and industry partners during the implementation of the Tracer study, owing to closeness of activities, multiplicity of tasks by trainers and conflicting time schedules. Further to this, the program staff claimed that the language of the questionnaire was complex and some questions were not clear.
		An introductory letter to familiarize the study was provided on the questionnaire to sensitize the respondents.
3.	*Low percentage of graduates willing to participate in the survey*	Due to the high unemployment rate and difficult financial situation of the majority of the students, it was expected that a certain number of graduates would not participate in the survey since they do not see any the benefits for themselves. Some graduates also declined to participate since they had just graduated. This affected the result of the survey to a great extent and should be a concern for future activities.
		Out of the available list of 328 graduates for this Tracer Study, it was not possible to receive any data from 180 graduates. There were two main reasons for this; the first reason being that the graduates were not willing to provide the necessary information needed on account of not being in employment while other

		graduates could not be reached due to non-existent phone number on the lists previously provided. Others felt persistent follow ups were a bother. Some graduates needed assurance that they will be employed after filling in the questionnaires while others claimed the digital link provided was not opening in their phones.
4.	*Low Study Completion and Pass Rates*	It was observed that for a number of graduates, cases of subject refers and failure affected their participation and opportunity for employment. The tracer study tool had an option of finding out what affected their continuity of study and how the management can assist in this case.
5.	*Remoteness and Unreliability of Mobile Network in some areas*	Lack network connectivity limited potential reach and participation of some graduates, for instance, it was assumed that students from South Sudan had connectivity, issue and therefore failed to submit back questionnaire. Remote locations of the graduates and unrealistic work demands by some graduates challenged the submission of the responses.
6.	*Lack of commitment by the respondents*	Questionnaires left with respondents for completion and to be collected at a later date yielded low returns and were more time consuming since one had to make several follow ups before the questionnaires were completed; For instance, graduates from Tanzania were sent the link for the questionnaire to fill and send back. While they agreed to do so, the actual process of administering the questionnaire became a problem. There was lack of commitment despite several follow ups.
7.	*Multiplicity of tasks among the program staff*	Whereas the program staff initially accepted to provide response to the survey, some of the program staff failed to respond due to time constraints in administering their core assignments and other duties. In addition, the tracer study team who participated in the data collection, analysis and reporting had other roles in the polytechnic which delayed the process.

Source, TS 2022/2023

PRESENTATION OF FINDINGS AND STATISTICAL OUTCOME

The sample size aimed to be representative of graduates and their department staff with a target sample of approximately 363 graduates. The achieved sample was 167, which accounted for a 50.61% *(n = 167) response rate. It should be noted that there was not much variation in terms of response. Weighting of the data was necessary to account for variation in response rates between departments

3.0 GRADUATE TRACER STUDY FINDINGS

3.1 GRADUATE DEMOGRAPHIC DATA

3.1.1 Response rate

The initial target of respondents was 330. However, because the methodological problems already alluded to in section 2.5, 148 graduates respondent to the questionnaire. This represented a response rate of 50.61% which is comparable to 50.49% reported by the tracer study FY 2021/2022.

The relatively low response rate could be attributed to what appears to be interview fatigue that could be a result of that there were two other studies in recent times that targeted the same respondents. From the questionnaires submitted back, 147 responses were obtained cutting across the three departments of the polytechnic where the EASTRIP project was domiciled. After collating and coding, 12 questionnaires returned were not priority programmes for tracer.

3.1.2 Response rate by gender and age

Gender and age were not considered as key variables in sampling of graduates in this study. However, information on respondents by gender and age is presented here to give insightful understanding of respondents to the study by these variables. Apart from depicting a possible fair distribution of sampling by age and gender, this information could highlight the attractiveness of the EASTRIP priority programs by age and gender as summarized in the demographic table below.

Table 7; Graduate Demographic Characteristics

Demographic Status		
Gender	Frequency, N	Percentage, %
i. Male	71	49.32%
ii. Female	72	48.63%
iii. Prefer not to say	3	2.05%
Marital Status		
i. Single	125	85.62%

ii.	Married	19	13.01%
iii.	Prefer not to say	1	0.68%
iv.	Engaged	0	0
v.	Separated	1	0.68%
Age			
i.	Below 25 yrs.	56	38.36%
ii.	25 – 35 yrs.	88	60.27%
iii.	Above 35 yrs.	2	1.37%
Level of Study			
i.	Diploma	30	21.28%
ii.	Craft	84	59.57%
iii.	Artisan	27	19.15%
Blank			
Total Response		**147**	**100**%

Source, TS 2022/2023

The results showed that 48.63% of the respondents were female while 49.32% of the respondents were male. Out of this 21.28 % (N=30) graduated with Diploma, 59.57 % (N=84) graduated with Craft qualification while 19.15% (N=27) graduated with Artisan Certificates.

Majority of the respondents were between 25 – 35 years accounting for 60.27%, followed by those below 25 years of age at 38.36%. This shows that market driven programs interests direct school leavers either who have attained either KCSE or those who wish to improve their competency have finished either artisan, craft or diploma program. Figure 4 shows the distribution of respondents by gender.

3.1.3 Response rate by area of specialisation

KCNP is implementing a 5 year Strategic Investment Plan that focuses on the Blue Economy in order to train manpower who will take up the tasks in the maritime sector.

This study therefore explored the uptake of the blue economy programs and other servicing areas in the industry as the country prepares to have a competent manpower in the maritime sector. The BE programs offered by the polytechnic are in the areas of Shipping, Cruise Service Management, Marine Engineering and other support subjects. The uptake of the courses is as outlined in the table below;

Table 8; Frequency of graduate response per program area

A.	**Shipping**	**Frequency, N**
i.	Certificate in shipping and logistics management	17
B.	**Cruise Service and Management**	

i.	Artisan in hairdressing and beauty	21
ii.	Craft certificate in beauty therapy and hairdressing	1
iii.	Craft certificate in cosmetology	9
iv.	Craft certificate in food and beverage production sales & service	12
v.	Craft in hairdressing and beauty therapy	3
vi.	Diploma in Catering and Accommodation Management	13
vii.	Diploma in cosmetology	1
viii.	Diploma in food and beverage management	9
ix.	Diploma in hospitality management	1
x.	Diploma in tourism management	6
xi.	Pastry chef	1
C.	**Marine Engineering**	
i.	Artisan in refrigeration and air conditioning	8
ii.	Craft in marine engineering	26
iii.	Craft in Refrigeration and Air Conditioning	2
D.	**Respondents from other trade areas**	
i.	Certificate in electrical engineering power option	1
ii.	Craft certificate in automotive engineering	5
iii.	Craft certificate in front office administration	2
iv.	Craft in Mechanical Engineering	3
v.	Diploma in automotive engineering	1
	TOTAL	**142**

Source, TS 2022/2023

The survey targeted graduates who finished their studies in the EASTRIP priority programs between July 2021 and November 2022 in the program areas of marine engineering, shipping and cruise service management. 17 respondents studied Shipping and Logistics and this represented 12% of the total respondents, 77 respondents or 54% studied Cruise Service and Management and 36 respondents that represented 25% of the total respondents studied marine engineering. In addition, the survey reported that 12 respondents from other program areas not related to EASTRIP priority programs also submitted responses accounting for 9% of the total respondents. The proportion of the response rate per program area is as shown in the bar chart below.
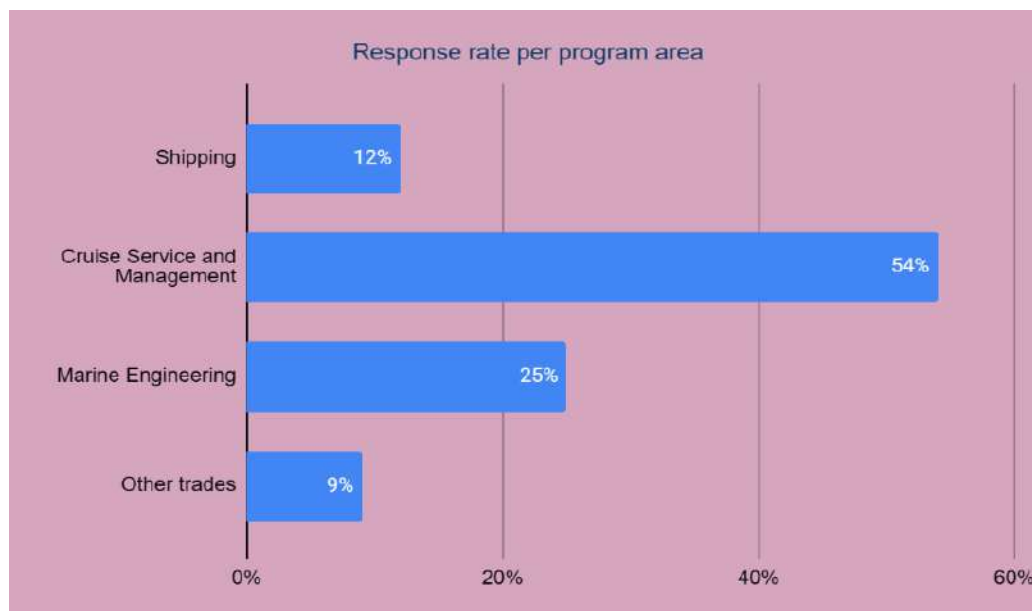
Figure 3; Response rate per program area
Source, TS 2022/2023

3.2 STUDY CONDITIONS AND PROVISIONS, STUDY EXPERIENCES

3.2.1 Duration since completion of studies

Despite the findings of the study, this survey needed to acquire deeper understandings about the factors affecting success and course completion rates amongst the EASTRIP priority programs in order to bring out the aspects of training quality, relevance and adequacy. The most commonly used indicators for measuring graduate relevance and quality are completion rates and time to completion, drop-out rates, especially after the first year, and graduation rates as well as destinations and employment rates of graduates in specific fields of study. The findings of the student completion rates were analysed and tabulated as shown below;

Table 9; Duration since completion of studies

Gender	1-6 months ago	13- 24 months ago	7-12 months ago	Dropped out of college	Over 24 months ago	Grand Total	**Percent %**
Blank	1	2	0	0	0	3	**2.05%**
Female	30	15	12	5	9	71	**48.63%**
Male	26	16	23	0	7	72	**49.32%**
Grand Total	57(=39%)	33(=23%)	35(=24%)	5(=3%)	16(=11%)	146	**100.00%**

Source, TS 2022/2023

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The survey report indicated since commissioning of this study, 39% of the respondents completed their studies in the last 1 – 6 months, 24% completed their studies in the last 7 – 12 months, 23% completed their studies in the 13 – 24 months and 11% completed their studies over 24 months ago. At the same time, 3% had dropped out of studies and cited the following reasons;

   i. *Three respondents said that they could not afford school fees or lacked school fees;*
   ii. *One respondent said that her parents separated, they both left her with her young sister. She had to start hustling to cater for their needs and;*
   iii. *One respondent was unable to pay the money to book for the exam.*

3.2.2 Reason(s) for taking or pursuing the course

Graduate performance both in class and after study completion is closely related to the motivating factors behind the career choices. Through this, the graduate either dedicate fully by giving extra attention to their duties or becomes negligent. The survey interrogated the factors behind selection of the programs. The figure below shows summary of factors analysed by percentage
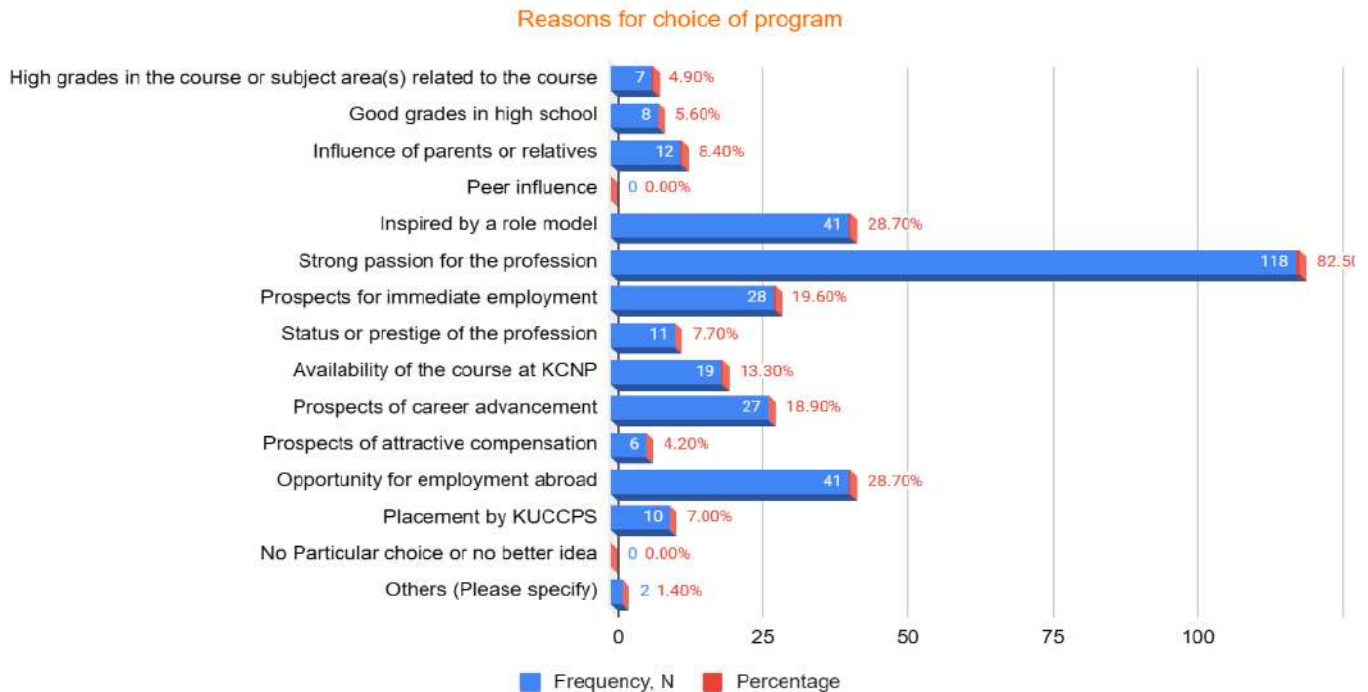
Figure 4; Reason(s) for taking or pursuing the course
Source, TS 2022/2023

The survey report indicated that 82.50% of the respondents who pursued the EASTRIP priority programs were driven by the strong passion for the programs, 28.70% were inspired by role models and opportunity for employment abroad respectively. 19.60% considered prospects for immediate employment as a motivating factor while 18.90% considered prospects for career advancement. In addition, 7.00% pursed the programs since they were placed by the placing agency KUCCPS. Other factors that influenced choice of the programs included, 13.3% due to availability of the program at KCNP, 8.4% due to influence by parents or relatives and good grades in High School, 4.9%. Other factors are explained in the chart.

3.2.3 Professional qualifications and/or certificates acquired after completion of studies at KCNP

After completion of study, it is necessary to have a professional recognition by a professional body. The graduates were asked whether they pursued a training to attain professional qualification to enable them to be registered with the regulating agencies for issuance of practicing licenses.

Table 10; Professional Qualification Status

Professional Qualification Status	Frequency, N	Percentage
Not seeking professional registration	100	70.92%
Acquired professional registration	41	29.08%

Source, TS 2022/2023

The survey results showed that 70.92% of the graduates had not pursued additional training to obtain professional licenses while only 29.08% have pursued professional trainings in their areas of specialization with professional bodies. Some of the professional trainings and licenses pursued by the graduates are listed below;

i. Certification of Engine Rating and STCW
ii. Computer user specialist certificate
iii. Discharge certificate from NYS
iv. KSTVET pedagogy certificate
v. Marine certificate
vi. Safety Training Course and Watch-keeping (STCW)
vii. Solar installation certificate
viii. STCW course certificate

3.3 JOB SEARCH, TRANSITION TO WORK AND EMPLOYMENT STATUS

With fast changing TVET education, employability and entry into the labour market becomes a more important criterion for assessing quality and relevance. This chapter details the graduate lifecycle, i.e. different phases from application, during and after study

into employment or further education. It is worth noting that the World Bank through GoK, is funding a 5-year transformational project conceptualized to transform the growing youth bulge into a growth dividend through the provision market-driven skills and knowledge that promote employment and entrepreneurship hitherto known us East Africa Skills for Transformation and Regional Integration Project (EASTRIP).

3.3.1 Graduate Employability Rates

In this section the Tracer Study report examines the employment status of the traced graduates in the sample, the industry sectors they are engaged in, their present employment status, type of employment contracts they hold, number of hours worked per week, time taken to find their first job, their salary structure, means and ways with which they found their jobs, reasons for not being in employment (for those not employed) and the challenges they faced during internship.

The study compiled proportion of KCNP graduates who pursued the EASTRIP priority programs and secured employments in various sectors of economy since completion of studies. Overall employability was calculated as sum total of formal employment through private or public sectors, engagement in self-employment and participation in further education. The table below compiles the findings of graduate employability;

Table 11; Graduate Employability Rates

Employment Status	Yes	Male	Female	Total	No	Male	Female	Total
Formal Employment	✓	7.20%	23.88%	31.08%	✗	33.57%	27.27%	60.84%
Self-employment	✓	9.40%	22.21%	31.61%	✗	19.58%	17.48%	37.06%
Further Education	✓	5.48%	13.20%	18.61%	✗	34.51%	36.62%	71.13%
Overall		22.08%	59.22%	**81.30%**		87.66%	81.37%	

Source, TS 2022/2023

The **overall employability rate was 81.30%**, N = 121, broken down as either employed under formal employment terms which accounted for 31.08% of the graduates, self-employed graduates translating to 31.61% of the graduates or unemployed but pursuing further studies comprised 18.30% of the graduates. Graduates pursuing further studies are considered employed by World Bank classification of employment statuses. The status of the graduates measured in the first six months of study completion is as tabulated below;

Table 12; Duration since Completion of Studies

Duration Since Completion of Studies	Formally Employed		Self employed		Pursuing further studies		
	Male	Female	Male	Female	Male	Female	Total
1 – 6 months	4.90%	23.77%	8.30%	20.31%	3.98%	10.43%	71.76%
7 – 12 months	0.90%	0.11%	0.70%	0.50%	0.80%	0.80%	3.81%
13 – 24 months	0.60%	0.00%	0.40%	0.70%	0.00%	1.40%	3.10%
Over 24 months	0.80%	0.00%	0.00%	0.70%	0.70%	0.50%	2.70%
TOTAL	7.20%	23.88%	9.40%	22.21%	5.48%	13.13%	81.30%

Source, TS 2022/2023

The first row in the table above summarizes the "situation of the traced KCNP graduates who undertook the EASTRIP priority programs in the first six months after graduating" from the polytechnic. ***Overall employability rate six months after completion of study was 71.76%.*** It shows that among the 148 graduates that were traced in the study, 28.67 per cent were "*Employed*" within the first six months after graduating. 28.61 per cent were "*Self-Employed*". 14.41 per cent went for "*Further Academic Education*" in vocational centres, undertaking sea time and pursuing degree programs. Up to about 3 per cent pursued "*internship*" programs.

The situation of female graduates six months after completion of study was also analysed and presented as shown in the table below;

Table 13; Female employment status six months after completion of study

S/No.	Female employment status six months after completion of study	Transition rate (n=71)
i.	Formally Employed	42.25%
ii.	Self-employed	20.31%
iii.	Pursuing further studies	10.43%
	Total	72.99%

Source, TS 2022/2023

The ***proportion of female graduates employed 6 months after study completion in the current study was 72.99%*** distributed as 42.25% in formal employment, 20.31% of the graduates had started their own means of self-employment and 10.43% of the female graduates were pursuing further education. This resulted to an overall female employability rate of 72.99% six months of study completion.

3.3.2 Further training for KCNP graduates

This subsection presents results and findings with respect to further training. It covers results and findings for the 148 traced graduates who have confirmed their present employment status (See table below on Present Employment Status). However, the 4 traced graduates who did not disclosed their present employment status were excluded from the analysis. The results and findings included participation in further training after graduation and courses studied while pursing further training.

    i.   Based on participation in further training, the respondents were asked if they had "Participated in further training" after graduation. Results were been taken from a sample of 148 graduates as follows;

Table 14; Taking further Training(s) / Advance studies after graduating from KCNP

Taking further Training(s) / Advance studies after graduating from KCNP	Female	Male	Grand Total
Blank	2.80% (n=4)		2.80%(n=4)
No	33.72%(n=48)	44.87%(n=65)	78.59%(n=113)
Yes	13.13%(n=19)	5.48%(n=7)	18.61%(n=26)
Grand Total	(n=67)	(n=72)	100.00% (n=143)

Source, TS 2022/2023

The results of the survey revealed that 18.61 percent (26 graduates) had *"Participated in Further Training".* 78.59 percent (113 graduates) *"did not participated in further training".* 2.8 percent (4 graduates) "*did not disclosed if they had (or had not) participated in further training"* after graduation.

    ii.   Based on the courses studied while pursing further training, the respondents who "Participated in further training" were requested to provide details of the type of further training they had participated in. The table below captures the "type of further training undertaken" by 148 traced KCNP graduates. This included graduates who have either "Participated in Further Training" or are currently "Participating in further training". The type of further education/training undertaken included;
        a. Further academic education/training (such as, higher education, for example degree).
        b. Further vocational education/training (such as, certificate, diploma, and advanced diploma).
        c. Further professional certification/ license to practice (such as, STCW).

Table 15; Number of graduates on further training

S/No.	Area of training	Number of graduates on further training
i.	Advanced training at sea	2
ii.	Bachelor in human resource management	1
iii.	Diploma in Marine Engineering	2
iv.	Diploma in Automotive Engineering	1
v.	Diploma in hospitality management	1
vi.	Diploma in Human Resource Management	1
vii.	Driving Classes	1
viii.	German language classes	1
ix.	Industrial training at MV Kalangala ship	1
x.	Internship	4
xi.	Joined KSTVET for pedagogy course	3
xii.	Spa therapy	1
xiii.	Standards for Training Certifications and Watch keeping (STCW)	2
xiv.	Rating Forming Part of Engineering Watch (RFPEW)	1
xv.	Supply Management	1
	TOTAL	23

Source, TS 2022/2023

The findings showed that 1 graduate participated in *"Further academic education"*. 8 graduates participated in *"Further vocational education/training".* In addition 11 graduates participated in *"Further professional certification/license to practice"*. While the remaining 3 joined Kenya School of TVET for pedagogy training.

3.3.3 Status of Employment

The study sought to find out the nature of employment terms the graduates were exposed to given the deliberate advantage employers have in maintaining casual, piece-rating or temporary employment. Bentolila, Dolado and Jimeno (2019) finds evidence that fixed term contract (FTC) workers are less productive than open ended contract (OEC) workers and that higher FTC rate leads to lower productivity growth. The employed graduates were contracted as follows;

Table 16; Terms of employment

Terms of employment	Female	Frequency	Male	Frequency	Grand Total	Grand Total
Casual	3.90%	7	4.20%	6	8.10%	13
Contract	6.39%	12	5.39%	12	11.78%	24
Part-Time	2.10%	3	2.10%	3	4.20%	6
Permanent	3.50%	5	3.50%	5	7.00%	10
Self-employed	22.21%	7	9.40%	3	31.61%	10
Total	**38.10%**	**34**	**24.59%**	**29**	**62.69%**	**63**
Not Employed	25.87%	37	30.07%	43	55.94%	80

Source, TS 2022/2023

The results of the study indicated that up to 8.10% graduates were employed on casual terms, 11.78% were employed on contract and 4.20% were employed on part-time. In addition, 7.00% of the graduates were employed on permanent terms while 31.61% were engaged on self-employment.

3.3.4 Overall Employability Trend in the last 5 Years

Over the last 5 cycles of the tracer study, KCNP has substantively recorded an improvement in the employability rates. This shows that the efforts to rebrand TVET and improve collaboration with industry has resulted to improved quality and relevance in training as well as creation of opportunities for the graduates. The figure below reveals that there has been steady rise in employability rates over the stated duration.
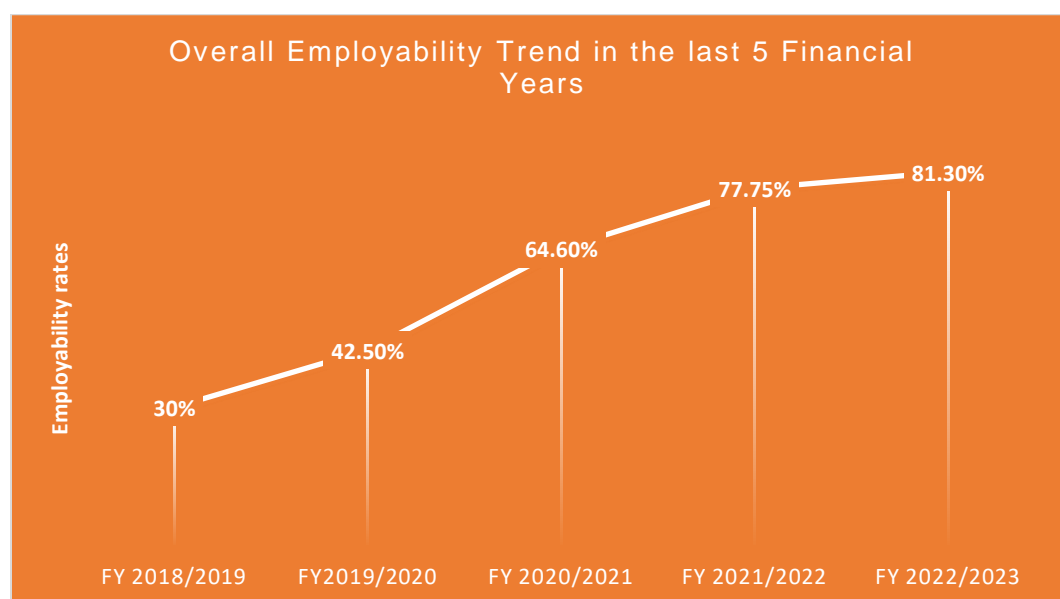
Figure 5; Overall Employability Trend in the last 5 Years
Source, TS 2022/2023

In the FY 2018/2019 when the EASTRIP project was initiated, the tracer study at that time reported an overall employability rate of 30%. What can be clearly seen in this figure is the continual growth of employability rates, signaling increasing number of graduate transition to the industry. The employability rate in the 5th year of project implementation was 81.30% and in contrast to baseline, there has been a +51.30% improvement in the work transition rate over the last 5 years.

3.3.5 Graduate Formal Sector Employment

Formal sectors represent all jobs with specific working hours and regular wages and the worker's job is assured. The workers are employed by the government, state or private sector enterprises, licensed organization that are liable to pay taxes. Policy and development interventions have focused largely on the young people as they move into the workforce. (World Bank, 2017).

Programmes that promote savings and provide access to credit and other financial services are also widely promoted as having an important role to play in supporting self-employment and entrepreneurship (Flynn & Sumberg, 2017). Figure below presents the results obtained from the preliminary analysis of the 63 employed graduates;
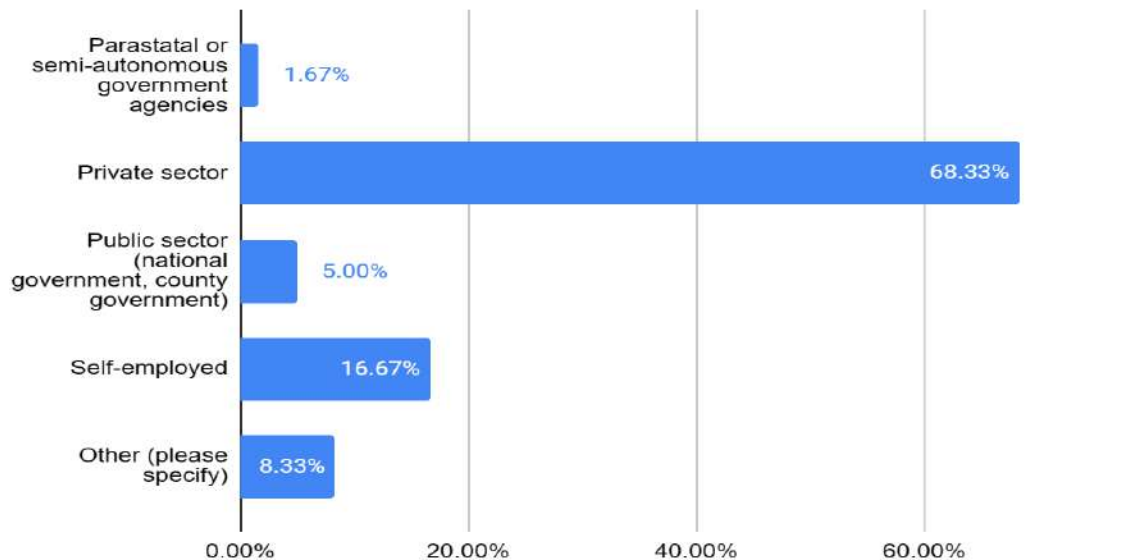
Figure 6; Graduate Formal Sector Employment
Source, TS 2022/2023

The bar graph illustrates the proportion of different categories of graduates as they work in different economic sectors. The results suggest that 68.33% of the graduates were employed in the private sector, being the biggest employer. Under public sector employment, only 5.00% of the graduates secured opportunity while 1.67% were employed under SAGAs otherwise known as the Parastatals. Proportion of the graduates

in self-employment accounted for 16.67% while other unspecified sectors accounted for 8.33% of the graduate responses.

3.3.6 Employment status by level of qualification

The graduates' status of employment was cross-tabulated with area of specialisation. Based on response rate, 21.28 % (N=30) of the respondents graduated with Diploma, 59.57 % (N=84) graduated with Craft qualification while 19.15% (N=27) graduated with Artisan Certificates. Figure below shows the results of the cross-tabulation. Out of a total of 148 respondents, majority of

Table 17; Employment status by level of qualification

Employment Status vs Level of Qualification	Did not specify Qualification	Artisan	Craft Certificate	Diploma	Grand Total
Unemployed	2.80%	8.39%	39.86%	11.89%	62.94%
Employed	0.00%	10.49%	17.48%	9.09%	37.06%
Grand Total	**2.80%**	**18.88%**	**57.34%**	**20.98%**	**100.00%**

Source, TS 2022/2023

On transition rates by level of qualification, Craft graduates had the highest level of employability at 17.48% followed by artisan certificate graduates with 10.49% and finally diploma with 9.09%. There was a clear negative relationship between the incidence of unemployment and the level of one's education, with craft certificate graduates being the most employed. The attractiveness of Craft Certificate holders by virtue of the majority of them being employed on a fulltime basis could indicate that the learning outcomes at this level are what are required by employers. Diploma graduates stay longer at in training to acquire their diploma certificates, which could have further refined their level of skill and competency to the desire of employers.

3.3.7 Considerations in making Career choice

The respondents were asked their considerations in making applications for job placements or reasons why they prefer to stay in particular jobs and not others. Analysis of the responses were presented as shown in the bar graph below;
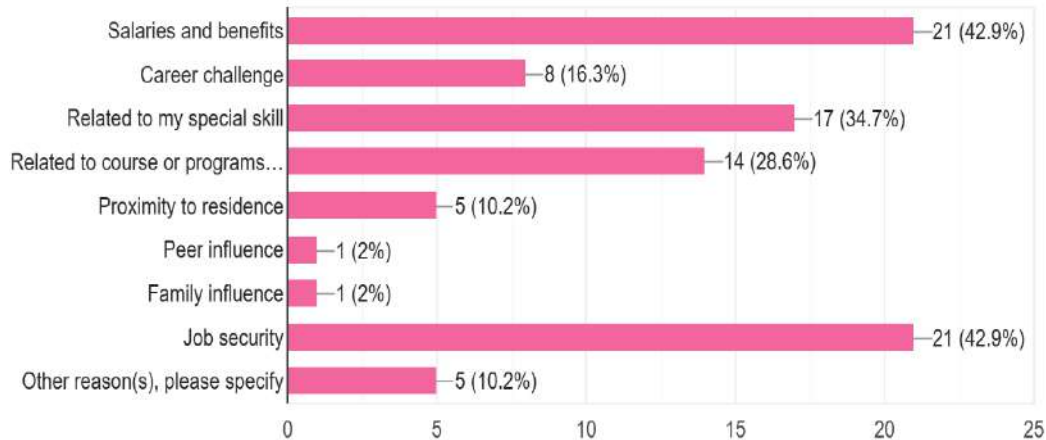
Figure 7; Considerations in making Career choice
Source, TS 2022/2023

Apart from the already discussed results with regard to graduate employability rates, 85.80% of the graduates considered as top priority the job security, salaries and benefits as the driving factor for the jobs they applied for. Further statements provide a good insight into the quality and nature of the employment of KCNP graduates:

i.   34.7% of the graduates who applied for jobs because it related to their skill areas;
ii.   28.6% of the graduates applied for the jobs because it had relationship with their program areas of study;
iii. 16.3% of the graduates wanted a career challenge;
iv.   10.2% considered proximity to their residence.

3.3.8 Wage Employment of KCNP graduates by industry sector

According to ILO, Industry refers to a specific group of companies that operate in a similar business sphere. Essentially, industries are created by breaking down sectors into more defined groupings. Therefore, these companies are divided into more specific groups than sectors. Sector therefore, is one of a few general segments in the economy within which a large group of companies can be categorized. For purposes of this survey, the study focused of four different sectors in an economy:

i.   **Primary Sector:** This sector deals with the extraction and harvesting of natural resources such as agriculture and mining;
ii.   **Secondary Sector:** This sector comprises construction, manufacturing, and processing. Basically, this sector comprises industries that relate to the production of finished goods from raw materials;
iii. **Tertiary Sector:** Retailers, electricity, transportation, communication, entertainment, and financial companies make up this sector. These companies provide services to consumers;

iv. **Quaternary Sector:** The final sector deals with knowledge or intellectual pursuits including research and development (R&D), business, consulting services, and education.

According to KNBS National Economic Survey 2021, Kenya has experienced limited changes in the composition of employment by sector during the last two decades. Wage employment represents the formally employed; it is to a large degree excluding workers from the informal economy, mainly in the agricultural sector. The wage employment sectors according to International Standard Industrial Classification (ISIC) are divided into 22 distinct sectors. Other subdivisions exist within these classifications as well.
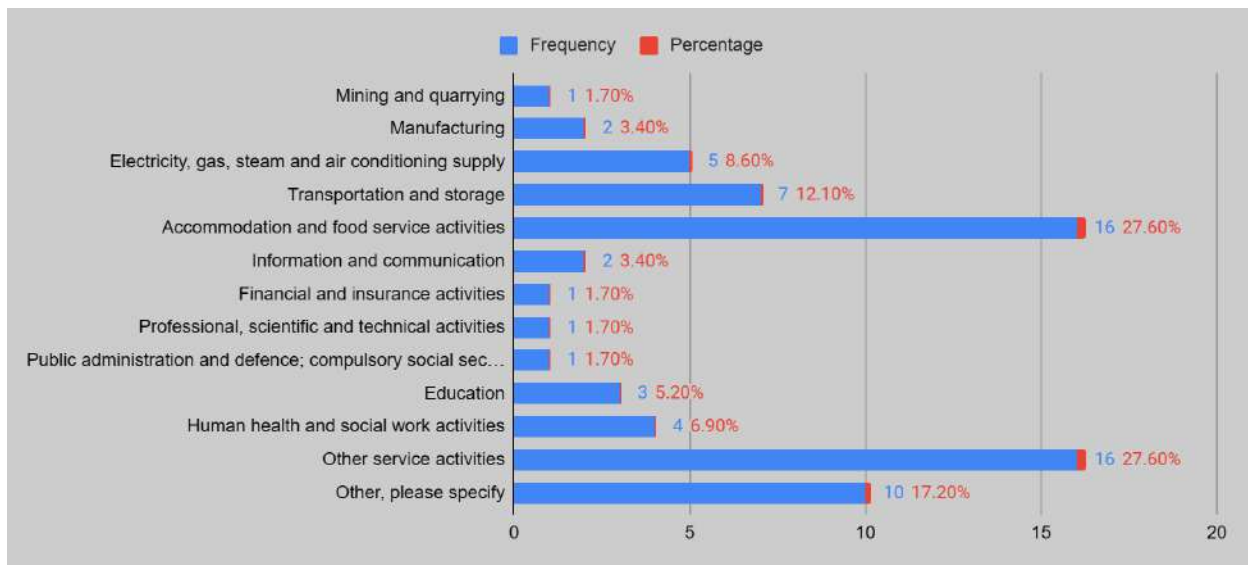
Figure 8; Wage Employment of KCNP graduates by industry sector
Source, TS 2022/2023

For purposes of this survey, the graduates were employed in 11 sectors. The survey findings revealed that accommodation and food services employed 27.60%, (n=16) graduates. 8.60%, (n=5) were employed in the Electricity, Steam, Gas and Air-conditioning sector. 12.10% (n=7) of the graduates were employed in transportation and storage sector. Manufacturing, Mining and Quarrying Sectors employed 5.10%, (n=3) graduates, while human health and social work activities employed 6.90% (n=4). 44.80% of the graduates are employed in other economic and service sectors.

3.3.9 Time lag between graduation and securing employment

The lag time between graduation and employment, can also be informative with regard to the easiness and/or difficulties by graduates in finding employment after graduation. Graduates were asked to state the length of time they have been looking for jobs after graduation.

Table 18; Period taken to secure a job after graduation

S/No.	Duration taken	Frequency, N	Percentage
i.	1 - 3 months	29	50.00%
ii.	3 - 6 months	14	24.14%
iii.	6 - 12 months	11	18.97%
iv.	13 - 24 months	4	6.90%
	Grand Total	58	100.00%

Source, TS 2022/2023

The results are summarised in table above shows that it took 74.14% of the graduates at most 6 months to get their first employment while 18.97% of the graduates took between 6-12 months. Overall, 93.11% of the graduates got their first job within 12 months after graduation. This further supported by that only 6.90% of graduates identified the length of time it takes to get a job as the main difficulty they experienced when job hunting. This could indicate that where jobs are available, the lag time between graduation and employment could be at most a year.

3.3.10 Methods used and easiness of securing employment

The methods used by companies for recruiting and looking for workers could be critical in linking polytechnic to available jobs. Some of the ways that graduates used in securing employment were responding to advertised positions, moving door to door and talking to potential employers or recommendations to employers by relatives and friends. The predominant methods used for securing jobs are presented in the table below;
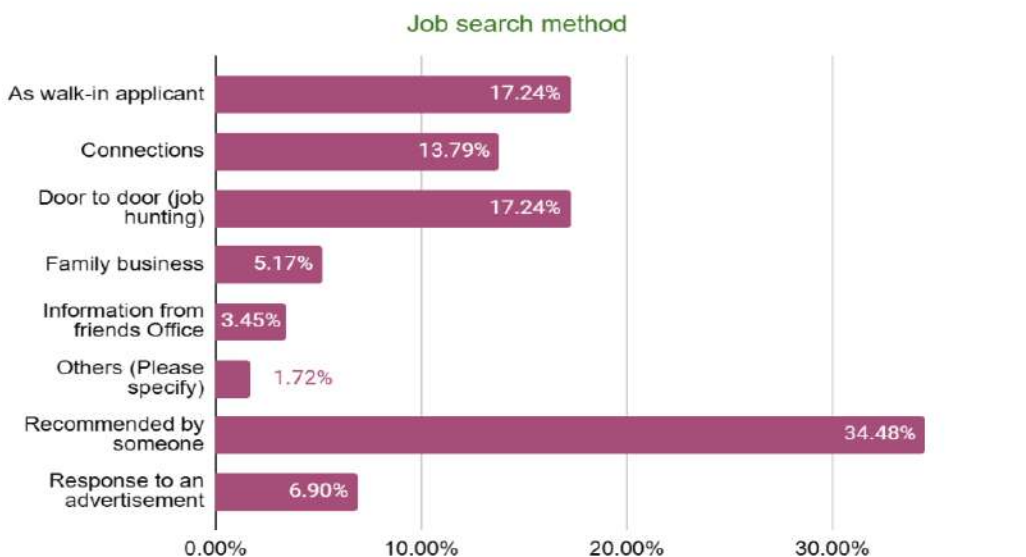
Figure 9; Methods used and easiness of securing employment
Source, TS 2022/2023

The study showed that 34.48% of the graduates were recommended by other people to secure employment, 17.24% secured employment through door to door and walk-in applications. 13.79% of the graduates used their social connections while 6.90% responded to a job advert. The results obtained can potentially reveal a number of crucial issues for review in the implementation of the apprenticeship model and enhancement of industry linkages. Note that there were no referral by the polytechnic Career Services office. It can also reflect that employer may not take the process of apprenticeships seriously enough or do not train students in occupations related to their study.

3.3.11 Employment income of graduates

The income offered by employment for TVET graduates could determine its attractiveness. The figure below shows the distribution of income among the KCNP graduates.
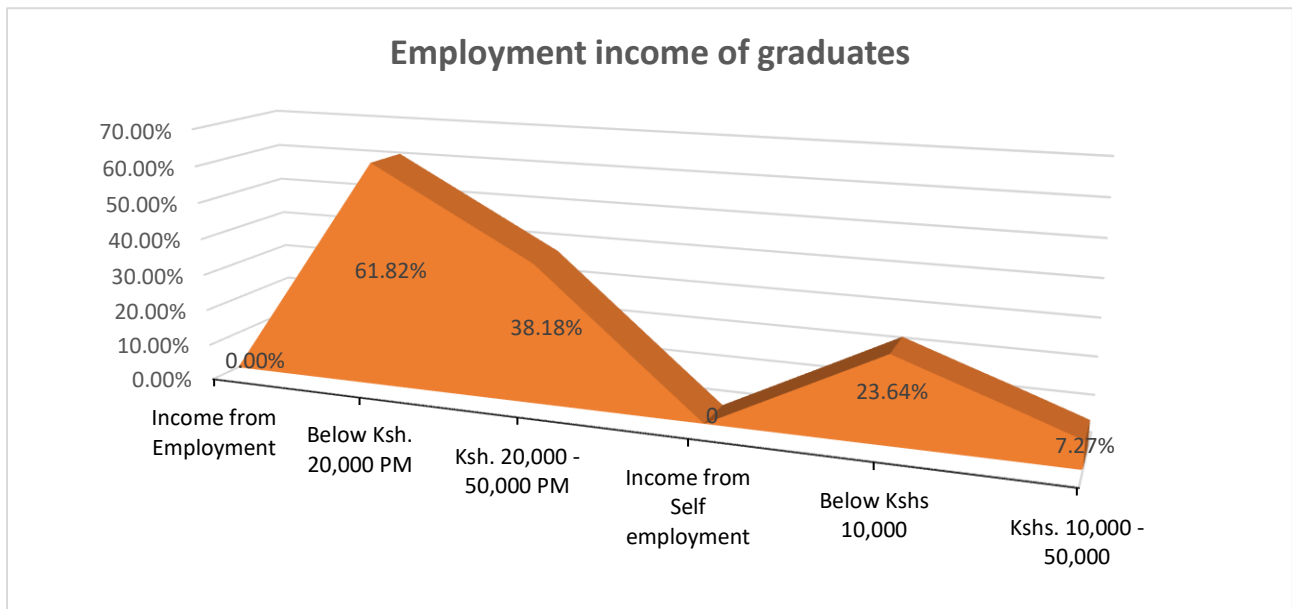
Figure 10; Employment income of graduates
Source, TS 2022/2023

The survey report shows that majority of employed graduates (61.82%) earned below Kshs. 20,000/month, while 38.18% earned between Kshs. 20,000 – 50,000/month. In addition, 23.64% who engaged in self-employment made at least Kshs.10,000/month and 7.27% made between Kshs. 10,000 – 50,000/month. Overall, the earnings were not relatively bad compared to other sectors employing semi-skilled and skilled personnel. The Kenya National Bureau of Statistics (KNBS) data show that the average monthly income for Kenyans rose at the fastest pace in six years to Sh20,123 following recovery from Covid-19 economic hardships in changes that reflect the growing pay inequality.

3.3.12 Employers Contacted

In this study, the graduates were asked to state the number of contacts they made before their first employment and the general difficulties in finding a job. Knowing the number of contacts graduates made before securing employment is important in alerting would-be graduates to start contacts with employers before graduation or to start applying for jobs after graduation (Ama et al. 2007).

Number of contacts made by graduates

Category	Percentage
0 - 5	50.00%
11 - 20	6.90%
6 - 10	20.69%
Employed immediately after attachment	8.62%
Over 20	5.17%
The organisation offered a chance immediately after t…	8.62%
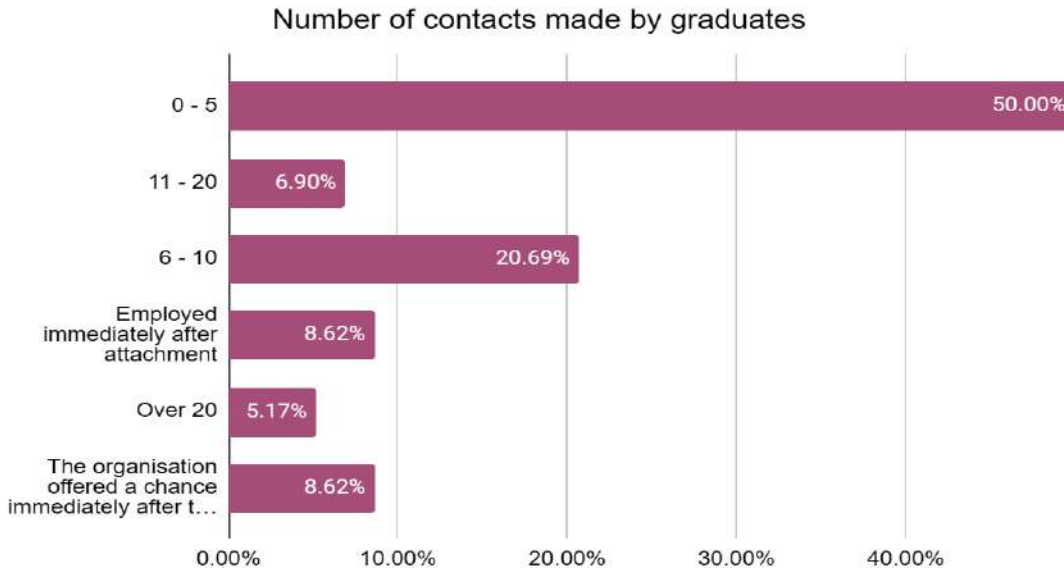
Figure 11; Employers Contacted
Source, TS 2022/2023

Figure above shows the distribution of the number of contacts made by graduates with prospective employers before first employment. Majority of the graduates (50.00%) made between 0-5 contacts before securing a job. This shows that where jobs are available, it did not take a large amount of effort to secure a job for the majority of those employed. However, a significant proportion of graduates (20.69%) made at least 6 – 10 contacts before securing a job. This shows securing a job for KCNP graduates required some significant effort for some of them. This is further supported by that when graduates were asked to pass an opinion on the statement **'It is easy for me to get a job'** as reflected below;
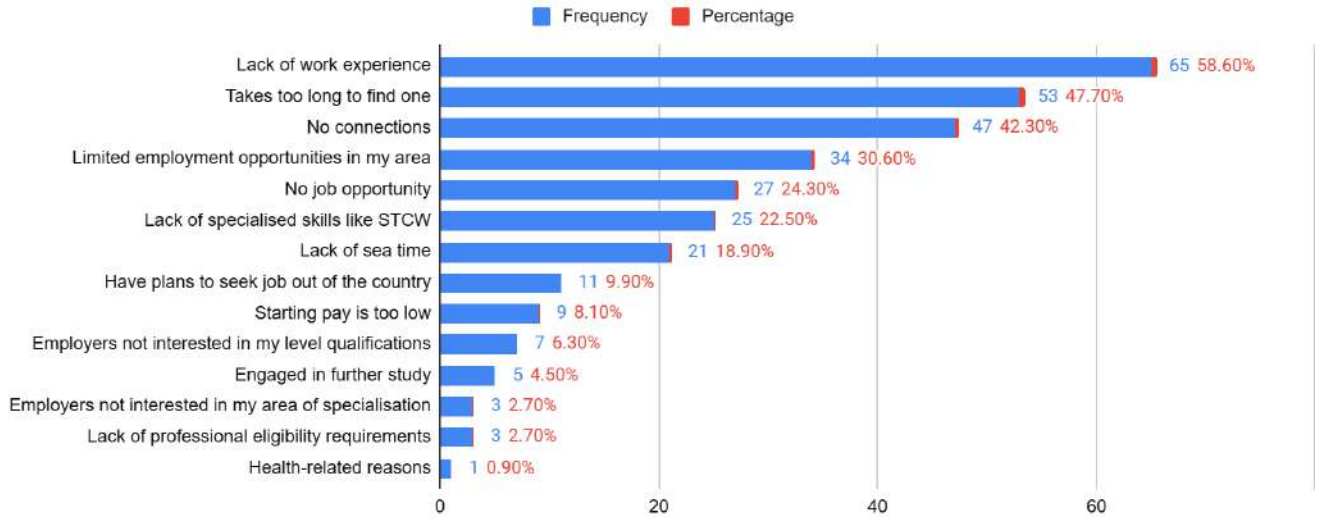
Figure 12; Ease of securing employment
Source, TS 2022/2023

The feedback was analysed and presented in stacks of bar graphs arranged in descending order from the most challenging reason that makes it difficult to secure employment to the least. From the chart, it can be seen that by far the greatest challenge for graduates is lack of experience as selected by 58.60% of the graduates, 47.70% of the graduates said that it takes too long to find job, 42.30% said they had no connections, 22.50% and 18.90% of the graduates said that they lacked specialized skills like STCW and sea time respectively. Other factors are indicated in the bar graph above.

3.3.13 Graduates mobility

This study also intended to establish graduates mobility across area of specialisation, between jobs within the same area of specialisation and reasons for such movement. In doing so, the study established that 62.3% of the graduates were employed in their areas of specialisation in training while 36.2% sought employment in other areas not related to the training they received from the polytechnic. The graduates highlighted the following as the reasons for changing their careers or working in different specialisation.
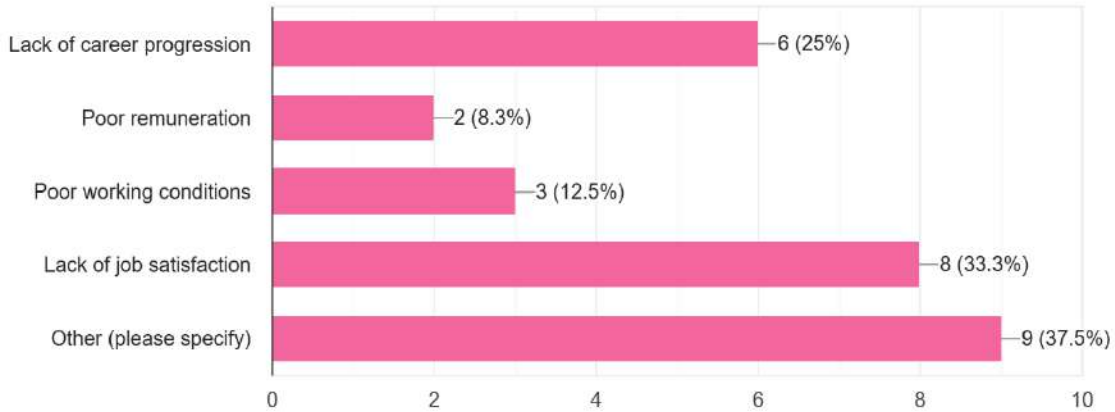
Figure 13; Graduates mobility
Source, TS 2022/2023

The factors that motivated career change included;
  i.   33.3% suggested lack of job satisfaction and other factors not specified;
  ii.   25% suggested lack of career progression;
  iii. 12.5% attributed poor working conditions;
  iv.   8.3% said poor remuneration moved them to take other specialities;
  v.   37.5% suggested other factors beyond their control.

3.4 SKILLS ACQUIRED, QUALITY AND RELEVANCE OF TRAINING

The Kenya Coast National Polytechnic was established as per the Polytechnic Order of 2016 as published in the Legal Notice No. 88 and in conformity with the TVET Act No. 29 of 2013. The activities of the Polytechnic are regulated by TVETA, who promote access and relevance of training programmes within the framework of the overall national socio-economic development plans and policies as well as assurance of quality and relevance in programmes of training. Through this, the Polytechnic ensures that the institutional priority areas, policies and strategies are in line with National Priorities and aligned to the Big Four Agenda, Vision 2030, Mitigation of COVID 19 pandemic and SDGs.

Since 2016, The Government through the Kenya Universities and Colleges Central Placement Service (KUCCPS) places students to various TVET institutions across the country. The Kenyan Constitution, 2010, requires all public institutions to ensure equity in terms of gender, Persons with Disability, regional distribution among others.

The Sessional Paper No. 14 of 2012, articulates the need to strengthen and grow academic programmes that support the national priority and strategic areas. There have

been efforts to improve the quality and relevance of the programmes on offer in TVET training. The Kenyan Government in the Vision 2030 has identified the need for manpower in Science, Technology Engineering and Mathematics (STEM) programmes in order to achieve its development goals.

In response to the Government's effort to increase enrolment in TVET institutions, the Government of Kenya (at the national level) committed to human resources through recruitment and replacement of trainers to provide relevant and adequate skills and competencies in strategic disciplines by the year 2020 (Republic of Kenya, 2006). Apart from recruiting teaching staff, the Government has also expanded training of TVET trainers through KSTVET as an essential aspect of improving the quality of teaching skills and responding to trained teacher demand in Kenya.

3.4.1 Relevance of the Acquired competencies at KCNP

Respondents were asked to assess the relevance and adequacy of the skills acquired during training in enabling them to perform the tasks in their current job. Figure below shows an assessment of the relevant skills acquired and the ability of the graduates to perform tasks in their current job.
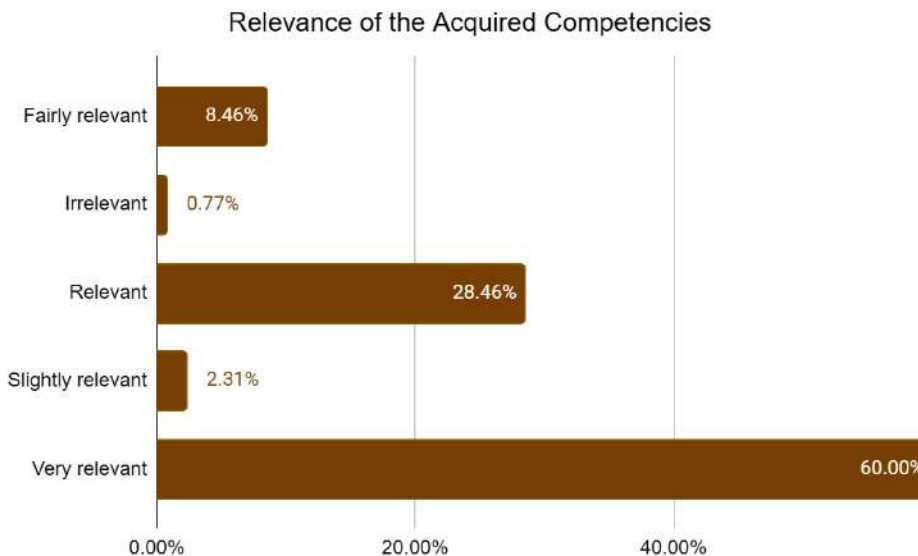
Figure 14; Relevance of the Acquired competencies at KCNP
Source, TS 2022/2023

The majority of respondents (60.00%) were of the view that the training they received at the polytechnic was very relevant; while only 0.77% said they were not relevant. This is further corroborated by the type of jobs graduates apply, 98.2.8% of the graduates apply jobs related to their area of training.
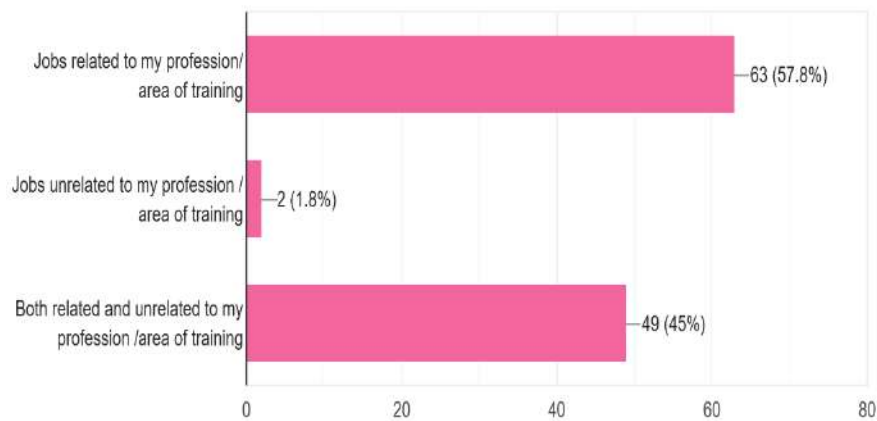
Figure 15; Jobs graduates apply
Source, TS 2022/2023

It was further noted that majority of respondents (62.3%) could easily change jobs within their area of specialization. This could indicate that they had acquired adequate skills that are in demand within their areas of specialization.

However, the changing of jobs within their area of specialization cannot be only attributed to skills acquired at the polytechnic. There is a possibility that some skills that were acquired on the job improved the competency of graduates.

3.5 ADEQUACY OF KCNP TRAINING AND WORK COMPETENCY

The rapid development era requires TVET graduates to have high capabilities and competitiveness in an effort to find work and maintain jobs in the global industrial market. In this regard, each graduate is expected to have **work readiness** which includes readiness in terms of knowledge, skills, attitudes and competences.

African Union agenda has envisioned the need to catalyze education and skills revolution and actively promote science, technology, research and innovation, to build knowledge, human resources, capabilities and skills for the African century. To achieve this, it has earmarked strengthening technical and vocational education and training through scaled up investments, establishment of a pool of high-quality Technical and Vocational Education and Training (TVET) centres across Africa.

The adequacy of the training on work competency and graduate employability was assessed on a 5 likert scale under 6 parameters as to whether the training adequately prepared graduates for work, employer satisfaction, ease of securing employment, ability for self-employment, ease of change of employment and effectiveness at workplace. The parameters were analysed and illustrated as shown below;

Table 19; Adequacy of KCNP Training, Graduate Employability and ability to perform at work

Adequacy of KCNP Training, Graduate Employability and ability to perform at work	Strongly Agree	Agree	Not Applicable	Disagree	Strongly Disagree
i. My training adequately prepared me for work	39.66%	39.66%	3.45%	7.76%	9.48%
ii. My employer/former employer is/was satisfied with my level of knowledge and skill	32.00%	40.00%	13.00%	5.00%	10.00%
iii. It was/is easy for me to get a job	13.86%	14.85%	6.93%	36.63%	27.72%
iv. I can easily be trained to improve my level of skill	56.07%	31.78%	2.80%	1.87%	7.48%
v. I find myself to be very effective in my current/previous job	39.78%	37.63%	9.68%	5.38%	7.53%
vi. I can easily change employers within my area of specialization	24.47%	36.17%	12.77%	10.64%	15.96%
vii. My training adequately prepared me for self-employment	39.81%	35.92%	8.74%	5.83%	9.71%

Source, TS 2022/2023

In the context of this tracer study survey, 39.66% strongly agreed that the training they undertook at KCNP adequately prepared them well for the world of work. 56.07% also strongly agreed that they could easily be trained to improve their level of skill at work and this anchors well with the CBET curriculum delivery objectives. In addition, 36.17% agreed that the training they undertook at KCNP could easily enable them to change employers within their areas of specialization. 39.78% of the graduates also strongly agreed that they found themselves to be very effective in their current or previous jobs. Furthermore, 39.81% strongly agreed that the entrepreneurial skills imparted adequately prepared them for self-employment.

3.5.1 Employer Considerations

The graduands were asked on what they considered important as they lodge their job applications. The study related quality and relevance of training to the expected outcome of the industry. Under EASTRIP PDO 2, the project aims at Improving quality and relevance of TVET programs through annual tracer study for our graduates and built capacity of trainers for all other departments in the polytechnic to continue conducting tracer study. These considerations were presented as follows;

Table 20; Employer Considerations

Employer Consideration	Very Important	Somewhat important	Don't know	Not at all important	Not very important
Matching professional qualification	62.50%	18.75%	2.08%	11.46%	5.21%
Reputation of TVET college that I graduated from	65.52%	12.64%	4.60%	5.75%	11.49%
The grades in my diploma	59.04%	14.46%	3.61%	9.64%	13.25%
Deficit of employees in my profession	37.04%	29.63%	11.11%	11.11%	11.11%
Social and individual competencies	63.41%	14.63%	8.54%	6.10%	7.32%
Relations/Connections	62.03%	16.46%	8.86%	6.33%	6.33%

Source, TS 2022/2023

The graduates considered the following factors to be **Very Important** when applying for employment;

- i. Reputation of the TVET College, 65.52%
- ii. Matching study program with professional qualification, 62.50%
- i. Basic skills on social and individual competencies, 63.41%
- ii. Relations and connections, 62.03%
- iii. Better grades in the chosen area of study, 59.04%

The graduates also considered the following factors to be **Somewhat Important** when applying for employment;

- i. Deficit of employees in their profession, 29.63%

Other factors are illustrated in the bar graph above.

3.5.2 Training areas for improvement

The dramatic growth in student numbers has been propped by the government policy of absorbing as many students as possible that meet the minimum TVET admissions qualification. To support this growth, the government has periodically developed various legal frameworks and strategies to ensure that it delivers the envisioned quality and relevant education required for socio-economic and other forms of development in the country. Among some of the legal frameworks and policy documents that have greatly influenced the shaping of the TVET education in Kenya are; the sessional paper no. 14 of 2012, the TVET Act No. 29 of 2013 and TVETA Quality Assurance Framework.

The graduates were expected to give their response with regards to the level of satisfaction on key areas of knowledge dissemination. The training areas for improvement were highlighted in the table below;

Table 21; Training areas for improvement

Area for improvement	Needs 0% Improvement	Needs 25% Improvement	Needs 50% Improvement	Needs 75% Improvement	Needs 100% improvement
Theory	6.90%	16.09%	12.64%	29.89%	34.48%
Training in practical skills	4.39%	8.77%	6.14%	17.54%	63.16%
Industrial attachments	2.83%	7.55%	6.60%	24.53%	58.49%
Course content	10.34%	11.49%	11.49%	24.14%	42.53%
Instructional manuals	4.60%	17.24%	10.34%	20.69%	32.18%
Textbooks	5.95%	13.10%	16.67%	26.19%	38.10%
Workshop equipment	4.17%	8.33%	5.21%	14.58%	67.71%
Laboratory work	11.27%	11.27%	7.04%	23.94%	46.48%
Teaching and delivery methods	6.98%	17.44%	9.30%	31.40%	34.88%
Instructor's knowledge of theory	11.84%	9.21%	15.79%	27.63%	35.53%
Instructor's practical skills	12.05%	6.02%	14.46%	16.87%	50.60%
Increase duration of training	19.23%	14.10%	11.54%	23.08%	32.05%
Decrease duration of training	37.29%	10.17%	11.86%	25.42%	15.25%

Source, TS 2022/2023

Significant Proportion of training that deserves 100% Improvement

i. 67.71% of the graduates feel that workshop equipment need 100% improvement;
ii. 63.16% of the graduates feel that training in practical skills 100% improvement;
iii. 58.49% of the graduates suggested that industrial attachments needs 100% improvement;
iv. 50.60% of the graduates feel that instructors practical knowledge needs 100% improvement;
v. 42.53% of the graduates recommended that improvement of the course content knowledge needs 100% improvement;

Significant Proportion of training that deserves 75% Improvement

i. 31.40% of the graduates feel that teaching and delivery methods need 75% improvement;
ii. 26.19% of the graduates feel that provision of textbooks need 75% improvement;
iii. 23.94% feel that equipping trainers' laboratory skills needs 75% improvement.

Significant Proportion of training that deserves 0% Improvement (no improvement)

i.   37.29% of the graduates feel decreasing training duration needs no improvement;

3.5.3 Respondent statements regarding the changes required to improve quality, relevance, adequacy and effectiveness in training the EASTRIP priority programs;

1.   *"I would like for Marine Engineering student to be considered and given an upper hand. They should have their own workshop fully equipped with marine equipment if possible a boat for their own studies just like automotive students have their own vehicles for learning this will help in avoiding the backlash we receive from employers during attachment period coz most of the times we aren't able to handle practical work properly due to lack of equipment in school. Lastly Marine students need exposure this can be made possible by organizing learning tours to Marine organizations at least this will help them get conversant with the arrangements of the ships. The school should also find a way of including STCW as part of training for marine students' because acquiring STCW after the completion of the studies is proving to be tough".*

2.
     "Marine engineering students should be highly considered and should have their own workshop fully equipped with equipment and accessories for practical..... If possible they should have a boat in school for studies just like automotive engineering students have cars for practical........ But in case the school can't afford a boat they should be taken for studies and tours at Marine organizations to enable them get conversant with ship parts to avoid being ridiculed during attachment for not know the parts......... The library should also be equipped with marine engineering books coz luck of books forces us to depend on the internet and at times we end up reading contents which are out of syllabus".

3.   *"Training which is hands on especially for the Shipping and Management course not mere studying things or theory work in class with the availability of a port to get attached and be practical as well as system guidance for instance on computers with regard to port operations, movement of ship routes and transporting of goods and services."*

GRADUATE DATABASE

4.1 Framework for graduate database

Databases for graduates are vital for providing the linkages between training and skills required by the industry. A Database Management System is a software program that enables the creation and management of databases. For purposes of this study, the graduate databases were drawn from the following sources;

i. Graduate excel spreadsheets downloaded from the polytechnic ABN MIS system. Data retrieved from the system shows the polytechnic has over 20,000 admissions since 2010;

ii. Data from the previous graduation lists obtained from the departments and registrar office;

iii. TVET Versatile database Tvet-tracer | TVET Versatile Database System (education.go.ke) provided by the Ministry of Education. The web based system that links graduates with available opportunities once their profile is uploaded. The graduate can as well edit to improve their profiles.

4.2 Data acquisition

The main data source for graduates input into the database should be academic departments. All departments should submit upon completion of studies graduate names and contacts in a format provided to a central repository for upload into the Tvet-tracer | TVET Versatile Database System (education.go.ke). KCNP should also flight on a bi-annual basis a data capture instrument on the website that would collect information on alumni to update the graduate database.

The figure below provides a framework and basis for data capture for KCNP graduates and its possible use.

Figure 16; TVET Versatile Database Framework

4.3 TVD Database management

[Tvet-tracer | TVET Versatile Database System (education.go.ke)](education.go.ke) is a Server database that offer organization the ability to manage large amounts of data efficiently and in a manner that enables many users to access and update the data simultaneously. The benefits offered by this server database are flexibility, powerful performance and scalability.

The TVET Versatile Database (TVD) database system was a support to technical and vocational education and training (TVET) for relevant skills development project (TVET phase II project) launched in January 2022.

The Institution applies for an account which is approved by the ministry. After the approval, the institution can log in and upload graduates into the institution database, submit graduates for approval at the Ministry level and view graduate's employment and academic records once the graduates have logged in and updated their profiles.

The Employer applies for an account which and logs in. The employer must then register a company and approved by the Ministry before he can be able to post jobs, short list applicants, view applicants employment and academic history

The Graduates are uploaded by the Institution and their accounts approved by the ministry. After the approval, a Graduate can log in and update his profile, view job adverts, apply for jobs and view communications.

The Ministry admin is the super admin of the entire system. The Ministry admin has the rights to approve account applications (Institutions, Employers and Graduates). Besides, the Ministry may also post messages on any relevant topic that interests the Institutions, Employers and Graduates.

4.3.1 Flow chart summarizing the TVD system application
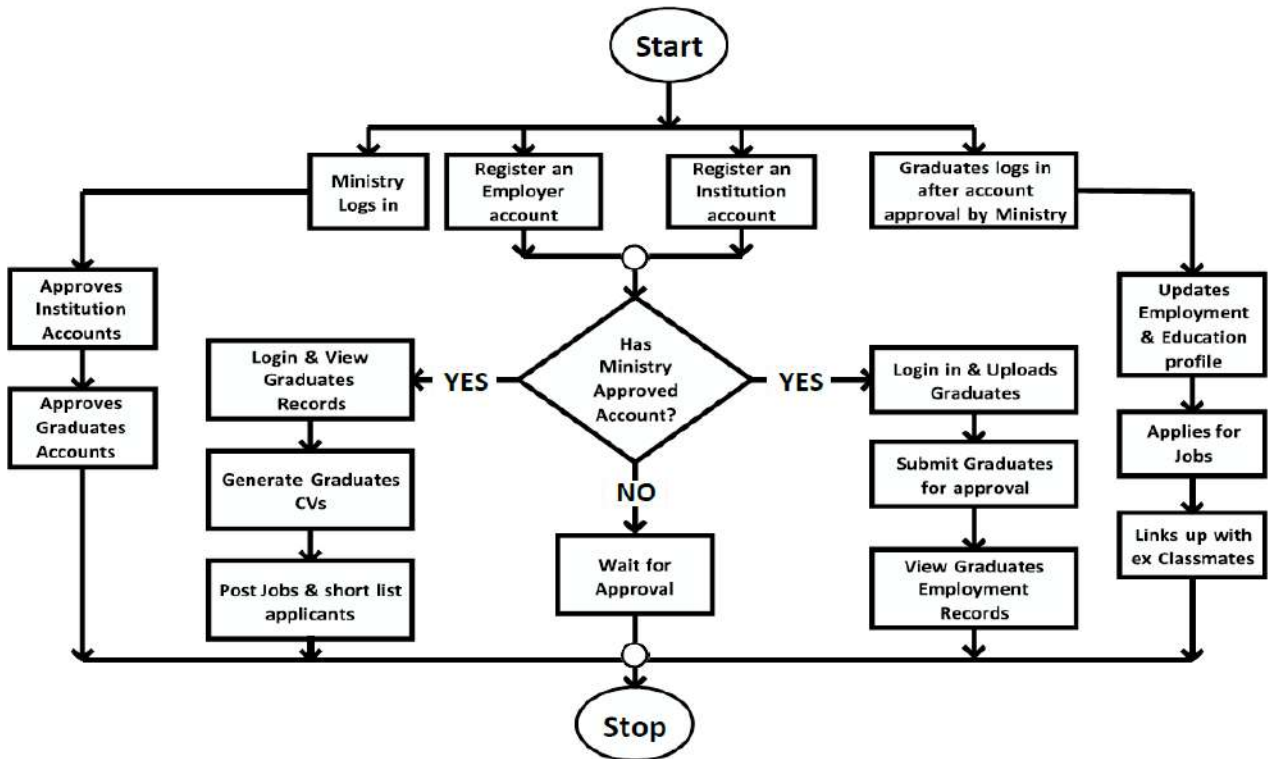
Figure 17; Flow chart summarizing the TVD system application
Source; TVD User Manual 2022

4.4 TVD Data capture for KCNP

Data available in the KCNP ABN MIS system shows that since the year 2010, the polytechnic has made considerable number of admissions beyond 20,000 students. Considering student completion rate of 84.2% as indicated in the graduation trends for

the past four graduations, the database of alumni can be appropriated at a lower limit of 16840.

In this survey, at least 472 graduates have been updated in the Tvet-tracer | TVET Versatile Database System (education.go.ke). Out of this, 460 graduates are awaiting ministry approval to enable them enjoy the online job search and matching of skills through the system, 11 graduates have been approved and are active in the versatile system. At least 306 programs, both long term and short-term courses have also been uploaded in the system.

Figure 18; KCNP TVD Dashboard capture

This TVET Versatile database system will be useful for:
  i.   Recording personal details of graduates and employment status;
  ii.   Retrieval for analysis and generating reports for planning and information for various stakeholders;
  iii. Tracing graduates and assessment of the impact of training;
  iv.   Serving as a point of contact between graduates and employers;
  v.   Graduates will be able to receive updates on employment opportunities available;
  vi.   Graduates will also post their CVs for potential employers and;
  vii. Create a virtual environment to link up graduates with their former classmates.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter assessed the outcome of the study based on the four main objectives of the survey. This is outlined and discussed as shown below;

To assess attitude of the KCNP graduates regarding job quality, relevance, and effectiveness of their training in securing employment;

The study findings revealed that the **overall employability rate was 81.30%**, N = 121, broken down as either employed under formal employment terms which accounted for 31.08% of the graduates, self-employed graduates translating to 31.61% of the graduates or unemployed but pursuing further studies comprised 18.30% of the graduates. Graduates pursuing further studies are considered employed by World Bank classification of employment statuses. The high employment rate among the areas of specialities could be indicative of market driven courses offered by the polytechnic.

The "situation of the traced KCNP graduates who undertook the EASTRIP priority programs in the first six months after graduating" from the polytechnic revealed that the ***Overall employability rate six months after completion of study was 71.76%*** broken down as follows; 28.67 per cent were "*Employed*" within the first six months after graduating. 28.61 per cent were "*Self-Employed*". 14.41 per cent were pursuing "*Further Academic Education*" in vocational centres, undertaking sea time and pursuing degree programs. Up to about 3 per cent pursued "*internship*" programs.

In regards to **Female employability rates;** the *proportion of female graduates employed 6 months after study completion in the current study was **72.99%*** distributed as 42.25% in formal employment, 20.31% of the graduates had started their own means of self-employment and 10.43% of the female graduates were pursuing further education. This resulted to an overall female employability rate of 72.99% six months of study completion.

Based on participation in Further Education that results to higher qualification; the results of the survey revealed that 18.61 percent (26 graduates) had *"Participated in Further Training".* 78.59 percent (113 graduates) *"did not participated in further training".* 2.8 percent (4 graduates) "*did not disclosed if they had (or had not) participated in further training"* after graduation. The 26 graduates who participated in further training were broken down as follows; 1 graduate participated in *"Further academic education".* 8 graduates participated in *"Further vocational education/training".* In addition 11

graduates participated in *"Further professional certification/license to practice"*. While the remaining 3 joined Kenya School of TVET for pedagogy training.

The nature wage employment the graduates secured; the results of the study indicated that up to 8.10% graduates were employed on casual terms, 11.78% were employed on contract and 4.20% were employed on part-time. In addition, 7.00% of the graduates were employed on permanent terms while 31.61% were engaged on self-employment.

On transition rates by level of qualification; Craft graduates had the highest level of employability at 17.48% followed by artisan certificate graduates with 10.49% and finally diploma with 9.09%. There was a clear negative relationship between the incidence of unemployment and the level of one's education, with craft certificate graduates being the most employed. The attractiveness of Craft Certificate holders by virtue of the majority of them being employed on a fulltime basis could indicate that the learning outcomes at this level are what are required by employers. Diploma graduates stay longer at in training to acquire their diploma certificates, which could have further refined their level of skill and competency to the desire of employers.

To examine the attitude of the KCNP graduates regarding business quality, relevance, and effectiveness of their training in supporting self-employment;

In terms of employment classification by economic sectors; the results suggested that 68.33% of the graduates were employed in the private sector, being the biggest employer. Under public sector employment, only 5.00% of the graduates secured opportunity while 1.67% were employed under SAGAs otherwise known as the Parastatals. Proportion of the graduates in self-employment accounted for 16.67% while other unspecified sectors accounted for 8.33% of the graduate responses.

Methods used and easiness of securing employment; The methods used by companies for recruiting and looking for workers could be critical in linking polytechnic to available jobs. The study showed that 34.48% of the graduates were recommended by other people to secure employment, 17.24% secured employment through door to door and walk-in applications. 13.79% of the graduates used their social connections while 6.90% responded to a job advert. The results obtained can potentially reveal a number of crucial issues for review in the implementation of the apprenticeship model and enhancement of industry linkages. Note that there were no referral by the polytechnic Career Services office. It can also reflect that employer may not take the process of

apprenticeships seriously enough or do not train students in occupations related to their study.

Employers Contacted; in this study, the graduates were asked to state the number of contacts they made before their first employment and the general difficulties in finding a job. Majority of the graduates (50.00%) made between 0-5 contacts before securing a job. This shows that where jobs are available, it did not take a large amount of effort to secure a job for the majority of those employed. However, a significant proportion of graduates (20.69%) made at least 6 – 10 contacts before securing a job or business.

Graduates mobility; this study also intended to establish graduates mobility across area of specialisation, between jobs within the same area of specialisation and reasons for such movement. In doing so, the study established that 62.3% of the graduates were employed in their areas of specialisation in training while 36.2% sought employment in other areas not related to the training they received from the polytechnic. It was further noted that majority of respondents (62.3%) could easily change jobs within their areas of specialization. This indicated that they had acquired adequate skills that are in demand within their areas of specialization

Employment income of graduates; the income offered by employment for TVET graduates could determine its attractiveness. The survey report indicated that majority of employed graduates (61.82%) earned below Kshs. 20,000/month, while 38.18% earned between Kshs. 20,000 – 50,000/month. In addition, 23.64% who engaged in self-employment made at least Kshs.10,000/month and 7.27% made between Kshs. 10,000 – 50,000/month. Overall, the earnings were not relatively bad compared to other sectors employing semi-skilled and skilled personnel. The Kenya National Bureau of Statistics (KNBS) data show that the average monthly income for Kenyans rose at the fastest pace in six years to Sh20,123 following recovery from Covid-19 economic hardships in changes that reflect the growing pay inequality.

To assess the adequacy of KCNP training to enable employability in the job market;

Time lag between graduation and securing employment; the lag time between graduation and employment, can also be informative with regard to the easiness and/or difficulties by graduates in finding employment after graduation. Graduates were asked to state the length of time they have been looking for jobs after graduation. The results indicated that 74.14% of the graduates took at most 6 months to get their first employment while 18.97% of

the graduates took between 6-12 months. Overall, 93.11% of the graduates got their first job within 12 months after graduation. This further supported by that only 6.90% of graduates identified the length of time it takes to get a job as the main difficulty they experienced when job hunting. This could indicate that where jobs are available, the lag time between graduation and employment could be at most a year.

Relevance of the acquired competencies at KCNP; majority of the respondents (60.00%) were of the view that the training they received at the polytechnic was very relevant; while only 0.77% said they were not relevant. This is further corroborated by the type of jobs graduates apply, 98.2.8% of the graduates apply jobs related to their area of training.

Adequacy of KCNP Training and Work Competency; In the context of this tracer study survey, 39.66% strongly agreed that the training they undertook at KCNP adequately prepared them well for the world of work. 56.07% also strongly agreed that they could easily be trained to improve their level of skill at work and this anchors well with the CBET curriculum delivery objectives. In addition, 36.17% agreed that the training they undertook at KCNP could easily enable them to change employers within their areas of specialization. 39.78% of the graduates also strongly agreed that they found themselves to be very effective in their current or previous jobs. Furthermore, 39.81% strongly agreed that the entrepreneurial skills imparted adequately prepared them for self-employment.

Employer Considerations; the graduands were asked on what they considered important as they lodge their job applications. The study related quality and relevance of training to the expected outcome of the industry. The graduates considered the following factors to be **Very Important** when applying for employment;

      a. Reputation of the TVET College, 65.52%
      b. Matching study program with professional qualification, 62.50%
      c. Basic skills on social and individual competencies, 63.41%
      d. Relations and connections, 62.03%
      e. Better grades in the chosen area of study, 59.04%

The graduates also considered the following factors to be **Somewhat Important** when applying for employment;

      a. Deficit of employees in their profession, 29.63%

To develop and update KCNP graduate database for future tracer studies.

TVD Data capture for KCNP Alumni; Data available in the KCNP ABN MIS system shows that since the year 2010, the polytechnic has made considerable number of admissions beyond 20,000 students. Considering student completion rate of 84.2% as indicated in the graduation trends for the past four graduations, the database of alumni can be appropriated at a lower limit of 16840.

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This TVET Versatile database system will be useful for:
  i.   Recording personal details of graduates and employment status;
  ii. Retrieval for analysis and generating reports for planning and information for various stakeholders;
  iii. Tracing graduates and assessment of the impact of training;
  iv. Serving as a point of contact between graduates and employers;
  v.   Graduates will be able to receive updates on employment opportunities available;
  vi. Graduates will also post their CVs for potential employers and;
  vii. Create a virtual environment to link up graduates with their former classmates.

Recommendations

a. Maritime specialisations offered by KCNP. The polytechnic needs to;
  i. Introduce IMO model courses.
  ii. Implement the reports of the benchmarking visits to international/world-class education & Training organisations conducted during the formative stages of the EASTRIP project.
b. Recruitment of appropriately qualified staff (trainers and workshop technicians). The polytechnic needs to;
  i. Build the capacity of the available KCNP staff (trainers and workshop technicians). This may include STCW training, Training of Trainers (ToT) and Health, Safety and Environment (HSE) Management courses.

      ii.   Bond the KCNP staff (instructors and workshop attendants) who participated in staff attachments, exchange programs and long term trainings for a certain duration of time.

      iii.   Obtain partnerships and collaborations with employers, so as to guarantee industrial exchange and training for program staff.

c. Educational attainment. The polytechnic needs to;

      i.   Ensure that the KCNP staff (instructors and workshop attendants) have at least a first degree and above training in the relevant specialties.

      ii.   Introduce Maritime Conversion programs for staff with diploma and degrees from other fields to enable them get necessary Certificates of Competencies to train MET programs.

      iii.   Send the KCNP staff (instructors and workshop attendants) to short training courses in the related field in order to keep up to date with latest development in the industry to improve their teaching skills.

      iv.   The pedagogy training and relevant (such as, maritime) advance training should be conditional.

      v.   Blend the training at the polytechnic by inviting and allocating units to teaching supervisors (such as, academic experts or active officers of merchant ships) to gain from their experience.

d. Work experience at sea. The polytechnic needs to;

      i.   Ensure that KCNP program staff handling maritime related programs (such as cruise animation, marine welding, Artisan in Seafarers and Craft Certificate in Marine Engineering) have at least 3 months experience at sea*.

e. Human resource recruitment challenges. The polytechnic needs to;

      i.   Use the "Industry Advisory Board to get referrals on suitable human resource persons."

      ii.   Enhance "linkages with relevant (such as, maritime) stakeholders and associations to get relevant human resource persons."

f. Practical training challenges experienced by KCNP. The polytechnic needs to;

      i.   Obtain partnerships and collaborations with relevant (such as, maritime) stakeholders.

      ii.   Enter into partnerships and collaborations with other local and international education and training organisations.

      iii.   Make necessary installations to utilize the simulations already procured for all training needs.

g. Collaborations and Partnerships

Training (Theory and Practical). The polytechnic needs to;

      i.   Enter into collaborations and partnerships with relevant (such as, maritime) stakeholders who can participate in Training (Theory and Practical) by taking up part-time lecturer roles at KCNP and sharing their equipment and facilities.

    ii.   Enter into collaborations and partnerships with relevant (such as, maritime) stakeholders who will allow KCNP students to access their facilities during field visits.

h. Industrial exchange for program staff. The polytechnic needs to;
    i.   Enter into collaborations and partnerships with maritime stakeholders who are willing to take staff for industrial exchange.
    ii.   Work closely with government agencies who are supporting industrial attachment by linking the KCNP with employers.

i. Internship programs. The polytechnic needs to;
    i.   Enter into collaborations and partnerships with employers who are willing to recruit student under their internship programs.
    ii.   Work closely with Government agencies who are supporting internship programs by linking graduates of relevant KCNP programs with employers.

j. Access to equipment and simulators. The polytechnic needs to;
    i.   Enter into collaborations and partnerships with employers who are willing to grant access to their equipment and simulators.
    ii.   Work closely with the government agencies who are available to offer guidance to ensure the simulators comply with the required standards and the simulators instructors are duly qualified."

k. Onboard training. The polytechnic needs to;
    i.   Enter into collaborations and partnerships with employers who are willing to grant access to their ships and vessels for onboard training.

Training areas for improvement

Significant Proportion of training that deserves 100% Improvement
    i.   67.71% of the graduates feel that workshop equipment need 100% improvement;
    ii.   63.16% of the graduates feel that training in practical skills 100% improvement;
    iii.   58.49% of the graduates suggested that industrial attachments needs 100% improvement;
    iv.   50.60% of the graduates feel that instructors practical knowledge needs 100% improvement;

Significant Proportion of training that deserves 75% Improvement
    i.   31.40% of the graduates feel that teaching and delivery methods need 75% improvement;
    ii.   26.19% of the graduates feel that provision of textbooks need 75% improvement;
    iii.   23.94% feel that equipping trainers' laboratory skills needs 75% improvement.

Significant Proportion of training that deserves 0% Improvement (no improvement)
    i.   37.29% of the graduates feel decreasing training duration needs no improvement;

Changes recommended by graduates for KCNP study/programme

Area of need	Comments and Suggestions from the Graduates
Infrastructure, Equipment and Necessary Expansion needs	i. Additional workshops for practical training; ii. Introduce a Marine workshop for marine engineering training; iii. Extension of the Library to accommodate more trainees; iv. Need to add more classroom spaces and seats; v. Addition of Kitchen equipment for hospitality students; vi. Introduction of Marine Engineering Simulators;
Training and Curriculum Delivery needs	i. Addition of qualified teaching staff; ii. Allocation of more practice sessions; iii. Enough practical, Materials and equipment; iv. Find master mariners to teach marine engineering not mechanical engineering teachers; v. I feel there should some practical training or industrial training offered to the students to better their skills; vi. Improve on technical skills; vii. Improve teaching method and find a way of students access shipyards for practical, the bus will have something to do; viii. Improvement in practical training facilities; ix. Lecturers should always avail themselves in classes. x. Students should be committed in their studies xi. Syllabus coverage is often disregarded but crucial that. A marathon way of covering class lessons was not good so I recommend better class timetable management; xii. The lectures teaching EDD should be committed to their work, many students fail because of the lectures not attending the lessons.
Curriculum Development Needs	i. Introduce STCW studies ii. Introduce diploma in marine engineering for progression iii. We need advancement in some courses like specially in cosmetology in diploma iv. Offer short courses mostly in field of cosmetology and also introduce diploma v. Offer higher diploma because no one is going to give us a job with just a certificate
Management and Leadership	i. Advice the security staff not to overuse their power ii. Attitude of the entire staff should improve iii. Registration for students during KNEC exams should be made favourable especially on fee. iv. The terms are too short hence there's a rush to finishing the syllabus

	v.	*Stop frustrating students when they come to collect their certificate or during graduation, especially those administration, exam offices and many more;*
	vi.	*In case of graduate with extra remaining school fee's. It's better if the fees will be transferred to short course like STCW that graduates may need to increase their qualifications in their area of study;*
	vii.	*Unity among tutors;*
	viii.	*Teachers should be monitored on class attendance especially languages;*
Concern for collaborations	*i.*	*Creating more partners with international companies to get sea time*
	ii.	*I could recommend, for practical training as well (internship) to be considered*
Career support and placement	*i.*	*I would recommend you to help the graduates finding jobs and internship. That will be a big help.*
	ii.	*Just view market needs*
	iii.	*They should improve the allocation of attachments for students to gain practical skills in the field of study*
	iv.	*Marketing of their student in the career*
	v.	*More resources input for practical skills and more exposure to the industrial set up*

APPENDICES

APPENDIX I: GRADUATE TRACER STUDY QUESTIONNAIRE

Dear Graduate

Kenya Coast National Polytechnic (KCNP) is carrying out annual graduate tracer survey to determine suitability and relevance of their curriculum, improve the study programmes and, more specifically, to inform the revision of the curricula. This survey is aimed at collecting information about your education and training and your employment situation after graduation in order to get a better understanding about the situation of TVET graduates and their labour market situation and to identify needs for improvement or change. Therefore, we would appreciate if you would share some information with us. The information you provide will only be used for this purpose. The survey is conducted by the KCNP Research and Innovation department. You have been randomly selected to take part in this study.

We kindly request your participation in this survey as one of the graduates who completed studies at KCNP. We would like to find out what happened to you after you completed your studies. 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?

Your information will be treated in strict confidence. The results will be published in such a way that identification of individual persons is excluded. Results of this survey will be published on the website of the institution. On your request we will send you a printed version of the report with the main results of the survey.

Please return/submit the completed questionnaire as soon as possible to the address mentioned below. Items marked with asterisk (*) are compulsory.

We hope you find the questionnaire interesting. If you have a question, please feel free to ask for assistance.

Thank you very much in advance for your kind support.

Overview of the Questionnaire Content

Section I - Demographic Information
Section II - Study Conditions and Provisions, Study Experiences
Section III - Job Search, Transition to Work and Employment Status
Section IV - Skills Acquisition, Quality and Relevance of Training and Employer Satisfaction
Section V - Comments and Recommendations

SECTION I – DEMOGRAPHIC INFORMATION
1. What is your Gender:
   Male
   Female
2. What is your Civil Status?
   Single
   Married
3. What is your Age (years)?
   Below 25
   25– 35
   Above 35
4. What is your Country of Residence: ------------------------------- City/County ---------------------------?
5. Mobile Phone Number (in case we need to ask you any further questions) --------------------------

6. What is your email address _____?

SECTION II – STUDY CONDITIONS AND PROVISIONS (Study Experiences)

7. When did you finish your study at KCNP_____?
8. What was your Year of Graduation _____?
9. What Level of Qualification did you attain at KCNP?
        Artisan
        Certificate
        Craft
        Diploma
10. Which course did you study at KCNP (for example, Diploma or Craft Electrical and Electronic Eng. Dip/Craft Business Management, etc.): --?
11. What were the reason(s) for taking or pursuing the course? You may check (√) more than one answer. (Multiple answers possible)
        High grades in the course or subject area(s) related to the course
        Good grades in high school
        Influence of parents or relatives
        Peer influence
        Inspired by a role model
        Strong passion for the profession
        Prospects for immediate employment
        Status or prestige of the profession
        Availability of the course at KCNP
        Prospects of career advancement
        Prospects of attractive compensation
        Opportunity for employment abroad
        No Particular choice or no better idea
        Others (Please specify)
12. Is there any other professional qualifications and/or certificate you acquired ---------------------------------- ---?
13. Did you take or are you taking further Training(s) / Advance studies attended after graduating from KCNP?
        Yes
        No
        No answer

SECTION III – JOB SEARCH, TRANSITION TO WORK AND EMPLOYMENT STATUS

14. Are you currently employed?
        Yes → Please continue with question 15
        No →Please continue with question 33
15. State your current employment status
        Employed on fulltime
        Employed on part-time
        Employed temporarily basis
        Unemployed and looking for employment

If employed

16. What is the name of your employer _____?
17. Where is the place of employment (e.g., Nairobi) _____?
18. Specify your type of employer?
        Public sector (national government, county government)
        Parastatal or semi-autonomous government agencies

Private sector
NGO
Self-employed
Other (please specify) _____

19. What are your present employment terms?
Permanent
Casual
Part-Time
Self-employed

20. Is this your first job after college?
Yes
No

21. If Yes, proceed to Question 22. What is the reason(s) for staying on the job? (Multiple answers possible)
Salaries and benefits
Career challenge
Related to my special skill
Related to course or programs of study
Proximity to residence
Peer influence
Family influence
Other reason(s), please specify

22. In what sector/area of specialisation is your job? (Multiple answers possible)
Agriculture, forestry and fishing
Mining and quarrying
Manufacturing
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
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

23. How long did it take you to get a job after completing your training?
Less than 6 months
6 – 12 months
13-24 months
25-36 months
Over 3 years

24. How did you find your first job? (Multiple answers possible)
Response to an advertisement
Arranged by school job placement officer
As walk-in applicant

Door to door (job hunting)

Family business

Recommended by someone

Job Fair of Public Employment Service Office

Information from friends Office

Connections

Others (Please specify)

25. What is your title in the current job in your organisation _____?

26. What is your initial gross monthly earning in your first job after college?

Below Ksh. 15,000 PM

Ksh. 20,000-45,000 PM

Ksh. 50,000-75,000PM

Ksh. 80,000 and above

27. How many employers did you contact before getting your current job?

0 - 5

6 - 10

11 - 20

Over 20

28. How long have you been working for your current employer?

Less than 6 months

6 – 12 months

13-24 months

25-36 months

Over 5 years

29. **If the current employer is not your first one,** why did you leave your previous employment?

Sought improved wage

Sought improved working conditions

Needed to change environment

Wanted a new challenge

Retrenched

Found employment in my area of specialisation.

Other (please specify) _____

30. Are you still employed in your area of training?

Yes

No

Don't know

31. (If No to question 30 above), why did you change your career?

Lack of career progression

Poor remuneration

Poor working conditions

Lack of job satisfaction

Other (please specify) _____

32. What are the difficulties you encountered while looking for a job? (Multiple answers possible)

Takes too long to find one

Employers not interested in my level qualifications

Employers not interested in my area of specialisation

Lack of work experience

Limited employment opportunities in my area

Other (Please specify) _____

If not employed

33. If not employed, what describes your current situation? (Multiple answers possible)

I continued studying / training
I am busy with my family and/or children
I am doing an internship
I am currently looking for employment
Other (please specify)

34. Please state the reason(s) why you are not yet employed. (Multiple answers possible)
No job opportunity
No connections
Family concern
No interest in getting in job
Health-related reasons
Lack of professional eligibility requirements
Lack of work experience
Starting pay is too low
Engaged in further study
Have plans to seek job out of the country
Other reason(s), please specify _____

35. For which jobs have you been applying?
Jobs related to my profession/area of training
Jobs unrelated to my profession /rea of training

SECTION IV – SKILLS ACQUISITION, QUALITY AND RELEVANCE OF TRAINING AND EMPLOYER SATISFACTION (Work and Competencies, Relationships Between Study and Work)

36. Is your present work, or, in case you are employed, the last job you held since graduation, related to the course you followed at Kenya Coast National Polytechnic?
Yes
No

37. Compare the skills you acquired from your training and your ability to perform on your current or previous job), would you say your training was:
Very relevant
Adequate
Not relevant

38. Can you recommend the course you went through to a friend, colleagues or relative?
Yes
No

39. Using the percentages (%) indicated, rate the extent to which the following components used in Training at KCNP should be improved to prepare graduates for the job market. Use a tick (√)

Training component	Needs 100% improvement	Needs 75% Improvement	Needs 50% Improvement	Needs 25% Improvement	Needs 0% Improvement
Knowledge (Theory)					
Training in practical skills					
Industrial attachments					
Course content					
Instructional manuals					
Textbooks					
Workshop equipment					
Laboratory work					
Teaching and delivery methods					

Instructor's knowledge of theory					
Instructor's practical skills					
Increase duration of training					
Decrease duration of training					
Quality of Trainers/Lecturers					

What is your opinion with regard to the following statements on the adequacy of KCNP training, graduate employability and your ability to perform in your job? Using a scale of 1 – 5 below whereby;
1 = strongly disagree; 2 = disagree; 3 = not applicable; 4 = agree; 5= strongly agree. Use a tick (√)

	1	2	3	4	5
My training adequately prepared me for work					
My employer/former employer is/was satisfied with my level of knowledge and skill					
It was/is easy for me to get a job					
I can easily be trained to improve my level of skill					
I find myself to be very effective in my current/previous job					
I can easily change employers within my area of specialisation					
My training adequately prepared me for self-employment					

In your opinion, how important were the following aspects for your employment? Use the scale below;
1=Not at all important, 2=Not very important, 3=Somewhat important 4=Very important 5 = Don't know

	1	2	3	4	5
Matching professional qualification					
Reputation of TVET college that I graduated from					
The grades in my diploma					
Deficit of employees in my profession					
Social and individual competencies					
Relations/Connections					
Other, please specify					

To what extent did your Vocational Education and Training help you to develop the following competencies?
1=Not at all, 2=To a little extent, 3=To some extent, 4=To a great extent, 5=Don't know

	1	2	3	4	5
TVET helped me to acquire the theoretical knowledge that is required in my profession.					
TVET helped me to develop the practical skills that are required in my profession.					
TVET helped me to develop the social competencies and individual attitudes that are required in the world of work.					
TVET has laid the foundations that I could (potentially) become self-employed.					
TVET enabled me to get along independently in life.					
Considering all aspects of your time in TVET, how satisfied are you with the education and training you received?					

In your opinion, what was lacking in your education and training? (Multiple answers possible)
- i. Training of practical skills
- ii. Transfer of theoretical knowledge
- iii. Teaching/training methods
- iv. Commitment of teaching / training staff
- v. Training materials/equipment
- vi. Other (please specify): …………………………………

SECTION V - COMMENTS AND RECOMMENDATIONS

Are there any changes you would recommend for your TVET institution study/programme?
Please specify...
....
....
Do you have any comments/suggestions regarding this survey?
Please specify...
....
....

APPENDIX II: TRACER STUDY IMPLEMEMTATION MATRIX

S/No.	TASK	Specific Deliverables	Responsible personnel	Execution venue	Time frame
1.	Development of data collection tools	Develop database of graduates that would enable KCNP to annually make follow ups on graduates and their occupational movements in the labour market; Develop standard set of data collection tools for Graduates, Industry and Staff; Compilation of Tracer Study programmes to be tracked.	Tracer Study Team	Conference or Seminar	5 days
2.	Collection of secondary data	Review relevant literature, TVET Documents, baseline surveys and studies and reports;	Chair, RIAC CL, EASTRIP M&E, EASTRIP	Workshop	3 days
3.	Compilation of introductory pages	Fixing institutional logo, designing cover page and back page, introduction, background of study, study objectives, methodology and review of lessons learnt from previous tracer studies. Analysis of the EASTRIP project achievements.	Chair, RIAC Two members of the tracer study team	Workshop	3 days
4.	Piloting of data Collection and Data collection	Data collection from Graduates, Industry and Staff to: - i. Establish occupation of TVET graduates in relation to their field of training; ii. Determine the means by which graduates acquire employment; iii. Determine the extent of occupational mobility of the KCNP TVET graduates; iv. Establish employment opportunities for KCNP TVET graduates; v. Establish employment rates of KCNP graduates; vi. Establish the difficulties encountered by those graduates that have not been able to find relevant employment vii. Establish waiting times for first employment and associated reasons; viii. Establish the level of employer satisfaction with regard to TVET Training graduate employee's skills and level of performance; ix. Provide comprehensive information on	Tracer Study Team	Field visits, calls, emails and face to face	30 days

		x. labour market outcome of the graduates; xi. Review the relevance and effectiveness of learning in TVET in relation to employability (Skills Mismatch)			
5.	Data cleaning and coding	1. Identification of incomplete questionnaires; 2. Separation of mixed-up questionnaires; 3. Numbering or coding of questionnaires per cluster; 4. Developing data entry templates in excel and SPSS;	Chair RIAC Two members of the tracer study team	Workshop	3 days

6.	Data Entry	Entry of the collected data set in SPSS or Excel from;
		   i. Graduates
		  ii. Staff
		 iii. Employers
			Chair RIAC Tracer Study Team	Workshop	10 days

7.	Data Analysis and Interpretation	1. Export data to Excel from SPSS for cleaning, entry and analysis; 2. Post data entry cleaning before any further analysis is conducted; 3. Frequencies and cross tabs run and compared with baseline figures; where available for comparison and checking on changes made by the programme; 4. Confidence intervals calculated for the indicators for comparison with baseline in order to check any significant change in the indicators. If the intervals overlap then we will conclude that there was no significant change on the indicator and vice versa 5. Graphical interpretations of the data analysed	Chair RIAC Two members of the tracer study team	Workshop	4 days
8.	Compilation of first draft report	Report writing	Chair RIAC Two members of the tracer study team	Workshop	5 days
9.	Validation workshop	Discussion and Validation of draft report with key staffs and stakeholders (partners and beneficiaries)	Tracer study team and interested parties	Conference	1 day
10	Compilation of final report	Revision of draft report to final copy; production and submission of final report to KCNP management	Tracer study team	Workshop	2 days
11		**TOTAL**			**66 days**

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