



The Adaptability of Engineering Graduates to Ugandan Labour Market

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Abstract

This paper addresses the vital issue of how well engineering graduates in Uganda can adapt to the constantly changing landscape of the local labor market. As the economy undergoes rapid transformation due to technological advancements and globalization, it becomes crucial to assess the preparedness of engineering graduates to meet employers' expectations. Through empirical research and qualitative analysis, this paper examines the challenges encountered by engineering graduates in Uganda, identifies areas where engineering education can be improved, and proposes strategies to enhance graduates' adaptability and employability. The study employed a cross-sectional design, integrating both quantitative and qualitative research methods. Initial findings revealed the significant role of effective communication skills in retaining employable skills among engineering graduates in Uganda. Furthermore, it highlighted the positive influence of cultural and family backgrounds on skill development and retention. Values instilled within these backgrounds contribute to a comprehensive approach to professional growth, adaptability, and resilience, thereby empowering individuals to navigate the demands of the Ugandan labor market successfully. The study concludes that adaptability, a critical outcome for engineering graduates, is shaped by factors such as cultural awareness, continuous learning, and effective communication. Graduates who excel in these domains are well-positioned to thrive in Uganda's evolving labor market, making meaningful contributions to their organizations and embracing change. As a recommendation, government ministries should prioritize the adaptability of Technical and Vocational Education and Training (TVET) graduates across various industries. Aligning TVET programs with the dynamic needs of the job market will equip individuals for diverse roles and underscore the dynamic career paths available to TVET graduates.

Subject Areas

Engineering Education, Vocational Education

Keywords

Engineering, Graduates, Adaptability, Labor Market, Employability

1. Introduction

According to ref. [1], the adaptability of engineering graduates to Uganda's labor market stands as a pivotal factor influencing the nation's economic development and industrial progress. Engineering holds a central position in propelling innovation, fostering infrastructure growth, and driving technological advancement, thereby rendering engineering graduates' essential contributors to the workforce. Nevertheless, the transition from academia to the labor market presents distinctive challenges and opportunities for these graduates.

In recent years, Uganda has undergone significant economic transformation and embarked on industrialization endeavors aimed at realizing sustainable development objectives. With a particular focus on sectors like construction, manufacturing, energy, and information technology, there exists a mounting demand for adept engineering professionals capable of addressing the evolving requirements of these industries ref. [2].

Adaptability emerges as the primary competitive advantage for the nation. It stands as the skill necessitating continuous attention if the goals of financial and temporal freedom in real estate are to be attained. According to ref. [3], adaptability can be delineated into two components: flexibility, denoting our willingness to adapt, and versatility, representing our capacity to adapt.

1.1. Engineering Graduates and the Labor Market

Engineering graduates represent individuals who have completed their university engineering courses and are prepared for employment opportunities aligned with their professional skills. The labor market, on the other hand, encompasses the dynamics of job availability, services, occupations, or situations open to competition from these graduates who possess the relevant skills demanded by the economy ref. [4]. Despite numerous policies and initiatives in Uganda aimed at promoting vocational engineering skills, many engineering graduates remain unemployed due to a lack of employable skills required by potential employers. To address this issue, the Ugandan government has initiated a national project focused on reskilling engineering graduates lacking basic job skills, with subsequent phases planned to address the backlog of remaining graduates.

1.2. Technical, Vocational Education, and Training (TVET) in Uganda

Technical, Vocational Education, and Training (TVET) in Uganda, also known

as Business, Technical, Vocational Education, and Training (BTVET), play a crucial role in providing relevant knowledge, values, and skills for academic progression and employment in the labor market ref. [5]. Guided by the BTVET Act of 2008, the sector aims to produce a competent and versatile workforce equipped with practical work skills and entrepreneurship orientation essential for employment. Recognizing the importance of TVET in skills development for socio-economic and technological advancement, the Ugandan government advocates for reforms in the BTVET education subsector, as evidenced by initiatives such as the ref. [6].

1.3. Factors Affecting Work Readiness and Transition to Employment

Factors influencing graduates' work readiness, such as emotional intelligence (EI) and psychological capital (PsyCap), significantly contribute to organizational acumen and work competence ref. [7]. The relationship between graduates, institutions, and employers depends on graduates' engagement with employability development opportunities provided by institutions, central support services, curriculum experiences, and work experiences. Employment agencies also play a crucial role in connecting TVET graduates to vacancies, both domestically and internationally, facilitating their transition into the workforce. The Canada-Saskatchewan Career and Employment Services (CSCES) serves as a model for this approach, demonstrating effective strategies for transitioning TVET graduates into the labor market.

2. Materials and Methods

2.1. Research Design

This study adopted a cross-sectional study design to gather insights from respondents, including employees and engineering graduates, through questionnaires and interview guides. The aim was to explore their perspectives on the employability, adaptability, and retention of engineering graduates within the Ugandan labor market. Ref. [8] defined a cross-sectional design as the collection of data from multiple cases at a single point in time, aiming to gather a body of quantitative or quantifiable data related to two or more variables, subsequently analyzed to identify patterns of association.

2.2. Study Population and Sample Size

Given the focus on the Ugandan labor market, the study population comprised students from two prominent public universities, namely Kyambogo University and Makerere University, renowned for their engineering programs. Additionally, lecturers, engineers, and employers from two selected Ugandan industries, along with community members working within the engineering sector, were included. Their insights were deemed crucial for assessing the employability, adaptability, and retention rates of engineering graduates within their respective fields.

2.3. Sampling Size (See Table 1)

The sample size was obtained using the following formula ref. [7]:

$$s = \frac{[x^2 NP(1-p)]}{[d^2(N-1) + x^2 P(1-P)]}$$

s = required sample size

N = the population size

x^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level

P = the population proportion

d = the degree of accuracy expressed as a proportion

Therefore, populate the figures to get $S = 232$.

Table 1. Accessible population and sample size.

Respondents	Population	Sample Size
Students	60	40
Employers	50	40
Factory engineers	30	20
Community members in labour market	90	40
Total	230	140

Source: Author (2021).

The study utilized purposive sampling to gather insights from respondents well-versed in the factors influencing the adaptability of engineering graduates to Uganda's labor market. Employers and educators from relevant engineering departments at Makerere and Kyambogo Universities were selected deliberately due to their substantial expertise and the institutions' commendable track record in engineering education. These universities, being emblematic of the nation's higher education landscape, were chosen for their robust human resources capacity and historical success in training engineering students. Limited time constraints necessitated the selection of only two institutions, albeit major ones, as representatives.

Additionally, random sampling was employed to ensure a diverse representation of university students, manufacturing engineers, and mechanical engineering professionals from factories and the broader labor market. This method was favored for its ability to accurately represent the sampled population, minimize biases, and yield more reliable and valid results. Regarding data collection procedures, official introduction letters from the University of Eldoret facilitated permissions where necessary. With the aid of a research assistant, the researcher approached selected respondents, scheduled interviews and questionnaires, and meticulously managed the data collection process. Subsequently, collected data underwent coding, processing, analysis, and measurement, culminating in the formulation of a comprehensive thesis for examination.

Data collection methods encompassed a mixed approach, prominently featuring interviews, questionnaire surveys, and document reviews. Interviews provided an avenue for in-depth discussions with relevant stakeholders, enabling a nuanced understanding of adaptation dynamics. Questionnaire surveys, tailored to elicit specific insights, were administered to university students and labor market participants, leveraging their literacy and ensuring standardized data collection. Document reviews complemented these methods, enriching the study's findings. To uphold data quality, reliability checks via Cronbach's alpha coefficient and validity assessments through pre-testing and expert consultation were rigorously conducted.

Data analysis incorporated both qualitative and quantitative techniques. Qualitative data underwent content analysis, facilitating the identification of recurrent themes and the presentation of descriptive content through narratives and graphical representations. Quantitative data analysis, primarily statistical, involved the use of SPSS to summarize, code, categorize, and analyze responses. Multivariate analysis, particularly correlations, was employed to discern cause-effect relationships, with a significance level of 0.05. Through this methodological rigour, the study aimed to offer robust insights into the challenges and opportunities surrounding the adaptability of engineering graduates in Uganda's labor market.

3. Results and Discussion

The study investigated how communication skills, cultural/family backgrounds, respect at workplace, and professional attitude/orientation impact the adaptability of engineering graduates in the Ugandan labor market. Results are summarized in **Tables 2-6** and **Figures 1-4** below.

Table 2. Effects communication skills on employability, adaptability, and retention of engineering graduates.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	62	45.0	45.0	45.0
	Strongly agree	54	40.0	40.0	85.0
	Not sure	12	9.0	9.0	94.0
	Disagree	08	6.0	6.0	100.0
	Strongly Disagree	0	0.0	0.0	100.0
Total		136	100.0	100.0	

Source: Author (2024).

Respondents strongly agree on the significant role of communication skills in influencing the adaptability of engineering graduates in the labor market as a crucial social factor. A combined 85% of respondents expressed agreement with this finding, with 45% in agreement and a notable 40% strongly agreeing. This consensus underscores the positive impact of communication skills on engineering graduates' adaptability in the labor market. Furthermore, respondents' opinions

on the effects of communication skills on engineering graduates' adaptability in the labor market revealed that effective communication is vital for lifelong learning and staying updated with industry trends. Engineers who can articulate their learning needs and share knowledge contribute to a culture of continuous improvement.

One respondent highlighted this point, stating,

"I strongly agree that effective communication helps engineering graduates adapt to changes in project scope, requirements, or timelines. It allows them to convey and receive information about changes in a clear and understandable manner" [CHC5].

Another respondent added,

"Engineers with strong communication skills are better equipped to manage and communicate changes, reducing the impact on project outcomes" [THC1].

These findings align with ref. [9], who emphasized the integral role of communication skills in engineering graduates' adaptability in the labor market. Engineers proficient in communication can navigate diverse work environments, collaborate effectively, manage projects, and build successful careers by remaining responsive to change and adaptable to evolving professional challenges.

Table 3. Cultural/family background impact on engineering graduates' employability and adaptability.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	57	42.0	34.0	34.0
	Strongly agree	60	44.0	53.0	87.0
	Not sure	19	14.0	13.0	100.0
	Disagree	0	0.0	0.0	100.0
	Strongly Disagree	0	0.0	0.0	100.0
	Total	136	100.0	100.0	

Source: Author (2024).

The overwhelming majority of respondents reached a consensus regarding the influence of cultural and family backgrounds on the adaptability of engineering graduates in the labor market, with an agreement rate of 86%. Specifically, 44% strongly agreed, while 42% agreed, underscoring the significant impact of cultural and family backgrounds on engineering graduates' adaptability in the labor market.

Table 3 corroborates these findings by highlighting the enduring influence of cultural and family backgrounds on engineering graduates' adaptability in the labor market. It reveals that these backgrounds often shape the emphasis placed on education. Graduates hailing from backgrounds that prioritize academic achievements may possess a robust foundation but might also face heightened expectations concerning career success.

Moreover, one respondent aptly noted,

“Cultural values may mold an individual’s work ethic and professional conduct. Certain cultural backgrounds may underscore hierarchical structures and reverence for authority, while others may foster more collaborative and egalitarian approaches” [CHC3].

Indeed, cultural and family backgrounds wield significant influence over the adaptability of engineering graduates in the labor market. These factors shape individuals’ mindsets, values, communication styles, and expectations, subsequently guiding their career trajectories ref. [10]. Clements further observes that cultural backgrounds can influence attitudes toward networking and relationship-building. In some cultures, networking is highly esteemed and deemed indispensable for career progression, whereas in others, it may be regarded as less consequential.

Table 4. Respect at the workplace impact on engineering graduates’ employability and adaptability.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	44	32.0	32.0	32.0
	Strongly agree	45	33.0	33.0	65.0
	Not Sure	30	22.0	22.0	87.0
	Disagree	15	11.0	11.0	98.0
	Strongly Disagree	02	1.4	1.4	100.0
Total		136	100.0	100.0	

Source: Author (2024).

Table 4 illustrates that most respondents recognize the crucial role of workplace respect in shaping the employability of engineering graduates in the Ugandan labor market. Notably, 32% agreed while 33% strongly agreed that respect for everyone at the workplace significantly influences the employability of engineering graduates in Uganda. Conversely, 22% expressed uncertainty, 11% disagreed, and merely 1.4% strongly disagreed with this notion.

Table 5. Professional attitude/orientation Impact on Engineering Graduates’ Employability and Adaptability.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	48	35.0	35.0	35.0
	Strongly agree	76	56.0	56.0	92.0
	Not sure	12	9.0	9.0	100.0
	Disagree	0	0.0	0.0	100.0
	Strongly Disagree	0	0.0	0.0	100.0
Total		136	100.0	100.0	

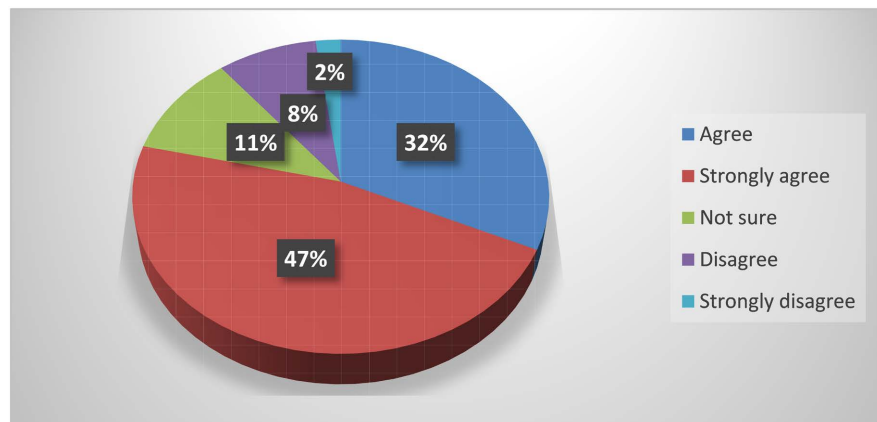
Source: Author (2024).

These findings resonate with ref. [11] emphasis on the impact of workplace

respect on employee performance. Arnold asserts that respect in the workplace is not only a moral imperative but also a strategic advantage for engineering graduates. It fosters a positive work culture, facilitates collaboration and innovation, supports professional growth, and ultimately enhances employability in a competitive job market.

As depicted in **Table 5** above, a combined percentage of 91% underscores that the majority of respondents recognize the profound impact of professional attitude and orientation on the adaptability of engineering graduates in the labor market. Among these, 35% agreed, while a significant 56% strongly agreed. However, 9% expressed uncertainty, which may be attributed to their recent entry into the labor market as fresh graduates. This collective agreement highlights the prevailing perception regarding how professional attitude and orientation shape the adaptability of engineering graduates in the labor market. Moreover, the researcher's observations noted a prevalent atmosphere of respect among staff members, corroborating the sentiments expressed by the respondents.

In a similar vein, ref. [12] observed that professionalism often entails effective communication skills. Engineers proficient in clear communication and adept at collaborating with diverse teams exhibit greater adaptability in the workplace. Effective communication fosters the exchange of ideas and ensures seamless transitions during changes or projects.



Source: Author (2024).

Figure 1. The financial motivation/payment by the employers impact on engineering graduates' employability and adaptability.

Considering **Figure 1** above, respondents widely acknowledged the significant influence of financial motivation on the adaptability of engineering graduates in the labor market. A combined percentage of 79% indicates that 32% agreed, while a substantial 47% strongly agreed. However, 11% expressed uncertainty, 8% disagreed, and 2% strongly disagreed. This strong collective agreement underscores the perceived impact of financial motivation provided by employers on engineering graduates.

Moreover, responses indicated that adequate financial rewards contribute to job

satisfaction and engagement. Engineering graduates who feel fairly compensated are more likely to be motivated, dedicated, and committed to their roles. Job satisfaction, in turn, is linked to higher adaptability, as satisfied employees tend to be more open to change and new challenges.

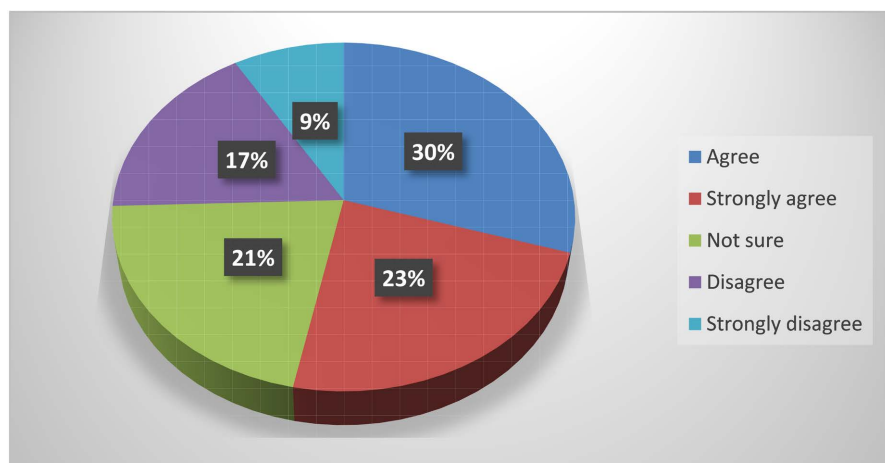
During interviews, one respondent emphasized,

“Financially motivated engineering graduates may have the resources and willingness to invest in their professional development. Whether through additional education, certifications, or training programs, graduates who receive competitive compensation are more likely to adapt to new technologies and industry trends” [TNA3].

Similarly, another respondent highlighted,

“Adequate compensation helps engineering graduates manage their financial responsibilities, reducing stress related to personal finances. Graduates who are less burdened by financial concerns are better able to focus on their work, contributing to increased adaptability in handling professional challenges” [TED2].

These responses are consistent with ref. [13], who argue that financial motivation fosters a competitive mindset among engineering graduates. This competitiveness drives individuals to continuously improve their skills, stay updated on industry trends, and proactively seek growth opportunities, thereby enhancing adaptability. Additionally, ref. [14] noted that financial motivation, through competitive compensation, is a crucial factor influencing the adaptability of engineering graduates in the labor market. It not only attracts and retains top talent but also fosters a positive work environment, reduces financial stress, and supports ongoing professional development, all of which contribute to graduates’ ability to navigate the evolving demands of the professional landscape.



Source: Author (2024).

Figure 2. The strength of the economy/the employing industry impact on engineering graduates’ employability and adaptability.

Referring to **Figure 2** above, respondents expressed a varied range of reactions and opinions regarding the influence of the strength of the economy and the

employing industry on the adaptability of engineering graduates in the labor market. However, most respondents 30% agreed, while 23% strongly agreed that the strength of the economy and the employing industry greatly impacts the adaptability of engineering graduates. Furthermore, 21% were uncertain, 17% disagreed, and only 9% strongly disagreed. These findings highlight the significant acknowledgment among respondents of the influence of the strength of the economy and the employing industry on engineering graduates.

During interviews, respondents elaborated on this influence. One respondent stated,

“Strong economies often coincide with growth and innovation in various industries. Engineering graduates working in thriving sectors are exposed to cutting-edge technologies and evolving practices, fostering adaptability as they stay abreast of industry advancements” [THC2].

Another respondent emphasized,

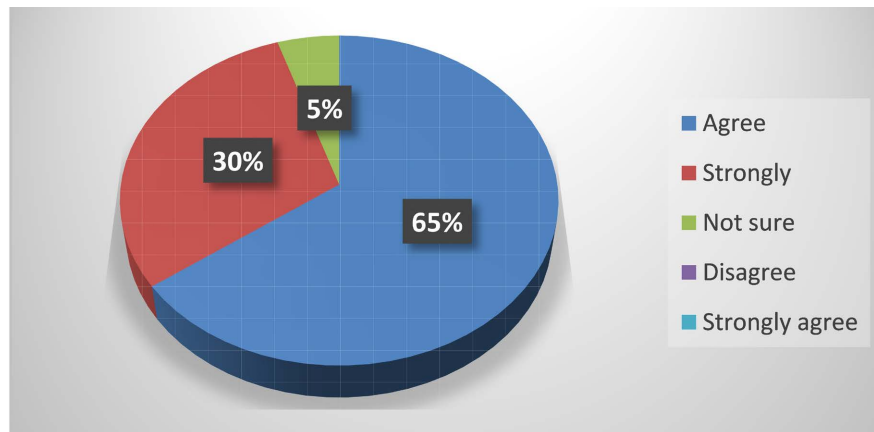
“Economic strength is often associated with increased investment in research and development. Engineering graduates employed in industries with robust R&D budgets are likely to be engaged in projects that require adaptability to address emerging challenges and integrate new technologies” [TED4].

Additionally, another respondent noted,

“A strong economy is typically associated with competitive compensation and benefits packages. Well-compensated engineering graduates are more likely to be motivated, satisfied, and adaptable, as they have the financial means to invest in their professional growth and navigate career changes” [CED3].

The collective agreement among respondents reinforces the significant influence of the strength of the economy and the employing industry on engineering graduates. These findings align with ref. [15], who observed that economic prosperity often stimulates entrepreneurial activities. Engineering graduates may be inclined to explore entrepreneurial ventures or establish their own businesses during periods of economic strength, demonstrating adaptability in pursuing diverse career paths. Similarly, ref. [16] noted that the strength of the economy and the employing industry significantly shape the adaptability of engineering graduates. A thriving economy fosters an environment conducive to career growth, innovation, and diverse opportunities, thereby enhancing graduates' ability to navigate and excel in the dynamic labor market. Conversely, economic challenges may necessitate heightened adaptability among graduates to cope with uncertainties and changing industry dynamics.

Respondents overwhelmingly recognize the profound influence of an organization's career development opportunities in the labor market, as depicted in **Figure 3**. A combined percentage of 95% agree that such opportunities affect the adaptability of engineering graduates. Specifically, 65% agreed, with an equivalent of 30% strongly agreeing, underscoring a unanimous consensus. Merely 5% expressed uncertainty. These perceptions align with existing literature, which highlights the crucial role of an organization's career development opportunities.



Source: Author (2024).

Figure 3. Career development opportunities impact on engineering graduates' employability and adaptability.

Ref. [17] observed that organizations investing in skill enhancement and training programs significantly contribute to the adaptability of engineering graduates. Regular training opportunities enable graduates to stay abreast of industry trends, emerging technologies, and evolving best practices, thereby enhancing their ability to adapt to changing work requirements.

In line with these observations, some respondents emphasized,

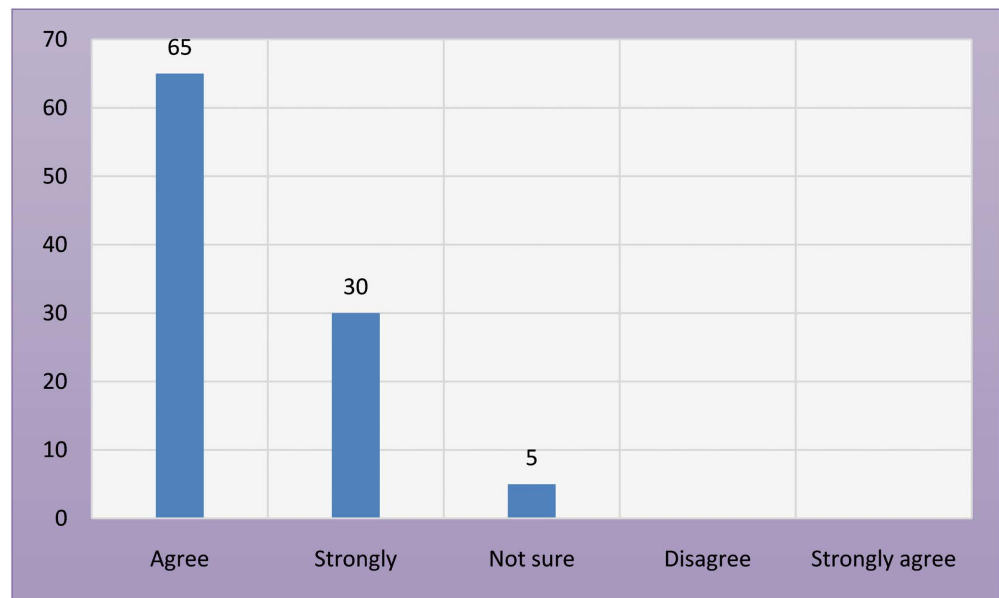
“Career development opportunities often include mentorship programs where experienced professionals guide and advise less experienced individuals. This mentorship fosters personal and professional growth, helping engineering graduates navigate challenges, make informed decisions, and adapt to different aspects of their careers” [CHC2].

Additionally, another respondent highlighted,

“Organizations that promote a culture of continuous learning contribute to the adaptability of their workforce. Engineering graduates exposed to a learning-oriented environment are more likely to develop a mindset that values ongoing education, enabling them to adapt to new skills and knowledge throughout their careers” [NED1].

These findings are consistent with ref. [18], who noted that an organization's career development opportunities significantly impact the adaptability of engineering graduates in the labor market. Such opportunities not only foster professional growth but also equip graduates with the skills, knowledge, and mindset necessary to navigate the dynamic and evolving nature of their careers.

The consensus among respondents clearly indicates their agreement on the influence of existing gainful economic options or alternatives for engineering graduates (Figure 4). A significant combined percentage of 95% express agreement with this factor, comprising 65% who agree and 30% who strongly agree, with only 5% expressing uncertainty. This widespread acknowledgment underscores the impact of existing gainful economic options or alternatives for engineering graduates.



Source: Author (2024).

Figure 4. Existing gainful economic options/alternatives impact on engineering graduates' employability and adaptability.

Furthermore, respondents highlighted the overall impact of these economic options. One notable respondent remarked,

“The presence of various gainful economic options affects the competitiveness of the job market for engineering graduates. If there are multiple opportunities, graduates may have the flexibility to choose roles that align with their skills, preferences, and career goals, enhancing their adaptability” [THC1].

Another respondent added,

“The existence of a thriving entrepreneurial ecosystem or business environment can encourage engineering graduates to explore entrepreneurial ventures. The availability of economic options such as startup support, funding, and mentorship influences graduates' adaptability as they consider alternative career paths” (NED3).

These findings underscore the significant influence of existing gainful economic options or alternatives for engineering graduates. Ref. [19] noted that the availability of global economic options can influence the adaptability of engineering graduates. Opportunities for international assignments, collaborations, and work in multinational corporations contribute to graduates' adaptability by exposing them to diverse work environments and cultural settings. Similarly, ref. [20] demonstrated that the existing gainful economic options available to engineering graduates have a significant impact on their adaptability in the labor market. Graduates evaluate these options based on factors such as industry trends, global opportunities, job security, and compensation to make informed decisions about their career paths and adapt to the evolving demands of the professional landscape.

Table 6. Impact of availability of raw materials required for the job performance at the workplace on engineering graduates' employability and adaptability.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	42	31.0	31.0	31.0
	Strongly agree	86	63.0	63.0	94.0
	Not sure	08	6.0	6.0	100.0
	Disagree	0	0.0	0.0	100.0
	Strongly Disagree	0	0.0	0.0	100.0
	Total	136	100.0	100.0	

Source: Primary Data.

Respondents widely acknowledge the significance of the availability of raw materials necessary for job performance in the workplace as one of the environmental factors affecting the adaptability of engineering graduates in the labor market (see **Table 6**). A combined percentage of 94% comprising 31% who agree and a substantial 63% who strongly agree underscores this shared perspective, emphasizing the observed environmental implications of raw material availability for job performance in the workplace.

In line with this, responses recognized the environmental effects of raw material availability that align with principles of engineering graduates' employability in Uganda.

One notable respondent articulated,

“Availability of environmentally sustainable materials is increasingly important in engineering projects. Graduates with knowledge of eco-friendly materials and practices may have an advantage in a job market where environmental considerations are gaining importance” [FTC2].

Additionally, another respondent highlighted,

“Engineers in technology-related fields may require specific materials for the development of new products and technologies. The availability of these materials can influence the pace of technological innovation and, consequently, the demand for engineering skills in these areas” [CED3].

Similarly, another respondent echoed similar sentiments,

“Availability of environmentally sustainable materials is increasingly important in engineering projects. Graduates with knowledge of eco-friendly materials and practices may have an advantage in a job market where environmental considerations are gaining importance” [NHC3].

The acknowledgment of environmental effects in the research aligns with the notion that learning should have relevance and application in the context of engineering graduates' employability in Uganda. Ref. [21] noted that different engineering disciplines are associated with specific industries that may rely on raw materials. For instance, civil engineers engaged in construction projects require materials such as cement, steel, and aggregates. The availability of these materials directly influences the demand for engineers in the construction sector.

4. Conclusion

In conclusion, this study has elucidated various factors that significantly influence the employability, adaptability, and retention of engineering graduates in the labor market. From the influence of cultural and family backgrounds to the impact of financial motivation, career development opportunities, and the availability of raw materials in the workplace, it is evident that multiple environmental and economic factors shape the trajectory of engineering graduates' careers. The findings underscore the importance of recognizing and addressing these factors to better prepare graduates for the dynamic demands of the labor market. Moreover, the alignment of respondents' perceptions with existing literature highlights the robustness of these findings. Moving forward, initiatives aimed at enhancing the employability and adaptability of engineering graduates should consider a holistic approach, encompassing not only technical skills but also soft skills, cultural competencies, and awareness of environmental considerations. By doing so, stakeholders can foster an environment conducive to the success and longevity of engineering graduates in the ever-evolving professional landscape.

5. Recommendations

The study recommends that there is a need for institutes to increase staff exchange programs between Technical and Vocational Education and Training (TVET) institutions and industry to bridge the gap between theoretical knowledge and practical skills. This initiative will help to enrich TVET trainers with real-world industry practices, ensuring alignment between academic teachings and industry expectations.

The study also recommends that there is a need for collaborative efforts for Employability Skills. Employers, parents, and TVET trainers should collaborate to nurture employability skills among trainees, irrespective of gender or field of study. This partnership will contribute to the overall employability, adaptability, and retention of engineering graduates in the Ugandan labor market, emphasizing a holistic approach to skill development.

There is a need for government emphasis on Adaptability and Versatility. The government ministries should emphasize the adaptability of TVET graduates to various industries and align TVET programs with the versatility needed in the job market. Acknowledging and promoting the versatility of TVET education will prepare individuals for diverse roles and highlight dynamic career paths available to TVET graduates.

Conflicts of Interest

The authors declare no conflicts of interest.

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