

## Employment Outcomes Following Industrial Attachment in Kenya

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## Introduction

Unemployment is a major concern for the youth of Kenya. One important part of the solution to this issue is the implementation of technical education programs such as the one in place at Tumaini Innovation Center in Eldoret, Kenya. These programs provide the skills necessary for students to enter the workforce (Ohagwu et al., 2022) and give students relevant experience through industrial attachment programs in which students are paired with employers and work prior to receiving their certification. However, technical education programs throughout the world can run into several challenges such as a mismatch between student skills and market demands (Sang et al., 2012), placing attachment students in industries that do not match their training (Abdullahi & Othman, 2022), and a lack of modern equipment (Muchira et al., 2022). Building on these previous findings, our study explored why students graduating from Tumaini Innovation Center have faced low employment rates even after completing an industrial attachment.

Using a mixed-methods approach, our study found that the students at Tumaini face some, but not all, of these challenges. Students and alumni reported that their skills are useful in their jobs and attachments. All the students are placed in attachments that match their skillset, and students mostly reported that the equipment used in their attachments is comparable to the equipment used at Tumaini. Despite these positives, students still experience low employment rates after completing their attachments. Given that the goal of attending a technical school such as Tumaini is to better employment prospects, it is important to figure out why students end up unemployed after graduation and the barriers to employment.

## Background

In this background section, we will review prior research on youth unemployment in Kenya, technical education, and industrial attachment programs. We will also provide an overview of the Tumaini Innovation center, which is the context for our study.

### *Youth Unemployment in Kenya*

Kenya has a very large youth population: 38% of its population is less than 14 years old (World Bank Open Data, 2022). This large demographic has consistently ranked job opportunities and unemployment as the top concerns they wish the government would address (Hope, 2012). As a result, the Kenyan government and other aid organizations such as the World Bank have put programs in place to attempt to fix this problem. One such program, the Youth Enterprise Development Fund (YEDF), was a way to give youth-owned businesses the capital they need to expand their business ventures. However, this program was plagued with corruption and had very little impact on the unemployment crisis (Ismail, 2018). Other programs such as the Kenya

Youth Employment Project (KYEP) resulted in moderate increases in employment but found little to no increase in earnings for program participants (Ismail, 2018).

Despite these programs, the youth unemployment rate was still 13.4% in 2022, (World Bank Open Data, 2023). This lack of employment is a leading cause of poverty, which is tied to a lack of access to housing, healthcare, education, and food security (Polak, 2008). “The [best] solution to the complex problem of poverty is helping poor people increase their income” (Polak, 2008). With over 30% of Kenya’s population living below the national poverty line (Poverty and Inequality Platform, 2023), increasing employment, and especially youth employment is imperative.

### *Technical Education*

One important solution to the unemployment crisis is the implementation of higher education programs. Through his research, Kempe Hope, a former senior official with the United Nations, found that, “in order to find a decent job, Kenyan youth need to develop a range of skills and knowledge that are typically gained through education and training” (Hope, 2012). One of the main ways this knowledge is imparted to the youth is through Technical and Vocational Education and Training (TVET). Across the world, these types of training programs teach students technical trades with the goal of increasing employment opportunities and social mobility for the students enrolled in these institutions (Ohagwu et al., 2022). Within Kenya, these employment opportunities can come from within the formal or informal sectors of the economy and aim to create a sustainable source of income for the graduates (Hope, 2012).

However, TVET institutions tend to face a multitude of challenges that inhibit their ability to effectively train students. Many institutions in Kenya do not keep up with market changes and students graduate with skills that do not match market demands (Sang et al., 2012). These students struggle to find jobs and cannot successfully transition into the labor market (Caves et al., 2021). Kenyan TVET institutions also may fail to teach students the equally important soft skills required to be a productive member of society such as teamwork, initiative, and resilience. (Muchira et al., 2022). All these problems are exacerbated by the fact that many technical schools struggle to find appropriately certified teaching staff (Sang et al., 2012). These challenges can create barriers to the success of TVET graduates.

### *Industrial Attachment Programs*

One of the most important aspects of an effective TVET program is the implementation of an industrial attachment program. An industrial attachment works like an internship. Students complete their education, learning a technical trade and other associated skills. They are then placed at a local company where they work for a few months. This work experience is a requirement for the students to earn their technical certification. Industrial attachment programs provide a way to bridge the gap between theoretical knowledge and practical knowledge and provide authentic workplace exposure (Abdullahi & Othman, 2022). Additionally, this experience is designed to help students easily transition into employment by giving them the skills and attitudes required for work (Dondofema et al., 2020). This experience makes students

more attractive to prospective employers and is designed to help connect potential employees to employers (Hope, 2012).

However, these programs face a lot of shortcomings. Industrial attachment programs across the world fall victim to various problems that render them less effective than they otherwise could be. Many students are placed in industries that do not match their training and end up doing menial tasks rather than what they have been trained for (Abdullahi & Othman, 2022). Others face costly attachment fees and a lack of funding. Many students are also left unsupervised in their work and do not receive the feedback they need to improve (Dondofema et al., 2020). These factors greatly impact the outcomes of industrial attachment programs.

### *Tumaini Innovation Center*

This study focuses on one technical training institution, the Tumaini Innovation Center. Tumaini is located in Eldoret, Kenya and aims to give technical educations to street-connected youth. Street youth are an especially vulnerable population who often leave home due to poverty, violence, or alcoholism (Sorber et al., 2014). Despite these barriers, most street-connected youth say they would like to return to school if given the chance to do so (Sorber et al., 2014).

Tumaini gives them that chance. The center's mission is to give these vulnerable youth the knowledge and skills they need to be successful within their communities (*Tumaini Innovation Center | Because Only Together We Can*, n.d.). Tumaini offers certifications in welding and fabrication, electrical wiring, motor vehicle mechanics, beauty therapy, hairdressing, and food technology. Each student selects one of these courses to specialize in and then is enrolled in general education classes in entrepreneurship, life skills, information and communication technology, and localized engineering education (*Tumaini Innovation Center | Because Only Together We Can*, n.d.).

Tumaini students are awarded a NITA Grade III certification upon completion of the program. NITA is a state corporation that certifies Kenyans in the technical trades as part of the Industrial Training Act of 2011 (The National Industrial Training Authority (NITA), 2023). Higher certifications can be achieved through the completion of NITA Grade I and II training or by obtaining a university degree. At Tumaini, the programs are designed to help support street-connected youth towards sustainable livelihood development and the fostering of leadership abilities through practical knowledge and work experience (*Tumaini Innovation Center | Because Only Together We Can*, n.d.).

### **Purpose**

The purpose of our study was to determine why students face low employment rates despite graduating from Tumaini and completing an industrial attachment. Specifically, this study sought to answer the following research question:

What factors determine a student's employment outcome following graduation from a technical training program?

While industrial attachment programs and TVET educational programs are designed to connect students with employers and increase their employability, this often does not end up happening. Tumaini students have reported low employment rates even after the completion of the accredited TVET program and this is a cause for concern.

## Methods

We used interviews with students, alumni, and teachers of Tumaini Innovation Center to address our research question. In this section, we describe our data collection and analysis processes.

### *Data Collection*

We used a combination of both qualitative and quantitative data collection. Quantitative data was collected during the first part of the interviews and was mostly focused on gathering relevant demographic information. We used this data to determine general trends about the population. We conducted interviews because this approach allowed us to examine the unique context in depth and find the causes of the trends observed in the quantitative data (Borrego et al., 2009). These interviews took place with people in various roles within Tumaini Innovation Center. The sample groups included current students, alumni, faculty, and employers. During each interview, researchers took field notes on statements made by the subjects. All subjects gave their consent to take part in the study. During student, faculty, and employer interviews, most conversations were audio recorded to be used as a reference for data analysis with subjects who were comfortable doing so.

### *Interview Participants*

Current students constituted our largest interview pool with 21 student interviews conducted. All interviews were conducted individually. However, if a student had a low level of English proficiency, an additional student acted as a translator to assist the research team in the interpretation of both the interview questions and the responses. Each student participated in a semi-structured interview where they were asked a standard set of questions dependent on their situation. Examples of some interview categories and questions are provided below:

<b>Attachment Experience</b>	How did you come into contact with your attachment provider? Did Tumaini help?
	How was your relationship with your attachment provider?
<b>Future Plans</b>	What is your plan after you complete your education at Tumaini?
	What do you think your chances of being employed by your attachment provider are?
<b>Experience at Tumaini</b>	Do you feel you were able to apply what you learned at Tumaini to your attachment?
	Have you benefitted from attending Tumaini? How so?

The students came from all course departments and the distribution roughly matches that of the school as a whole. Student sampling was completed using a convenience sampling method with an emphasis on students enrolled in the literacy class. No student was denied participation in the study.

School alumni made up our second largest interview pool with 10 interviews conducted. These interviews were structured in a less formal way. The research team conducting these interviews included seven researchers and one Tumaini faculty member. The faculty member and one of the researchers acted as a translator for many of the interviewees. The alumni were interviewed regarding a variety of topics. Of these topics, only some of the responses were used in this study. Due to the diverse backgrounds of the alumni, many of the questions asked varied with the individual's specific situation while some remained constant. Convenience sampling was also used for this sample group as scheduling meetings and finding contacts prevented random sampling.

Interviews with Tumaini teachers were used to gain insights into the attachment program and the education system. Teachers were interviewed on a case-by-case basis based on their role at the school and the knowledge they had regarding student employment and industrial attachment. Due to this, specific questions were uniquely generated for each individual. Only one teacher was interviewed.

Finally, we also interviewed three industrial attachment providers, specifically the managers that had overseen alumni during their industrial attachments. Only some of the alumni who had worked under the supervision of the interviewed attachment providers were also interviewed. These managers participated in the most structured interview process out of any of the sample groups. This was because the employers had similar experiences, and a standard set of questions could be asked regardless of the situation. A set of questions was followed in the same order for all participants. Interview questions consisted of sections focused on background information, attachment students, school relations, attachment skills, hiring, and other feedback. The sample size was constrained to three participants due to a low willingness to participate in the study.

In total, there were 37 interview participants in this study. Each participant had quantitative demographic data gathered about them, typically surrounding their course at Tumaini or the industry they worked in and their employment history. Additionally, all participants participated in a unique set of qualitative questions specific to their role within Tumaini.

## **Data Analysis**

Interview responses were analyzed both qualitatively and quantitatively using a mixed methods approach. Trends were then looked at within individual sample groups and across samples. Responses that could be separated into concrete categories were analyzed as quantitative data.

Meanwhile, questions that evoked a wider range of responses were analyzed using narrative and thematic analysis (Kellam, et al., 2015).

### *Quantitative Data*

Students and alumni were asked a series of multiple-choice questions as a part of their interviews. The responses to these questions were analyzed as quantitative data and reported as percentages. The proportions reported were also triangulated with qualitative reports from faculty and employers who had experienced similar trends. This approach helped to ensure the accuracy of the data.

### *Qualitative Data*

As the data collection method in this study was interviews, qualitative data was collected from all sample groups. Student and alumni data were compared to determine time-based trends in the data. Meanwhile, the responses from the students and alumni were also used to create a framework for students' pathways following graduation. This framework was triangulated with the attachment providers' and teachers' responses to ensure the accuracy of the information.

## **Results**

Based on our interviews, a framework was created to understand the pathways that led students to certain outcomes after graduation. Figure 1 (below) shows the process that Tumaini students go through when they are finishing school. As students complete their education, they begin looking for attachments with the help of their guardians and teachers. Once they have found an attachment provider to work for and completed classes, they complete their attachment.

Following the attachment, students must try to find permanent employment. About half of the students who complete an attachment will be hired by their attachment provider, while the other half will not. Students without an offer of employment at the end of their attachment must work to find a new job. The staff at Tumaini will occasionally help students find openings, but this process is typically done alone. When an opening is found, Tumaini staff must write a recommendation letter and the student must submit their CV. After the application is complete, a hiring decision is made by the employer. Along the way, students face many barriers such as high competition for the limited available employment opportunities and poor perception of street youth.

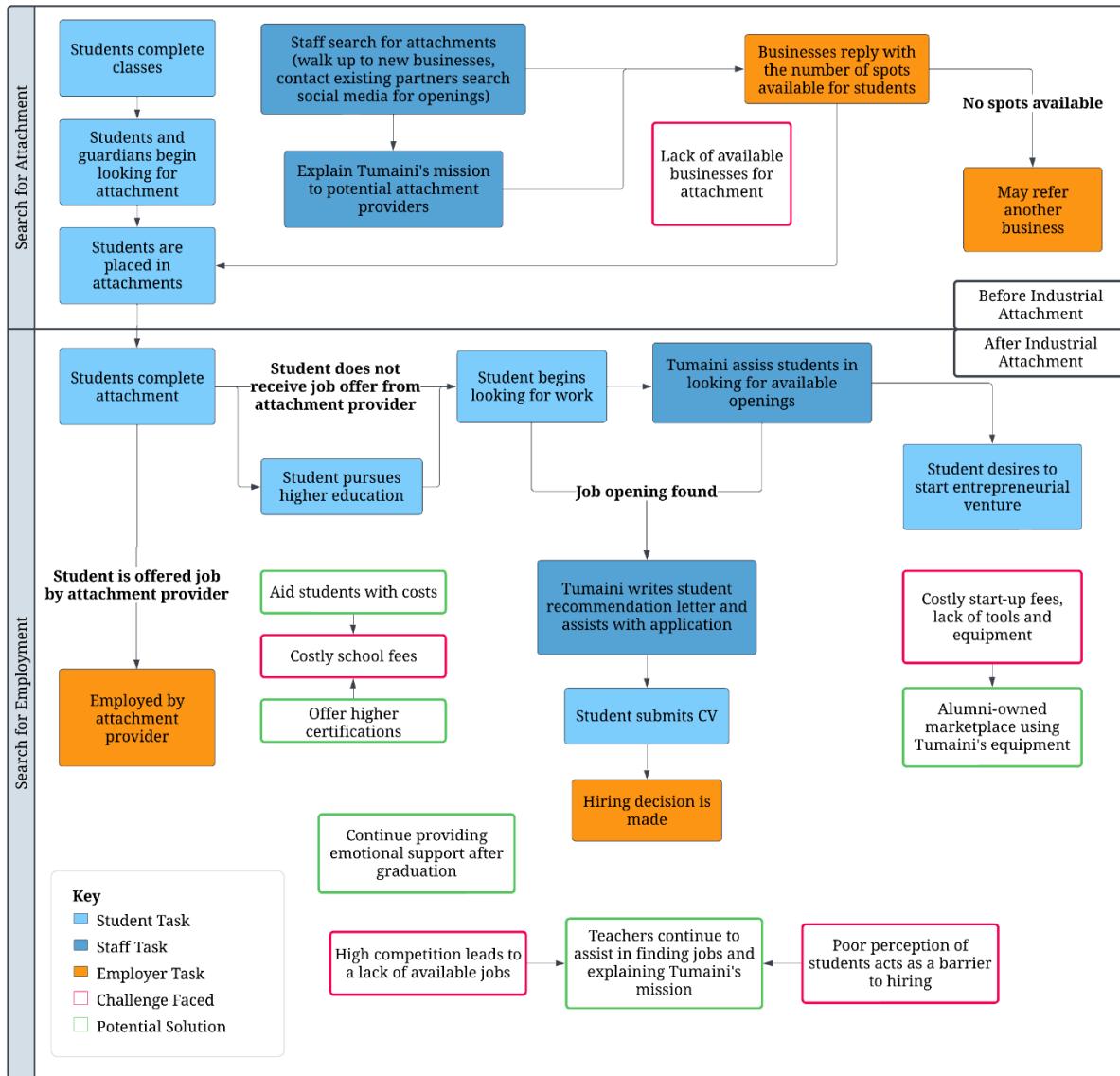


Figure 1 – A flowchart for the typical pathways Tumaini students follow while looking for employment

Throughout our data analysis, five common outcomes arose. We saw that students were consistently ending up in one of the following categories: employed in a job related to their attachment, employed in a job unrelated to their field of study, unemployed, furthering their education, or starting their own business. Each of these outcomes is described in more detail below.

#### Attachment Leading to Employment

One of the main goals of completing an industrial attachment is that the student gains workplace experience and can obtain employment upon completion of their education. Most students do complete an attachment: we found that 11 out of the 21 current students had already completed a

short attachment. Meanwhile, 14 of the students had plans for where they will be working for during their upcoming long attachment. Of these students, about half found their attachments through personal connections while the other half received help from Tumaini staff, as exemplified by this student:

When I am here in school, our teacher provide[s] for us where we are going for attachment. (Student, Motor Vehicle Mechanics)

While the students appreciate the teachers' help in finding attachment, many still run into challenges while searching for them. A lack of available businesses along with costly attachment fees pose barriers the prevent students from starting their attachments.

Finance [is the biggest challenge] since [he needs] to pay for the attachment. It is the attachment fee he will need. (Translated from a student, Motor Vehicle Mechanics)

Even once an attachment has begun, students still face challenges in completing the program. Financial burdens and other responsibilities may prohibit students from finishing their attachment.

He is saying that where he lives is very far from where he will be doing his attachment, and it will be a challenge ... to find food and travel back and forth to the attachment. It is a very long distance. In a nutshell, [his biggest challenge is] financial struggle because if he has those finances, finding those food and the transport will be easy. (Translated from a student, Electrical Wiring)

However, students that do complete their attachment tend to be successful. Out of those that had completed an attachment previously, almost all of them reported positive relationships with their employers.

My relationship with my manager: when I was meeting [him] he was ... excited ... [and] we [became] friends. He [taught] me more, and he wants me to know more about mechanics. (Student, Motor Vehicle Mechanics)

Attachment providers agreed that students possessed the necessary skills required for entering the workplace.

[The students] have been so helpful, very helpful, especially when we have [a] large group here, they have been very helpful. (Attachment Provider, Food Technology)

Their punctuality ... they know how to associate with the customer well, they treat my customers right. (Attachment Provider, Hairdressing)

The employers also expressed the desire to hire the attachment students but were unable to due to a lack of space for new employees.

The main reason [we cannot hire students] is [that] we are many and the room I am working in is a bit small ... but when I move to a bigger space, I might hire people. (Attachment Provider, Beauty Therapy)

Students also repeatedly reported that the skills they had learned at Tumaini were useful during their attachment and employment experiences.

Tumaini has equipped him with the skills and the knowledge he needs through MVM (Motor Vehicle Mechanics) to be a great engineer. Before he was looked down on and ... [now] he has a chance to be someone and get the respect he deserves. (Translated from Student, Motor Vehicle Mechanics)

Employers valued these skills and acknowledged the benefits of an education from Tumaini.

They are very disciplined, and they are doing their work well and keeping their time. Tumaini is really doing a good job. They are training them good. (Attachment Provider, Food Technology)

We found that six of the ten alumni interviewed had completed an attachment and that two of them were working full-time at their place of attachment. Meanwhile, one other alumnus was doing casual work for their attachment provider on a part-time basis. Alumni and students stated the importance of completing an attachment as a way to find employment and learn new skills.

He says if he gets the attachment, it will be easier for him to get a job [because he will] have connections with people ... that can help him get ... the job. (Translated from Student, Motor Vehicle Mechanics)

Industrial attachments have many benefits for the students that complete them. Students make meaningful connections and employers gain valuable employees. However, students still struggle to find these attachment opportunities and employers are not always able to offer full-time employment following the attachment period.

#### *Employment in Fields Unrelated to Attachment*

Some of these students ended up employed in an industry that was not related to their course of study. There were two main reasons for this: either alumni could not find employment in their field and took the job that was available, or students had always wanted to work in a field different from the one they studied at Tumaini. For example, one alumnus told her story of studying and completing an attachment in hairdressing, but not being able to get a job at a salon. As a result, she worked in a hotel for almost three years before eventually being hired by the

salon she had originally completed her attachment at. These employment opportunities are sometimes a last resort option for students who cannot not find employment in their desired field.

A different alumnus told his story of being hired by his attachment provider but realizing he wanted to work in a different industry. He was able to connect with an employer in that industry and was hired. He is now living out the job he always dreamed of having.

Dream job? I think I am doing what I wanted to do. (Alumni, Electrical Wiring).

Regardless of whether these were dream jobs or a last resort, it was typical of people who had not been hired by their attachment providers to find their jobs through personal connections.

I had a guy who introduced me to another guy. The guy was from Tumaini, ... we knew each other from there so I [engaged] with him a lot and he gave me work and [then] he linked me with the work I am in now. (Alumni, Electrical Wiring)

While most alumni were employed within the field they had studied, these stories illustrate some of the ways in which people end up working in industries they did not initially imagine. Amongst current students, nine dreamed of working in jobs unrelated to their studies. This represented nearly half of the interviewed student population that did not want to have jobs in their chosen fields. Some students stated their desires to study courses not offered at Tumaini such as tailoring or art. One student talked about his wish to specialize in ICT: a course that all students take as a part of their education at Tumaini but is not offered as a certification. Alumni and students wished for more options for specialization within their fields and wished Tumaini had given them that.

Now I am dealing with solar, and they taught me electrical. Though they are somehow similar, I wish they could go deeper when they are teaching electrical. (Alumni, Electrical Wiring)

There are a variety of reasons that students end up employed in industries that differ from their original plans. Some always wanted to work in a different industry, some find better opportunities, and some are left with no other options.

### *Entrepreneurship*

Meanwhile, there is yet another group who find alternative employment in the form of entrepreneurial ventures. While none of the alumni are currently self-employed, 70% of them stated their desire to start their own business. One alumnus currently does some side jobs for members of her community that she is occasionally compensated for, but none of the alumni are earning a living wage from their own business. Many of them talked about the difficulty of obtaining enough capital to start a business whether those funds were necessary for start-up fees, tools and equipment, or renting a space for their business.

Meanwhile, current students differed in their entrepreneurial visions. Only a few students expressed a desire to start their own businesses.

My dreams? ... To become my own boss. (Student, Hairdressing)

A desire has been expressed by both students, alumni, and teachers for the implementation of an entrepreneurial program at Tumaini. This program would assist students by giving them the tools necessary to run their own business and providing them with a platform from which to sell their products. It would help take away the barriers to self-employment and provide an additional way to interact with community members.

### *Unemployment*

Despite the many success stories of students from Tumaini getting employment opportunities that help them get off the streets, there are still many that end up unemployed or underemployed. One alumnus was only doing casual work when needed by her employer. She did not have a full-time schedule and was only contacted for work when there was an influx of customers. Another alumnus was turned away from employment because she did not know all the hairstyles necessary to be employed by a salon. She cannot afford the training required to learn the new styles and is trying to support her young child at home. She is struggling to make enough money to live off and cannot find employment due to a lack of jobs and her lack of skills. Yet another alumnus told his story of unemployment and the hope that he would be able to find a job by moving to Nairobi. He had a connection with an employer there and thought it was his best option to find a job.

After graduation, students face many challenges that inhibit their ability to get a job. Some lack the skills employers expect of them such as the hairdressing student mentioned above. A barrier to other students is the high competition in the market for the limited jobs available.

[I had] very many difficulties because someone needs to trust me, needs to know my experience. At that time, I had no experience. I need work. I had responsibilities to attend to. It took me two years [to find a job]. (Alumni, Electrical Wiring)

Alumni and employers also echoed the fact that there are simply not enough jobs available for all the people who need them.

I have been struggling, applying [to] many places, but nowadays I don't know what is happening. I try to apply but it is not happening. It is hard – very hard. (Alumni, Food Technology)

Yet another challenge Tumaini students face is the poor perception of people from the slums and the tribalism that is occasionally present within the community. Nevertheless, the one recurring theme amongst all participants interviewed is the desire and excitement at the thought of

employment. Every single student reported feeling excited or happy at the prospect of employment.

Anything in the whole world, I am ready to do it. (Alumni, Food Technology)

Employment is the goal for all students and the recurring theme of unemployment is a concern for the students, alumni, and staff especially when students are desperate to take any form of employment.

As long as it pays, I am happy. (Student, Food Technology)

#### *Further Education*

One strategy that students have used to increase their chances of employment is obtaining higher education. Three of the alumni were currently pursuing further education both in other technical institutions and high schools. This was also an extremely popular choice amongst current students. Ten of the current students said they plan to continue their studies after graduation from Tumaini.

After graduation ... I want to do diplomacy for mechanic. When I finish [my] diploma, I'll go to master's and then after master's I'll go to degrees. (Student, Motor Vehicle Mechanics)

Many of them feel that the NITA Grade III certificate that Tumaini offers is not enough to easily get a job.

The request I would like to make direct to Tumaini, I would ask if they can upgrade and give us more. We need something like certificates, higher education. It is a very big issue. (Alumni, Food Technology)

Amongst the students that do pursue higher education, many run into challenges such as the school fees they are required to pay and the long travel they go through to reach school each day. Many current students were worried about the difficulty of exams at the next school they attend. However, all alumni that were enrolled in higher education spoke of the ease with which they transitioned to higher education. They thought that Tumaini had prepared them well and that they had exceptional skills in the lab and practical classes.

However, students have benefited in more ways from their education at Tumaini than just the technical skills they learned.

They have really helped me a lot. ... Tumaini for me is like a family. (Alumni, Electrical Wiring)

Many have also benefitted emotionally from attending Tumaini. They have been able to get off drugs, learned to control their anger, and learned to work with others. Many talked about what they learned about themselves and the new interests they developed as a result of attending Tumaini.

I have acquired new skills and I know how to communicate ... and how to express myself. (Student, Hairdressing)

Students also appreciated the services that Tumaini provided, and some alumni had a hard transition away from Tumaini because they did not have housing or food to fall back on like they did at Tumaini. However, a major theme across all groups that were interviewed was the benefits they received by attending Tumaini.

I was in the streets, no hopes, but now I am in Tumaini [and] I have hopes for the future. (Student, Motor Vehicle Mechanics)

## Discussion

Most Tumaini students successfully complete an industrial attachment and we found that they often have very positive relationships with their employers. This leads a portion of them to be hired directly from their attachment. Meanwhile, others run into challenges in finding open jobs, transportation to and from work, and access to food and housing. These challenges mean that another subset of students end up unemployed and struggling to get off the streets due to the general lack of available jobs in the area. To combat this high labor market competition, some attempt to further their education while others attempt to start their own businesses.

Despite the multitude of challenges Tumaini students face, there are many positives that come from the Tumaini attachment program. Students felt they learned relevant skills while in school and felt supported by their teachers and peers. Additionally, Tumaini did an excellent job instilling strong interpersonal skills in students and helped them grow emotionally. These interpersonal skills have been shown to play a significant role in whether a student completes their employment training (Pagnocco & Bertone, 2021). Social and Emotional Learning has also been shown to improve students' confidence, school engagement, and mental health (Greenberg et al., 2017). Additionally, students tend to benefit long-term and are better prepared for higher education, more successful in their careers, and more engaged citizens (Greenberg et al., 2017). Tumaini students appear to reap many of these benefits: they felt that they were a part of a supportive community and that they learned a lot about themselves such as how to control their emotions, how to be comfortable with themselves, and how to express themselves. Since it is very important that students fully complete their industrial attachments to maximize their benefits from the program, the fact that students possess these soft skills speaks highly of the Tumaini program. These emotional benefits have typically been overlooked by past research and the methods Tumaini uses to ensure a welcoming environment could be examined and used as a blueprint for other schools in the future.

While this study corroborates much of past research done on industrial attachment programs, Tumaini offers a unique case in that students are always placed in an attachment matching their skillset and most have reported the skills taught to them in school are relevant to their work. Past studies have found these two aspects to play a large role in the success of the attachment program but many study programs that have a mismatch between students' skills and market demand. Tumaini offers a look into the benefits and challenges of an attachment program that has successfully implemented these aspects. While there are still components of the Tumaini students' educational pathways that could be improved, we found that students greatly benefit from the program and are grateful for their time at Tumaini.

### *Implications*

These findings offer important insights for several key stakeholders including, but not limited to, Tumaini and other vocational training institutes, government officials, and future researchers. It informs educational institutions about the pathways students take and the needs they have as they navigate the transition from education to employment. It provides useful insight into both the strengths and weaknesses of attachment programs and provides suggestions for future improvement.

Similarly, policymakers should consider some of the lessons learned from this research. When seeking to reduce unemployment and build stronger communities, it is important to consider the barriers that prevent people from getting jobs and getting off the streets. This paper contains indications of these challenges, especially within the street youth community.

As other researchers look to expand on this research, these pathways could be an important guide to researching similar issues at other technical training institutes and potential solutions could be tested and implemented to determine which actions are most effective at reducing unemployment and improving technical education systems. Overall, this research highlights some of the benefits and challenges for students at Tumaini Innovation Center and offers a framework for the paths students take as they enter the workforce.

### *Study Limitations*

While this report provides a general overview of the attachment and hiring process, challenges students face, and where Tumaini students end up, there are several limitations of the study.

Many of the sample groups had small sample sizes; we were only able to interview three employers and ten alumni. Additionally, some of the students and alumni were interviewed with the assistance of a student translator. Consequently, there is potential that this process swayed the responses that were received. Conversely, students that did not have a translator assisting them may have struggled to fully express themselves. We gained much richer information from students who were assisted by the translator or who had higher levels of English proficiency. This language barrier posed a challenge to complete data collection and may have hindered the responses received. Finally, this study only utilized the responses from one technical training

institution: Tumaini Innovation Center and therefore may not be a completely accurate generalization for other similar educational systems.

### *Next Steps*

It would be important to investigate the implementation of solutions to these problems. While this study has determined the common outcomes for students and associated challenges, it does not examine the effectiveness of solutions. Further research is needed to determine how to best combat these challenges and to find programs that can be put in place to increase employment rates amongst technical school graduates.

### **Conclusion**

Tumaini students come from a unique background of growing up as street youth in Kenya. They come to Tumaini to set themselves up for employment and to help themselves get off the streets: graduating with an important combination of technical and soft skills. While these skills are positively correlated to employment, this study aimed to determine where the students end up after graduation and if their goals have been achieved. It was determined that students typically end up in one of several pathways: employment, further education, entrepreneurship, or unemployment. Regardless of the pathway students take, they have a unique set of challenges including lack of finances, availability of jobs, and a mismatch of skills with the market that correlate to which of the pathways students follow. Despite these challenges, Tumaini students reported an overwhelmingly positive experience at the school saying it benefited them emotionally, socially, and financially.

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