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Tracer Study Report on the Employment Outcomes of the Arusha Technical College Graduates 2023 Cohort

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ACRONYM

ATC	Arusha Technical College
DIT	Dar es Salaam Institute of Technology
DLI	Development Linked Indicator
EASTRIP	East Africa Skills for Transformation and Regional Integration
GN	Government Notice
ICT	Information and Communication Technology
MoEST	Ministry of Education, Science and Technology
NACTE	National Council for Technical Education
NGO	Non-Government Organization
NIT	National Institute of Transport
NTA	National Technical Award
NVA	National Vocational Award
RFTI	Regional Flagship Training Institute
SPSS	Statistical Package for Social Sciencies
TCA	Technical College Arusha
TVET	Technical and Vocation Education Training
TZS	Tanzania Shilling
URT	United Republic of Tanzania
VETA	Vocational Education and Training Authority

THE EXECUTIVE SUMMARY

ES1 The need to conduct this study arose from the necessity to understand the employment outcomes of the 2023 cohort of Arusha Technical College graduates. This study aimed to categorize the graduates based on gender, age, program of study, and level of qualification to provide a comprehensive overview of their initial career trajectories. It also aimed to address gender disparities in technical fields, examine the distribution of employment across various sectors, and assess the satisfaction and challenges faced by graduates in their early careers. By doing so, the study aimed to offer insights that could inform strategies for enhancing graduate employability and supporting diverse career paths.

ES2 The methodology applied in this study involved collecting and analyzing survey data from the 2023 graduates of Arusha Technical College. Graduates were classified according to demographic and educational factors, and their employment status was recorded as either employed (including contract, self-employed, and permanent positions) or not employed. The study also analyzed the response rates by field of specialization and gender, the time taken to secure the first employment, the methods used to obtain employment, and the sectoral distribution of employment. Additionally, graduates' satisfaction with their employment, the challenges they faced, and the skills they found essential were assessed. Employers' preferences and satisfaction with graduates' skills were also evaluated.

ES3 The results showed that 405 (72.5%) were employed in which 179 (44.2%) were employed on contract basis, 91 (22.5%) were employed on permanent basis, 39(9.6%) were self employed, and 96(23.7%) were attending further academic training. Out of 559 respondents, 154 (27.5%) were unemployed and looking for employment. Personal networks and internet resources were the primary job search methods. Employment by sector revealed a high prevalence of contract positions in the private sector and stable permanent positions in the public sector. Graduates expressed high satisfaction with independent work and job security but faced challenges like lack of opportunities matching their skill set and insufficient work experience. Employers highlighted gaps in practical skills and the need for enhanced software

and entrepreneurial skills..

ES4 Generally, this study shows the diverse career paths pursued by graduates and the importance of addressing gender disparities in technical education. It highlights the value of practical training, personal networks, and digital resources in securing employment. The findings suggest the need for targeted interventions to improve employment opportunities and working conditions for graduates. Moreover, enhancing practical skills, software proficiency, and entrepreneurial abilities are crucial for aligning graduate competencies with industry demands and supporting sustainable career development.

CHAPTER ONE

INTRODUCTION

1.1   Background

The Arusha Technical College (ATC) formerly known as Technical College Arusha (TCA) was established in 1978 through an agreement of technical cooperation between the Government of the United Republic of Tanzania and the Government of the Federal Republic of Germany (FRG) which was also known as "West Germany". The name Arusha Technical College (ATC) came into existence officially in March 2007 when the College was given autonomy through the Arusha Technical College Establishment Order No. 78 of March 2007 under the NACTE Act No. 9 of 1997 which was later revoked and replaced by the ATC Establishment Order GN 302, 2015. The College is located at the Central Business District of the Arusha City in the Northern part of Tanzania. The College is under the Ministry of Education, Science and Technology (MoEST).

The core functions of the College are training, research, and consultancy. The College is registered and accredited by the National Council for Technical and Vocational Education and Training (NACTVET) to train technicians and engineers (NTA's level 4-8) and artisans (NVA level 1-3) on vocational education programmes.

In 2013 ATC was handled over by the government of the United Republic of Tanzania (URT) the dysfunctional Kikuletwa Hydro Power Plant (KHPP) to use it for training purposes. As part of an effortto ensure availability of trained experts in renewable energy, the government of the United Republic of Tanzania secured fund from the World Bank through East Africa Skills for Transformation and Regional Integration Project (EASTRIP) to develop ATC Kikuletwa Renewable Energy Training and Research Center into a fully-fledged Regional Flagship Training Institute (RFTI) in renewable energy to address the skill requirement in the energy sector to support national and regional economic integration initiatives. Through EASTRIP, all RFTI's are required to conduct tracer study of graduates to determine employment rate of their graduates and employer's satisfaction of the skills and competencies of TVET graduates. Tracer study is one of the Development Linked Indicators (DLI's).

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Tracer studies provide feedback for practical conclusions for improving the training conditions in institutions. They provide feedback for curriculum development and other aspects of improving training conditions.

Despite multiple initiatives to improve TVET programmes in the URT, Mihyo et al. (2020) revealed that employers are not satisfied with the skill set of graduates from TVET, hence this calls for the need to conduct tracer studies to assess the impact of training programmes offered by ATC in equipping graduates with necessary skills needed by the labour market.

1.2 Objectives of the tracer study

1.2.1 General objective

The general objective of this tracer study was to assess the impact of training programmes offered by ATC in equipping graduates with necessary skills needed by the labour market.

1.2.2 Specific objectives

More specifically; the study sought to:

(a) Analyse the employment status of ATC graduates;

(b) Evaluate the relevance of various skills and competencies in relation to employment; and ;

(c) Analyse employers' satisfaction with skills and competencies of graduates from ATC.

1.3 The rationale of the tracer study

The role of ATC is to prepare graduates who meet the needs of the labour market. The development of short-term and long-term programmes need to be aligned with the needs of the labour market. Despite having demand-driven programmes increases the employability of graduates there is inadequate reliable and relevant data and information on relevance of ATC training with the needs of the labour market. The results obtained in tracer studies provide institutions, curricula developers, industries, policymakers, and other relevant authorities with feedback for practical conclusions for improving training programmes and conditions.

1.4 Scope of the tracer study

The study covered 621 ordinary diploma and bachelor's degree graduates of the year 2023 from eighteen long-term academic programmes and their employers. The information required from the graduates included gender, age group, level of qualification, programme of study, employment status at the time of the study, further education and training and relevance of the skills and competencies, the employers were required to give information about criteria and procedures for recruitment, the extent of satisfaction with the skills of the graduates as well as competencies that graduates lack. The information obtained enabled the College to receive reliable feedback about the relevance of training to the needs of the labour market. Context variables, such as localities/regions of employment and graduates' change of employment were taken into account to enable effective interpretation of the results. Information about knowledge and skills gained, practical works, and work performance were obtained which helped to conclude the relevance of quality of training.

1.5 Conceptual Framework

This study aimed to assess the impact of training programms offered by ATC in equiping graduates with necessary skills needed by the labour market. The study included several aspects of training and employment to analyse the relevance of the skills and the needs of the labour market. The study used the Conceptual Framework as described in Figure 1:
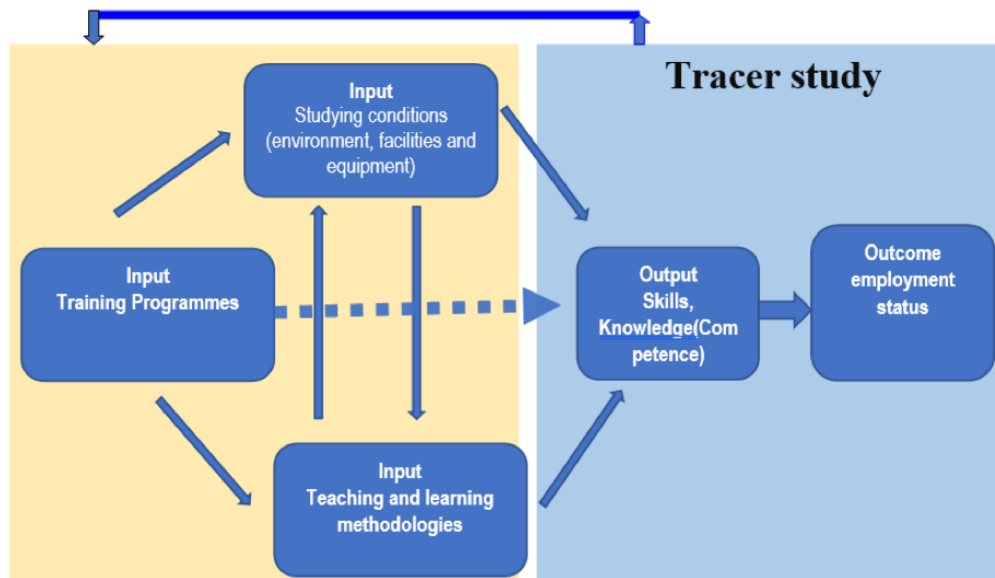
Figure 1: Conceptual Framework for Tracer Study, Source: Schomburg (2016).

Considering Figure 1 above, outputs and outcomes of education are determined by manyvariables. Graduate and employer surveys are important for measuring the output and outcomes in TVET education, but they cannot be restricted to only measuring the output only where questions of the effect of TVET education and desirable forms of teaching and study are concerned Schomburg (2003). The process of getting competent graduates involves inputs elements which are market-relevant training programmes, favorable studying conditions (adequate training facilities, equipment, and libraries), and good teaching and learning methodologies. Successful integration of market-relevant training programmes, favorable studying conditions, and teaching and learning methodologies results incompetent graduates. Competencies and skills to be acquired includes practical-job-related skills, knowledge of field of specialization, communication skills, entrepreneurship skills, problem-solving skills, work ethics, customer service, and ICT skills. Outcomes of education include several aspects of employment. To analyse the link between education and graduate employment, tracer studies might include several aspects of employment and workas well asthe inputs. The findings about these are not limited to simple descriptive points but are linked to each other. It is obvious that through this modality, tracer studies could provide reliable data and information for establishing the relevance of training programmes and graduates' employability.

CHAPTER TWO

METHODOLOGY

2.1 Introduction

This chapter presents the methodologies and techniques used for data collection, as well as outlines the study design, target population, data collection procedures, questionnaire structure, methods for data analysis, and ethical principles and guidelines pertinent to the tracer study. Additionally, it addresses the limitations encountered in the study and mitigation measures used to address these challenges effectively.

2.2 Study design

This study used cross-sectional design where a population of graduates was questioned at one point only. Various methods were used in this study design such as pannel study (longitudinal studies) and cross-sectional methods. Longitudinal studies are used when a study intends to obtain information on individual change by combining answers from the same respondent at different times. Longitudinal studies are more complicated to conduct and Also the statistical analysis of data is more demanding Schomburg (2016).

2.3 Target population

This study targeted two distinct populations: (i) Graduates; and (ii) Employers. To ensure an effective tracer study for graduates, it is advisable to select a homogeneous group who completed their studies at the same time (cohort). This approach is crucial because labor market conditions and educational experiences can vary significantly across different cohorts. By focusing on one cohort, conditions are assumed to be more similar and comparable, allowing for clearer insights and more meaningful comparisons in the study of their posteducation outcomes Schomburg (2016).

For this reason, this study involved a total of 559 graduates out of 621 graduates of 2023, meaning a response rate of 90.01% which is satisfactory. The target population included eighteen

programs including programme of Mechanical Engineering, Electrical Engineering, Electronics and Telecommunication Engineering, Electrical and Automation Engineering, Civil Engineering, Civil and Highway Engineering, Civil and Irrigation Engineering, Computer Science, Laboratory Science and Technology, Pipes Works Oil and Gas Engineering, Electrical and Hydropower Engineering, Electrical and Biomedical Engineering, Automotive Engineering, Auto-electric and Electronics Engineering, Information Technology, Electrical and Solar Energy Engineering, Electrical and Wind Energy, and Electrical and Hydropower Engineering .

2.4   Data collection

Online Google Forms were employed as the means for collecting graduate data. All graduates from the academic year 2022|2023 were invited to participate via email, which included details about the project and a secure link to access the online study. This data collection initiative spanned a period of six months, from August 2022 to January 2023.Up to December 2022 there were only 420 response out of 621 intendend population. To ensure adequate participation of graduates in this study, phone calls and e-mail reminders were used. The data collection process ended with 559 respondent out of 621, meaning a response rate of 91.01% which is satisfactory.

2.5   Questionnaire

Semi-structured standardized questionnaires for both graduates and employers were drafted. Graduates' questionnaire contained 32 questions subdivided into four parts namely; demographic information, employment status, relevance of training, and comments and recommendations. To collect all the required information questionnaires were distributed to graduates in online google forms with invitation letters and reminders via their email addresses.

Employers' questionnaire contained eight (8) questions categorized into background information,recruitment procedures and skill gap. Employers' questionnaires were administered physically.

2.6   Data analysis

The data collected in this study were analysed using Statistical Package for Social Sciences (SPSS) version 25. SPSS is the most used and best-documented software for statistical data analysis Schomburg (2016). Open-ended questions were thematically arranged and coded to enable re-translation during data entry and analysis. Data entry was done by professionals with fundamental knowledge to understand and interpret the results of statistical analysis. The study encountered some missing values because some respondents left certain questions unfilled. The missing value instruction was set in SPSS to enable the programme to show values defined as missing. The respondents were contacted to request them to complete the missing data. The data were analysed descriptively into simple frequency counts, percentages, and other aggregate statistics such as arithmetic mean. Data were presented in tables, figures. and graphs.

2.7   Ethical principles and guidelines for tracer study

The tracer study was a voluntary exercise hence both graduates and employers were not forced to respond to the questionnaires. Both graduates and employers were sensitized and made aware of the benefits of tracer study. The information you provide would help to know employability of ATC graduates in different fields of specialization and employer satisfaction which in turn will enable the College to improve curricula, teaching, and learning facilities..

In maintaining the confidentiality and anonymity of the respondents, the questionnaires did not require the participants to mention their names. This aimed to protect the participants so that the information provided cannot be used against them in any incriminating or negative manner. Both graduates and employers were informed that the results of the tracer study will be shared with them after the completion. Representatives of both graduates and employers were invited to a stakeholders' meeting to discuss the findings of the study. The report was published on various media of communication for publicity.

2.8 Limitations of the study and mitigation measures

The Tracer Study faced several limitations but a team learned through them and devised various mitigation measures which made the Tracer Study effective. Some of the limitations and mitigation measures were as follows:

(a) All graduates' questionnaires were administered online using Google Forms. Google Forms were shared using e-mail addresses of the graduates. Some e-mail addresses were not valid and other graduates did not write their e-mail addresses. This was addressed by calling some graduates and asked to communicate their valid e-mail addresses and respond to the questionnaires. Snowball technique was used where by graduates who communicated were asked to share information of their fellow graduates.

(b) Lack of awareness among the graduates about the significance of tracer studies. In some cases, unemployed graduates were reluctant to respond to the tracer study questionnaires since they did not see any benefits for themselves. The College addressed this by creating a team of staff from all academic departments who called the graduates and sensitized them about the significance of tracer study. This increased the response rate to 90.01%

(c) Some of the employers had very busy schedules hence failed to respond to the questionnaires on time of the visit. The questionnaires were left for them to respond via e-mail

(d) Some of the graduates who were employed on contract basis were not found at the employers they mentioned.

CHAPTER THREE

RESULTS AND DISCUSSION

3.1 Graduates response rates

The study initially targeted 621 graduates from the 2023 cohort of Arusha Technical College across eighteen academic programs, encompassing both ordinary diploma and bachelor's degree holders. A response rate of 90.01% was achieved, with 559 graduates participating in the online questionnaires. This high level of engagement signifies a strong willingness among graduates to contribute data on their employment outcomes shortly after graduation. The dataset obtained provided valuable insights into the initial career trajectories, employment patterns, and challenges faced by graduates across various disciplines which are crucial for informing educational strategies, policy decisions, and career development initiatives aimed at enhancing graduate employability and fostering successful transitions into the labor market. .

3.2 Employment Status Among Respondents

An analysis of employment status among graduates of the 2023 cohort of Arusha Technical College, categorized by gender, age interval, program of study, and level of qualification, is presented in the following table. The data provides an overview into the current employment outcomes of graduates shortly after they have completed their ordinary diploma (NTA-6) or bachelor's degree (NTA-8) programs. Graduates are classified according to demographic and educational factors, including Gender, Age Interval, Program of Study, and Level of Qualification. "Employed" indicates graduates who reported being employed in either Contract basis, Self employed or Permanent employed."Not Employed" represents graduates who reported not being employed or not actively seeking employment. The data presented in Table 1, shows the distribution of employment outcomes across different segments of the graduate population, providing a view of their initial career trajectories after graduation.

Table 1: Employment status and demographic of respondents

Characteristics	Categories	Employment Status		
		Employed N(%)	Not Employed N(%)	Total
Gender	Female	67(62.6)	40(37.4)	107
	Male	338(74.8)	114(25.2)	452
Age Interval	15-24	188 (66.7)	94 (33.3)	282
	25-34	216 (78.5)	59 (21.5)	275
	35 and above	01(50)	01(50)	02
Program of Study	Auto Electrical and Electronic Engineering	14(100)	-	14
	Automotive Engineering	07(87.5)	01(12.5)	08
	Civil and Highway Engineering	20(100)	-	20
	Civil and Irrigation Engineering	32(64)	18(36)	50
	Civil Engineering	29(65.9)	15(34.1)	44
	Computer Science	55(94.8)	03(5.2)	58
	Electrical and Automation Engineering	26(41.3)	37(58.7)	63
	Electrical and Biomedical Engineering	74(80.4)	18(19.6)	92
	Electrical and Hydropower Engineering	20(95.2)	1(4.8)	21
	Electrical and Solar Energy Engineering	04(100)	-	04
	Electrical and Wind Energy	03(100)	-	03
	Electrical Engineering	45(76.3)	14(23.7)	59
	Electronics and Telecommunication Engineering	08(50)	08(50)	16
	Information Technology	24(61.5)	15(38.5)	39
	Laboratory Science and Technology	18(62.1)	11(37.9)	29
	Mechanical and Bioenergy Engineering	03(100)	-	03
	Mechanical Engineering	12(50)	12(50)	24
	Pipe Works, Oil and Gas Engineering	12(91.7)	01(8.3)	12
Level of Qualification	Bachelor Degree (NTA-08)	86(57.7)	63(42.3)	149
	Ordinary Diploma (NTA-06)	319(77.8)	91(22.2)	410

3.2.1 Response by field of specialization and gender

The response rate by field of specialization and gender indicates that there are varying levels of participation among different engineering and technology disciplines. Male respondents outnumbered female respondents across most technical fields, reflecting broader gender disparities within these fields. Specifically, fields such as Electrical and Biomedical Engineering, Electrical and Automation Engineering, Electrical Engineering, and Computer Science demonstrated higher participation rates, with a higher proportion of males than females. These results shown

in Figure 2, demonstrate the importance of promoting gender diversity and inclusivity in engineering and technology sectors, as well as the need for targeted strategies to promote broader participation and representation in all fields of study.
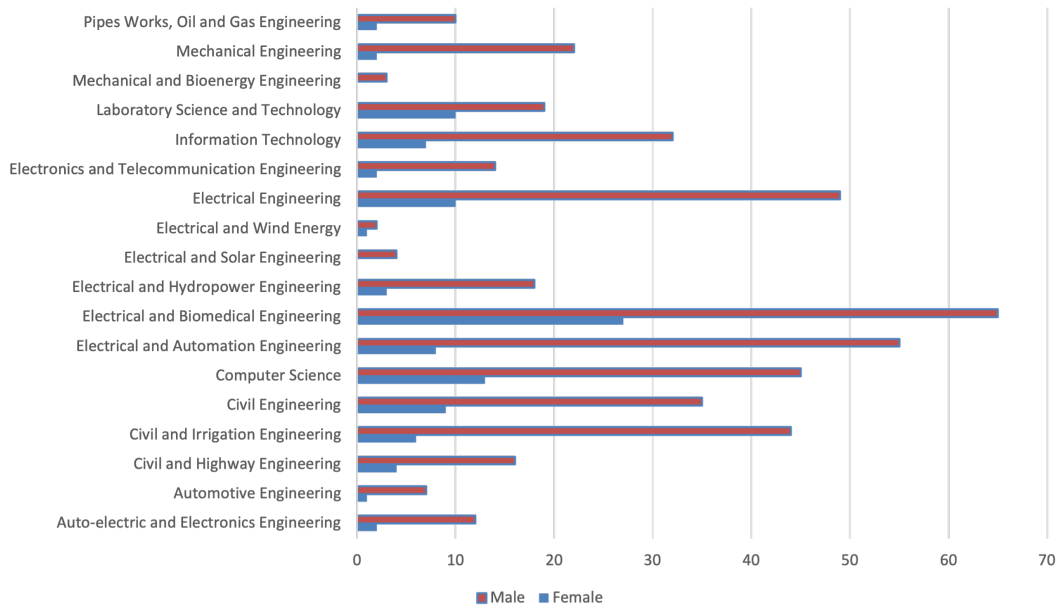
Figure 2: Number of respondents by field of specialization and gender

3.2.2 Graduate employment status six months after graduation

Six months after graduation, the employment status of the graduates presented in figure 3 reflects a varied distribution across different career paths. A significant proportion, 36%, of the graduates have secured employment, indicating that a substantial number have successfully transitioned into the workforce. Meanwhile, 30% of the graduates are engaged in further academic training, suggesting a strong pursuit of advanced studies. However, a notable 26% are not employed but are actively seeking employment, highlighting some challenges in the job market. Additionally, a smaller group, 8%, have opted for self-employment, demonstrating entrepreneurial endeavors among the graduates.
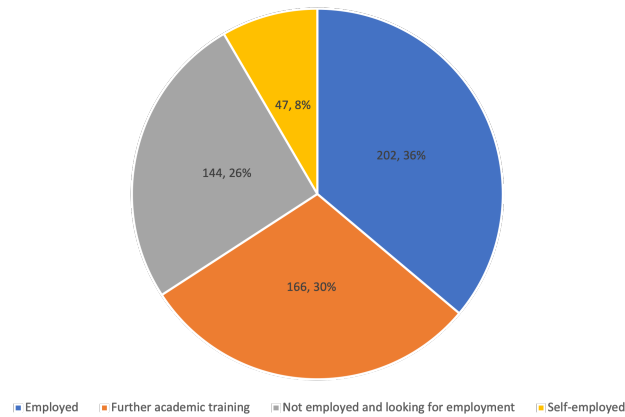
Figure 3:   Employment status six months after graduation

3.2.3   Graduate employment status six months after graduation by gender

Six months after graduation, the employment status of graduates by gender presented in Figure 4 shows that a larger number of males are employed, with 172 males compared to 30 females. Similarly, in the category of further academic training, there are 128 males and 38 females. Among those not employed but looking for work, 108 males and 36 females are represented. For self-employment, 44 males and 3 females have pursued this option. These figures reflect the differences in outcomes between males and females, which may be influenced by the varying enrollment numbers in the initial cohort.
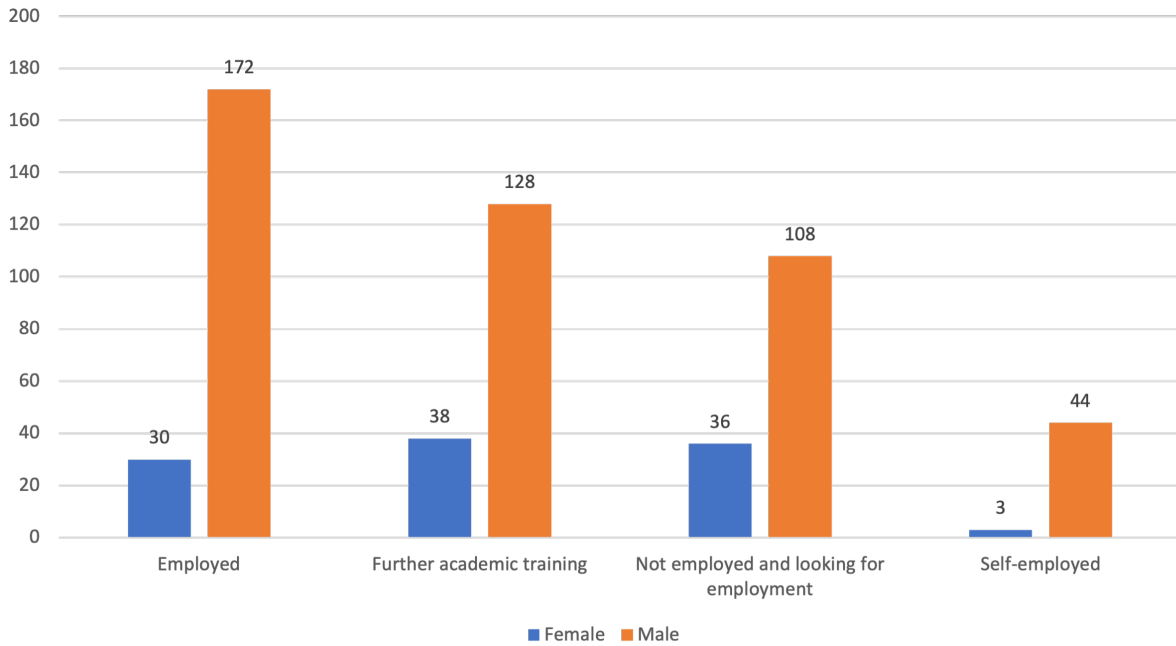
Figure 4:   Employment status six months after graduation by gender

3.2.4   Time taken to secure first employment

Based on the results shown in Figure 5, the time it takes for graduates to secure their first employment varies, with most securing jobs within the first six months after graduation. Specifically, 163 graduates obtained their first employment within 0-6 months, indicating a quick transition into the workforce for the majority. However, a significant number, 66 graduates, took between 7-9 months to secure employment. A smaller group of 26 graduates found their first job between 10-12 months after graduation, while only 8 graduates took more than 12 months. These results suggest that while many graduates find employment relatively quickly, others experience a longer search period, which could be influenced by various factors, including job market conditions, industry demand, and individual career choices.
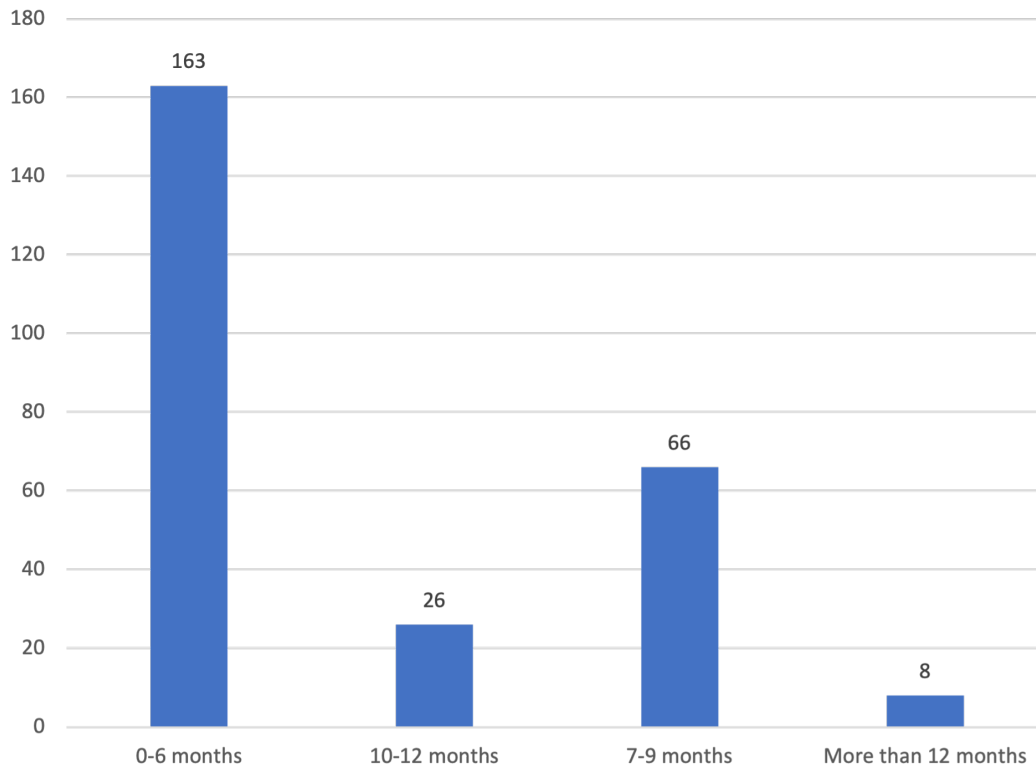
Figure 5:   Time taken to find first employment

3.2.5   Source of information about current employment

According to the survey results shown in Figure 6, graduates used a variety of methods to obtain their current employment. Most respondents reported finding a job through relatives, friends, or colleagues, with 119 respondents using their personal networks. 107 graduates were able to obtain employment through the use of internet resources, including government and company websites. Among the other notable channels were industrial linkages (26 respondents), school endorsements (13 respondents), social media platforms such as Facebook, WhatsApp, and LinkedIn (22 respondents), and traditional newspaper advertisements (14 respondents). Findings from this survey shows the diverse strategies graduates can use to navigate the job market, emphasizing the importance of personal connections in addition to digital and institutional resources in finding employment once they graduate.According to the survey results, graduates used a variety of methods to obtain their current employment. Most respondents reported finding a job through relatives, friends, or colleagues, with 119 respondents using their personal networks. 107 graduates were able to obtain employment through the use of internet

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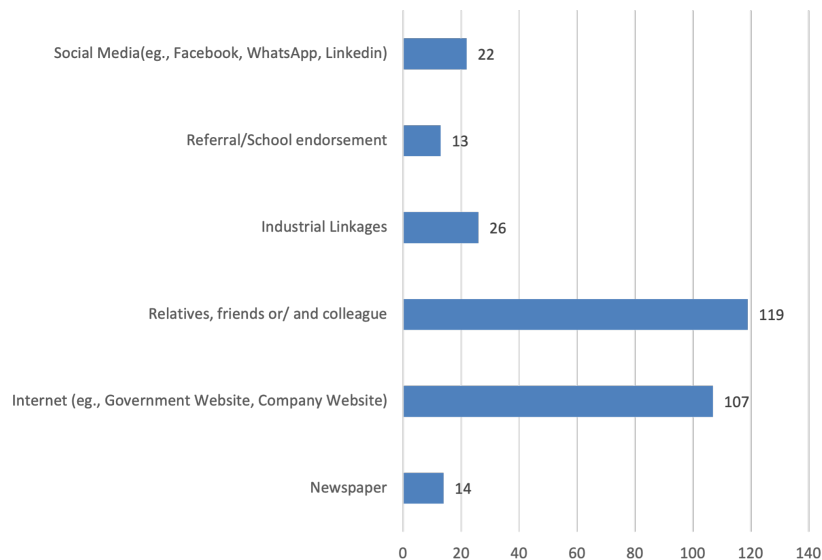
Figure 6:   Source of information about current employment

3.2.6   Employment status and employer category

The survey results shown in Figure 7, illustrates the employment status across various employer categories. A significant portion of individuals is pursuing further academic training and 154 unemployed and seeking employment, suggesting a focus on skill enhancement or transition to the job market. The public sector (central/local government) employs a considerable number on a permanent basis (71), indicating stable job opportunities within government institutions. The private sector shows a notable number of individuals on contract (114), reflecting the sector's reliance on flexible employment arrangements. Conversely, the NGO sector has the lowest employment numbers across all categories, with only a small fraction employed on contract or permanently. The self-employed category shows some activity in the NGO and public sectors but is otherwise minimal. The data highlights a diverse employment landscape with varying degrees of job security and opportunities across different sectors.
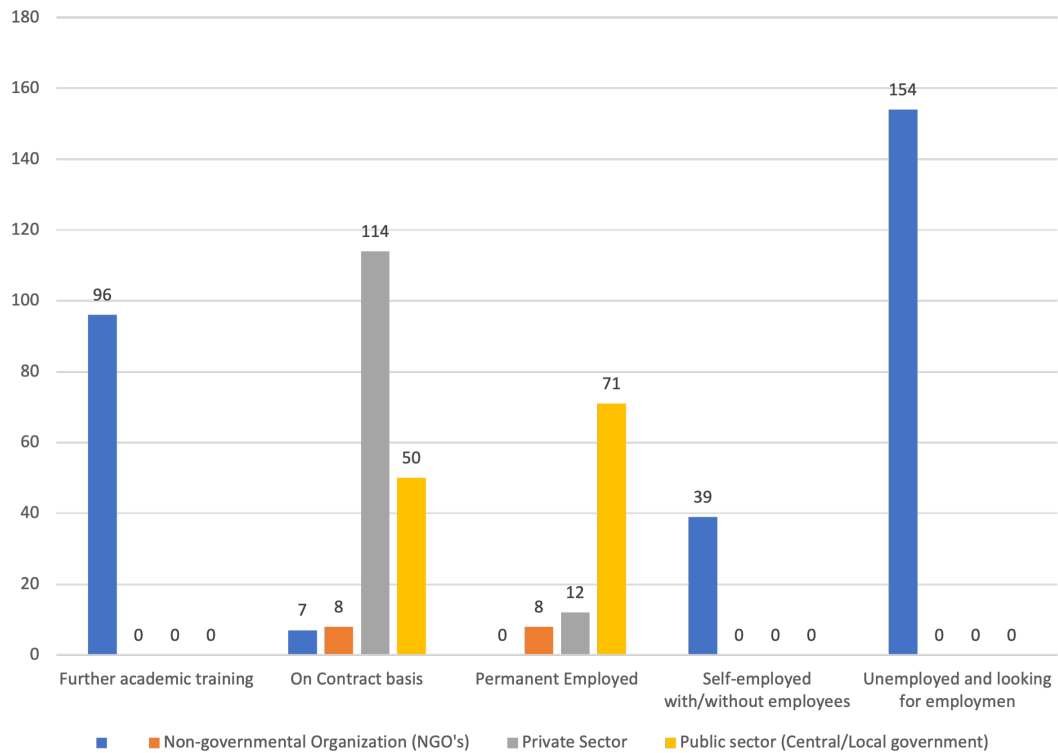
Figure 7: Employment status and employer category

3.2.7 Employment status by industry of employment

The Table 2, presents the employment outcomes for graduates across various industries, categorizing them into On Contract Basis, Permanent Employment, and Self Employed. Several trends emerge: The construction and manufacturing sectors show a high reliance on temporary employment, with 27 and 35 graduates beginning their careers in temporary positions, most likely for project-based work that is common in these sectors. There is a high percentage of graduates securing permanent positions (45), indicating stability in the healthcare and social services sectors of the public sector. Education and Information and Communication Technology (ICT) sectors also exhibit notable numbers of permanent employment (2 in Education, 4 in ICT), indicating there is a continued need for skilled professionals in these fields. A high rate of self-employment is observed in Agriculture (12), Business (23), and Tourism (3), indicating that graduates within these sectors pursue entrepreneurial ventures. In general, these findings highlight the diversity of career paths available across industries following graduation, influenced by sector-specific dynamics and providing opportunities for both traditional employment and entrepreneurship.

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Table 2: Employment status by industry of employment

Type of Industry	On Contract Basis	Permanent Employment	Self Employed
Agriculture	03	00	12
Business	18	00	23
Construction	27	05	02
Education	103	02	00
Energy	21	07	05
Finance and Insurance	06	00	00
Human Health and Social Works	12	45	00
Information and Communication Technology	19	04	04
Manufacturing	35	08	00
Mining	02	01	00
Oil and Gas	02	02	00
Security and Defense	00	10	00
Tourism	02	00	03
Transportation	09	03	00
Water Supply and Sanitation	04	02	00

3.2.8 Graduates levels of satisfaction with aspects of employment

The employed graduates were asked the extent to which they were satisfied with some aspects of their employment. The findings presented in Table 3, show that employed graduates were strongly satisfied with the ability to work independently, clear and regular tasks, and possibilities to put their own ideas into practice and satisfied with job security, status and recognition and income benefits as indicated in table 6 below. This implies that most of the employers give employees clear and regular tasks, allow them to work independently and put their own ideas into practice.

Table 3: Satisfaction level on different aspects of their employment

	Mean	Description
Being able to work independently	4.8	Strongly satisfied
Clear and regular tasks	4.6	Strongly satisfied
Job security	4.1	Satisfied
Social status and recognition	4.0	Satisfied
Possibilities to put your own ideas into practice	4.5	Strongly satisfied
Income benefits	3.5	Satisfied
Working condition	4.0	Satisfied
Career advancement prospects	4.0	Satisfied
Being able to coordinate/supervise work	4.0	Satisfied

3.2.9 Employment status in field of specialization

Among graduates employed in their fields of specialization, the results in Figure 8 indicate a variety of employment statuses. There is a balanced distribution of contract-based employment (82) and permanent positions (82), indicating that both temporary and stable positions are equally available to graduates within their respective fields. Additionally, a significant number of graduates have chosen to work for themselves (39), highlighting the importance of entrepreneurship within specialized fields. As evidenced by this distribution, graduates are navigating their career paths through a variety of employment opportunities, from gaining experience through contract roles to establishing their own businesses. Based on the findings, it is important to promote an environment that encourages both traditional employment and entrepreneurial endeavors within specialized sectors, ensuring graduates have options aligned with their career goals and the employment demands of their fields.
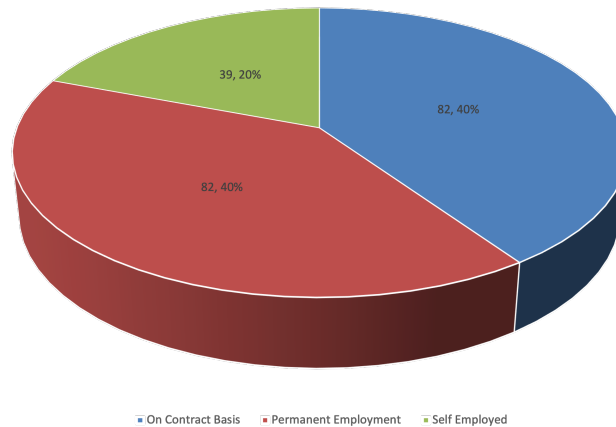
Figure 8:   Employment status in field of specialization

3.2.10   Reasons for not employed in field of specialization

According to the survey results shown in Figure 9, there are several reasons why graduates are not employed in their fields of specialization. The most prevalent factor reported by 70 respondents is a lack of employment opportunities matching their educational background and skill set. The low remuneration offered to graduates is cited as a concern by three graduates, indicating dissatisfaction with the salaries offered to them that might not meet their expectations or industry standards. Additionally, 6 graduates cited poor working conditions as a contributing factor to their decision not to pursue roles within their specialty. There are 10 respondents who report job dissatisfaction, indicating that issues beyond compensation and working conditions impact graduates' satisfaction with potential employment opportunities. In light of these findings, graduates face a number of multifaceted challenges when attempting to obtain meaningful employment within their fields of study, highlighting the need for strategic interventions aimed at addressing barriers such as employment availability, compensation packages, working conditions, and overall job satisfaction in order to assist graduates in achieving greater success upon graduation.
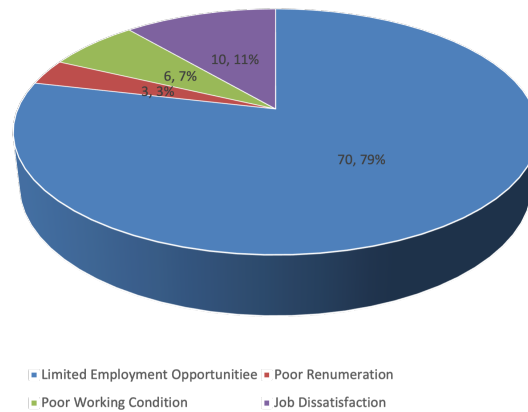
Figure 9:   Reasons for not being employed in field of specialization

3.2.11   Number of employers contacted

According to the survey results presented in Figure 10, graduates make a variety of attempts to contact potential employers before obtaining their first job. There were 156 graduates who reported contacting between one and five employers, indicating a proactive approach to seeking employment. In contrast, a smaller number (19) contacted between 11 and 20 employers, reflecting persistent efforts to explore a wider range of employment opportunities. Additionally, 10 graduates contacted 6-10 employers, demonstrating their active participation in the job search process. In particular, 74 graduates reported not directly contacting employers, possibly relying on alternative job search techniques or having difficulty initiating direct contact. There were only four graduates who contacted over 20 employers, suggesting that fewer graduates pursued a comprehensive outreach strategy in order to find employment. It is clear from these findings that proactive job search strategies are essential, and graduates vary in their level of engagement in seeking employment opportunities, demonstrating the need for targeted career guidance and support for graduates to enhance their success in the workplace.
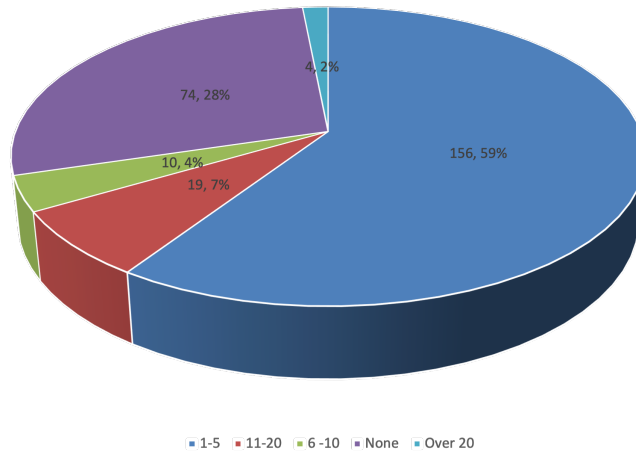
Figure 10: Number of employers contacted before the current employer

3.2.12 Number of employers worked before the current employment

Based on the survey responses from graduates regarding the number of employers worked before their current employment presented in Figure 11, the majority of respondents (197) indicated having no prior employers. Among those who did have prior employment, 27 reported having worked for more than two employers, 45 reported working for one employer, and 32 reported working for two employers. This distribution suggests a significant portion of graduates entered their current employment without prior work experience, potentially influencing their career trajectories and job readiness. This finding shows the importance of career counseling and internship opportunities aimed at enhancing students' readiness for the job market.
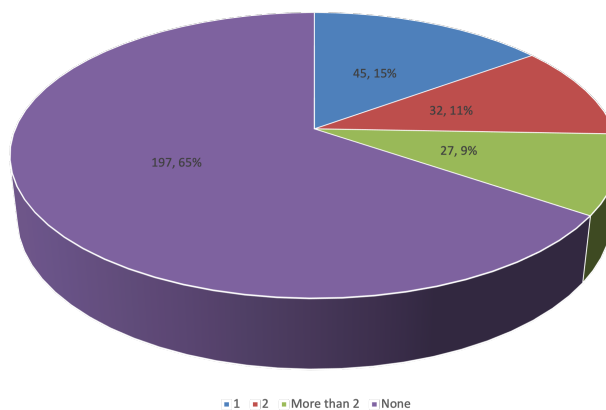
Figure 11: Number of employers worked before the current employer

3.2.13 Reasons for leaving your previous employment

The data collected from graduates reveal their reasons for leaving previous employment provide valuable insights into workforce dynamics. Key factors influencing their decisions include the pursuit of improved wages, better working conditions, and the desire for new challenges, all highlighting the importance of financial incentives, workplace environment, and career development opportunities in retaining talent. Additionally, the alignment of job roles with graduates' fields of specialization and the completion of contracts were significant contributors to job transitions. These findings presented in Figure 12, shows the need for organizations to prioritize supportive work environments and opportunities for professional growth to effectively attract and retain skilled professionals in today's competitive labor market.
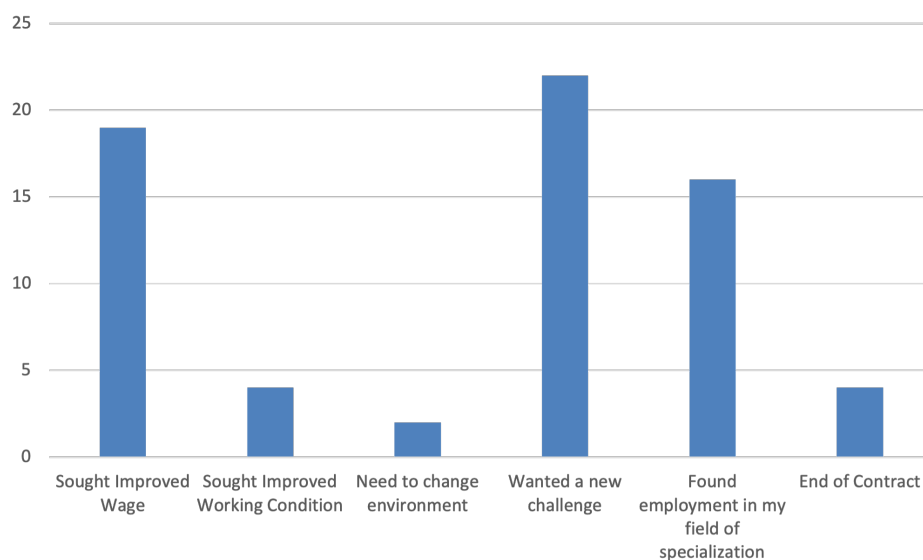
Figure 12:   Reason for leaving your previous employer

3.2.14 Investment capital for self employed graduates

Based on the survey responses from self-employed graduates regarding their initial investment amounts, the majority fell within the range of 100,000 to 500,000 units (22 respondents), followed by above 1,000,000 units (15 respondents). Only a small number invested below 100,000 units (3 respondents), with an even smaller cohort investing between 500,000 and 1,000,000 units (6 respondents). This distribution presented in Figure 13, suggests that a significant portion of self-employed graduates are willing to make substantial initial investments, potentially

indicating confidence in their ventures or the industries they are entering. However, the relatively low number of respondents in the lowest investment implies that barriers to entry might exist for those with fewer financial resources, potentially influencing the diversity and accessibility of entrepreneurial opportunities.
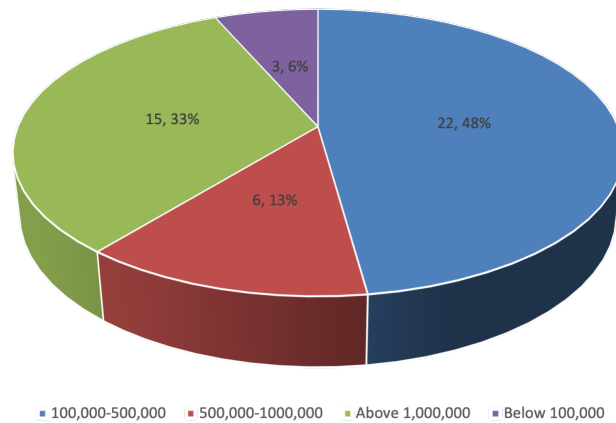
Figure 13:   Amount of capital invested

3.2.15   Source of capital for investment

The survey results presented in Figure 15, reveal diverse sources of investment for self employed graduates, with the majority relying on Women and Youth funds from Local Government (27 respondents), indicating targeted governmental support for entrepreneurial initiatives among these demographics. Significant numbers also cited support from Parents/Relatives (21 respondents), highlighting the role of familly networks in providing initial capital. A smaller proportion secured investment through loans from Commercial Community Banks (6 respondents) and Donor's Funds (2 respondents), suggesting that while financial institutions play a role, government sponsored initiatives and family support remain critical pillars of financial backing for entrepreneurial endeavors among graduates.
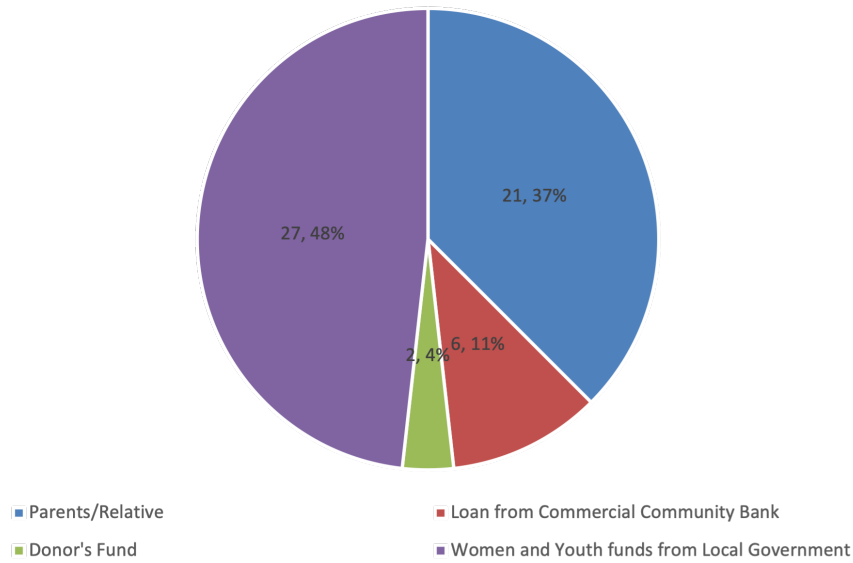
Figure 14:   Source of capital for investment

3.2.16   Challenges faced by self employed graduates

The survey results presented in Figure 15, highlights several challenges faced by self employed graduates in their entrepreneurial pursuits. The most commonly cited challenge is lack of initial capital for investment and expansion (25 respondents), showing the financial barriers that hinder business growth and sustainability. Additionally, unfavorable registration procedures (15 respondents) and family issues (16 respondents) emerge as significant challenges, pointing to bureaucratic hurdles that can impede entrepreneurial activities. Other notable obstacles include marketing problems (11 respondents), lack of experience (7 respondents), and insufficient access to proper equipment and market acquisition information (3 respondents each), which collectively highlight the multifaceted challenges faced by graduates in navigating the complexities of self employment.
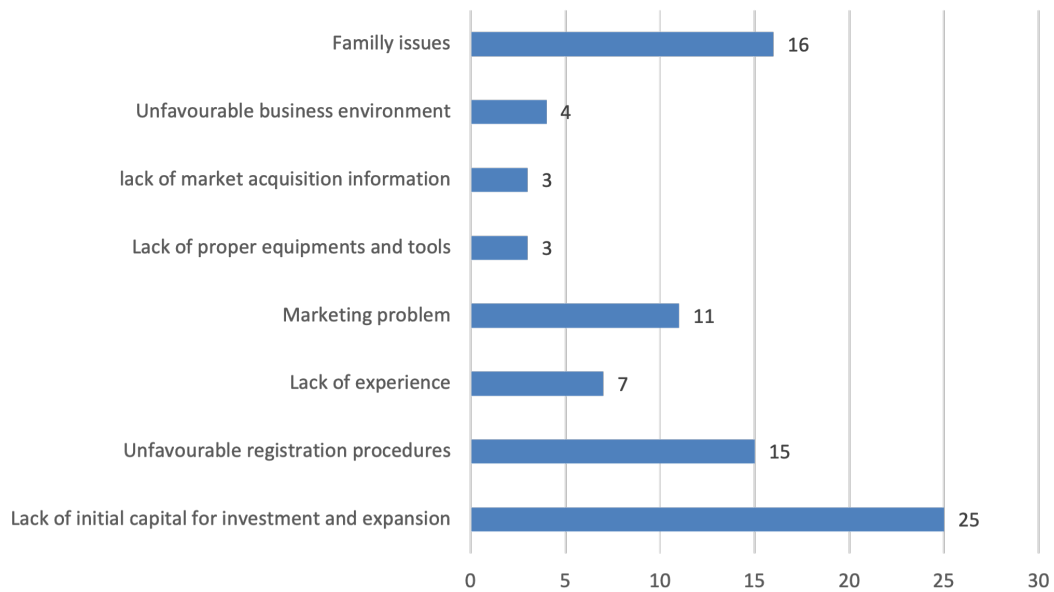
Figure 15:   Challenges faced by self employed graduates

3.2.17   Reasons for not being employed

The results presented in Figure 16, indicate various reasons why graduates are not employed: 14 opted not to look for employment, 98 faced unsuccessful applications, 34 lost previous employment, and 74 cited a lack of work experience. These findings underscore several challenges graduates encounter in their job search process, including personal choices affecting job-seeking behavior, difficulties in securing positions despite applying, setbacks due to job loss, and the barrier posed by insufficient work experience. Addressing these issues requires targeted strategies such as career counseling to motivate active job search, enhanced support for job application processes, measures to mitigate job instability, and initiatives to bridge the gap between academic qualifications and workplace demands through internships or practical training opportunities. .
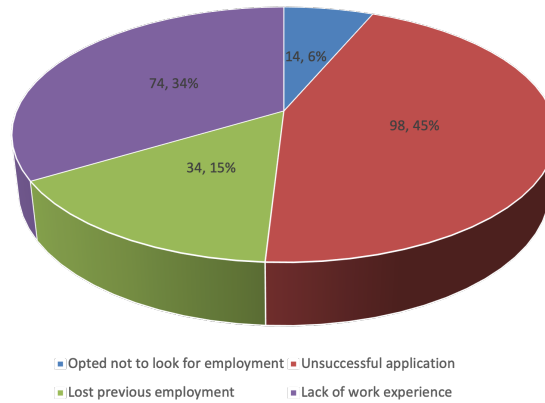
Figure 16: Reasons for unemployment

3.3 Acquired competencies at ATC

The survey highlights a spectrum of skills that graduates perceive as vital for daily activities as presented in Figure 17: practical job-related skills (301), specific occupational knowledge (299), and teamwork skills (300) emerged as the most valued. This underscores the importance of hands-on capabilities and collaborative abilities in professional settings. Additionally, work ethics (297) and time management skills (276) are crucial for effective task execution and workplace reliability. Communication skills (245) and problem-solving skills (264) are recognized as essential competencies for navigating diverse challenges, while ICT skills (178) and entrepreneurship skills (186) reflect the growing importance of technological proficiency and innovative thinking in modern careers. Customer service skills (173), negotiation skills (223), leadership skills (140), and creativity (244) are also noted, emphasizing a multifaceted approach to career readiness. These findings underscore the multifaceted nature of skills required in today's workforce, urging educational institutions and employers to foster a comprehensive skill set that equips graduates for diverse professional environments.
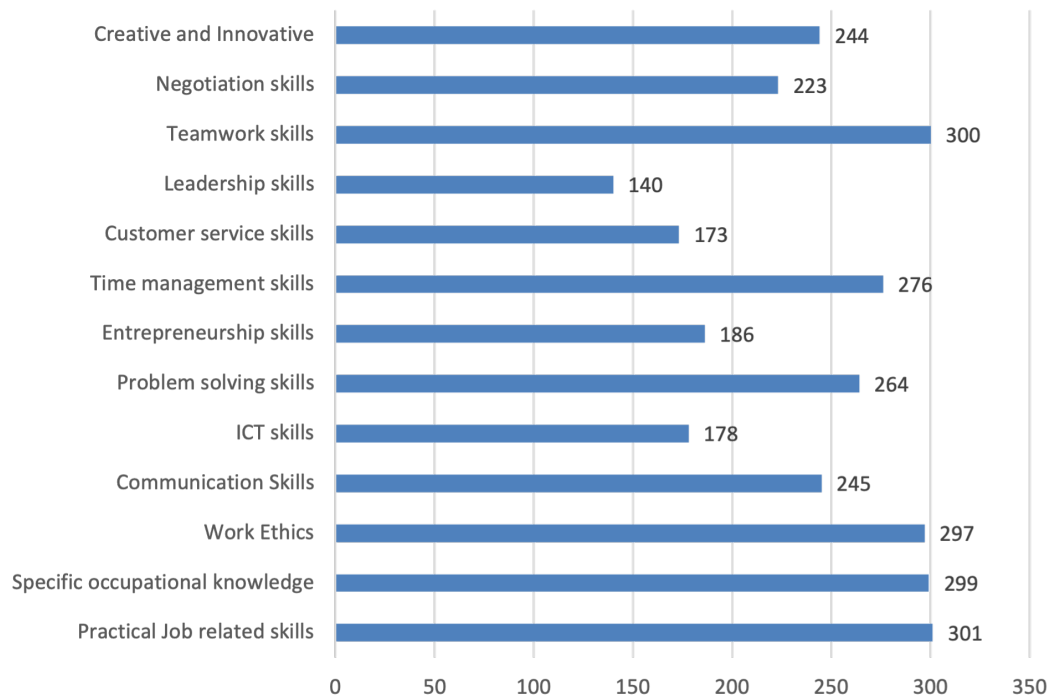
Figure 17: Skills helped graduates in performing their daily tasks

3.3.1 Relevance of training offered at ATC

Graduates were asked to rate relevance of training elements used in preparing ATC graduates to their activities using a five Likert scale (very good, good, neutral, poor, very poor) for each element. Graduates rated training in knowledge, skills acquired during practical training, skills acquired during industrial attachment, workshop equipment and tools, laboratory works and teaching and delivery methods as very good while instructional manuals and library services as good. This implies that most of the training elements used to prepare graduate at ATC were very good but there is a need to improve more library services and instructional manuals. Table 4, presents five Likert scale on relevance of training offered at ATC

Table 4: Relevance of training offered at ATC to prepare competent graduates

	Mean	Description
Knowledge (Theory)	1.63	Very Good
Skills acquired during practical training session	1.57	Very Good
Skills acquired during Industrial Attachment	1.51	Very Good
Instructional manuals	1.78	Good
Library Services	2.00	Good
Workshop equipment and tools	1.68	Very Good
Laboratory work	1.71	Very Good
Teaching and delivery methods	1.73	Very Good

3.3.2 Adequacy of training, graduates' employability and their ability to perform jobs

All respondents consistently indicated their satisfaction with the adequacy of training provided by ATC across several dimensions: preparation for work, ability to train others, skill improvement, effectiveness in employment, and transitioning between employers within their specialization. They also expressed a readiness to recommend both their program of study and ATC itself. These findings presented in Table 5, strongly suggest that ATC's training programs effectively equip graduates for employment and enhance their job performance. The majority of graduates rated the various training elements highly, affirming their belief that ATC plays a crucial role in producing competent graduates ready to meet the challenges of the workforce.

Table 5: Recommendation in training on performing your jobs

	Mean	**Description**
My training adequately prepared me for work	1.92	Agree
I can easily train others	2.03	Agree
I can easily be trained to improve my level of skills	1.76	Agree
I find myself to be very effective in my employment	2.04	Agree
I can easily change employers within my field of specialization	2.24	Agree
I can recommend the studied program to others	2.03	Agree
I can recommend others to join ATC	1.72	Agree

3.4 Employers Responses

3.4.1 Skill level of graduates

The results from employers indicate the distribution of educational levels among the graduates they predominantly employ as presented in Figure 18: 9 employers reported hiring graduates with certificates most frequently, 27 employers hire graduates with diplomas most often, 7 employers hire those with higher diplomas, and 18 employers hire graduates with bachelor's degrees. This data illustrates the varying preferences among employers for different levels of educational qualifications when selecting candidates for employment. Employers' choices likely reflect their specific needs for skills, knowledge, and expertise required for various roles within their organizations. It also underscores the importance for educational institutions to tailor their programs to align with industry demands and prepare graduates effectively for the job market across different educational levels.
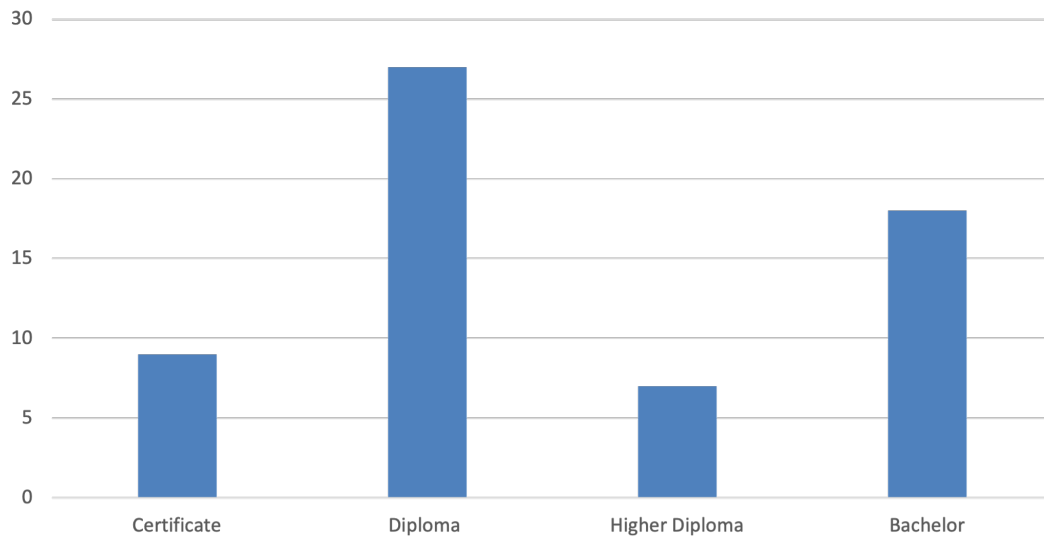
Figure 18:   Skill level of graduates

3.4.2   Recruitment Methods

Employers utilize a variety of recruitment methods to hire graduates, as indicated in Figure 19 by their responses: 21 employ advertisement on websites, 18 through direct applications by graduates, 16 via advertisements on social media, and 15 through newspaper advertisements. Additionally, internal advertisements of vacancies (16), personal contacts with graduates (9), and public service recruitment secretariats (8) are also utilized. Less frequently used methods include private employment agencies (4), career advisory agencies (3), and other forms of contact with institutes (3). These findings highlight the diversity of channels employers leverage to attract and recruit graduates, reflecting the evolving landscape of recruitment strategies in response to technological advancements and changing candidate expectations. Effective use of digital platforms like websites and social media underscores the importance of online presence in modern recruitment practices, while traditional methods such as newspaper advertisements and personal contacts remain relevant for reaching specific audiences and maintaining professional networks. This variety suggests that employers tailor their recruitment approaches to effectively target and engage with potential candidates across different demographic and professional contexts.
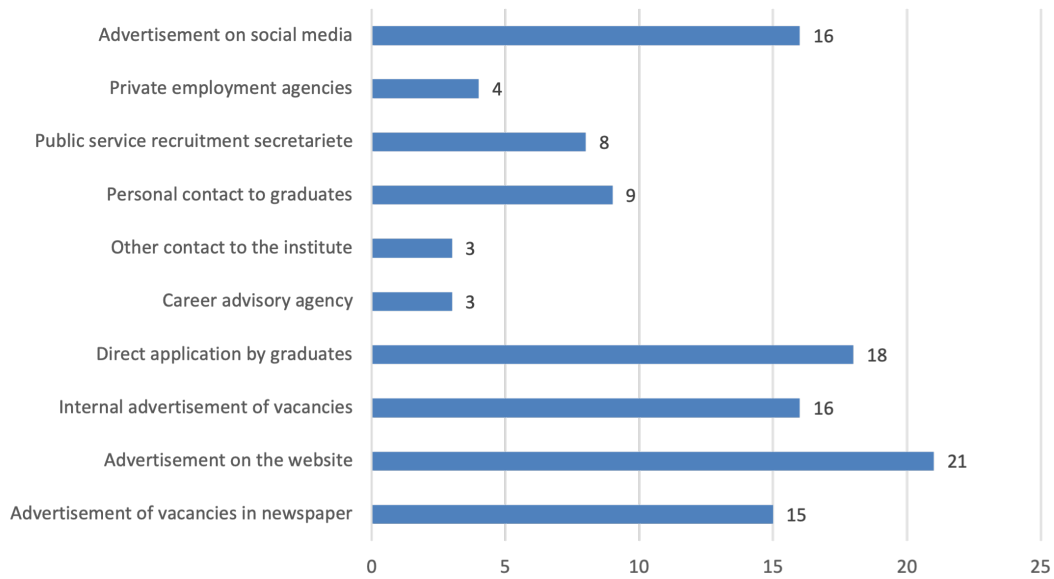
Figure 19: Recruitment Methods

3.4.3 Employers' satisfaction with the skills and abilities of graduates from ATC

The study assessed employers' satisfaction with various skills and abilities of graduates from ATC using a five-point Likert scale. The findings presented in Table 6, indicate that a majority of employers expressed strong satisfaction with graduates' ability to demonstrate conceptual knowledge relevant to their work, use specific technical skills required for their jobs, interact effectively with others to achieve goals, and perform tasks accurately while paying attention to details, as illustrated in Table 9. Additionally, employers reported satisfaction with other skills. These results align with graduates' perceptions that practical job-related skills, problem-solving abilities, communication skills, and teamwork capabilities were highly beneficial in their daily activities. This mutual satisfaction shows the effectiveness of ATC's training in equipping graduates with essential competencies sought by employers, thereby enhancing their readiness and performance in the workforce.

Table 6: Employers' satisfaction with the skills and abilities of graduates from ATC

	Mean	**Description**
Demonstrate conceptual knowledge related to work	4.51	Very satisfied
Uses specific technical skills related to job being done	4.51	Very satisfied
Uses computer and other technological tools to perform necessary tasks	4.35	Satisfied
Speaks in a clear /concise and correct manner	4.40	Satisfied
Writes in a clear/concise and correct manner	4.33	Satisfied
Interact with others in the way that contribute effective working relationship and achievement of goals	4.55	Very satisfied
Determine task and resources to complete activity	4.53	Very satisfied
Observe safety issues while performing assigned tasks	4.42	Satisfied
Perform task accurate and pay attention to details	4.51	Very satisfied
Create innovative strategies and/or product that meet identified needs	4.20	Satisfied
Observe work ethics, discipline and code of conduct	4.46	Satisfied
Apply mathematics technics with accuracy required to solve problem and making decisions	4.13	Satisfied
Critical thinking	4.14	Satisfied

3.4.4 Knowledge and skills the employed lack

Employers were surveyed regarding the knowledge and skills they find lacking in graduates from ATC. A significant portion, accounting for 27.4%, identified a lack of knowledge of national laws. Additionally, 18.9% mentioned deficiencies in understanding and producing drawings, while 17.9% noted insufficient practical skills in using equipment and machines. Other areas of concern included practical use of working tools (11.6%), practical use of materials and parts (9.5%), performing measurements at work (8.4%), and utilizing written instructions and guides (6.3%). These findings presented in Table 7, highlight specific areas where employers perceive gaps in graduates' preparedness, suggesting potential areas for curriculum enhancement and targeted training to better align with industry needs and expectations.

Table 7: Knowledge and skills the employed lack

	Frequency	Percentage (%)
Practical use of working tools	7	11.6
Practical use of machines and equipment	10	17.9
Practical use of material and parts	5	9.5
Understanding and producing drawings	11	18.9
Doing measurements at work	5	8.4
Use of written instructions and working guides	4	6.3
Knowledge of national laws	16	27.4

3.4.5 Employers suggestions for improving ATC academically

According to Table 8, majority of employers, comprising 22 (38.6%), highlighted the need for increased software skills as a key area for improvement among graduates. Additionally, 10 employers (17.5%) emphasized the importance of enhancing practical training, while 4 (7%) raised concerns about the development of entrepreneurial-specific skills. These findings underscore employers' priorities for enhancing specific competencies in graduates from ATC, reflecting the evolving demands of the modern workforce and signaling potential areas for educational reform and curriculum adaptation to better meet industry needs.

Table 8: Areas for improving ATC academically

Areas for improvement	Frequency	Percentage (%)
Increase software skills	22	38.6
Establish hematology skills	1	1.8
Setting and installation of hydroponics	1	1.8
Calibration of oxygen and other plants	1	1.8
IoT and Artificial intelligence	5	8.8
Increase practical training	10	17.5
Entrepreneurial specific skills	4	7.0

CHAPTER FOUR

CONCLUSION

The analysis of employment outcomes among graduates from Arusha Technical College provides a comprehensive view of their initial career trajectories, influenced by both their responses and those of their prospective employers.

4.1   Key Findings from Graduates' Employment Responses

i) Graduates from Arusha Technical College exhibit diverse initial career paths, with a notable proportion securing contract-based positions (110), indicating a common pathway for gaining early work experience.

ii) A significant number of graduates have opted for self-employment (43), underscoring entrepreneurial ambitions among the cohort.

iii) The distribution of permanent employment (26) suggests a preference for stable career options shortly after graduation.

4.2   Employer Perspectives and Responses

i) Employers expressed overall satisfaction with graduates' conceptual knowledge and technical skills, affirming the effectiveness of ATC's educational programs.

ii) Areas for improvement highlighted by employers included deficiencies in practical skills such as knowledge of national laws and proficiency in using equipment and producing drawings.

iii) There was a consensus among employers regarding the need to enhance software skills among graduates, reflecting industry demands for technological proficiency.

iv) Sector-specific dynamics also influenced employment outcomes, with the private sector favoring contract-based roles (114) for initial career exposure, while the public sector

demonstrated a preference for permanent positions (71), emphasizing stability and benefits associated with government employment.

Generally, the findings shows the dynamic landscape of early career transitions for graduates from Arusha Technical College, shaped by both their own employment choices and the expectations of prospective employers. While graduates have shown versatility in securing contract-based and self-employment opportunities, the preference for stable career paths, especially among certain sectors, highlights the importance of aligning educational programs with industry needs. Enhancing practical skills, particularly in areas identified by employers, such as legal knowledge, technical proficiency, and software skills, is essential to better prepare graduates for the demands of the job market. Strengthening partnerships between educational institutions and employers, and fostering gender-equitable access to career opportunities, will be important in promoting inclusive economic growth and maximizing the potential of graduates in the workforce.

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APPENDICES
Appendix I: Graduate Questionnaire

ARUSHA TECHNICAL COLLEGE
JUNCTION OF MOSHI ARUSHA AND NAIROBI ROAD,
P.O. BOX 296, ARUSHA, TANZANIA

QUESTIONNAIRE FOR TRACER STUDY SURVEY

GRADUATES

Dear graduate,

The Arusha Technical College (ATC) is conducting a tracer study to find opinions of ATC graduates on employability and the quality of education and training they received.

You are kindly requested to spare some few minutes to help complete this survey. Data obtained will assist ATC to effectively formulate and implement training plans while focusing on the employability and labour market strategies. All information obtained will be handled at utmost confidentiality.

Dr. Naisujaki Lyimo

Lecturer, Team Leader- Training Programs

Arusha Technical College,

P.O. Box 296, Junction of Moshi-Arusha and Nairobi Roads,

Arusha, Tanzania

Mobile: +255 763 469 460/+255 788 768 658

Email: naiviebe@gmail.com

Thank you very much in advance for your kind support.

PART I: Demographic Information

Please fill in or tick (✓) where appropriate.

1. Sex:　　　　　Male　　☐　　　　Female　　☐

2. Age group (years):　15 - 24　☐　25-34　☐　35 and above　☐

3. What level of formal qualification did you attain at ATC?　*(Multiple answers possible)*

    a) Basic Technician Certificate (NTA 4) ☐　　b) Technician Certificate (NTA 5) ☐

    c) Ordinary diploma (NTA 6) ☐　　d) Higher diploma (NTA 7) ☐

    e) Bachelor degree (NTA 8) ☐

4. What programme did you study at ATC?

Mechanical Engineering	☐	Laboratory Science and Technology	☐
Electrical Engineering	☐	Pipes Works, Oil and Gas Engineering	☐
Electronics and Telecommunication Engineering	☐	Electrical and Hydropower Engineering	☐
Electrical and Automation Engineering	☐	Electrical and Biomedical Engineering	☐
Civil Engineering	☐	Automotive Engineering	☐
Civil and Highway Engineering	☐	Auto-electric and Electronics Engineering	☐
Civil and Irrigation Engineering	☐	Heavy Duty Equipment Engineering	☐
Computer Science	☐	Information Technology	☐

5. Did you attend any short course at ATC?

    Yes ☐　　No ☐

    If yes, mention the name of short course: _____

PART II: Employment Status

Please fill in or tick (✓) where appropriate.

1. What were you doing in the first six months after graduation?

   a) Employed ☐   c) Further academic training ☐

   b) Self-employed ☐   d) Not employed and looking for employment ☐

2. What is your present employment status?

   a) Permanent Employed ☐

   b) On Contract basis ☐

   c) Unemployed and looking for employment ☐

   d) Self-employed with/without employees ☐

3. How long did it take you to find your first employment (or first self-employment)?

   a) 0-6 months ☐   b) 7-9 months ☐

   c) 10-12 months ☐   d) More than 12 months ☐

SECTION A: IF YOU ARE EMPLOYED ANSWER THIS SECTION

4. How did you get to know about your current employment? *(Multiple answers possible)*

   a) Newspaper /Television/Radio ☐

   b) Internet (e.g., government websites, company websites) ☐

   c) Relatives, friends or/and colleagues ☐

   d) Industry Linkages during training (e.g., On the Job Training) ☐

   e) Referral/School Endorsement ☐

   f) Social media (e.g., Facebook, WhatsApp, LinkedIn) ☐

5. What is the name and address of your current employer?

   Organization Name: _____

   Postal Address: _____

   Physical Address: _____

   Locality (Region): _____

   Country: _____

   Telephone (Official line): _____

6. Please specify your employer category

   a) Public sector (central/local government) ☐   c) NGOs ☐

   b) Private sector ☐

7. In which industry/sector are you working in?

Agriculture	☐	Construction	☐
Mining	☐	Manufacturing	☐
Energy	☐	Transportation	☐
Water supply and sanitation	☐	Tourism	☐
Business	☐	Information and communication Technology	☐
Finance and insurance	☐	Education	☐
Public administration	☐	Arts, entertainment and recreation	☐
Security and defense	☐	Fishing	☐
Human health and social work	☐	Oil and Gas	☐
Forestry	☐		

8. To what extent are you satisfied with the following aspects of your employment? Tick (√) where appropriate

Employment Satisfaction Aspects	Strongly satisfied	Satisfied	Neutral	Dissatisfied	strongly Dissatisfied
Being able to work independently					
Clear and regulated tasks					
Job security					
Social status and recognition					
Possibilities to put your own ideas into practice					
Income and benefits					
Working condition					
Career advancement prospects					
Being able to coordinate/supervise work					

9. Are you employed in your field of specialization?

a) Yes ☐   b) No ☐

10. *If you answered **NO in Question 11**, why are you not employed in your field of specialization?*

(Multiple answers possible)

a) Limited employment opportunity ☐   c) Poor working conditions ☐

b) Poor remuneration ☐   d) Job dissatisfaction ☐

9. Other (please specify) _____

11. How many employers did you contact before getting your current employment?

a) None ☐   b) 1-5 ☐   c) 6-10 ☐   d) 11-20 ☐   e) Over 20 ☐

12. How many employers did you work for before the current employment?

   a) None ☐   b) 1 ☐   c) 2 ☐   d) More than 2 ☐

13. If your current employment is not first one, why did you leave your previous employment?

   a) Sought improved wage ☐   d) Retrenched/ reduced/ terminated ☐

   b) Sought improved working conditions ☐   e) Wanted a new challenge ☐

   c) Needed to change environment ☐   f) Found employment in my field of specialization ☐

   g) Other (please specify) _____

SECTION B: IF YOU ARE SELF-EMPLOYED ANSWER THIS SECTION

14. How much did you invest in your business/company (in TZS)?

   a) Below 100,000 ☐   c) 500,000-1,000,000 ☐

   b) 100,000-500,000 ☐   d) Above 1,000,000 ☐

15. How did you get capital to invest in your business/company? *(Multiple answers possible)*

   a) Parents/relatives ☐

   b) Joint venture ☐

   c) Loan from commercial/community banks ☐

   d) Donors' funds ☐

   e) Women and Youth Funds from local government ☐

16. Have you employed any assistants?

   Yes ☐   No ☐

17. If yes, how many assistants have you employed?
   a) 1-3 ☐   b) 4-6 ☐   c) 7 and above ☐   d) None ☐

18. If you have employed assistants, what type of skills do they have

_____

_____

_____

19. What challenges did you face when you started your business/company?

	Challenges	Tick any number of answers below
1	Lack of capital for initial investment and expansion	
2	Unfavorable registration procedures	
3	Lack of experience	

4	Marketing problems	
5	Lack of proper equipment and tools	
6	Lack of market acquisition information and	
7	Unfavorable business environment	

SECTION C: IF YOU ARE UNEMPLOYED ANSWER THIS SECTION

20. If you are not employed, what is/are the reason(s) for? *(Multiple answers possible)*

   a) Family issues

   b) Opted not to look for an employment

   c) Unsuccessful application

   d) Lost previous employment

   e) Lack of work experience

Other reasons (please specify): _____

PART III: Relevance of Training

Please fill in or tick (✓) where appropriate.

1. Which of the following help you in performing your daily activities? *(Tick (✓) any number of answers)*

Specific occupational knowledge		Time management skills	
Practical job-related skills		Managerial skills	
Work ethics		Customer service skills	
Communication skills		Leadership skills	
ICT skills		Teamwork skills	
Problem-solving skills		Negotiation skills	
Entrepreneurship skills		Creative and Innovative	

2. What is your opinion on the relevance of training elements used to prepare competent graduates?

   Tick (✓) where appropriate

Training elements	Very Good	Good	Neutral	Poor	Very Poor
Knowledge (Theory)					
Skills acquired during practical training session					
Skills acquired during Industrial Attachment					
Instructional manuals					
Library Services					
Workshop equipment and tools					
Laboratory work					
Teaching and delivery methods					

3. Have you ever attended further training since you graduated?

   a) Yes [ ]

   b) No [ ]

4. (**IF YES**), please specify type of course (s):_____

5. (**IF NO)**, why?

   a) No relevant course available [ ]   c) No fund for training [ ]

   b) No need for further training [ ]   d) Other (please specify: _____

PART IV: Comments and Recommendations

Please fill in or tick (✓) where appropriate.

1.What is your opinion with regard to the following statements of the adequacy of training, graduate's employability and their ability to perform their jobs? (Use a Tick (v) where appropriate)

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
My training adequately prepared me for work					
I can easily train others					
I can easily be trained to improve my level of skills					
I find myself to be very effective in my employment					
I can easily change employers within my field of specialization					
I can recommend the studied program to others					
I can recommend others to join ATC					

2. Do you have any suggestions for improving ATC academically?

_____
_____
_____

Thank you for your valuable time for completing this questionnaire.

1.Your Surname (Optional): _____

2.Your First Name (Optional): _____

3. Your Mobile Number (Optional): _____

Appendix II: Employer's Questionnaire

ARUSHA TECHNICAL COLLEGE

Junction of Moshi-Arusha and Nairobi Roads,
P.O. BOX 296, ARUSHA, TANZANIA

QUESTIONNAIRE FOR TRACER STUDY SURVEY

EMPLOYERS

Dear Sir/ Madam,

The Arusha Technical College (ATC) is conducting a tracer study to find opinions of the employers on the ATC graduates and the quality of education and training they received.

You are kindly requested to spare some few minutes to help complete this survey. Data obtained will assist ATC to effectively formulate and implement training plans while focusing on the employability and labour market strategies. All information obtained will be handled at utmost confidentiality.

Dr. Naisujaki Lyimo

Lecturer, Team Leader- Training Programs

Arusha Technical College,

P.O. Box 296, Junction of Moshi-Arusha and Nairobi Roads,

Arusha, Tanzania

Mobile:+255 763 469 460/+255 788 768 658

Email: naiviebe@gmail.com

Thank you very much in advance for your kind support.

PART I: Background Information

Please fill in or tick (✓) the correct response in the space provided.

1. Name of your Organization: _____ .

   Locality: _____

   Permanent address: _____

   Telephone: _____

   Email address: _____

2. Position in Organization: _____

PART II: Recruitment Procedures and Criteria

Please tick (✓) or fill the correct response in the space provided.

1. At what level do you employ the graduates from the ATC?

   a) Basic Technician Certificate ☐

   b) Technician Certificate ☐

   c) Ordinary diploma ☐

   d) Higher diploma ☐

   e) Bachelor degree ☐

2. What kind of methods does the company/organization use to get graduates for recruitment? (*Tick all that apply.*)

   a) Advertisements of vacancies in newspapers ☐

   b) Advertisements on the websites ☐

   c) Internal advertisements of vacancies ☐

   d) Direct application by graduates ☐

   e) Career advisory agency ☐

   f) Other contacts to the Institute ☐

   g) Personal contacts to graduates ☐

   h) Public service recruitment secretariate ☐

   i) Private employment agencies ☐

   j) Advertisement on social media ☐

   k) Other (please specify):

   _____

3. If you employ graduates from the **ATC**, to what extent are you satisfied with the following skills and abilities? Please respond to each factor on the five-point scale, as shown below. **Tick (√) correct response**

Skills and Abilities	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Demonstrate conceptual knowledge related to work					
Uses specific technical skills related to job being done					
Uses computer and other technological tools to perform necessary tasks					
Speaks in a clear/ concise and correct manner					
Writes in a clear/ concise and correct manner					
Interact with others in the way that contribute effective working relationship and achievement of goals					
Determine task and resources to complete activity					
Observe Safety issues while performing assigned task					
Perform task accurate and pay attention to details					
Create innovative strategies and/or product that meet identified needs.					
Observe work ethics, discipline and code of conduct					
Apply mathematics technics with accuracy required to solve problems and making decisions					
Critical thinking					

4. If you employ graduates from ATC, what knowledge and skills do they usually lack?

	Area where improvement of training is needed	Tick any number of answers below
1	Practical use of working tools	
2	Practical use of machines and equipment	
3	Practical use of materials and parts	
4	Understanding and producing drawings	
5	Doing measurements at work	
6	Use of written instructions and working guides	
7	Knowledge of national laws	

5. Are there other skills that you feel are/will be in demand in the future and should be included in educational preparation of ATC graduates?

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_____
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6. Do you have any additional comment?

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Thank you for spending your valuable time in completing this questionnaire.