

# CARISCA Centre for Applied Research and Innovation in Supply Chain – Africa



# GRADUATES EMPLOYABILITY REPORT

2023



**USAID**  
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**KNUST**  
KWAME NKURUMAH UNIVERSITY  
OF SCIENCE AND TECHNOLOGY



## Authors from Kwame Nkrumah University of Science and Technology

- Pasty Asamoah
- Foster Sedem Dedume
- Mary Lamptey

## Under the auspices of

- Nathaniel Boso, PhD, CARISCA
- John Serbe Marfo, PhD, CARISCA

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This report was commissioned by the Centre for Applied Research and Innovation in Supply Chain - Africa as part of its supply chain graduates' employability programme in Ghana.

# EXECUTIVE SUMMARY

This tracer study serves to **provide valuable insights into the alignment between education and industry needs** to facilitate better career planning and enhance industry-academia collaboration as well as provide policymakers with preliminary research for capacity development in the country. Our research is also beneficial for international organizations, and capacity development agencies as it provides in-depth insight into the perception of educational quality offered by the Supply Chain and Information Systems Department in the Kwame Nkrumah University of Science and Technology, School of Business (KSB-SCIS) and its relevance to the current labor market demands. **The research seeks to assess the employability of KSB-SCIS graduates, evaluate KSB-SCIS graduates' career progression, and gather alumni feedback for a holistic evaluation** of KSB-SCIS education and training, teaching methods, and support services.

**The findings suggest that there may be some level of mismatch between the skills graduates possess and current market demands, as some graduates indicated that they work in areas unrelated to their field of study. This may further suggest that the curriculum offered to students in KSB-SCIS may not wholly align with current labor market demand.** The findings of this study are based on quantitative data collected from graduates of KSB-SCIS. Our research specifically provides insights on the job search methods, occupational mobility, time-to-first employment, relevance of the jobs to their fields of study, salary growth, job satisfaction, professional journeys of alumni, university experience, perceived value of their education, perceived value of the skills and competencies acquired, strength and weaknesses of the curriculum, teaching methods, and support services in KSB-SCIS education.

The client for this tracer study report is the Center for Applied Research and Innovation in Supply Chain, Africa (CARISCA). CARISCA is a global center of excellence for training, generating, and translating supply chain management research and innovations into positive development outcomes for Ghana and across Africa. CARISCA forms part of the Building Research and Innovation, Generating Evidence, and Training (BRIDGE-Train) program of USAID, which harnesses intellectual, research, community engagement, and capacity building expertise of higher education institutions to address some of the world's most complex development challenges.





**Key Insights**

**Unemployed  
Graduates**

# EXECUTIVE SUMMARY...

## Key Insights: Unemployed Graduates

The majority of the KSB-SCIS graduates, 218 (71%), comprising 167 (77%) males and 51 (24%) females, are employed, while 89 (29%), comprising 66 (74%) males and 23 (26%) females, are unemployed.

**What Unemployed Graduates Are Currently Doing:** Generally, most of the KSB-SCIS unemployed graduates are actively seeking jobs (49.50%), exploring entrepreneurial opportunities (10.12%), and furthering their education (9.02%).

**How Long Unemployed Graduates Have Been Looking for Jobs:** The majority of the KSB-SCIS unemployed graduates recently started looking for jobs. About 35 (39.33%) started looking for a job less than six months ago and 25 (28.09%) have spent between six months to a year looking for a job. Just about 13 (14.61%) have been searching for a job for over two years after graduating from KSB-SCIS.

**Job Search Methods of Unemployed Graduates:** The majority of the KSB-SCIS unemployed graduates search for jobs through public advertisements (e.g., internet, newspapers, radio, TV, etc.), and personal contacts (e.g., parents, relatives, friends, etc.). Other approaches used include contacting companies directly, and leveraging commercial employment agencies.

**Type of Jobs Searched for by Unemployed Graduates:** The majority of the KSB-SCIS unemployed graduates have been searching and applying for jobs related to their field of study 55 (61.80%). About 30 (33.71%) have been searching for all categories of jobs, both related and unrelated to their field of study.

**Category of Jobs Unemployed Graduates Apply For:** While KSB-SCIS unemployed graduates have been applying for varied job categories including public enterprise, private multinational company, private established enterprise, startups, churches, and non-governmental organizations, the majority of the graduates applied to public, private established, private multinational firms, and NGOs.



# EXECUTIVE SUMMARY...

## Key Insights: Unemployed Graduates...

**Countries to which Unemployed Graduates are Applying for Jobs, and Nature of Service:** More than 90% of the unemployed graduates apply for jobs located in Ghana only. These jobs are mostly hybrid (on-site and remote), and on-site in nature. The jobs applied for are mostly full-time, 52 (58.43%), full-time and part-time, 12 (13.48%), and full-time, part-time, and internship opportunities, 6 (6.74%).

**Why Graduates Have Not Secured Jobs:** In the opinion of unemployed graduates, their inability to secure jobs is associated with a lack of work experience, poor social networks, low industry demand, and a mismatch in skills acquired in school.



A young woman with voluminous, dark, curly hair is shown from the chest up. She is wearing a white, long-sleeved button-down shirt. She is looking down and to the left, presumably at a laptop screen, which is partially visible in the lower-left corner. The background is a blurred office setting with windows. Two text boxes are overlaid on the lower-left portion of the image.

**Key Insights**

**Employed  
Graduates**

# EXECUTIVE SUMMARY...

## Key Insights: Employed Graduates

**Employed Graduates' Working in Their First Job:** About half of the employed graduates are currently working in their first job after graduating (49.07%), while 50.93% of the respondents have changed jobs at least once after graduating from KSB-SCIS.

**How Long It Took Employed Graduates to Land Their First Job:** The majority (66.97%) of the KSB-SCIS graduates secured their first job in less than six months of searching after graduating. The results indicated that it took at most a year for 81.19% of KSB-SCIS graduates to secure their first job.

**Employers of KSB-SCIS Graduates:** KSB-SCIS graduates work with public enterprises (45.87%), private multinational companies (23.85%), private established enterprises (21.10%), and startups (3.21%).

**Why the Self-employed Started a Business after Graduating:** Employed graduates started their businesses because they had a strong entrepreneurship desire, and some were unable to find waged employment opportunities.

**Countries and Nature of Employed Graduates' Work:** Although there is evidence that some employed graduates work in the United Kingdom (1.38), France, Malawi, South Sudan, and Sweden (0.46% each), almost all the KSB-SCIS employed graduates (96.79%) work in Ghana. In addition, the majority of the employed graduates work on-site, and both on-site and online. Very few of them work remotely.

**Job Search Strategies of Employed Graduates:** While graduates leveraged varied means to secure their current jobs, the majority of them landed employment through public advertisement (34.40%), personal contacts including family and friends (20.64%), contacting companies directly (15.60%), internships (14.22%), and referrals (5.96%).





# EXECUTIVE SUMMARY...

## Key Insights: Employed Graduates...

**Category of Job, Duration of on-the-job Training, and Relatedness to Program of Study:** The majority of the employed graduates work full-time in their field of study, and receive between a month and three months of on-the-job training.

**Factors Contributing to the Employment of Graduates:** Competency (e.g., soft skills, ability to use modern technologies), social networks, and training (e.g., coaching, counseling, workshops, internships), to some extent, contributed to the employment of KSB-SCIS employed graduates.

**Career Progression of Employed Graduates:** Generally, there has been a positive career progression in terms of promotion, salary increments, leadership or role (duties), and job satisfaction levels among the KSB-SCIS employed graduates.





**Key Insights**

# **Alumni Feedback & Key Issues**

# EXECUTIVE SUMMARY...

## Key Insights: Alumni Feedback

### **How KSB-SCIS Education Has Developed Graduates' Competencies and Skills:**

While the ability to use modern technologies and practical hands-on experience greatly influenced employment, it seems the KSB-SCIS education pays little attention to them. Alumni hold the opinion that the KSB-SCIS education pays much attention to the development of soft skills (e.g., teamwork skills, communication skills, critical thinking skills, adaptation to new environments skills, and research skills).

### **Contributions of Cooperative Training to the Development of Graduates' Competencies and Skills:**

Cooperative training such as internships, research seminars, industry engagement, skill development, and social gatherings have helped graduates develop their teamwork skills, communication skills, problem-solving skills, leadership skills, adapt to new environments, and improve their social networks and critical thinking skills.

### **What is Lacking in KSB-SCIS Education and Training:**

KSB-SCIS education lacks job placement services, industry internship placement, industrial engagements, exposure of students to industrial challenges, practical hands-on experiences, and access to career resources.

### **KSB-SCIS Teaching Method Evaluation:**

The KSB-SCIS teaching method is characterized by clarity of instructions, engagement and interactivity, encouragement of critical thinking and problem-solving, relevance to real-world application, and the use of modern technologies. Support for students, feedback and assessment methods, and access to career resources for students require massive improvement.

### **KSB-SCIS Support Services Evaluation:**

KSB-SCIS has good support services in learning (e.g., library, laboratory, etc.), information technology, academic advising and guidance, and support for students with special needs. Support for students' mental health and counseling, financial aid and scholarship opportunities, and job placement requires improvement.



# EXECUTIVE SUMMARY...

## Key Issues

- The mismatch between skills graduates possess and current market demands puts a responsibility on the employing organizations to offer on-the-job training to employed graduates, which may be expensive.
- While little attention is paid to the use of modern technologies and practical hands-on experience in KSB-SCIS education, the majority of the employed graduates possessed soft skills, ability to use current technologies, and practical hands-on experience, which landed them their current jobs.
- Cooperative training contributes immensely to the quality of education and training of KSB-SCIS students, which eventually led to employment, job satisfaction, and positive career progression; however, a huge proportion of the graduates did not engage in such training.
- KSB-SCIS education lacks job placement services, industry internship placement, industrial engagements, exposure of students to industrial challenges, practical hands-on experiences, and access to career resources.
- Graduates are not consistently monitored to understand their career progression and perception of KSB-SCIS education over time.





**Key Insights**

**Future Research  
& Policy**

**Recommendations**

# EXECUTIVE SUMMARY...

## Recommendations for Furture Research

- Further understand, from the perspectives of employers, the skills and competencies required for employment.
- Delve deeper into understanding the gender skills mismatch and how it affects employment and entrepreneurial capacities.



# EXECUTIVE SUMMARY...

## Recommendations for KSB-SCIS, Capacity Development Agencies, and Policymakers

- 1. Design and implement a tracer study management information system.** It is imperative to consistently monitor the progress and perceptions of graduates to gain insights into their career development. A tracer study management information system will yield a robust database of alumni, offering a systematic means to gather pertinent data regarding the present status of graduates. We recommend that the tracer study management information system be designed in a way that provides students and alumni the ability to learn, network, mentor, share success stories, and provide job opportunities through posts and shareability affordances. In addition, the system should provide job advertisement capabilities.
- 2. Institute alumni networking and engagement programs.** Organize networking events, alumni panels, and entrepreneurship conferences to connect current students with successful alumni who have launched their businesses or landed employment. The event should feature a showcase of success stories of alumni who have successfully transitioned into entrepreneurship or found employment in their respective fields. Highlighting these role models can inspire current students and demonstrate the potential pathways to success beyond graduation.
- 3. Provide internship and experiential learning opportunities.** Develop partnerships with local businesses, startups, and entrepreneurial organizations to offer internship and experiential learning opportunities for students. These opportunities can provide hands-on experience, industry exposure, and potential pathways to employment or entrepreneurship post-graduation. To ensure the effectiveness of internships and experiential learning programs, we suggest that the KSB-SCIS department establishes the internships and experiential learning program as one that is compulsory and requires field reports from the participating students.



# EXECUTIVE SUMMARY...

## Recommendations for KSB-SCIS, Capacity Development Agencies, and Policymakers...

- 4. Collaborate with business incubators and accelerators for cooperative training and business resources to turn ideas into viable ventures.** Collaborate with on-campus and affiliate business incubators and accelerators where students and graduates can receive mentorship, guidance, and resources to develop their business ideas into viable ventures. We hold that cooperative training such as internships, research seminars, industry engagement, skill development, and social gatherings may develop students' teamwork skills, communication skills, problem-solving skills, leadership skills, social networks, and critical thinking skills, which are essential for employment and entrepreneurship. These programs can offer workspace, access to funding, industry connections, and expert advice.
- 5. Implement entrepreneurship training programs.** Implement comprehensive entrepreneurship training programs within the curriculum of KSB-SCIS. These programs should include workshops, seminars, and courses covering essential and practical entrepreneurial skills such as business planning, financial management, marketing strategies, and networking.





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**SECTION ONE**

**BACKGROUND**

# BACKGROUND

Tracer studies have become increasingly relevant in various industrial sectors as a means of evaluating the outcomes and impacts of educational programs and training initiatives. Such studies have been instrumental in assessing the effectiveness of workforce development programs and tracking employment patterns. By providing valuable insights into the alignment between education and industry needs, tracer studies facilitate better career planning and enhance industry-academia collaboration. In today's dynamic and competitive job market, the role of tertiary institutions in preparing students for successful careers has become increasingly significant. With a commitment to shaping well-rounded individuals and equipping them with the necessary skills and knowledge, institutions strive to create an environment conducive to academic excellence and personal growth. However, the ultimate measure of their effectiveness lies in the employability of their graduates.

A tracer study, as an essential evaluation tool, serves to bridge the gap between education and employment by shedding light on the post-graduation experiences and outcomes of alumni. This tracer study report aims to provide a comprehensive analysis of the employability and career trajectories of the graduates of the Supply Chain and Information Systems department at the Kwame Nkrumah University of Science and Technology, School of Business (KSB-SCIS). By examining the post-graduation pathways and gathering valuable insights from the KSB-SCIS alumni, this report seeks to evaluate the effectiveness of the educational programs of KSB-SCIS and identify areas for improvement.

The client for this tracer study report is the Center for Applied Research and Innovation in Supply Chain, Africa (CARISCA). CARISCA is a global center of excellence for training, generating, and translating supply chain management research and innovations into positive development outcomes for Ghana and across Africa. CARISCA forms part of the Building Research and Innovation, Generating Evidence, and Training (BRIDGE-Train) program of USAID, which harnesses intellectual, research, community engagement, and capacity-building expertise of higher education institutions to address some of the world's most complex development challenges. CARISCA seeks to strengthen local capacity to improve supply chains by increasing their efficiency, effectiveness, and inclusiveness, driving country self-reliance (CARISCA, 2023).



# BACKGROUND...

The principal objectives of this tracer report are:

1. **To assess the employability of KSB-SCIS graduates**, by analyzing key employment indicators, such as job search methods and occupational mobility, time taken to secure the first job, and the relevance of the jobs to their fields of study.
2. **To evaluate KSB-SCIS graduates' career progression**, through tracking the professional journeys of alumni over time. Exploring factors such as salary growth and job satisfaction will contribute to identifying the factors that contribute to long-term career success and potential areas for enhancement in KSB-SCIS academic programs.
3. **To gather alumni feedback** for a holistic evaluation of KSB-SCIS programs, courses, teaching methods, and support services. By surveying graduates regarding their satisfaction with their university experience, the perceived value of their education, and the skills and competencies they acquired, invaluable insights into the strengths and weaknesses of the KSB-SCIS curriculum, teaching methods, and support services will be gained. This feedback will inform future improvements and ensure that programs remain aligned with industry needs.



A man and a woman are sitting at a table, smiling and looking at a tablet together. The man is on the left, wearing a blue denim shirt, and the woman is on the right, wearing a light blue button-down shirt. They are both looking at the tablet held by the man. The background is bright and out of focus. A blue banner is at the top, and a large blue oval is in the center containing the main title. A blue circle with the number 4 is in the bottom right corner.

## SECTION TWO

# REVIEW OF TRACER REPORTS

# BRIEF REVIEW OF TRACER REPORTS

In this section of the study, we briefly review related academic and industrial tracer studies reports. We seek to leverage the existing body of knowledge to ensure conformity to theoretical and practical standards in conducting tracer studies. Specifically, we examine the objectives, methodologies, and findings of previous tracer studies report. Table 1 is a summary of the literature review on tracer reports.

## 2.1 Objectives of Tracer Studies

Tracer studies serve multiple objectives in the realm of education and workforce development. Contemporary studies have shown that tracer studies are primarily conducted to track and analyze the career paths of graduates or trainees, providing insights into their employment status, job satisfaction, income levels, and the relevance of their education or training to their current occupations [1]–[7]. [3] elaborates that tracer studies are conducted to examine the margin between the starting-up salaries of graduates and trainees and employees in similar positions, waiting time prior to first employment, employment sector, performance and job satisfaction, career prospects, gather graduates' comments for improvement of curricula, and to determine employment rates of graduates and trainees. The study of [1] examined Technical and Vocational Education and Training (TVET) schools, employment status of graduates one year after graduation, situation of employed graduates, and job search strategies of employed and unemployed graduates. The study of [2] established the employment outcomes of vocational training graduates. The study of [3] examined the various types of graduate employment, job-hunting periods, and the factors affecting the employment of AB-English graduates of the Institute of Liberal Arts. [4] examined the employability competencies required from tourism and hospitality graduates, whilst [5] assessed the competencies possessed by alumni with their application in the world of work. The study of [6] assessed the graduates' level of satisfaction with the university's services, learning environment and facilities, and the extent to which the various curricular programs contributed to the development of the graduates' communication skills, human relations skills, leadership skills, problem-solving skills, and research skills. The work of [7] assessed the employment status of computer engineering graduates and the relevance of curriculum, knowledge, skills, work values, and school-related factors to their job placement.

# BRIEF REVIEW OF TRACER REPORTS...

## 2.2 Methodologies Adopted in Tracer Studies

Tracer studies employ various methodologies to gather data and analyze the outcomes and impacts of educational programs and training initiatives. Evidence from contemporary literature shows that authors have adopted mainly surveys, interviews, and focus group discussions as methods of data gathering [1]–[7]. The study of [1] adopted a descriptive survey method for data gathering. The study included ten (10) TVET schools from five (5) municipalities in Bosnia and Herzegovina (BiH) and leveraged descriptive statistics for its analysis. The study conducted by [2] leveraged a mixed method approach to gather both qualitative and quantitative data from 1080 participants. The authors conducted a descriptive and thematic content analysis to generate insights to inform policy. The study of [3] used mainly a survey approach to gather data and subsequently interviews to supplement and validate the data gathered from the respondents. [4] also used a mixed method research designed to collect both qualitative and quantitative data from 1994 participants. [5], [6] employed a descriptive survey research approach to collect quantitative data from 1444 graduates [6]. The study of [7] employed a survey research approach to collect data from 175 computer engineering graduates.

## 2.3 Findings of Related Tracer Studies

Reports on tracer studies have revealed a wealth of findings that offer valuable insights into the outcomes of educational programs and training initiatives. These studies, conducted across different educational sectors, have provided a comprehensive understanding of graduates' employment outcomes, career trajectories, and the effectiveness of educational programs [1]–[7]. The study of [1] discovered that cooperative training contributes to training and education quality, and personal relations are important in finding jobs [6], [7]. In addition, the study revealed that graduates leverage public ads, media advertisements [2], and state employment agencies to search for jobs. The study of [3] revealed that graduates' employability is influenced by factors like skills, interest in the job, health, and job experience. Similarly, [4] concluded that fundamental, functional and professional competencies are the critical skills required for graduates' employment [5].

# BRIEF REVIEW OF TRACER REPORTS...

Table 1: Literature table

Author(s)	Title	Study Objectives	Methodology	Findings
[1]	TVET Graduates in BiH Tracer Study Report 2018	The study examined TVET schools, employment status of graduates one year after graduation, situation of employed graduates, and job search strategies of employed and unemployed graduates.	The study included ten (10) TVET schools from five (5) municipalities in BiH. It employed a survey approach and leveraged descriptive statistics for its analysis.	<ul style="list-style-type: none"> <li>• Cooperative training contributes to the quality of TVET.</li> <li>• Relations are important in finding a job.</li> <li>• Public ads and state employment agencies are the primary job search strategies of unemployed graduates.</li> <li>• About 34% of graduates surveyed were unemployed.</li> </ul>
[2]	Tracer Study on the Employment Outcomes of the Vocational Training Graduates	The study sought to establish the employment outcomes of the Vocational Training Graduates of BOTA-accredited institutions.	The study included 1080 participants. A mixed method approach was used, and both descriptive and thematic analysis were carried out.	<ul style="list-style-type: none"> <li>• Employment rate stood at 50.45%.</li> <li>• Limited mobility of graduates across areas of specialization.</li> <li>• Responding to media advertisements is the primary job search strategy.</li> </ul>
[3]	Tracer Study of Bachelor of Arts Graduates Major in English	The study sought to examine the type of graduate employment job-hunting periods, and the factors affecting the employment of AB-English graduates of the Institute of Liberal Arts.	The study used mainly a survey approach to gather data, and subsequently interviews to supplement and validate the data gathered from the respondents.	<ul style="list-style-type: none"> <li>• The majority of the employed graduates were working as casual staff, contractual, and teacher/instructor in both private and public offices.</li> <li>• Graduates are affected with employability factors like skills, interest in the job, health, and job experience.</li> </ul>
[4]	Preferred Competencies for Tourism and Hospitality Graduates: Evidence from Longitudinal Tracer Studies	The study examined the employability competencies for tourism and hospitality graduates.	A mixed method research design was used. The study included 1994 participants.	<ul style="list-style-type: none"> <li>• Fundamental, functional, and professional competencies are the critical skills required for tourism and hospitality management graduates</li> </ul>



# BRIEF REVIEW OF TRACER REPORTS...

[5]	Tracer Study Exploration of Medan State University Graduates	The study examined the competencies possessed by alumni with their application to the world of work.	A survey method was employed for the study.	<ul style="list-style-type: none"> <li>• The competencies possessed by graduates are in accordance with the needs of the world of work.</li> <li>• The waiting period for graduates to find work was six months, and graduate employers were satisfied with the work results of their graduates.</li> </ul>
[6]	Tracer Study of PNU Graduates	The study assessed the graduates' level of satisfaction with the university's services, learning environment, and facilities. In addition, the study investigated the extent to which the various curricular programs contributed to the development of the Graduates' communication skills, human relations skills, leadership skills, problem-solving skills, and research skills.	A descriptive survey research approach was adopted for the study. About 1444 graduates participated in the study.	<ul style="list-style-type: none"> <li>• A great number of the participants were employed immediately after graduation by application and not by political connections. Level of satisfaction with the university's services, learning environment, and facilities was generally high.</li> <li>• The school's curricular programs had contributed greatly to the development of graduates' competencies.</li> </ul>
[7]	Tracer Study of BS Computer Engineering Graduates of Lyceum of the Philippines University	The study assessed the employment status of the Computer Engineering graduates and the relevance of curriculum, knowledge, skills, work values, and school-related factors to their job placements,	A descriptive survey research approach was used. The study included 175 computer engineering graduates.	<ul style="list-style-type: none"> <li>• Most of the respondents are gainfully employed with positions related to the course they completed.</li> <li>• Respondents obtained their first job within 1-6 months in local manufacturing firms.</li> <li>• Respondents used a walk-in-application approach to secure jobs.</li> <li>• Mathematics, Microsoft Office Application, and programming are the subjects that are most relevant to their employment.</li> </ul>

Source: Authors' construct, 2023.

A man and a woman in an office setting are looking at a tablet together. The man is on the left, wearing a striped shirt, and the woman is on the right, wearing a light blue shirt. They are both looking at the tablet which the man is holding. The background shows an office environment with a desk, a keyboard, and some plants.

## SECTION THREE

# METHODOLOGY

# METHODOLOGY

In the previous section, we discussed contemporary research methodologies that have been leveraged by scholars for conducting both academic and industrial tracer studies. Evidences show that authors have adopted mainly surveys, interviews, and focus group discussions as methods of data gathering [1]–[7]. **This study leverages both survey and archival data to generate insights.** While this study presents a unique method for participant selection and data analysis, we followed the method proposed by [8].

## 3.1 Archival Data Collection, Relevance, Transformation, and Analysis

In the quest to develop criteria for including participants and understanding the pre-admission and admission characteristics of the alumni, **we sought data about the KSB-SCIS alumni, specifically logistics and supply chain, from the Kwame Nkrumah University of Science and Technology Information Technology Services (UITs) after ethical clearance and following conventional approaches.** The archival data is important in understanding the social and economic backgrounds of the alumni, providing a base for comparison and measuring the development of alumni after graduation. **The data consisted of admission, pre-admission employment, and pre-admission educational attributes between 2016 and 2022.** We leveraged the Microsoft Power BI desktop software for the archival data transformation (e.g., handling missing values, standardization, and creating categories), modeling (e.g., managing relationships between the different dataset sources), and analysis (e.g., visualization). We have presented a detailed analysis of the archival data in section 3.2. For example, the analysis suggested that about 304 KSB-SCIS alumni are over sixty (60) years old currently, indicating retirement. Figure 1 is a graphical representation of the alumni age brackets. While this study included the entire population (2273 graduates), it is important to iterate that this information provided a direction about cohort sampling and the category of information we can obtain from the participants.



# METHODOLOGY...

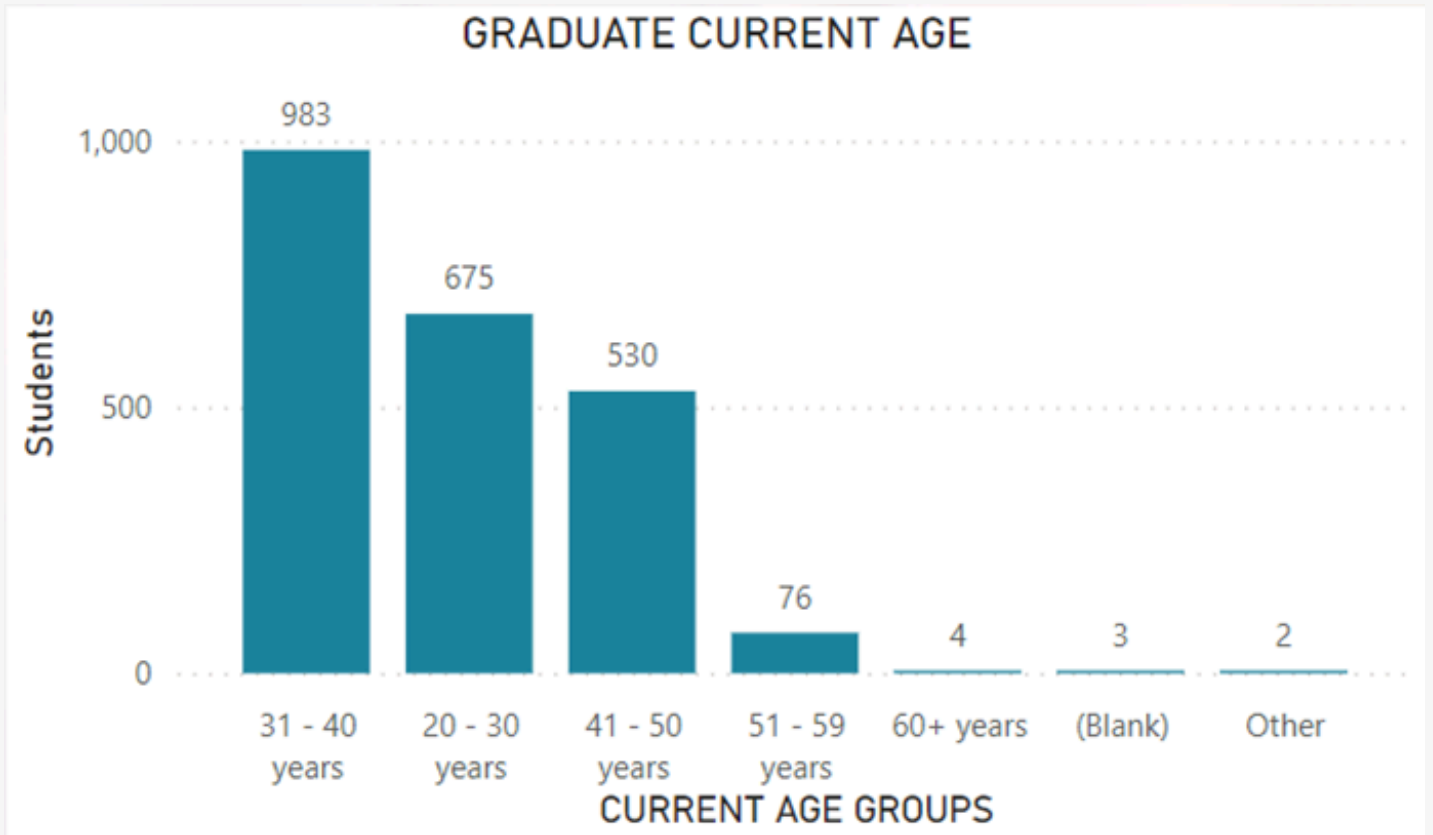


Figure 1: KSB-SCIS graduates' current age groupings

## 3.2 Insights from the Archival Data and Justification for the Study

We leveraged the Microsoft Power BI desktop software to draw insights from the archival data. The insights provided a direction for the instrument development, validation, and data collection. Analysis of the data collected revealed important statistics about the KSB-SCIS graduates' background, education, and employment, providing evidence for the study. The next section discusses the insights from the archival data.



# METHODOLOGY...

## 3.2.1 Entry and Graduation Highlights

Analysis of the data revealed that 2273 students graduated from the KSB-SCIS department between 2016 and 2022. There were almost twice as many males (1434) as females (839), indicating male dominance. Out of the 2273 alumni, 1671 graduated at the postgraduate level while 602 graduated at the undergraduate level. This again indicates that more than twice as many undergraduates than postgraduates graduate from the department every year. Figure 2 provide highlights of the statistics.

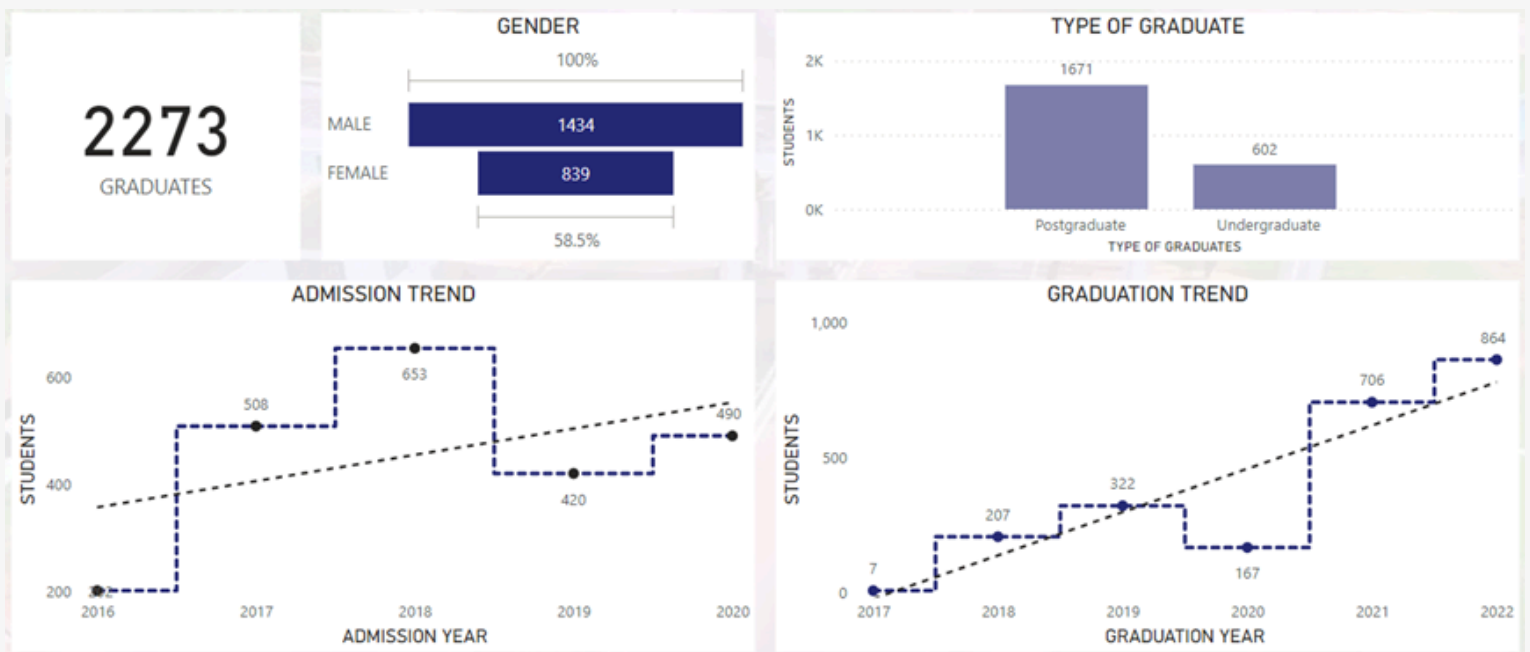


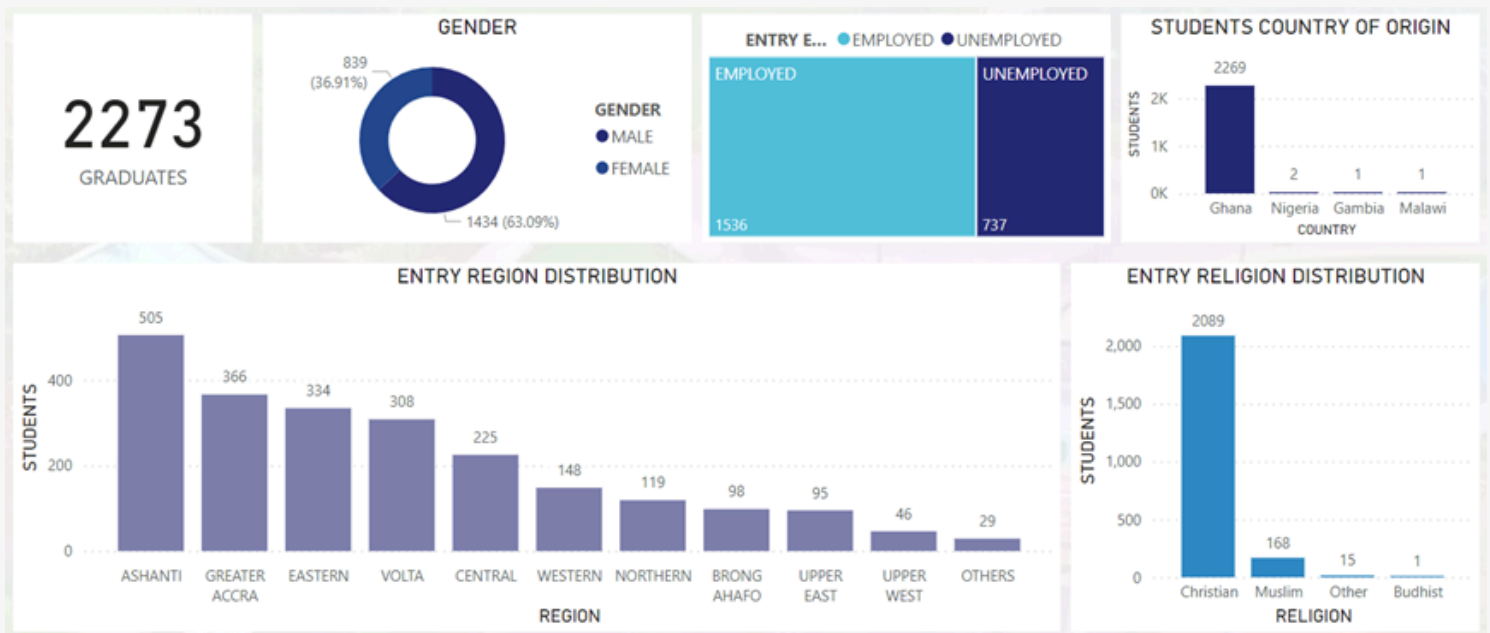
Figure 2: Entry and graduation highlights



# METHODOLOGY...

## 3.2.2 Entry Demographic Information

This section examines the demographic information of the KSB-SCIS alumni. Insights drawn from the demographic data revealed that **the majority of the alumni are from Ghana (2269)**. We found that **2 alumni are from Nigeria, and 1 each from Gambia and Malawi**. In terms of region, most of the alumni are from the Ashanti region (505), Greater Accra (366), Eastern region (334), Volta region (308), and Central region (225) of Ghana. The remaining alumni were proportionally distributed across the other regions in Ghana, as shown in Figure 3. The data identified two main religions, Christianity (2089) and Islam (168), and 16 other religions. Further analysis showed that 983 of the alumni are currently between 31 and 40 years old, 708 are between 20 and 30, and 510 are between 41 and 50. These findings provide evidence that the majority of the KSB-SCIS alumni are still in the working age bracket.



# METHODOLOGY...

## 3.2.2 Entry Demographic Information...

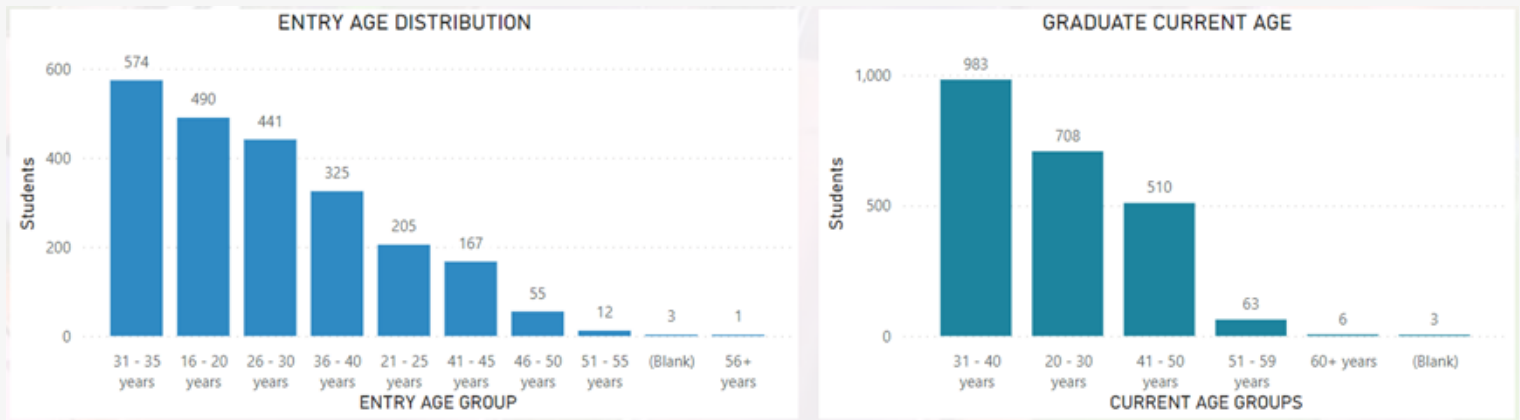
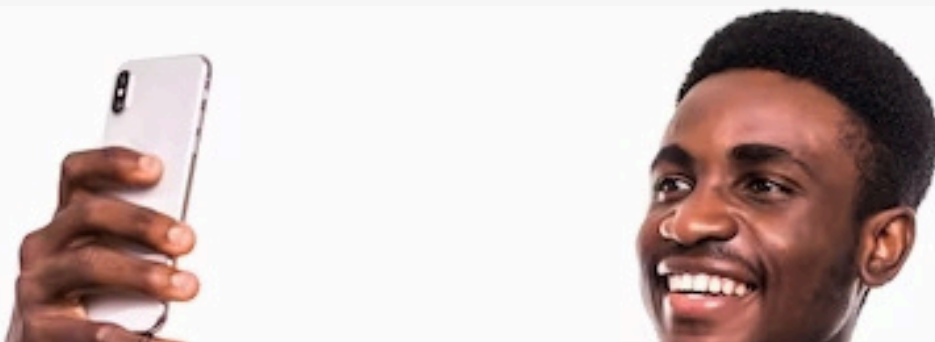


Figure 3: Entry demographic information

## 3.2.3 Educational Background at Entry

In terms of educational background, we examined the graduates' (students) entry qualification, academic background, application mode, stream, type of graduate, and class awarded. It was revealed that more than half of the graduates had an undergraduate degree (946), others had an HND certificate (134), or professional certificates (e.g., ICAG) (94), and postgraduate degree (64). Similarly, while graduates apply with different backgrounds in business, engineering, science, accounting, etc., the majority of the applicants came with purchasing and procurement (611), business (546), logistics and transport (334), management (239), and engineering (102) backgrounds. Further analysis showed that the majority of the alumni applied in the long-distance stream (1518), while the remaining 755 applied for regular (full-time). A contributing factor to the high disproportionality between the two streams is that the long-distance applicants are already employed and seek to broaden their knowledge and skill levels. This is confirmed in the data as there are more postgraduate (1671) than undergraduate (602) alumni in the KSB-SCIS department. Figure 4 provides a detailed analysis and insights of the educational background data.



# METHODOLOGY...

## 3.2.3 Educational Background at Entry...



Figure 4: Educational background

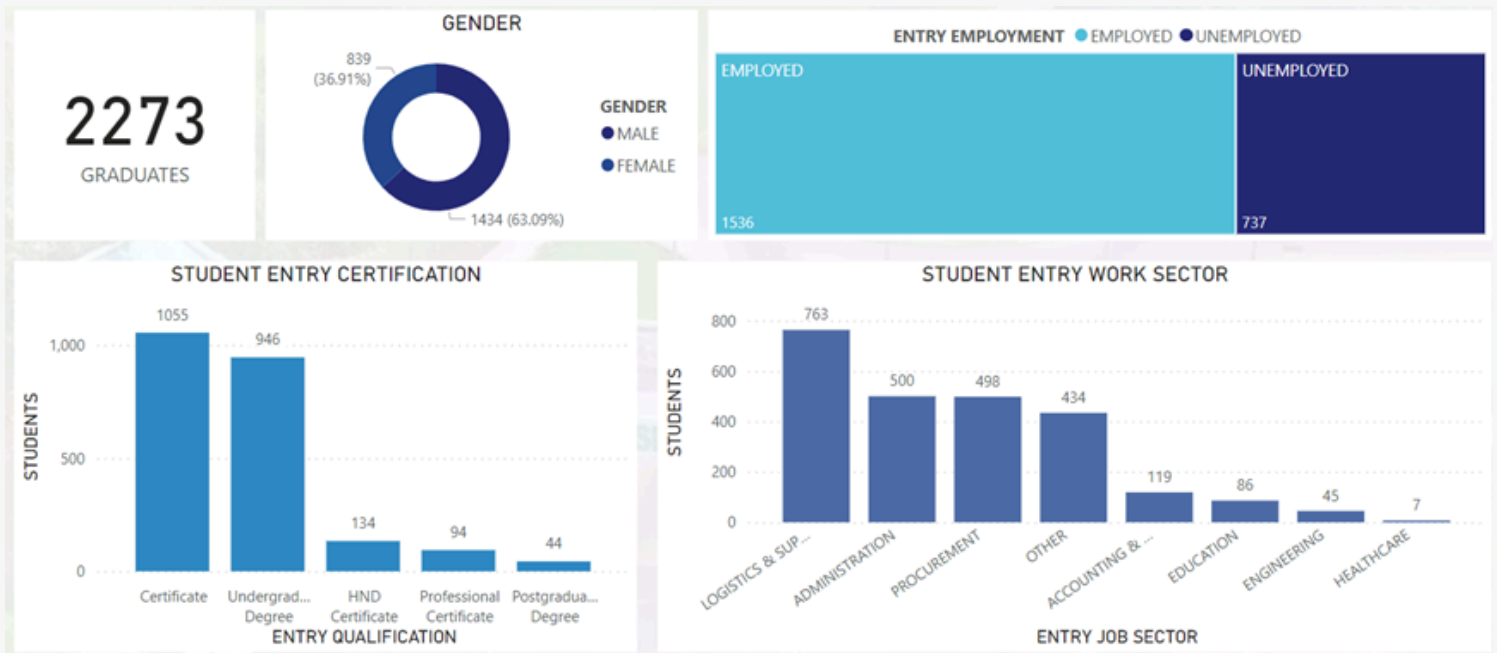




# METHODOLOGY...

## 3.2.4 Entry Profession and Employment

In terms of the alumni entry profession and employment attributes, we found that **more than half of the alumni who applied to the department were already employed** (1536) as compared to the unemployed (737). Further, we found that the majority of the employed applicants worked in the logistics and supply chain sector (763), administration (500), procurement (498), accounting and finance (119), and engineering (45). In terms of management levels, we found that the majority of the alumni applied while working as functional managers (1540), middle-level managers (378), supervisory or team lead (170), specialist or professionals (79), and top-level managers (52). While it is unclear why alumni pursued programs in KSB-SCIS considering their employment backgrounds, we speculate that they applied to KSB-SCIS for the purposes of salary raises, better conditions of service, and promotions. Figure 5 provides detailed analysis of the entry profession and employment attributes from the archival data.



# METHODOLOGY...

## 3.2.4 Entry Profession and Employment...

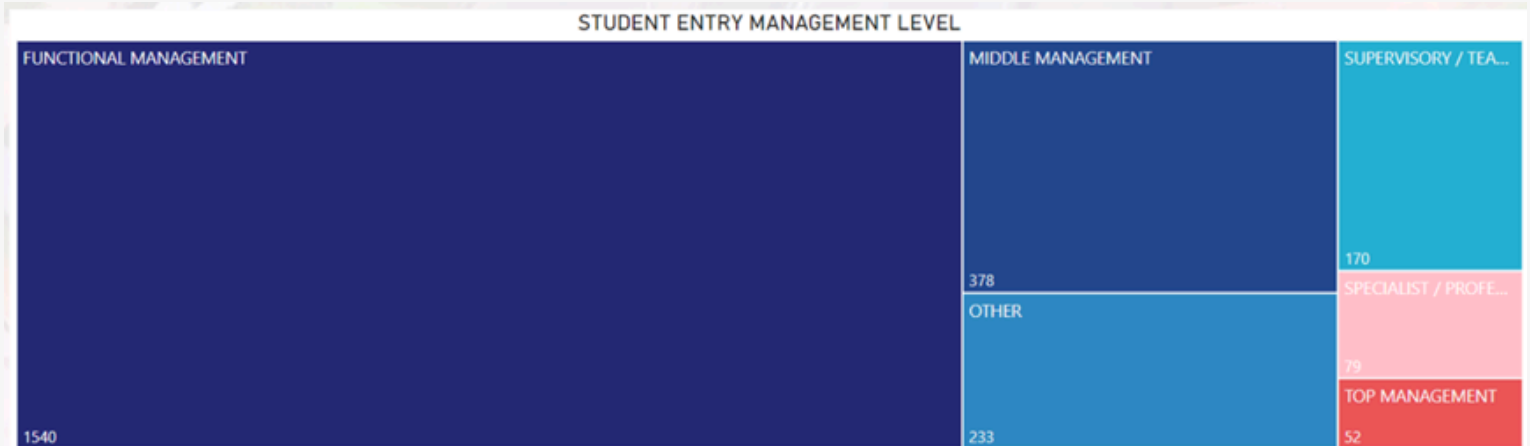


Figure 5: Entry profession and employment

## 3.2.5 Concluding Remarks on the Insights from the Archival Data

The archival data presents interesting findings that give rise to questions requiring this follow-up study. Specifically, the insights presented answer questions on the pre-admission conditions of the alumni. For example, the data answers questions including the entry profession and employment status, demographics, and academic background information of KSB-SCIS alumni. **What are not known about the KSB-SCIS alumni are the job search methods employed by the alumni after graduation, occupational mobility, rate of employment, time taken to secure first job after graduation, relevance of the jobs the alumni are currently doing, and how these relate to the fields of study, professional journey, salary growth, promotion rates, job satisfaction, university experience, perceived value of their education, perceived value of their skills and competencies, perception of the strengths and weaknesses of the curriculum, and the effectiveness of the teaching methods, and support services.** These unknowns provide strong justification for the need of this study.





**SECTION FOUR**

**DATA COLLECTION  
APPROACH**

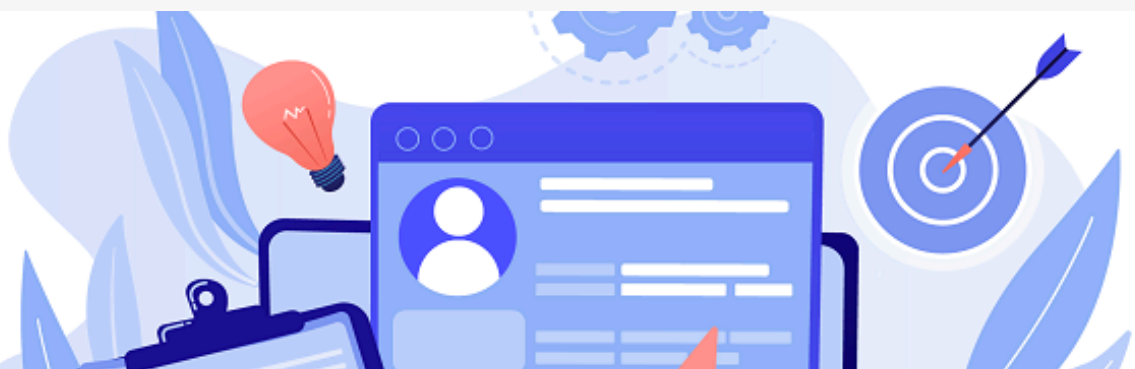
# DATA COLLECTION APPROACH



**Key Insight:** Generally, the majority of the KSB-SCIS graduates, 218 (71%), comprising 167 (77%) males and 51 (24%) females, are employed, while 89 (29%), comprising 66 (74%) males and 23 (26%) females, are unemployed.

We developed the data collection instrument from insights from the archival data and extant literature [1]–[4]. To assess the employability, career progression, and feedback of alumni, we developed a survey for them to respond to. While the survey instrument was developed from insights from the archival data and extant literature, we also sourced expert opinions on the subject. The tentative survey was then sent to five (5) alumni, and three (3) faculty members for validation. Their inputs were used to develop the final survey items used to collect the data from the respondents.

The highly dispersed nature and large number of study participants necessitated the use of digital approaches in collecting their data. Two (2) main strategies were developed to collect the data. First, we converted all the data collection instruments to Google Forms to facilitate reaching participants across the country. Second, we leveraged the emails and phone numbers in the archival data to disseminate the data collection instrument. Specifically, we used bulk SMS and bulk email services to disseminate the data collection instruments. Out of the 2273 emails and SMS sent, we received 1280 successful delivery reports [link to the survey instrument: <https://forms.gle/PTruXWutpj2kEvDR6>]. We leveraged the Microsoft Power BI software for the data cleaning, modeling, and analysis. **Out of the 1280 emails and SMS sent, we received 307 responses, resulting in a 24% response rate;** 218 (71%), comprising 167 (77%) males and 51 (24%) females, are employed, while 89 (29%), comprising 66 (74%) males and 23 (26%) females, are unemployed. Data analysis was conducted based on respondents' employment status.





**SECTION FIVE**

**KEY FINDINGS ON  
UNEMPLOYED  
GRADUATES**

# KEY FINDINGS ON UNEMPLOYED GRADUATES

## 5.1 What Unemployed Graduates are Currently Doing



**Key Insight:** Generally, the majority of the KSB-SCIS unemployed graduates are actively seeking jobs, exploring entrepreneurial opportunities, and furthering their education.

Respondents who indicated that they are unemployed were asked about what they were doing after graduating from KSB-SCIS: “What are you currently doing after graduating from KSB-SCIS?” Generally, we counted 120 selections, comprising 64 (53.33%) “searching for job”, 23 (19.17%) “exploring entrepreneurial opportunities”, 21 (17.50%) “continuing education”, 8 (6.67%) “internships”, 3 (2.50%) “busy with family”, and 1 (0.83%) “taking certification course”. Details of the analysis are provided in Table 2.

Further analysis revealed that the majority of the respondents, 44 (49.50%), are only actively searching for jobs, 9 (10.12%) are only exploring entrepreneurial opportunities, 8 (9.02%) are only continuing their education, and 7 (7.92%) are both searching for a job and exploring entrepreneurial opportunities simultaneously. We found several other respondents who are focused on more than one activity (e.g., 4 respondents indicated that they are continuing their education, searching for a job, and exploring entrepreneurial opportunities simultaneously). Details of the analysis are presented in Table 3.



# KEY FINDINGS ON UNEMPLOYED GRADUATES...

## 5.1 What Unemployed Graduates are Currently Doing...

Table 2: General count of what unemployed graduates are doing

Current Graduate Activity	Frequency	Ratio
Searching for Job	64	53.33%
Exploring Entrepreneurial Opportunities	23	19.17%
Continuing Education	21	17.50%
Internship	8	6.67%
Busy with Family	3	2.50%
Taking Certification Course	1	0.83%
<b>Total</b>	<b>120</b>	<b>100.00%</b>



# KEY FINDINGS ON UNEMPLOYED GRADUATES...

## 5.1 What Unemployed Graduates are Currently Doing...

Table 3: Frequency of what unemployed graduates are doing

Current Graduate Activity	Frequency	Ratio
Searching for Job	44	49.50%
Exploring Entrepreneurial Opportunities	9	10.12%
Continuing Education	8	9.02%
Searching for Job; Exploring Entrepreneurial Opportunities	7	7.92%
Continuing Education; Searching for Job	4	4.51%
Continuing Education; Searching for Job; Exploring Entrepreneurial Opportunities	4	4.51%
Internship	3	3.41%
Internship; Searching for Job	2	2.20%
Busy with Family	1	1.10%
Continuing Education; Exploring Entrepreneurial Opportunities	1	1.10%
Continuing Education; Exploring Entrepreneurial Opportunities; Busy with Family	1	1.10%
Continuing Education; Internship; Searching for Job	1	1.10%
Continuing Education; Searching for Job; Taking Certification Course	1	1.10%
Internship; Exploring Entrepreneurial Opportunities	1	1.10%
Internship; I am applying for postgraduate programme.	1	1.10%
Searching for Job; Busy with Family	1	1.10%
<b>Total</b>	<b>89</b>	<b>100.00%</b>





# KEY FINDINGS ON UNEMPLOYED GRADUATES...

## 5.2 How Long Unemployed Graduates Have Been Searching for Job

**Key Insight:** The majority of the KSB-SCIS unemployed graduates recently started searching for jobs.



Respondents who indicated that they are unemployed were asked about how long they have been looking for a job after graduating from KSB-SCIS: “How long have you been looking for a job?” We found that the majority of the respondents, 35 (39.33%), recently (less than six months ago) started looking for a job, 25 (28.09%) have spent between six months and a year looking for a job, 16 (17.98%) have spent between a year and two years looking for a job, and 13 (14.61%) have been searching for a job for over two years after graduating from KSB-SCIS. A summary of the analysis on how long KSB-SCIS graduates have been looking for a job after graduating is presented in Figure 6.

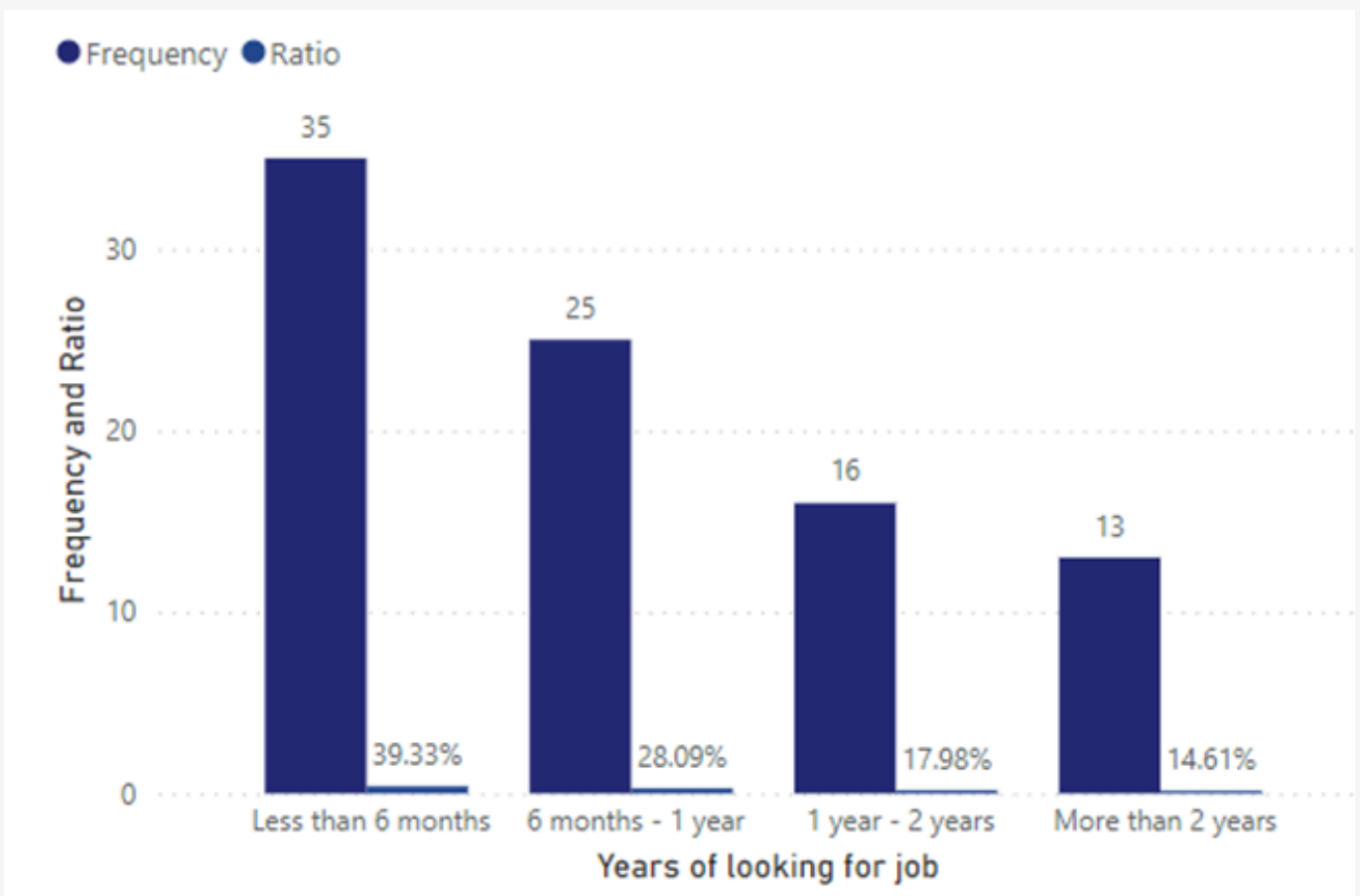
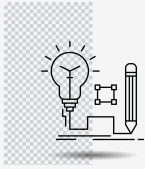


Figure 6: Length of time unemployed graduates have been looking for a job

# KEY FINDINGS ON UNEMPLOYED GRADUATES...

## 5.3 Job Search Methods of Unemployed Graduates



**Key Insight:** The majority of the KSB-SCIS unemployed graduates search for jobs through public advertisements (e.g., internet, newspapers, radio, TV, etc.), and personal contacts (e.g., parents, relatives, friends, etc.). Other approaches used include contacting companies directly, and leveraging commercial employment agencies.

Respondents who indicated that they are unemployed were asked about their strategies and methods for searching for a job after graduating from KSB-SCIS: “How do you search for a job?” While the study discovered that unemployed graduates leverage several approaches including public advertisements (e.g., internet, newspapers, radio, TV, etc.), relations (e.g., parents, relatives, friends, etc.), contacting companies directly, and commercial employment agencies for their job search, we found that the majority of the respondents, 28 (31.46%), seek jobs using public advertisement, 13 (14.61%) use both public advertisement and close relations, and 10 (11.24%) use both public advertisement and contacting companies directly. Other job search methods leveraged by the unemployed graduates are presented in Table 4.

# KEY FINDINGS ON UNEMPLOYED GRADUATES...

## 5.3 Job Search Methods of Unemployed Graduates...

Table 4: Job search methods

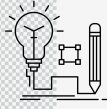
Job Search Method	Frequency	Ratio
Contacting companies directly	4	4.49%
Contacting companies directly; Contacting commercial employment agency	1	1.12%
Contacting companies directly; Contacting commercial employment agency; Relations	4	4.49%
Contacting companies directly; Relations	1	1.12%
Public advertising	28	31.46%
Public advertising; Contacting commercial employment agency	4	4.49%
Public advertising; Contacting companies directly	10	11.24%
Public advertising; Contacting companies directly; Contacting commercial employment agency	3	3.37%
Public advertising; Contacting companies directly; Contacting commercial employment agency; Relations	5	5.62%
Public advertising; Contacting companies directly; Contacting commercial employment agency; Relations;	1	1.12%
Public advertising; Contacting companies directly; Contacting commercial employment agency; Relations; Assistance from the state employment office	3	3.37%
Public advertising; Contacting companies directly; Relations	4	4.49%
Public advertising; Contacting companies directly; Social Media	1	1.12%
Public advertising; Relations	13	14.61%
Public advertising; Relations; Assistance from the state employment office	1	1.12%
Public advertising; Whatsapp and Telegram Groups, LinkedIn	1	1.12%
Relations	5	5.62%
<b>Total</b>	<b>89</b>	<b>100.00%</b>



# KEY FINDINGS ON UNEMPLOYED GRADUATES...

## 5.4 Types of Jobs Searched for by Unemployed Graduates

**Key Insight:** The majority of the KSB-SCIS unemployed graduates have been searching and applying for jobs related to their field of study.



Respondents who indicated that they are unemployed were asked about the types of jobs they have been applying and searching for after graduating from KSB-SCIS: “For which jobs have you been applying?” The results showed that the majority of the respondents, 55 (61.80%), have been searching for jobs related to their field of study. Very few respondents, 4 (4.49%), indicated that they have been searching for jobs unrelated to their field of study. The remaining 30 (33.71%) have been searching for all categories of job (both related and unrelated to their field of study). A summary of the analysis of the types of jobs searched for by unemployed graduates is presented in Figure 7.

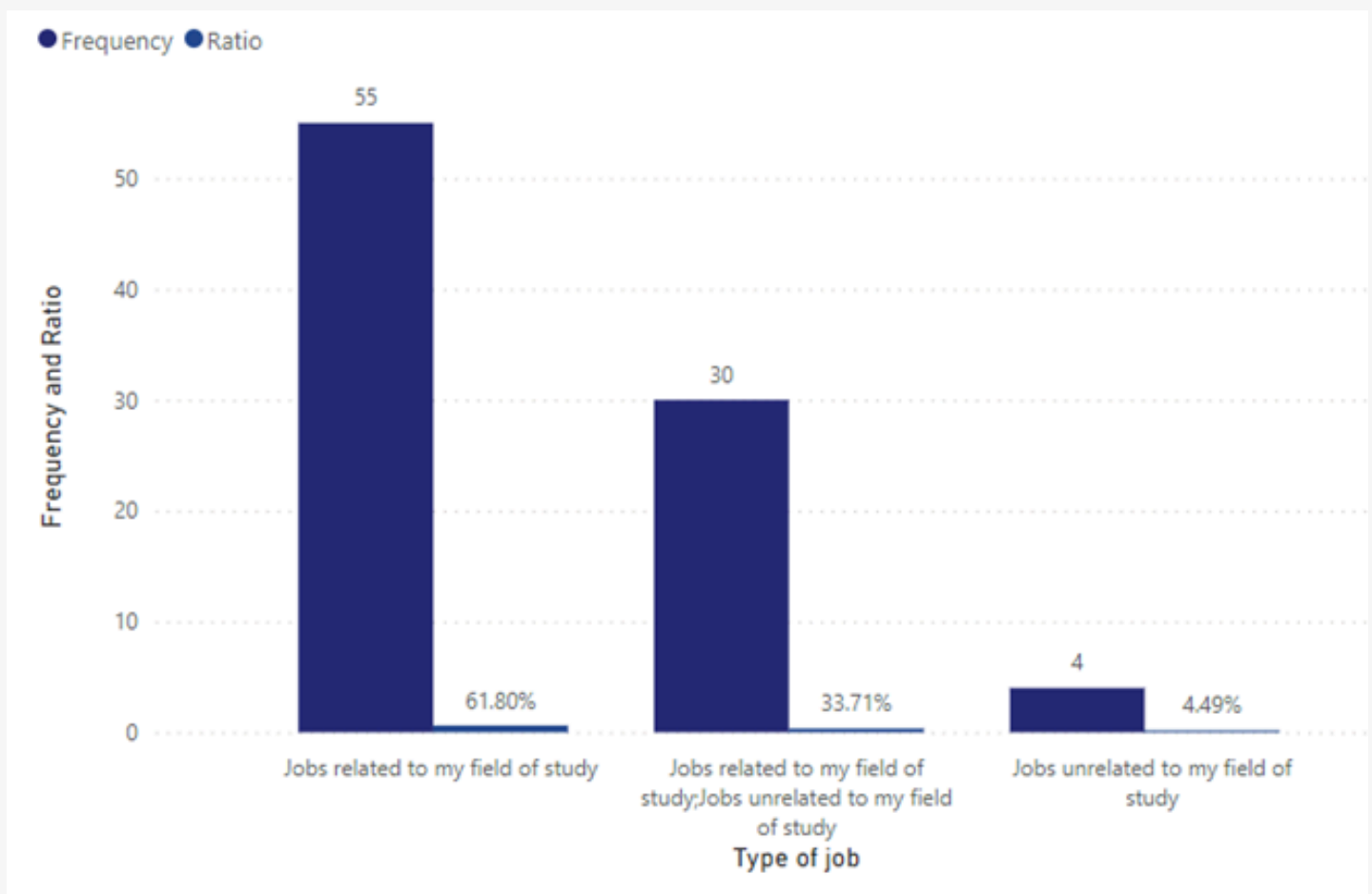


Figure 7: Job categories that unemployed graduates search for

# KEY FINDINGS ON UNEMPLOYED GRADUATES...

## 5.5 Job Categories that Unemployed Graduates Apply for



**Key Insight:** While KSB-SCIS unemployed graduates have been applying for varied job categories including public enterprise, private multinational company, private established enterprise, startups, churches, and non-governmental organizations, the majority of the graduates applied to public, private established, private multinational firms, and NGOs.

Respondents who indicated that they are unemployed were asked about the job categories they have been applying for after graduating from KSB-SCIS: “For which category of jobs have you been applying?” The results showed that graduates have been applying for varied job categories ranging from public enterprise, private multinational company, private established enterprise, startups, churches, and non-governmental organizations. Specifically, we found that 17 (19.10%) of the respondents have been applying to public enterprises, private multinational firms, and private established firms; 11 (12.36%) have been applying to both public enterprises and private multinational firms; 7 (7.87%) have been applying to private multinational firms; and 6 (6.74%) have been applying to private multinational firms and private established firms. A detailed analysis is presented in Table 5.



# KEY FINDINGS ON UNEMPLOYED GRADUATES...

## 5.5 Job Categories that Unemployed Graduates Apply for...

Table 5: Job categories applied for by unemployed graduates

Category of job	Frequency	Ratio
Public enterprise; Private multi-national company; Private established enterprise	17	19.10%
Public enterprise; Private multi-national company	11	12.36%
Private multi-national company	7	7.87%
Private multi-national company; Private established enterprise	6	6.74%
Private established enterprise	5	5.62%
Public enterprise; Private established enterprise	5	5.62%
Public enterprise; Private multi-national company; Private established enterprise; Private startup; NGO	5	5.62%
Private multi-national company; Private established enterprise; Private startup; NGO	4	4.49%
Public enterprise; Private multi-national company; Private established enterprise; Private startup	4	4.49%
Private multi-national company; Private established enterprise; Private startup	3	3.37%
Public enterprise	3	3.37%
Public enterprise; Private multi-national company; Private startup	3	3.37%
Public enterprise; NGO	2	2.25%
Public enterprise; Private established enterprise; NGO	2	2.25%
Public enterprise; Private established enterprise; Private startup; NGO	2	2.25%
Public enterprise; Private multi-national company; NGO	2	2.25%
Private established enterprise; Church	1	1.12%
Private established enterprise; NGO	1	1.12%
Private established enterprise; Private startup	1	1.12%
Private multi-national company; NGO	1	1.12%
Private multi-national company; Private established enterprise;	1	1.12%
Private multi-national company; Private established enterprise; NGO	1	1.12%
Private multi-national company; Private startup	1	1.12%
Public enterprise; Private multi-national company; Private established enterprise; NGO	1	1.12%
<b>Total</b>	<b>89</b>	<b>100.00%</b>



# KEY FINDINGS ON UNEMPLOYED GRADUATES...

## 5.6 Countries to which Unemployed Graduates Are Applying for Jobs, and Nature of Service



**Key Insight:** The majority of the unemployed graduates apply for jobs located in Ghana only. These jobs are mostly hybrid (on-site and remote), and only on-site in nature. The jobs applied for are mostly full-time.

Respondents who indicated that they are unemployed were asked about the geographical location and nature of the jobs they have been applying for after graduating from KSB-SCIS. Surprisingly, we found that 80 (93.26%) of the respondents applied for jobs located only in Ghana. Only 6 respondents indicated that they have been applying for jobs in the United Kingdom, Canada, or Ivory Coast (see Figure 8).

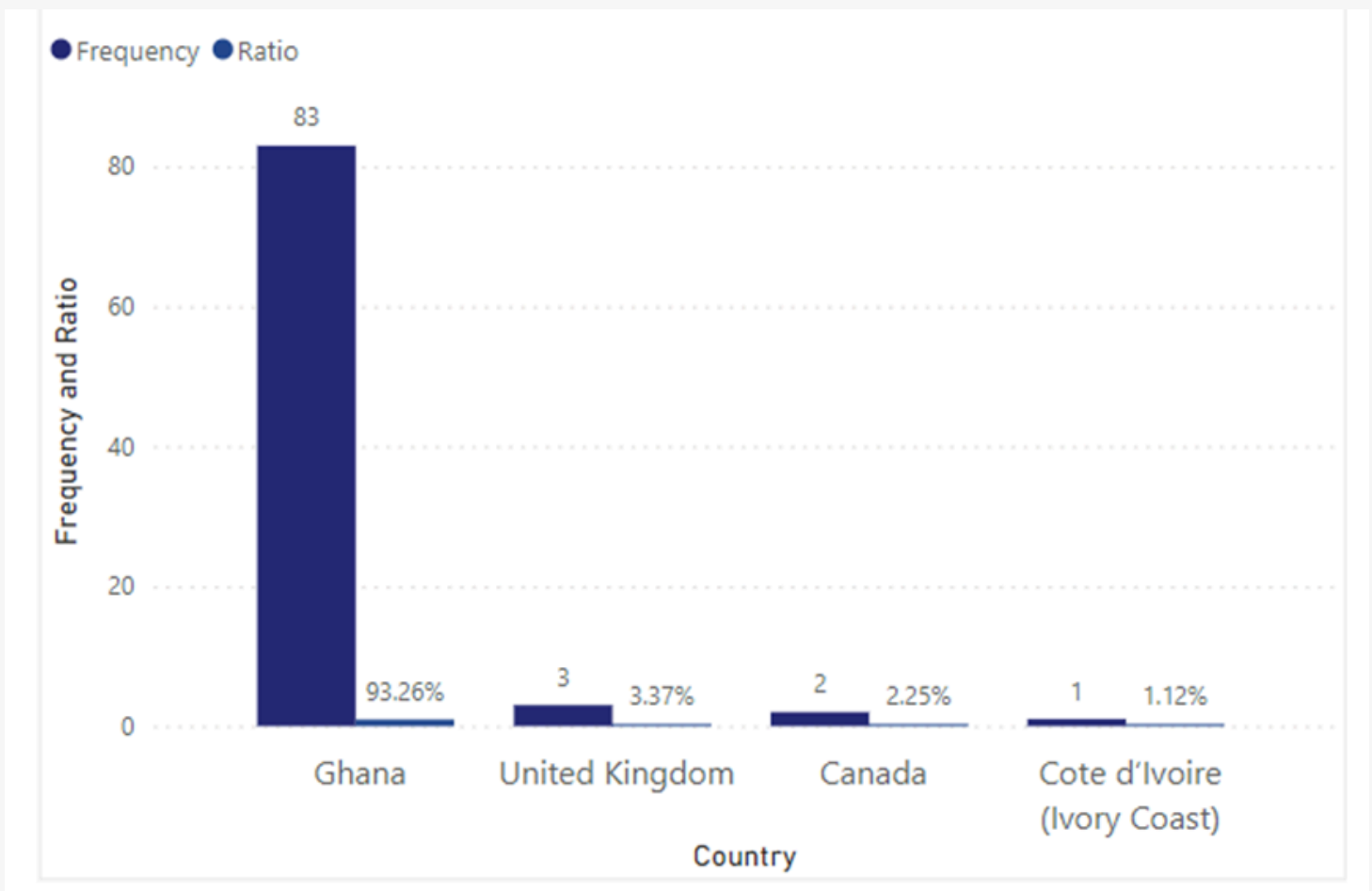


Figure 8: Countries to which unemployed graduates are applying for jobs

# KEY FINDINGS ON UNEMPLOYED GRADUATES...

## 5.6 Countries to which Unemployed Graduates Are Applying for Jobs, and Nature of Service...

Further investigations revealed that the nature of the jobs the unemployed graduates apply for are mostly hybrid (both on-site and remote) (93.26%), and only on-site (21.35%), explaining the reason why the graduates mostly apply for jobs in Ghana only. Only 2 (2.25%) of the respondents applied for remote jobs (see Figure 9).

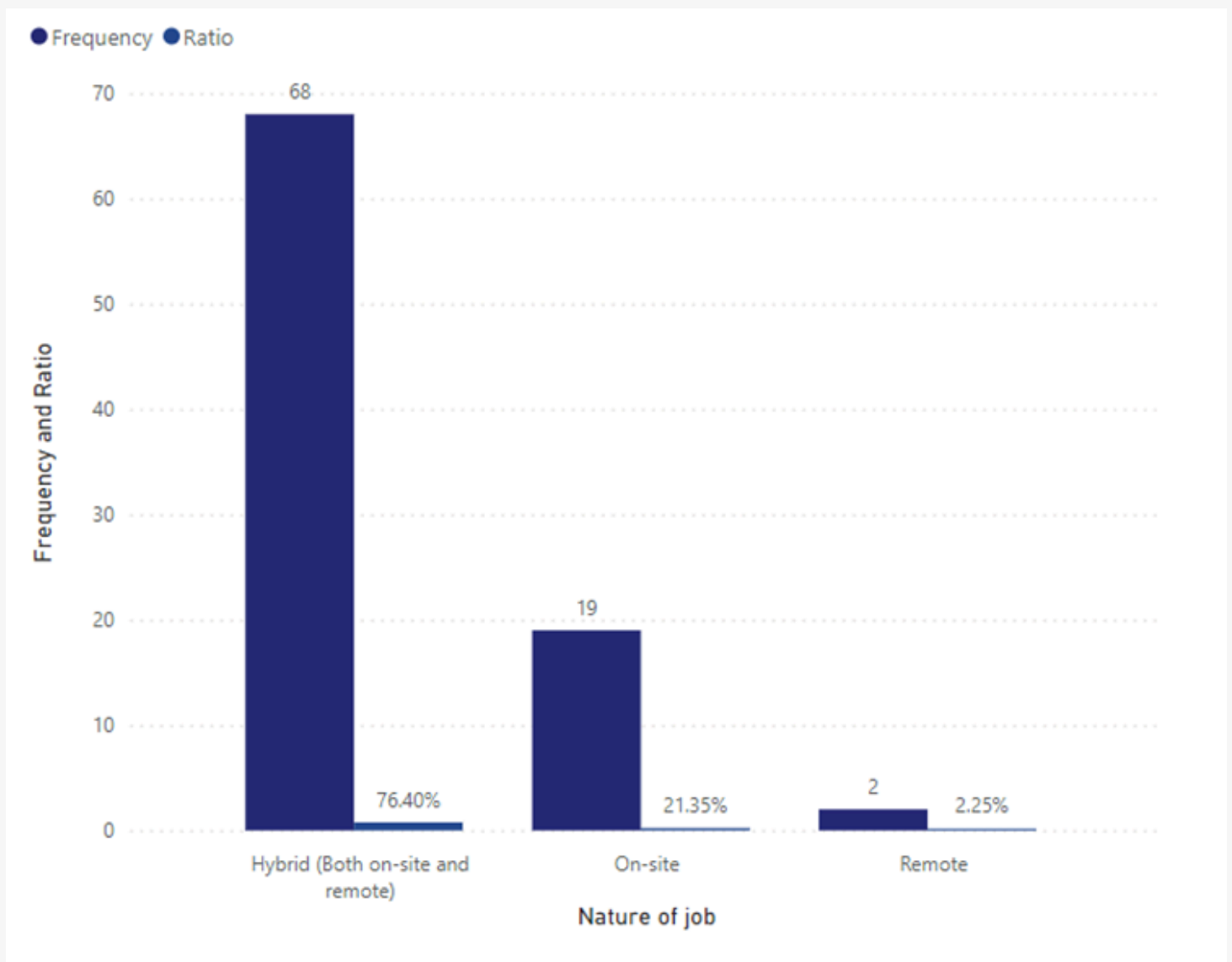


Figure 9: Nature of the jobs for which unemployed graduates apply



# KEY FINDINGS ON UNEMPLOYED GRADUATES...

## 5.6 Countries to which Unemployed Graduates Are Applying for Jobs, and Nature of Service...

In addition, while respondents indicated that they are searching for full-time, part-time, internships, and freelance jobs, the majority, 52 (58.43%), of the respondents indicated that they seek full-time jobs, 12 (13.48%) seek both full-time and part-time jobs, and 6 (6.74%) seek full-time, part-time, and internship opportunities (see Table 6).

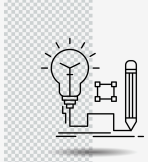
Table 6: Job categories

Job Category	Frequency	Ratio
Full-time	52	58.43%
Full-time; Part-time	12	13.48%
Full-time; Part-time; Internships	6	6.74%
Full-time; Internships	5	5.62%
Full-time; Part-time; Freelance or Gig Work	4	4.49%
Full-time; Part-time; Internships; Freelance or Gig Work	3	3.37%
Part-time	2	2.25%
Full-time; Freelance or Gig Work	1	1.12%
Full-time; Internships; Freelance or Gig Work	1	1.12%
Part-time; Freelance or Gig Work	1	1.12%
Part-time; Internships	1	1.12%
Part-time; Internships; Freelance or Gig Work	1	1.12%
<b>Total</b>	<b>89</b>	<b>100.00%</b>



# KEY FINDINGS ON UNEMPLOYED GRADUATES...

## 5.7 Why Graduates Have Not Secured Jobs



**Key Insight:** Unemployed graduates' inability to secure jobs is associated with a lack of work experience, poor social networks, low industry demand, and a mismatch in skills acquired in school.

To understand the reason respondents have not been able to secure jobs after graduating from KSB-SCIS, we asked: “What do you think are the reasons you haven’t secured a job yet?” We found several reasons including lack of work experience, poor social networks, low industry demand, mismatch in skills acquired in school and industry requirements, and poor digital literacy. Specifically, the majority, 21 (23.60%) of the respondents, indicated “lack of work experience” has contributed to their inability to secure jobs, 12 (13.48%) indicated “poor social networks”, 9 (10.11%) indicated “low industry demand”, and 8 (8.99%) indicated “lack of work experience and low industry demand” (see Table 7).



# KEY FINDINGS ON UNEMPLOYED GRADUATES...

## 5.7 Why Graduates Have Not Secured Jobs...

Table 7: Reasons for unemployment

Reasons for unemployment	Frequency	Ratio
Lack of work experience	21	23.60%
Poor social networks	12	13.48%
Low industry demand	9	10.11%
Lack of work experience; Low industry demand	8	8.99%
Lack of work experience; Mismatch of skills acquired in school and industry requirements	4	4.49%
Lack of work experience; Poor social networks	4	4.49%
Low industry demand;	4	4.49%
Lack of work experience; Poor social networks; Low industry demand	3	3.37%
Low industry demand; Mismatch of skills acquired in school and industry requirements	3	3.37%
Poor social networks; Low industry demand	3	3.37%
I can't really tell	1	1.12%
I just don't get feedback	1	1.12%
Just started searching	1	1.12%
Lack of work experience;	1	1.12%
Lack of work experience; Low industry demand; Mismatch of skills acquired in school and industry requirements	1	1.12%
Lack of work experience; Low industry demand; Poor research skills	1	1.12%
Lack of work experience; Poor research skills	1	1.12%
Lack of work experience; Poor social networks; Lack of soft skills (e.g.,communication skills); Poor digital literacy skills	1	1.12%
Lack of work experience; Poor social networks; Mismatch of skills acquired in school and industry requirements	1	1.12%
Lack of work experience; Poor social networks; Mismatch of skills acquired in school and industry requirements; Poor research skills; what we learn on campus is totally different from reality. Work experience involves practicality and individual smartness.	1	1.12%
Low academic performance	1	1.12%
Low academic performance; Lack of work experience; Poor social networks; Low industry demand; Mismatch of skills acquired in school and industry requirements; Lack of soft skills (e.g.,communication skills); Poor digital literacy skills	1	1.12%
Mismatch of skills acquired in school and industry requirements	1	1.12%
No available jobs	1	1.12%
No response	1	1.12%
Poor social networks; Low industry demand;	1	1.12%
Poor social networks; Low industry demand; Mismatch of skills acquired in school and industry requirements	1	1.12%
Poor social networks; No readily available remote part-time jobs	1	1.12%
<b>Total</b>	<b>89</b>	<b>100.00%</b>



## SECTION SIX

# KEY FINDINGS ON EMPLOYED GRADUATES

# KEY FINDINGS ON EMPLOYED GRADUATES

## 6.1 Employed Graduates Working in Their First Job



**Key Insight:** About half of the employed graduates are currently working in their first job after graduating (49.07%), while 50.93% of the respondents have changed jobs at least once after graduating from KSB-SCIS.

Respondents who indicated that they are currently employed were asked if the current job is their first job opportunity after graduating from KSB-SCIS: “Is this your first job since graduation?” We found that close to half, 105 (49.07%), indicated that it was not their first job after graduation, while 109 (50.93%) agreed that it was their first job. The remaining 4 did not respond to the question. Details of the analysis are provided in Figure 10.

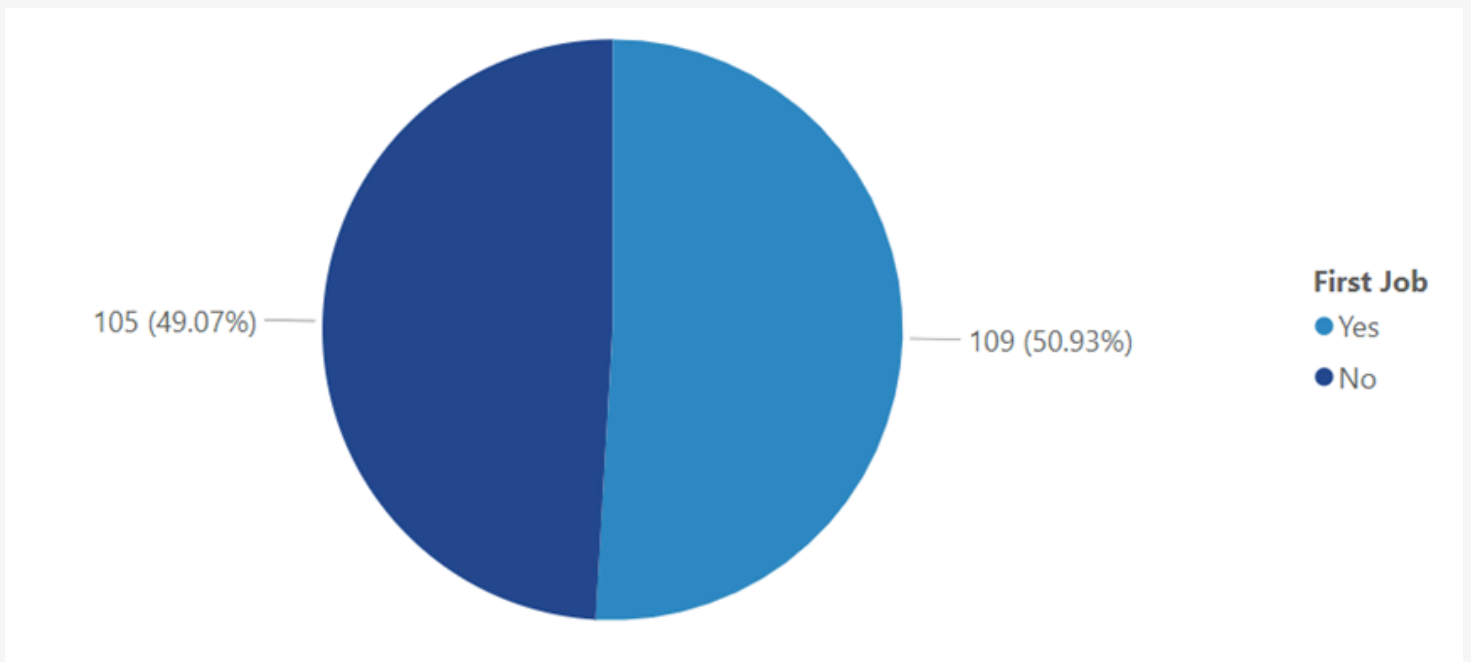


Figure 10: Employed graduates' working in their first job



# KEY FINDINGS ON EMPLOYED GRADUATES...

## 6.2 How Long it Took Employed Graduates to Land their First Jobs



**Key Insight:** The majority of the KSB-SCIS graduates secured their first jobs in less than six months of searching after graduating. The results indicated that it took at most a year for 81.19% of KSB-SCIS graduates to secure their first job.

Respondents who indicated that they are currently employed were asked about how long it took them to secure their first job after graduating from KSB-SCIS: “How long had you been searching before you got your first job?” Interestingly, more than half, 146 (66.97%), of the respondents indicated that they were able to secure their first job in less than six (6) months of searching. In addition, 31 (14.22%) of the respondents indicated that they found their first job within six months to a year of searching, and 17 (7.80%) landed their first job between one and two years of searching, while it took the remaining 24 (11.01%) more than two years to land their first job (see Figure 11).

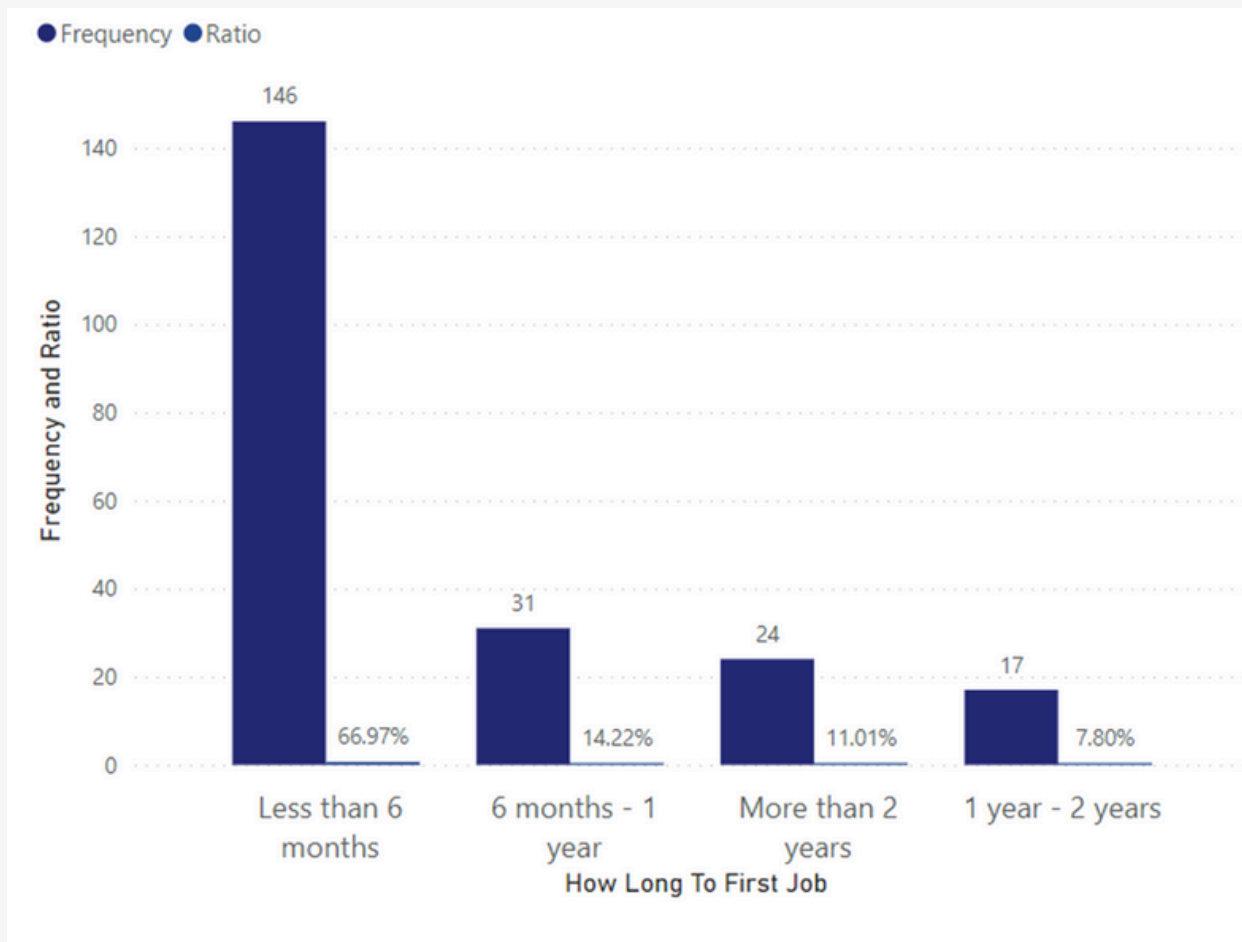


Figure 11: How long it takes graduates to land their first job

# KEY FINDINGS ON EMPLOYED GRADUATES...

## 6.3 Employers of KSB-SCIS Graduates



**Key Insight:** The majority of KSB-SCIS graduates work with public enterprises, private multinational companies, and private established enterprises.

Respondents who indicated that they are currently employed were asked who their employers were: “Who is your employer?” While graduates were found to be working in diverse institutions including public enterprises, private multinational companies, private established enterprises, private startups, and NGOs, and were also self-employed, the majority of the respondents, 100 (45.87%), indicated that they work in public enterprises, 52 (23.85%) work in private multinational companies, 46 (21.10%) work in private established enterprises, and 7 (3.21%) work with startup organizations (see Table 8).

Table 8: Employers

Employers	Frequency	Ratio
Public enterprise	100	45.87%
Private multi-national company	52	23.85%
Private established enterprise	46	21.10%
Private startup	7	3.21%
NGO	4	1.83%
Self-employed	4	1.83%
Private established enterprise;Self-employed	2	0.92%
	1	0.46%
Private multi-national company;Self-employed	1	0.46%
Public enterprise;Self-employed	1	0.46%
<b>Total</b>	<b>218</b>	<b>100.00%</b>

# KEY FINDINGS ON EMPLOYED GRADUATES...

## 6.4 Why the Self-employed Started Their Own Business after Graduating



**Key Insight:** Self-employed graduates started their own business because they had a strong entrepreneurship desire, some were unable to find wage employment opportunities, and others wished to start their own business.

Out of the 218 respondents who have successfully secured jobs after graduating, 19 (8.71%) of them started their own business. In the quest to understand their reasons, we asked participants about why they ventured into entrepreneurship: “If you are self-employed, why did you start your own business?” The results showed that 15 (78.95%) of the 19 participants who have started their own business indicated that “it was their wish” to establish a business. Also, 3 (15.79%) of the respondents could not find waged employment opportunities after several applications, and 1 (6.16%) had a strong desire to start a business (see Figure 12).

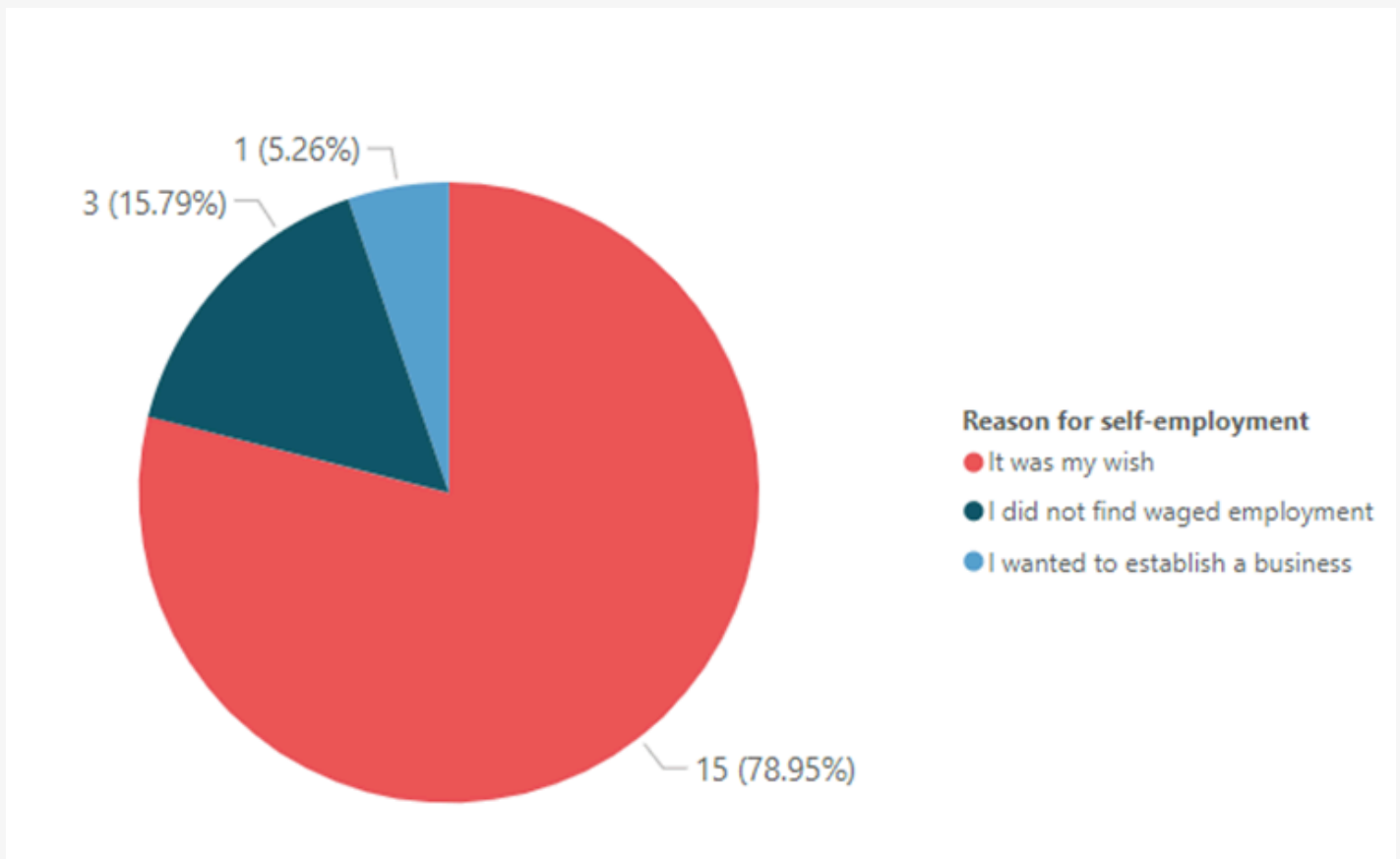
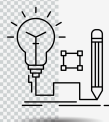


Figure 12: Why the self-employed started their business



# KEY FINDINGS ON EMPLOYED GRADUATES...

## 6.5 Countries and Nature of Employed Graduates' Work



**Key Insight:** Although there is evidence that some employed graduates work in the United Kingdom, France, Malawi, South Sudan, and Sweden, almost all the KSB-SCIS employed graduates (96.79%) work in Ghana. In addition, the majority of the employed graduates work only on-site, and both on-site and online. Very few of them work remotely.

Respondents who indicated that they are currently employed were asked about the countries within which they work: "In what country do you work?" Analysis of the data showed that the huge majority of the employed graduates, 211 (96.79%), work in Ghana, 3 (1.38%) work in the United Kingdom, and 1 (0.46%) each work in France, Malawi, South Sudan, and Sweden (see Table 9).

Further analysis showed that 131 (60.93%) of the employed graduates work only on-site, and 77 (35.81%) work both on-site and online, explaining why the huge majority of the graduates work in Ghana. Just 7 (3.26%) of the employed graduates work solely online (see Figure 13).

Table 9: Countries in which Graduates Work

Countries Graduates Work	Frequency	Ratio
Ghana	211	96.79%
United Kingdom	3	1.38%
France	1	0.46%
Malawi	1	0.46%
South Sudan	1	0.46%
Sweden	1	0.46%
<b>Total</b>	<b>218</b>	<b>100.00%</b>

# KEY FINDINGS ON EMPLOYED GRADUATES...

## 6.5 Countries and Nature of Employed Graduates' Work...

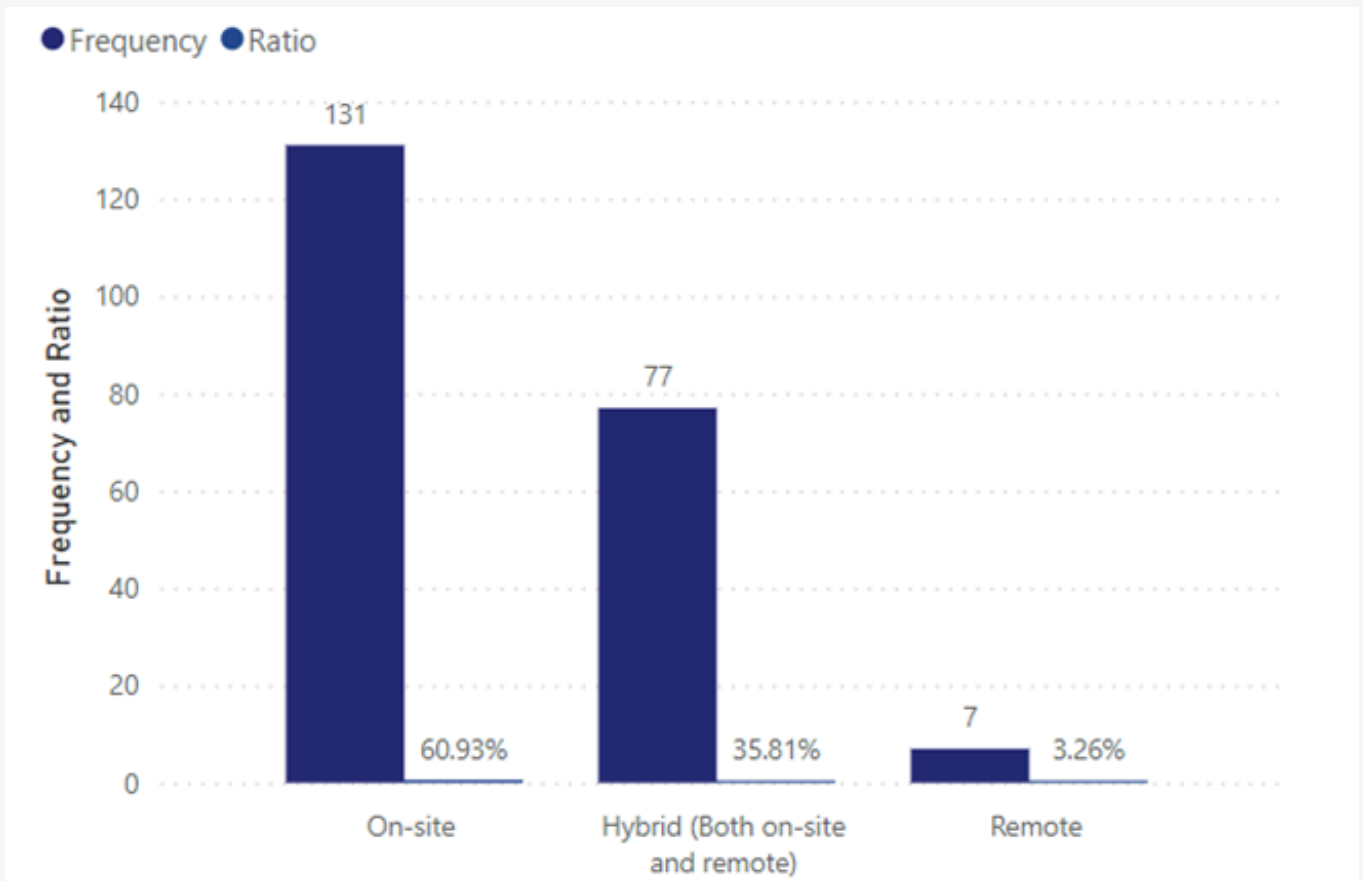


Figure 13: Nature of employed graduates' jobs

## 6.6 Job Search Strategies of Employed Graduates



**Key Insight:** While graduates leveraged varied means to secure their current jobs, the majority of them landed employment through public advertisement, personal contacts including family and friends, contacting companies directly, internships, and referrals.

# KEY FINDINGS ON EMPLOYED GRADUATES...

## 6.6 Job Search Strategies of Employed Graduates...

To understand the job search strategies of the employed graduates, respondents were asked about the means through which they found their current jobs: “By what means did you find your current job?” The majority, 75 (34.40%), of the respondents indicated that they found their current job through public advertisement, 45 (20.64%) found their current job through personal relations (e.g., families and friends), 34 (15.60%) contacted the employing companies directly, 31 (14.22%) had jobs through internship opportunities, and 13 (5.96%) were contacted by the company through referrals. Other strategies that emerged included national service, 5 (2.29%), assistance from the state employment office, 3 (1.38%), and commercial employment agency, 3 (1.38%) (see Table 10).

Table 10: Job search strategies of employed graduates

Job search strategy	Frequency	Ratio
Public advertising	71	33.65%
Relations	43	20.38%
Contacting companies directly	34	16.11%
Internship	31	14.69%
I was contacted by the company	13	6.16%
I established my own business	5	2.37%
National service	4	1.90%
Assistance from the state employment office	3	1.42%
Contacting commercial employment agency	3	1.42%
No response	3	1.42%
Public service job	1	0.47%
<b>Total</b>	<b>211</b>	<b>100.00%</b>

# KEY FINDINGS ON EMPLOYED GRADUATES...

## 6.7 Employed Graduates' Job Categories, Duration of on-the-job Training, and Relatedness to Program of Study



**Key Insight:** The majority of the employed graduates work full-time in their field of study, and receive between a month and three months' on-the-job training.

Generally, the majority, 164 (96.47%), of the respondents who indicated that they are employed work full-time, 4 (2.35%) work as part-timers, and 2 (1.18%) work as freelancers. An impressive 139 (81.76%) of the employed graduates secured jobs related to their program of study, while 31 (18.24%) do not work in areas related to their field of study. In addition, 95 (55.88%) of the employed graduates received less than a month's on-the-job training, 39 (22.94%) received about 3 months' on-the-job training, and 36 (21.18%) received more than 3 months' on-the-job training (see Figure 14).

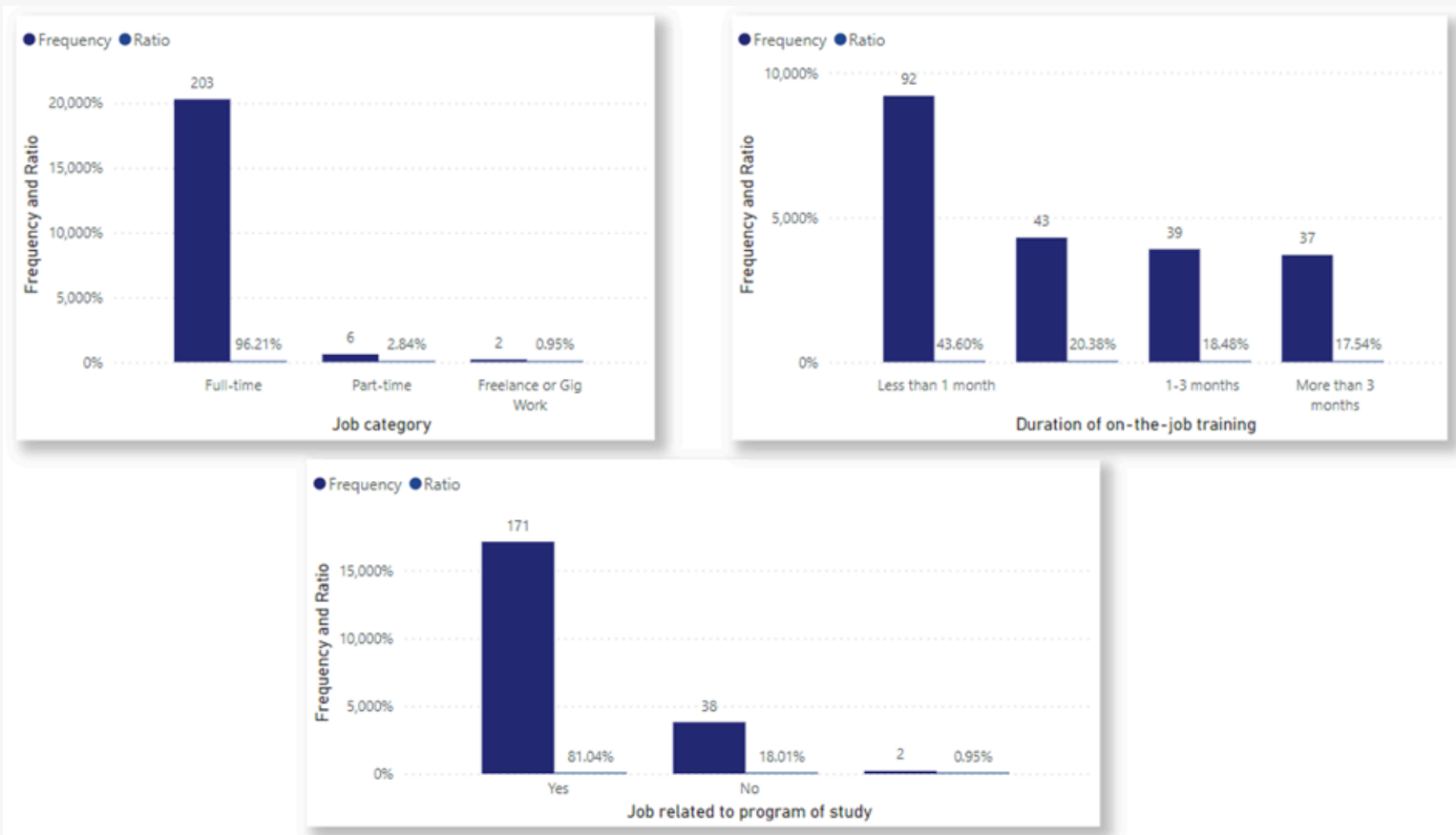


Figure 14: Employed Graduates' Job Categories, Duration of on-the-job Training, and Relatedness to Program of Study

# KEY FINDINGS ON EMPLOYED GRADUATES...

## 6.8 Factors Contributing to the Employment of Graduates



**Key Insight:** Competency (e.g., soft skills, ability to use modern technologies), social networks, and training (e.g., coaching, counseling, workshops, internships), to some extent, contributed to the employment of KSB-SCIS employed graduates

We examined factors that contributed to employed graduates securing their current jobs. Details of the analysis are presented in Figure 15 (1=not at all, 2=I don't know, 3=to a little extent, 4=to some extent, 5=to a great extent). In order of the ratings and importance, participants indicated that, to some extent, KSB-SCIS education has helped them in terms of soft skills development (e.g., communication), ability to use modern technologies, practical hands-on experience, academic guidance, exposure to industrial challenges, professional development workshops, industrial internships, the reputation of KNUST, career guidance and counselling, mentorship, grades, and relatives and social networks. While 45 (20.64%) of the respondents found their current jobs through personal contacts (e.g., family and friends) (2nd rating), social network was rated 12th with a score of 2.54 (about 3). This suggests that, while many of the graduates secured their jobs through social networks, their competency levels played a key role in sustaining them.



# KEY FINDINGS ON EMPLOYED GRADUATES...

## 6.8 Factors Contributing to the Employment of Graduates...

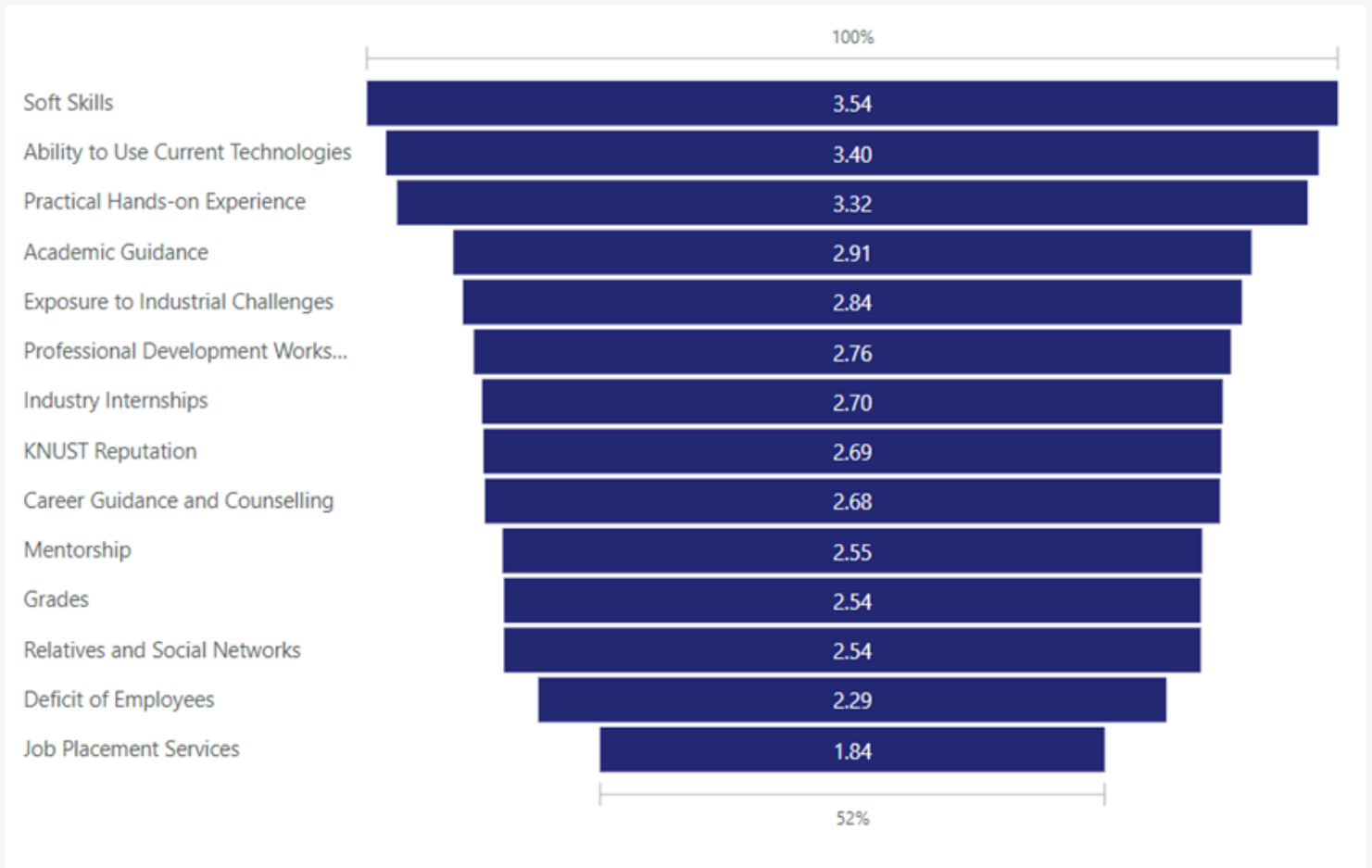


Figure 15: Factors contributing to the employment of graduates



# KEY FINDINGS ON EMPLOYED GRADUATES...

## 6.9 Career Progression of Employed Graduates



**Key Insight:** Generally, there has been a positive career progression in terms of promotion, salary increments, leadership or role (duties), and job satisfaction levels among the KSB-SCIS employed graduates.

We examined the career progression of employed graduates with a focus on job promotion (associated with salary rise and additional responsibilities), and job satisfaction after graduating from KSB-SCIS. In terms of promotion, we found that about half of the respondents have received a promotion or are about to be promoted. Specifically, 86 (41.15%) of the respondents indicated that they have been promoted, while 22 (10.53%) indicated that they are about to be promoted. This associates with additional responsibilities leading to salary rises. About 101 (48.33%) of the respondents indicated that they have not been promoted (see Figure 16).

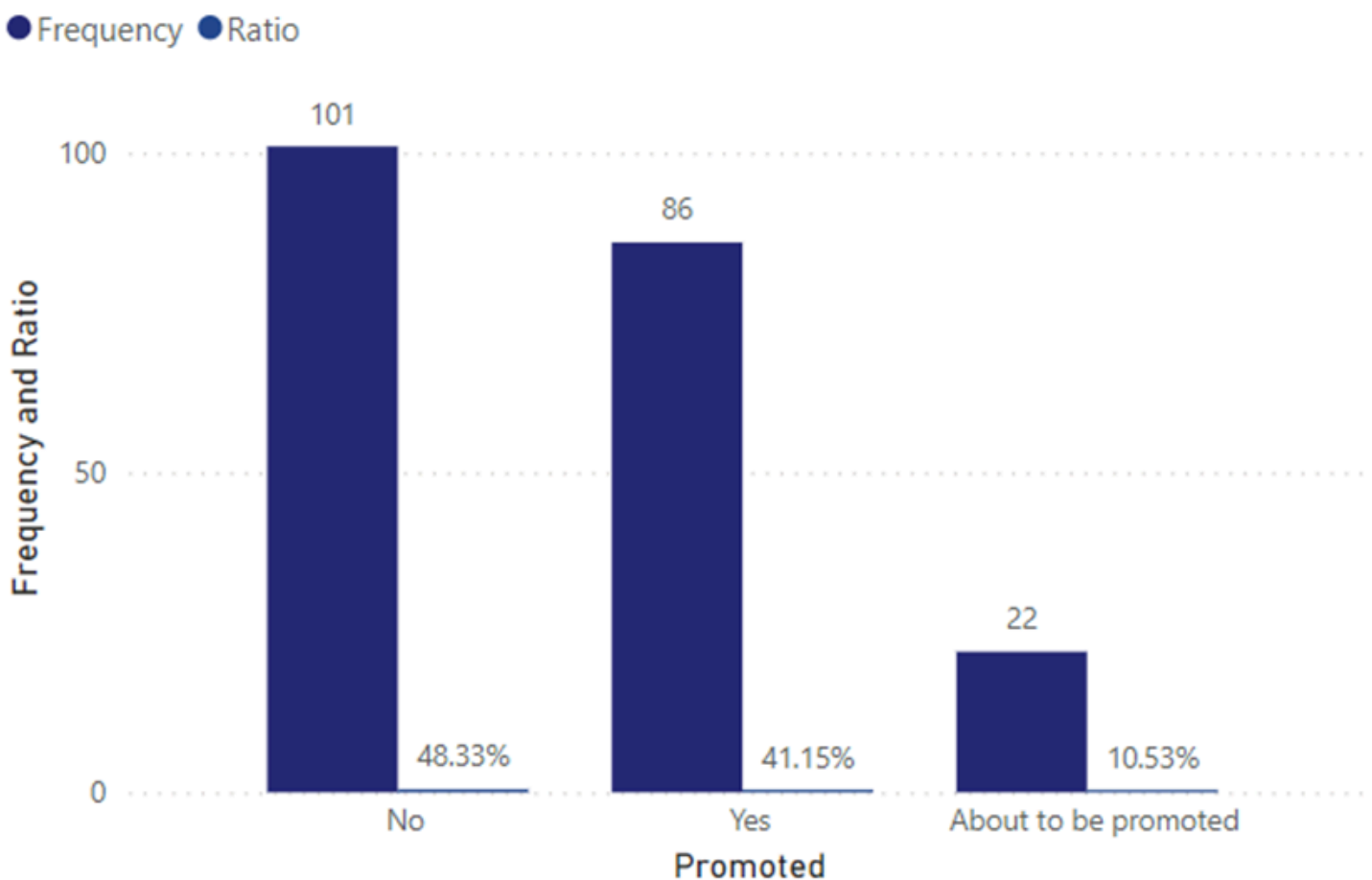


Figure 16: Promotion after graduation

# KEY FINDINGS ON EMPLOYED GRADUATES...

## 6.9 Career Progression of Employed Graduates...

In terms of job satisfaction, we assessed the job satisfaction level of respondents before and after graduation. We found that, before the respondents enrolled for a postgraduate program at the KSB-SCIS, 26 (12.32%) of them were not satisfied with their work experience, 70 (33.18%) were somewhat satisfied, 98 (46.45%) were satisfied, and only 17 (8.06%) were very satisfied with their work. After graduation, 11 (6.11%) were found to be not satisfied with their work, 47 (22.27%) were somewhat satisfied, 88 (41.71%) were satisfied, and the majority, 65 (30.81%), were very satisfied with their work. A descriptive comparison between the two shows that, proportionately, job satisfaction has increased among employed graduates (see Figure 17).

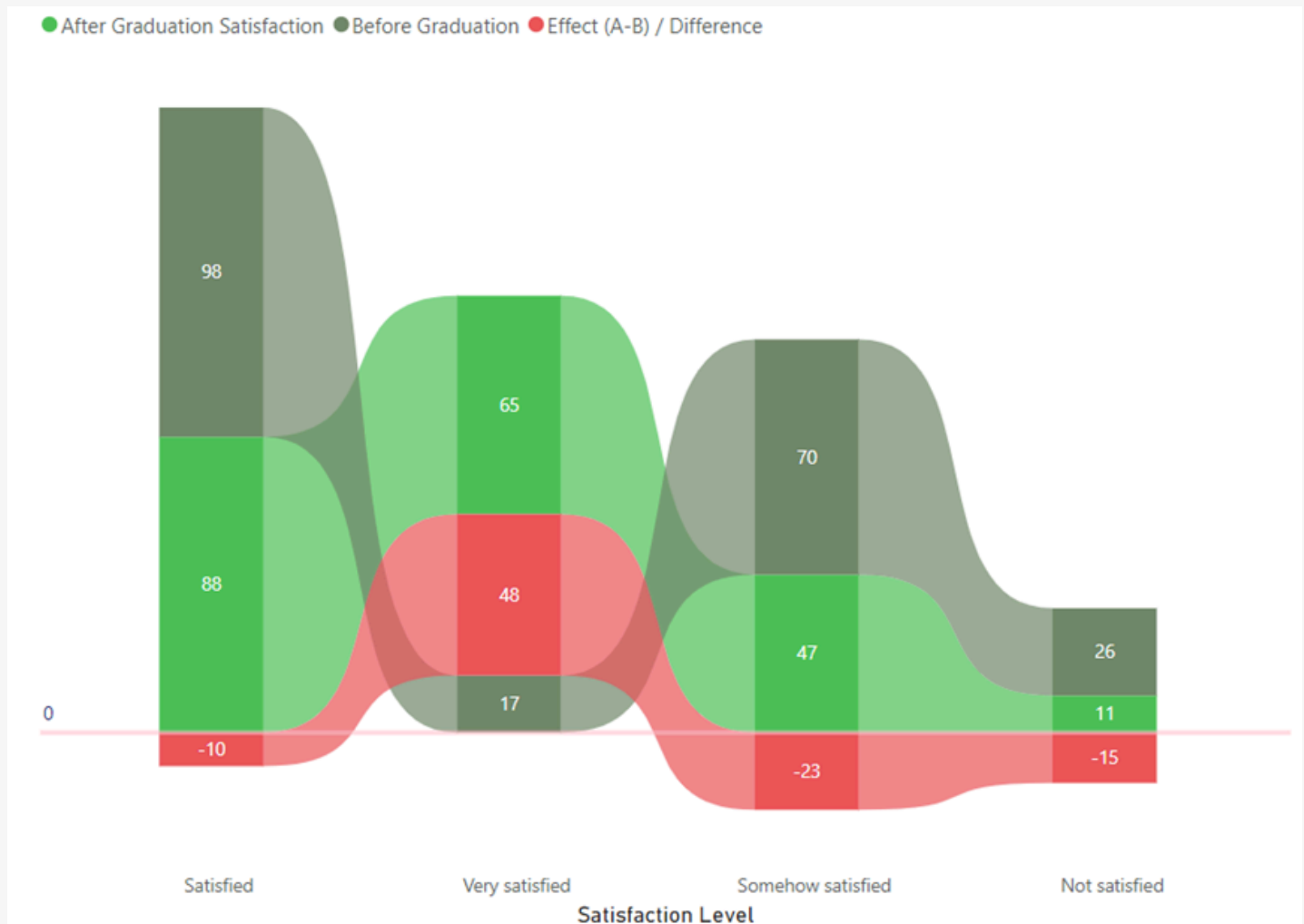


Figure 17: Comparison of job satisfaction levels

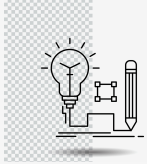


## SECTION SEVEN

# ALUMNI FEEDBACK ANALYSIS

# ALUMNI FEEDBACK ANALYSIS

## 7.1 How KSB-SCIS Education Has Developed Graduates' Competencies and Skills



**Key Insight:** While the ability to use modern technologies, and practical hands-on experience greatly influenced employment, it seems the KSB-SCIS education pays little attention to these abilities. Alumni were of the opinion that the KSB-SCIS education pays much attention to the development of soft skills (e.g., team-work skills, communication skills, critical thinking skills, adaptation to new environments skills, and research skills).

We leveraged a five-point Likert scale (1=not at all, 2=I don't know, 3=to a little extent, 4=to some extent, 5=to a great extent) to understand alumni perceptions about how the KSB-SCIS education has helped them develop competencies that affect their work. In order of the ratings and importance, participants indicated that, to some extent, the KSB-SCIS education helped them develop team-work skills, communication skills, critical thinking skills, adaptation to new environments skills, research skills, leadership skills, time management skills, creativity, emotional intelligence skills, digital literacy skills, and entrepreneurial skills (see Figure 18). While employed graduates indicated that the ability to use modern technologies, and practical hands-on experience greatly influenced their employment, it seems that the KSB-SCIS education pays little attention to these abilities. This could mean that the alumni leveraged KSB-SCIS existing resources and infrastructure to learn such skills on their own.



# ALUMNI FEEDBACK ANALYSIS...

## 7.1 How KSB-SCIS Education Has Developed Graduates' Competencies and Skills...

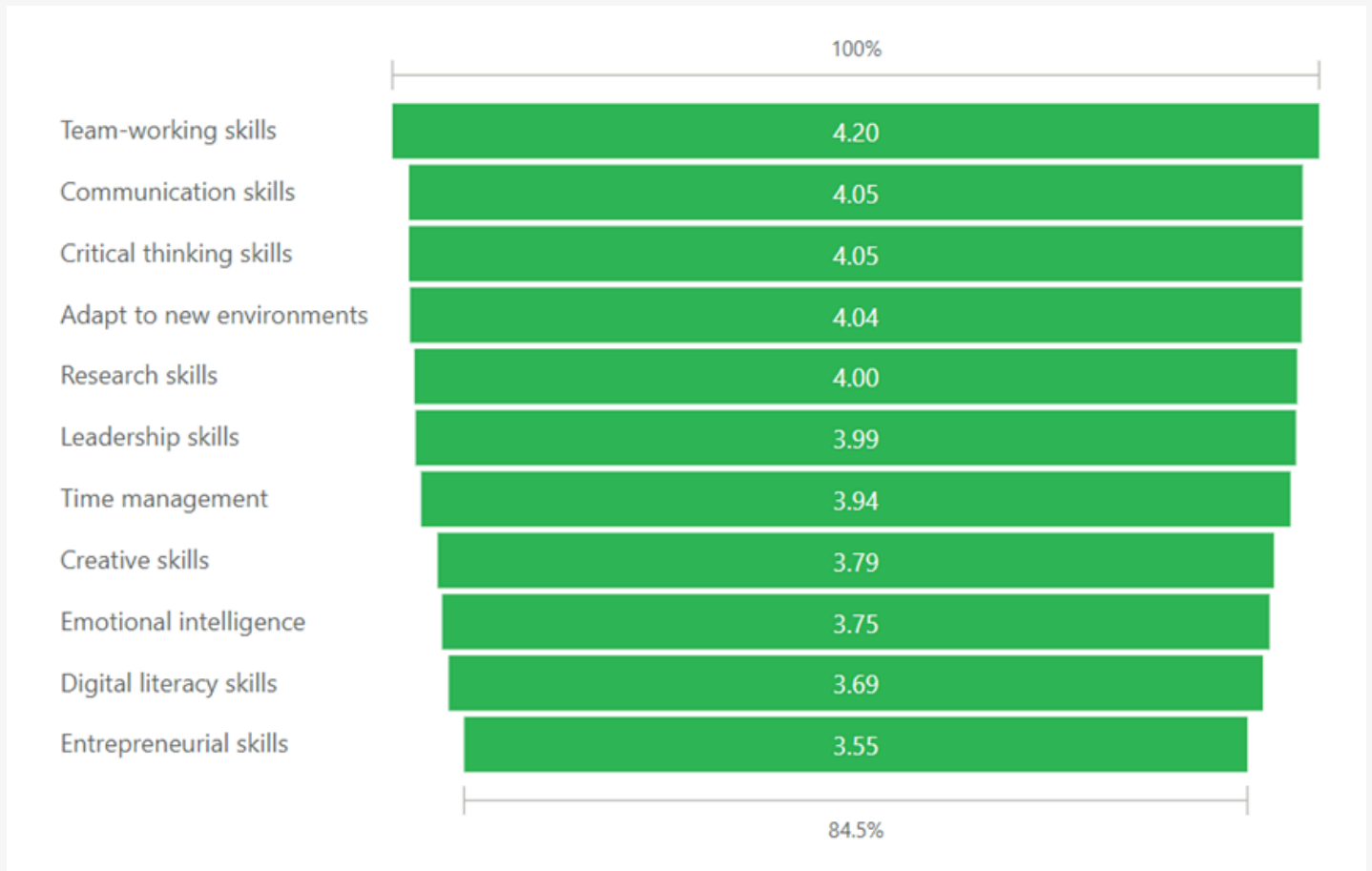
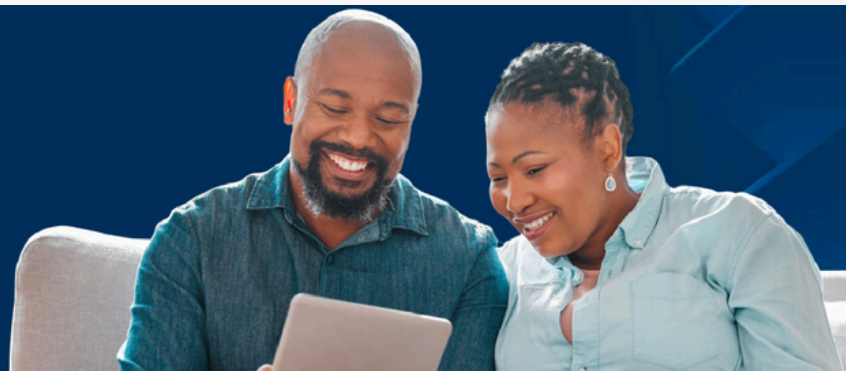


Figure 18: Skills developed at KSB-SCIS



# ALUMNI FEEDBACK ANALYSIS...

## 7.2 How Cooperative Training Has Developed Graduates' Competencies and Skills



**Key Insight:** Cooperative training such as internships, research seminars, industry engagement, skill development, and social gatherings has helped graduates develop their team-work skills, communication skills, problem-solving skills, leadership skills, critical thinking skills as well as adapting to new environments, and improved social networks.

In an examination to understand alumni perceptions on how cooperative training (e.g., internships) has helped develop their skills and competencies, we found that 87 (29.10%) of the employed graduates and 59 (19.73%) of the unemployed graduates engaged in cooperative training. About 63 (35%) indicated that they engaged in internship cooperative training, 23 (12.78%) engaged in research seminars, 11 (6.11%) engaged in industrial engagements, 9 (5%) engaged in soft skills development and social network gatherings, and 6 (3.33%) engaged in digital literacy cooperative training (see Table 11).

Table 11: Cooperative training participated in by graduates

Cooperative training	Frequency	Ratio
Internship in companies	63	35.00%
Research Seminars	23	12.78%
Industry engagement	11	6.11%
Skills development (e.g.,communication skills)	9	5.00%
Social networking	9	5.00%
Digital literacy	6	3.33%
Internship in companies;Social networking	5	2.78%
Mentorship	4	2.22%
Internship in companies;Research Seminars	3	1.67%
Internship in companies;Industry engagement;Social networking;Research	2	1.11%
<b>Total</b>	<b>180</b>	<b>100.00%</b>

# ALUMNI FEEDBACK ANALYSIS...

## 7.2 How Cooperative Training Has Developed Graduates' Competencies and Skills...

Leveraging a five-point Likert scale (1=not at all, 2=I don't know, 3=to a little extent, 4=to some extent, 5=to a great extent), we assessed how the cooperative training has helped graduates develop competencies that affect their work. In order of the ratings and importance, participants indicated that, to some extent, the cooperative has helped them develop team-work skills, communication skills, problem-solving skills, leadership skills, and critical thinking skills, as well as helping them to adopt to new environments and improve their social networks. In addition, respondents recognized the development of their digital literacy skills, emotional intelligence, research, and entrepreneurial skills (see Figure 19).

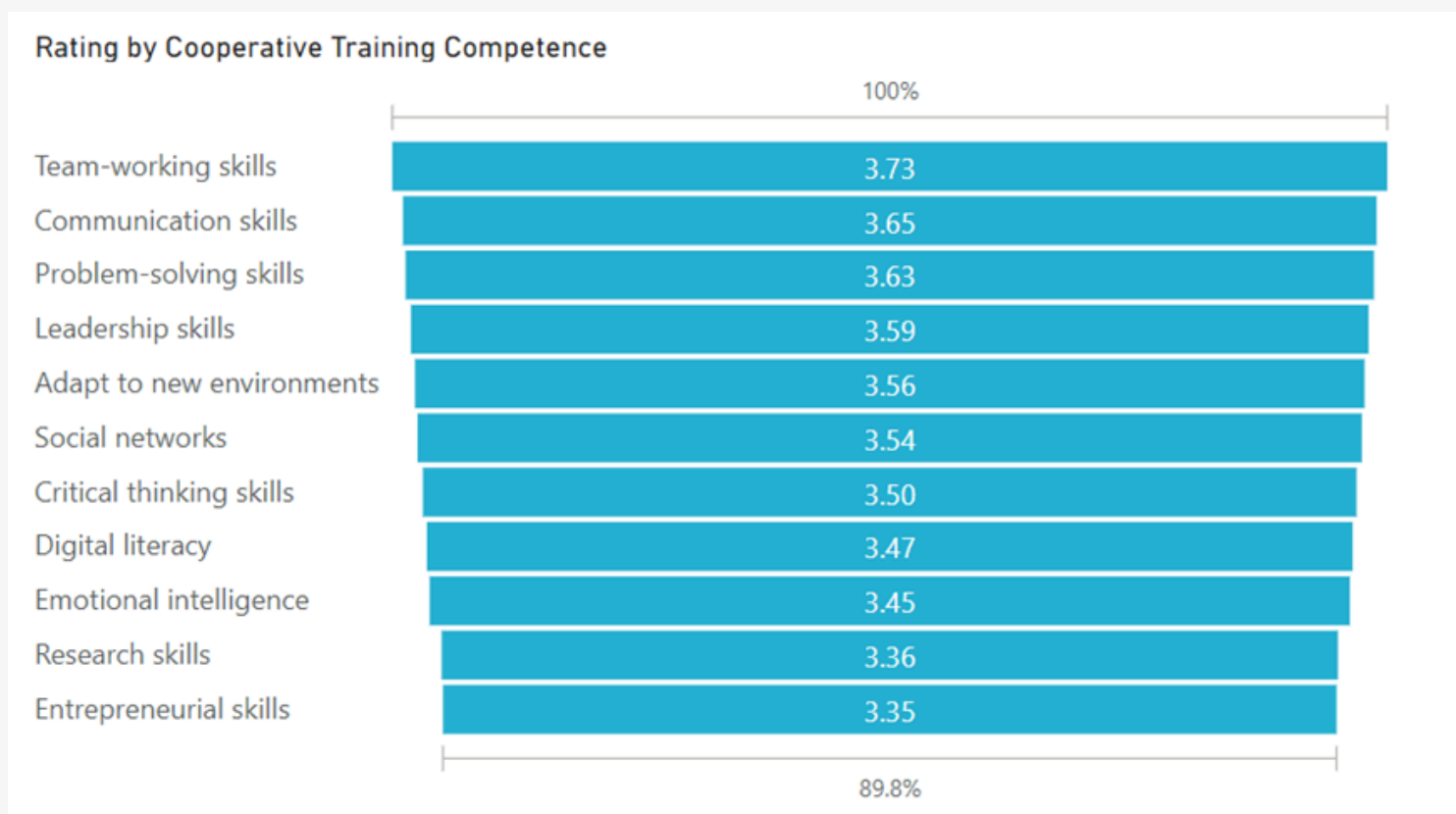


Figure 19: Skills developed through cooperative training

# ALUMNI FEEDBACK ANALYSIS...

## What is Lacking in KSB-SCIS Education and Training



**Key Insight:** KSB-SCIS education lacks job placement services, industry internship placement, industrial engagements, exposure of students to industrial challenges, practical hands-on experiences, and access to career resources.

To understand what is lacking in KSB-SCIS education and training, we leveraged a five-point Likert scale (1=completely lacking, 2=mostly lacking, 3=moderately lacking, 4=slightly lacking, 5=not lacking) to collect data from the respondents. Details of the analysis are presented in Figure 20. In order of lack, respondents believed that the KSB-SCIS education mostly lacked job placement services, industry internship placement, industrial engagements, exposure of students to industrial challenges, practical hands-on experiences, and access to career resources. In addition, respondents indicated that professional development workshops, career guidance and counselling, entrepreneurial and innovation support, soft skills development, access to current technologies, and relevance to industry were somewhat lacking.



# ALUMNI FEEDBACK ANALYSIS...

## What is Lacking in KSB-SCIS Education and Training...

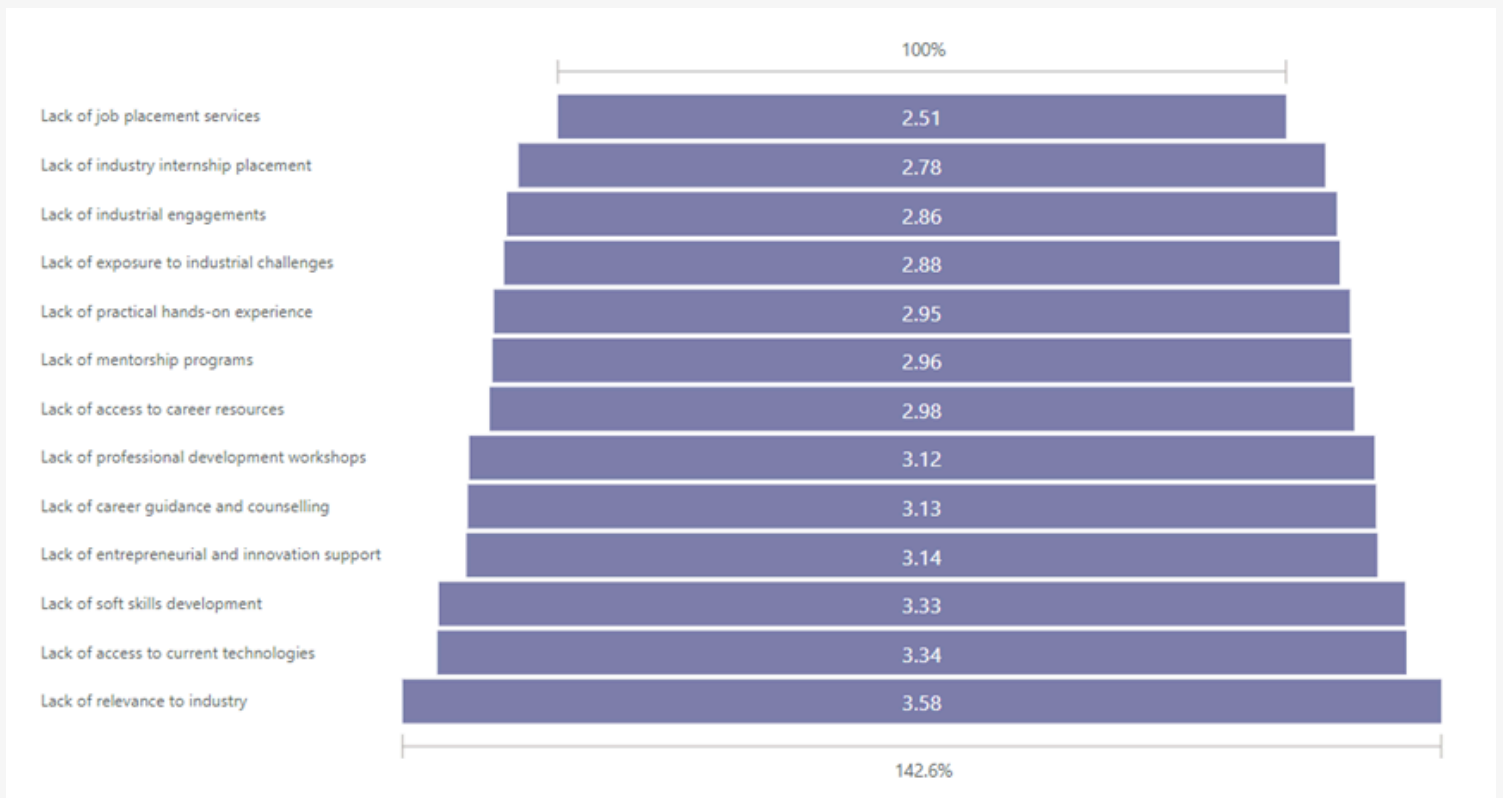
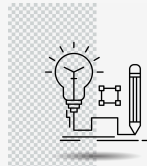


Figure 20: What is Lacking in KSB-SCIS Education and Training



# ALUMNI FEEDBACK ANALYSIS...

## 7.4 KSB-SCIS Teaching Method Evaluation



**Key Insight:** The KSB-SCIS teaching method is characterized by clarity of instructions, engagement and interactivity, encouragement of critical thinking and problem-solving, relevance to real-world applications, and the use of modern technologies. Support for students, feedback and assessment methods, and access to career resources for students require massive improvement

Participants were asked to rate the teaching methods of KSB-SCIS on a four-point Likert scale (1=poor, 2=fair, 3=good, 4=excellent). Details of the analysis are presented in Figure 21. In the order of the rating and importance, we found that the KSB-SCIS teaching method is characterized by clarity of instructions, engagement and interactivity, encouragement of critical thinking and problem-solving, relevance to real-world application, and the use of modern technologies. It is believed that the KSB-SCIS needs to improve on its support for students, feedback and assessment methods, and access to career resources for students.

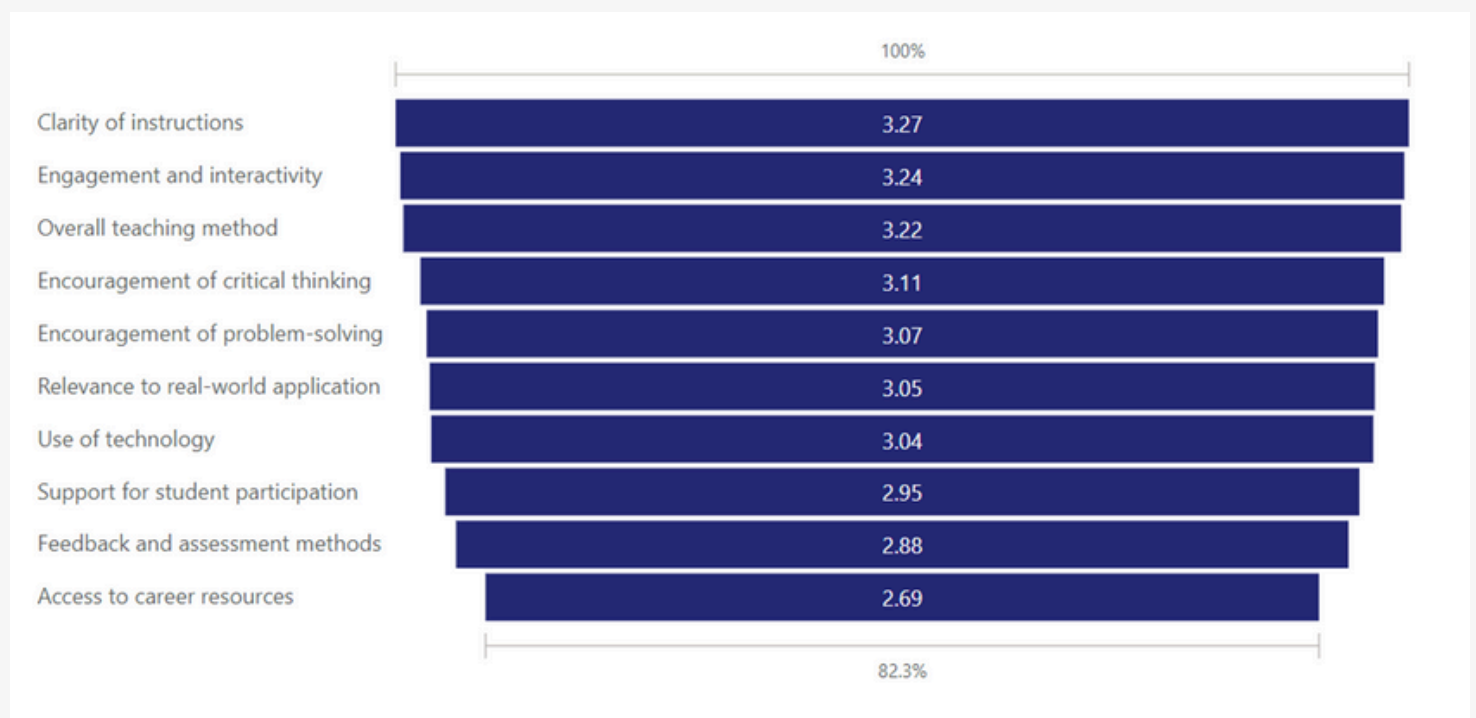


Figure 21: KSB-SCIS teaching method evaluation



# ALUMNI FEEDBACK

## ANALYSIS...

### 7.5 KSB-SCIS Support Services Evaluation



**Key Insight:** KSB-SCIS has good support services in learning (e.g., library, laboratory, etc.), information technology, academic advising and guidance, and support for students with special needs. Support for students' mental health and counseling, financial aid and scholarship opportunities, and job placement requires improvement.

Participants were asked to rate the support services of KSB-SCIS on a four-point Likert scale (1=poor, 2=fair, 3=good, 4=excellent). Details of the analysis are presented in Figure 22. In the order of the rating and importance, we found that the KSB-SCIS has a good learning service (e.g., library, laboratory, etc.), IT services, academic advising and guidance services, and support for students with special needs. It is believed that the KSB-SCIS needs to improve on its support for mental health and counselling, financial aid and scholarship opportunities, and job placement services

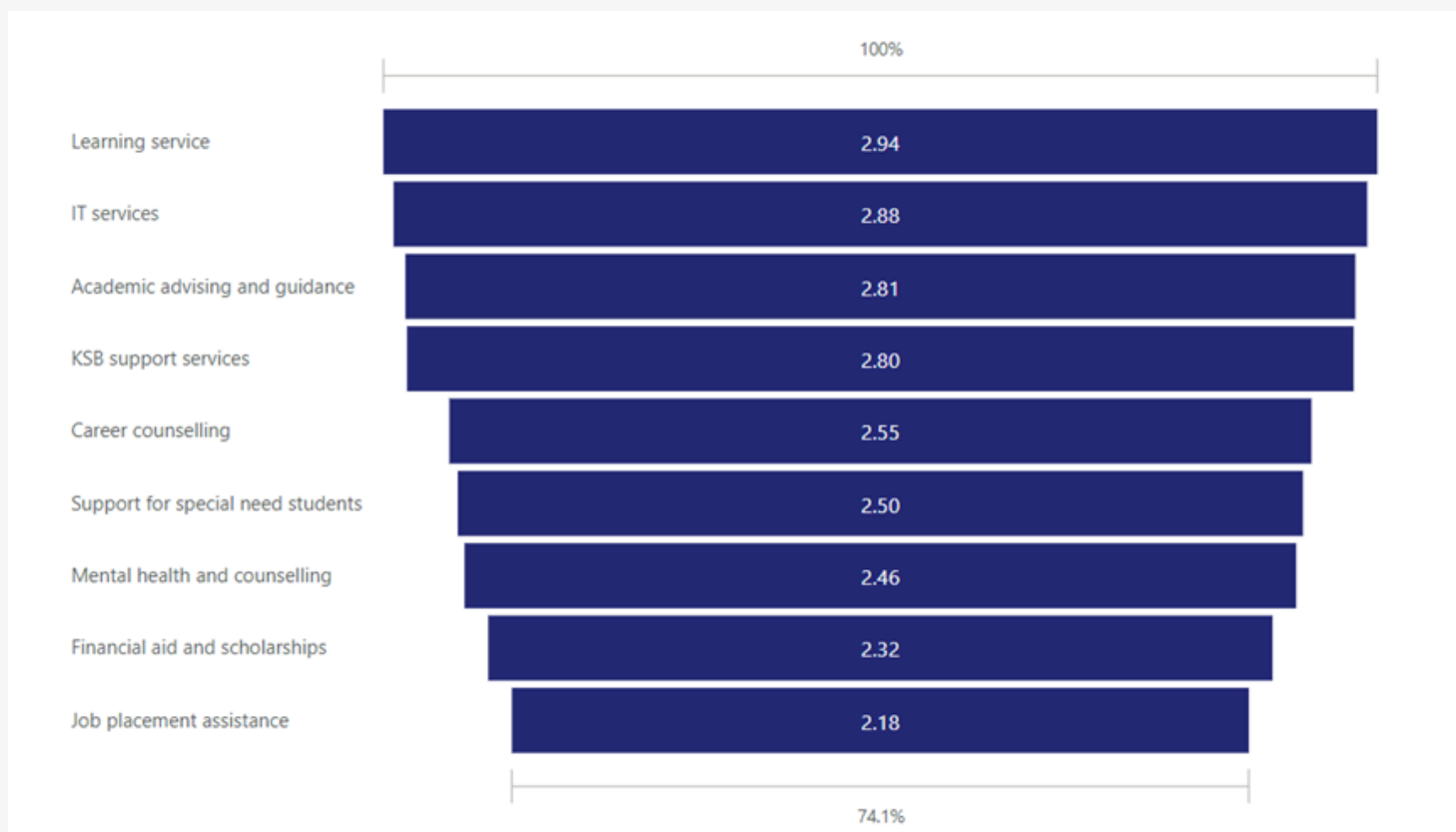


Figure 22: KSB-SCIS support services evaluation



**SECTION EIGHT**

**SUMMARY OF  
FINDINGS AND  
RECOMMENDATIONS**

# SUMMARY OF FINDINGS AND RECOMMENDATIONS

This study serves to provide valuable insights into the alignment between education and industry needs to facilitate better career planning and enhance industry-academia collaboration as well as provide policymakers with preliminary research for capacity development in the country. Our research is also beneficial for international organizations and capacity development agencies, as it provides in-depth insight into the perception of educational quality offered by the KSB-SCIS and its relevance to the current labor market demands. **The findings suggest that there may be some level of mismatch between the skills graduates possess and current market demands, as some graduates indicated that they work in areas unrelated to their field of study. This may further suggest that the curriculum offered to students in KSB-SCIS may not wholly align with current labor market demand.**

The findings of this study are based on quantitative data collected from graduates of KSB-SCIS. This section findings are expected to provide insights into the job search methods, occupational mobility, time-to-first employment, relevance of the jobs to their fields of study, salary growth, job satisfaction, professional journeys of alumni, university experience, perceived value of their education, perceived value of the skills and competencies acquired, strength and weaknesses of the curriculum, teaching methods, and support services in KSB-SCIS education. This section is presented under the following themes:

- a) Employability of KSB-SCIS Graduates
- b) KSB-SCIS Graduates Career Progression
- c) Feedback From KSB-SCIS Graduates



# SUMMARY OF FINDINGS AND RECOMMENDATIONS...

**a) Employability of KSB-SCIS Graduates.** To assess the employability of the graduates, we analyzed key employment indicators, such as job search methods, occupational mobility, time taken to secure the first job, and the relevance of the jobs to their fields of study.

We found that 71% of the respondents are employed in public enterprises, private multinational companies, private established enterprises and with startups in Ghana, the United Kingdom, France, Malawi, South Sudan, and Sweden, while the remaining 29% are actively seeking job opportunities. Some of the employed graduates started their own business, because they had a strong entrepreneurial desire, some were unable to find waged employment opportunities, and others wished to start their own business.

While graduates leveraged varied means to secure jobs, the majority of them landed employment through public advertisement, social networks including family and friends, internships, and referrals. In some cases, the companies directly contacted the graduates with job offers. Interestingly, the majority of the employed graduates work full-time in their field of study. Additionally, about 18.24% of the graduates' work was unrelated to their field of study, providing evidence that the skills possessed by the graduates make them occupationally mobile.

Sadly, a mismatch between the skills graduates possess and current market demands puts a responsibility on the employing organizations to offer on-the-job training to employed graduates, which may be expensive. We found that about 78.82% of the employed graduates received at most three (3) months' on-the-job training after employment.

The results indicated that it took at most a year for about 81.19% of KSB-SCIS graduates to secure their first job. Importantly, respondents mentioned that competence (e.g., soft skills, ability to use modern technologies), social networks (e.g., family, friends), and training (e.g., coaching, counseling, workshops, internships) contributed greatly to their success in securing employment.



# SUMMARY OF FINDINGS AND RECOMMENDATIONS...

**b) KSB-SCIS Graduates' Career Progression.** To evaluate graduates' career progression, we explored factors such as promotions, salary growth, and job satisfaction, which contribute to identifying the factors that influence long-term career success and potential areas for enhancement in KSB-SCIS educational programs.

Analysis of the data showed a **positive career progression in terms of promotion, salary increments, leadership or role (duties), and job satisfaction levels among employed graduates.** Specifically, while 41.15% of the respondents indicated that they had been promoted, 10.53% indicated that they were about to be promoted. We contend that the promotion is associated with additional responsibilities, leading to a rise in salary. In addition, **we found a general increase in job satisfaction levels of employed graduates.** For instance, only 8.06% were very satisfied with their work before enrolling at the KSB-SCIS. **After graduation, 30.81% were very satisfied with their work, which may be a result of the development of their soft skills including teamwork, communication, critical thinking, ability to use modern technologies, and research skills.**

**Cooperative training opportunities were identified to play an important role in the skill and competencies development of graduates.** For instance, respondents indicated that cooperative training such as internships, research seminars, industry engagement, skill development, and social gatherings has helped them develop their teamwork skills, communication skills, problem-solving skills, leadership skills, critical thinking skills, as well as helping them to adapt to new environments, and improve their social networks. Since cooperative training has complemented the growth and development of graduates, this suggests that cooperative training contributes immensely to the quality of education and training of KSB-SCIS students, which eventually leads to employment, job satisfaction, and positive career progression. Sadly, a huge proportion of the unemployed graduates (about 47.48%) did not engage in cooperative training.



# SUMMARY OF FINDINGS AND RECOMMENDATIONS...

**c) Feedback from KSB-SCIS Graduates.** We collected data on graduates' satisfaction level with their university experience, perceived value of their education, the skills and competencies they acquired, teaching methods, and support services. We believe that the feedback will inform future improvements and ensure that programs remain aligned with industry needs.

Analysis of the data revealed that, while the ability to use modern technologies, and practical hands-on experience greatly influenced employment, it seems that the KSB-SCIS education pays little attention to these abilities. Alumni believed that the KSB-SCIS education pays much attention to the development of soft skills (e.g., team-work skills, communication skills, critical thinking skills, adaptation to new environments skills, and research skills). Interestingly, the majority of the employed graduates indicated that their soft skills, ability to use current technologies, and practical hands-on experience contributed massively to securing their current jobs. This may suggest that graduates leveraged existing resources and infrastructure to learn such skills on their own, and also participated in cooperative development training. It is therefore important for the KSB-SCIS to develop its research and learning infrastructure, and guide students to learn certain competencies which may not be available in the curriculum on their own.

Further analysis showed that KSB-SCIS education lacks job placement services, industry internship placement, industrial engagements, exposure of students to industrial challenges, practical hands-on experiences, and access to career resources. In addition, while the teaching method is characterized by clarity of instructions, engagement and interactivity, encouragement of critical thinking and problem-solving, relevance to real-world application, and the use of modern technologies, support for students, feedback and assessment methods, and access to career resources for students require massive improvement. Further, although KSB-SCIS has good support services in learning (e.g., library, laboratory, etc.), information technology, academic advising and guidance, support for students with special needs, support for student's mental health and counseling, financial aid and scholarship opportunities, and job placement requires improvement.



# SUMMARY OF FINDINGS AND RECOMMENDATIONS...

## Recommendations for KSB-SCIS, Capacity Development Agencies, and Policymakers

- 1. Design and implement a tracer study management information system.** It is imperative to consistently monitor the progress and perceptions of graduates to gain insights into their career development. A tracer study management information system will yield a robust database of alumni, offering a systematic means to gather pertinent data regarding the present status of graduates. We recommend that the tracer study management information system be designed in a way that provides students and alumni the ability to learn, network, mentor, share success stories, and provide job opportunities through posts and shareability affordances. In addition, the system should provide job advertisement capabilities.
- 2. Institute alumni networking and engagement programs.** Organize networking events, alumni panels, and entrepreneurship conferences to connect current students with successful alumni who have launched their businesses or landed employment. The event should feature a showcase of success stories of alumni who have successfully transitioned into entrepreneurship or found employment in their respective fields. Highlighting these role models can inspire current students and demonstrate the potential pathways to success beyond graduation.
- 3. Provide internship and experiential learning opportunities.** Develop partnerships with local businesses, startups, and entrepreneurial organizations to offer internship and experiential learning opportunities for students. These opportunities can provide hands-on experience, industry exposure, and potential pathways to employment or entrepreneurship post-graduation. To ensure the effectiveness of internships and experiential learning programs, we suggest that the KSB-SCIS department establishes the internships and experiential learning program as one that is compulsory and requires field reports from the participating students.



# SUMMARY OF FINDINGS AND RECOMMENDATIONS...

## Recommendations for KSB-SCIS, Capacity Development Agencies, and Policymakers...

**4. Collaborate with business incubators and accelerators for cooperative training and business resources to turn ideas into viable ventures.** Collaborate with on-campus and affiliate business incubators and accelerators where students and graduates can receive mentorship, guidance, and resources to develop their business ideas into viable ventures. We hold that cooperative training such as internships, research seminars, industry engagement, skill development, and social gatherings may develop students' teamwork skills, communication skills, problem-solving skills, leadership skills, social networks, and critical thinking skills, which are essential for employment and entrepreneurship. These programs can offer workspace, access to funding, industry connections, and expert advice.

**5. Implement entrepreneurship training programs.** Implement comprehensive entrepreneurship training programs within the curriculum of KSB-SCIS. These programs should include workshops, seminars, and courses covering essential and practical entrepreneurial skills such as business planning, financial management, marketing strategies, and networking.

## Recommendations for Future Research

- Further understand, from the perspectives of employers, the skills and competencies required for employment.
- Delve deeper into understanding the gender skills mismatch and how it affects employment and entrepreneurial capacities.





## SECTION NINE

# REFERENCES

# REFERENCES

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## SECTION TEN

# APPENDICES

# APPENDICES

## Questionnaire

Dear KSB-SCIS graduate,

We are conducting a tracer study to assess employability, career progression, and obtain feedback from our graduates. Your participation in this study is important as it will help us to improve our programs and services to better prepare our students for the workforce. Your participation in this study is voluntary and confidential. The information you provide will be used solely for the purpose of this study and will not be shared with anyone else. If you have any questions about this study, please do not hesitate to contact us at [ksbsurvey@knust.edu.gh](mailto:ksbsurvey@knust.edu.gh). Thank you for your time and consideration. Kindly proceed by responding to the questions if you wish to participate in this study.

### **ALL PARTICIPANTS SHOULD RESPOND TO THE FOLLOWING QUESTIONS**

#### DEMOGRAPHIC INFORMATION

1. Your email.....
2. Your phone number.....
3. Your KNUST student number.....
4. Are you currently employed? [1] Yes [2] No

#### ALUMNI FEEDBACK

5. To what extent did KSB-SCIS education and training help you to develop the following competencies?

# APPENDICES

## Questionnaire...

Competencies	To a great extent	To some extent	To a little extent	I don't know	Not at all
Critical thinking skills	[4]	[3]	[2]	[1]	[0]
Research skills	[4]	[3]	[2]	[1]	[0]
Time management	[4]	[3]	[2]	[1]	[0]
Adapting to new environment	[4]	[3]	[2]	[1]	[0]
Collaboration	[4]	[3]	[2]	[1]	[0]
Communication	[4]	[3]	[2]	[1]	[0]
Digital literacy	[4]	[3]	[2]	[1]	[0]
Problem-solving / creativity	[4]	[3]	[2]	[1]	[0]
Leadership skills	[4]	[3]	[2]	[1]	[0]
Emotional intelligence	[4]	[3]	[2]	[1]	[0]
Entrepreneurial skills	[4]	[3]	[2]	[1]	[0]

6. Did you have any cooperative training (e.g., internship) during KSB-SCIS education?

[1] Yes

[2] No

7. If Yes (to question 6), What kind of cooperative training did you have?

[1] Internship in companies

[2] Mentorship

[3] Skills development (e.g., soap making, communication skills)

[4] Industry engagement

[5] Social networking

[6] Research

[7] Digital literacy

[8] Other (Specify)

8. To what extent did the cooperative training help you to develop the following competencies?

# APPENDICES

## Questionnaire...

Competencies	To a great extent	To some extent	To a little extent	I don't know	Not at all
Critical thinking skills	[4]	[3]	[2]	[1]	[0]
Research skills	[4]	[3]	[2]	[1]	[0]
Social networking skills	[4]	[3]	[2]	[1]	[0]
Adapting to new environment	[4]	[3]	[2]	[1]	[0]
Collaboration	[4]	[3]	[2]	[1]	[0]
Communication	[4]	[3]	[2]	[1]	[0]
Digital literacy	[4]	[3]	[2]	[1]	[0]
Problem-solving / creativity	[4]	[3]	[2]	[1]	[0]
Leadership skills	[4]	[3]	[2]	[1]	[0]
Emotional intelligence	[4]	[3]	[2]	[1]	[0]
Entrepreneurial skills	[4]	[3]	[2]	[1]	[0]

9. To what extent were the following lacking in your schooling and training at KSB-SCIS?

# APPENDICES

## Questionnaire...

Lacking	Not lacking	Slightly lacking	Moderately lacking	Mostly lacking	Completely lacking
Relevance to industry needs	[4]	[3]	[2]	[1]	[0]
Practical hands-on experience	[4]	[3]	[2]	[1]	[0]
Career guidance and counseling	[4]	[3]	[2]	[1]	[0]
Soft skills development	[4]	[3]	[2]	[1]	[0]
Industry internship placement	[4]	[3]	[2]	[1]	[0]
Access to current technologies	[4]	[3]	[2]	[1]	[0]
Industrial engagements	[4]	[3]	[2]	[1]	[0]
Mentorships	[4]	[3]	[2]	[1]	[0]
Entrepreneurial & innovation support	[4]	[3]	[2]	[1]	[0]
Access to career resources	[4]	[3]	[2]	[1]	[0]
Job placement services	[4]	[3]	[2]	[1]	[0]
Exposure to industrial challenge	[4]	[3]	[2]	[1]	[0]
Professional development workshops	[4]	[3]	[2]	[1]	[0]

10. Generally, how would you evaluate the teaching methods of KSB-SCIS in terms of the following areas?

# APPENDICES

## Questionnaire...

Teaching methods	Excellent	Good	Fair	Poor
Clarity of instructions	[4]	[3]	[2]	[1]
Engagement and interactivity	[4]	[3]	[2]	[1]
Relevance to real-world application	[4]	[3]	[2]	[1]
Use of technology and resources	[4]	[3]	[2]	[1]
Support for student participation	[4]	[3]	[2]	[1]
Feedback and assessment methods	[4]	[3]	[2]	[1]
Encouragement of critical thinking	[4]	[3]	[2]	[1]
Encouragement of problem-solving	[4]	[3]	[2]	[1]
Overall teaching method	[4]	[3]	[2]	[1]
Access to career resources	[4]	[3]	[2]	[1]

11. Generally, how would you evaluate the support services of KSB-SCIS in terms of the following areas?

Support service	Excellent	Good	Fair	Poor
Academic advising and guidance	[4]	[3]	[2]	[1]
Career counselling	[4]	[3]	[2]	[1]
Job placement assistance	[4]	[3]	[2]	[1]
Learning service (e.g., library, Lab)	[4]	[3]	[2]	[1]
Mental health and counselling	[4]	[3]	[2]	[1]
Financial aid and scholarships	[4]	[3]	[2]	[1]
Support for students with needs	[4]	[3]	[2]	[1]
IT services	[4]	[3]	[2]	[1]
Overall evaluation of support services	[4]	[3]	[2]	[1]



# APPENDICES

## Questionnaire...

### ONLY UNEMPLOYED PARTICIPANTS SHOULD RESPOND TO THE FOLLOWING QUESTIONS

12. What are you currently doing after graduating from KSB-SCIS?

- [1] Continuing my education
- [2] I'm doing an internship
- [3] I'm looking for a job
- [4] I'm exploring entrepreneurial or self-employment opportunities
- [5] I'm busy with my family
- [6] Other (specify).....

13. How long have you been looking for a job?

- [1] Less than 6 months
- [2] 6 months - 1 year
- [3] 1 year - 2 years
- [4] More than 2 years
- [5] Other (specify).....

14. How do you search for jobs?

- [1] Public advert (e.g., internet, newspapers, radio, TV, etc.)
- [2] Contacting companies directly
- [3] Contacting commercial employment agency
- [4] Relations (e.g., parents, relatives, friends, etc.)
- [5] Assistance by state employment office
- [6] Other (specify).....

15. For which jobs have you been applying?

- [1] Jobs related to my field of study
- [2] Jobs unrelated to my field of study

# APPENDICES

## Questionnaire...

**ONLY UNEMPLOYED PARTICIPANTS SHOULD RESPOND TO THE FOLLOWING QUESTIONS...**

16. For which category of jobs have you been applying for?

- [1] Public enterprise
- [2] Private multinational company
- [3] Private established enterprise
- [4] Private startup
- [5] NGO
- [6] Other (specify).....

17. In what country have you been applying for jobs?

- [1] Ghana
- [2] United States
- [3] Germany
- [4] United Kingdom
- [5] Italy
- [6] Spain
- [7] Canada
- [8] Other (specify).....

18. What is the nature of the jobs you have been applying for?

- [1] Hybrid (Both on-site and remote)
- [2] On-site
- [3] Remote

19. What is the category of jobs you have been applying for?

- [1] Full-time
- [2] Part-time
- [3] Internships
- [4] Freelance or Gig Work

# APPENDICES

## Questionnaire...

**ONLY UNEMPLOYED PARTICIPANTS SHOULD RESPOND TO THE FOLLOWING QUESTIONS...**

20. What do you think are the reasons you haven't secured a job yet?

[1] Low academic performance

[2] Poor digital literacy skills

[3] Poor social networks

[4] Poor research skills

[5] Mismatch of skills acquired in school and industry requirements

[6] Other (Specify).....

# APPENDICES

## Questionnaire...

**ONLY EMPLOYED/SELF-EMPLOYED PARTICIPANTS SHOULD RESPOND TO THE FOLLOWING QUESTIONS**

### EMPLOYABILITY ASSESSMENT

21. Is this your first job since graduation?

- [1] Yes
- [2] No

22. How long had you been searching before you got your first job?

- [1] Less than 6 months
- [2] 6 months - 1 year
- [3] 1year - 2 years
- [4] More than 2 years
- [5] Other (specify).....

23. How long have you been working in this job?

- [1] Less than 6 months
- [2] 6 months - 1 year
- [3] 1year - 2 years
- [4] More than 2 years
- [5] Other (specify).....

24. Who is your employer?

- [1] Public enterprise
- [2] Private multinational company
- [3] Private established enterprise
- [4] Private startup
- [5] Self-employed
- [6] NGO
- [7] Other (specify).....

# APPENDICES

## Questionnaire...

**ONLY EMPLOYED/SELF-EMPLOYED PARTICIPANTS SHOULD RESPOND TO THE FOLLOWING QUESTIONS**

### **EMPLOYABILITY ASSESSMENT**

25. If you selected “Self-employed” in question 24,

Why did you start your own business?

- [1] It was my own wish
- [2] I inherited the business
- [3] I did not find waged employment
- [4] Other (specify).....

26. How many employees does your current company have?

- [1] Only me
- [2] Fewer than 6 employees
- [3] 6-10 employees
- [4] 11-50 employees
- [5] More than 50 employees

27. In what country do you work?

- [1] Ghana
- [2] United States
- [3] Germany
- [4] United Kingdom
- [5] Italy
- [6] Spain
- [7] Canada
- [8] Other (specify).....

# APPENDICES

## Questionnaire...

**ONLY EMPLOYED/SELF-EMPLOYED PARTICIPANTS SHOULD RESPOND TO THE FOLLOWING QUESTIONS**

### **EMPLOYABILITY ASSESSMENT**

28. By what means did you find your current job?

- [1] Public advert (e.g., internet, newspapers, radio, TV, etc.)
- [2] Contacting companies directly
- [3] Through internship and voluntarily work
- [4] I was contacted by the company
- [5] Contacting commercial employment agency
- [6] Relations (e.g., parents, relatives, friends, etc.)
- [7] Assistance by state employment office
- [8] I established my own business
- [9] Other (specify)

29. What is the nature of your job?

- [1] Hybrid (Both on-site and remote)
- [2] On-site
- [3] Remote

30. What is the category of your job?

- [1] Full-time
- [2] Part-time
- [3] Internship
- [4] Freelance or Gig Work

31. Is your current employment related to your profession or program of study?

- [1] Yes
- [2] No

# APPENDICES

## Questionnaire...

**ONLY EMPLOYED/SELF-EMPLOYED PARTICIPANTS SHOULD RESPOND TO THE FOLLOWING QUESTIONS**

### **EMPLOYABILITY ASSESSMENT**

32. Have you received any on-the-job training since you started working for the company?

[1] Yes

[2] No

33. If your response to question 32 is “Yes”, State the duration of the on-the-job training you received

[1] Less than 1 month

[2] 1-3 months

[3] More than 3 months

34. To what extent were the following aspects important toward securing your current job?

# APPENDICES

## Questionnaire...

Aspects leading to employment	To a great extent	To some extent	To a little extent	I don't know	Not at all
Reputation of KNUST	[4]	[3]	[2]	[1]	[0]
Grades in my transcript	[4]	[3]	[2]	[1]	[0]
Deficit of employees within my profession	[4]	[3]	[2]	[1]	[0]
Relatives and social networks	[4]	[3]	[2]	[1]	[0]
Academic advising and guidance	[4]	[3]	[2]	[1]	[0]
Career guidance and counselling	[4]	[3]	[2]	[1]	[0]
Job placement assistance	[4]	[3]	[2]	[1]	[0]
Practical hands-on experience	[4]	[3]	[2]	[1]	[0]
Soft skills (e.g., communication)	[4]	[3]	[2]	[1]	[0]
Industry internship placements	[4]	[3]	[2]	[1]	[0]
Ability to use current technologies	[4]	[3]	[2]	[1]	[0]
Mentorship	[4]	[3]	[2]	[1]	[0]
Exposure to industrial challenge	[4]	[3]	[2]	[1]	[0]
Professional development workshops	[4]	[3]	[2]	[1]	[0]
Other (Specify).....	[4]	[3]	[2]	[1]	[0]



# APPENDICES

## Questionnaire...

**ONLY EMPLOYED/SELF-EMPLOYED PARTICIPANTS SHOULD RESPOND TO THE FOLLOWING QUESTIONS**

### **CAREER PROGRESSION**

35. What was your salary level before graduating from KSB-SCIS?

- [1] Below GHS 1,000
- [2] GHS 1,000 - GHS 2,500
- [3] GHS 2,600 - GHS 3,500
- [4] GHS 3,600 - GHS 4,500
- [5] GHS 4,600 - GHS 5,000
- [6] Above 5,000

36. What is your salary level now?

- [1] Below GHS 1,000
- [2] GHS 1,000 - GHS 2,500
- [3] GHS 2,600 - GHS 3,500
- [4] GHS 3,600 - GHS 4,500
- [5] GHS 4,600 - GHS 5,000
- [6] Above 5,000

37. Which sector are you working in now?

- [1] Accounting and Finance
- [2] Administration
- [3] Education
- [4] Engineering
- [5] Healthcare
- [6] Logistics, Procurement, and Supply Chain
- [7] Other (specify).....

# APPENDICES

## Questionnaire...

**ONLY EMPLOYED/SELF-EMPLOYED PARTICIPANTS SHOULD RESPOND TO THE FOLLOWING QUESTIONS**

### **CAREER PROGRESSION**

38. What is your role level now?

- [1] Functional management
- [2] Middle-level management
- [3] Supervisory or team lead
- [4] Specialist or professional
- [5] Top management
- [6] Other (Specify).....

39. Have you been promoted since you graduated from KSB-SCIS?

- [1] Yes
- [2] No
- [3] About to be promoted

40. What was your job satisfaction level in your company before graduating from KSB-SCIS?

- [1] Not satisfied
- [2] Somewhat satisfied
- [3] Satisfied
- [4] Very satisfied

41. What is your job satisfaction level now?

- [1] Not satisfied
- [2] Somewhat satisfied
- [3] Satisfied
- [4] Very satisfied

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