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## INFLUENCE OF SITUATIONAL ANALYSIS IN TVET INSTITUTIONS ON GRADUATE EMPLOYABILITY IN KENYA. A CASE OF NAIROBI METROPOLITAN COUNTIES

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### ABSTRACT

*This study assessed the influence of situational analysis in TVET institutions on graduate employability in Kenya. The study was anchored on human capital theory. Survey research design was used in the study. A sample size of 353 was selected from a target population of 3036 key TVET management staffs from 506 public and private TVET institutions in Nairobi, Machakos, Kiambu and Kajiado. Applying Yamane formula, stratified sampling technique was used to select 59 principals/deputy principals, 59 Registrars, 59 Dean of students for academics, and 176 Heads of Departments. A selected number of Ministry of Education officials were interviewed for additional data. Primary data was collected using a questionnaire consisting of both close and open-ended questions to capture quantitative and qualitative data. Quantitative data was analyzed using descriptive and inferential statistics aided by SPSS version 25 computer software and Excel worksheets, and presented using tables and figures. The findings established that 86% of the TVET institutions carried out regular situational analysis as part of their strategy review process to enhance graduate employability, with 68% of the reviews dictated by market trends, 48% by availability of financial resources, 63% by competitiveness of courses, and 94% educational resources. The study concluded that situational analysis was an important element of strategy review that should be embraced by all TVET institutions. However, a number of the institutions were unable to carry out regular situational analysis due to lack of financial and human resource capacities to institute and implement this process in a regular manner and to a right scale. The study recommended that TVET institutions should create budgets for regular and thorough situational analysis.*

**Key Words:** *Employment in Kenya, Situational Analysis, TVET Institutions*

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## INTRODUCTION

Across the world, TVET institutions have been proved as very critical in equipping young people with the requisite skills in different important sectors of the economy. There is empirical evidence that TVET is very instrumental for the learners to acquire practical and readily employable skills for the job market (Quintini & Martin, 2014). The International Labour Organization (ILO) (2014) further avers that vocational training helps individuals to obtain skillsets and knowledge which are important for effective participation in economic, social, and technological development and innovations, hence enabling holistic development and growth of the economy. In many countries in the world, other areas of education which are also very important in facilitating knowledge acquisition among citizens include basic, middle level, and higher institutions of learning, including post-graduate studies. Notably, each of these areas serves a particular essential education purpose (Hippach-Schneider, 2019). On its part, the TVET sector aims to purposefully train and prepare students to become independent in their choice of careers. The emphasis is placed on the right set of skills and competence which are decisively and consistently pursued from an early post-secondary schooling age (European Commission & Cedefop, 2014).

There are many relevant policy guidelines for promoting and implementation of TVET at global, regional, and national levels, but which require purposeful review to meet the ever-evolving employment needs in different spheres of the economy. Despite the central place occupied by TVET as an important instrument of sustainable development in many countries, especially in developing regions, TVET operations and management seem not to have been properly mainstreamed in the economic transformation initiatives of a number of these countries (Stone, 2012). The TVET strategy review is about the response to the existing policies, especially driven by the need to meet labour market demands of the 21<sup>st</sup> century through proper training of the TVET graduates (Serumu, 2015). Oviawe et al (2017) assert that integration of sustainable development of TVET may include reviewing of curriculum, learning content and general learning policies and practices as important indicators. However, strategy review can be done within a given scope, such as by assessing the influence of situational analysis, institutional objectives, institutional curriculum, and departmental plans on TVET graduate employability.

In Africa and developing countries in general where there is a relatively big percentage of skilled yet unemployed people, TVET could play a significant role in equipping young people with the necessary skills needed for self-employment (Ngugi, 2019). According to Ajithkumar (2017), such a scenario can also help address the problem of declining opportunities in the formal employment sector while at the same time enabling economies in the region to avoid overdependence on salaried jobs. Despite the importance of TVET in improving the informal job sector by offering the requisite knowledge and skills to millions of young people in the region graduating from high schools into an uncertain job market, there is empirical evidence that TVET education has not been fully embraced as a priority in a number of developing countries (Gachunga et al., 2020a). Gachunga et al (2020b) aver that lack of more attractive programs is one of the major contributors to this scenario. Hence, this calls for constant education policy and curriculum review in order to keep up with the ever-evolving human resource needs in the job market.

In Kenya, according to the TVET Curriculum Development, Assessment and Certification Council (TVET CDACC) Strategic Plan (2021-2025), the Council has the central role of delivering curriculums based on the global demands of targeted skills among new entrants into the job market (TVET CDACC, 2021). The main objective of TVET CDACC echoed that of the Technical and Vocational Education and Training Authority (TVETA), as spelt out in its 2018-2022 Strategic Plan, which was to realize the best modern labour market needs that cut across national boundaries of the Kenyan economy (TVETA, 2018). In order to implement a more progressive TVET system, there is need for quality and relevance of the programs where emphasis is put on affordability and relevance of the programs. Good governance and management and financing must also be at the center of achieving what is best for the TVET education and training stakeholders while having in mind the bigger picture of meeting Kenya's labour force demands in terms of relevant skills and knowledge. Despite the

progress made in terms of continuity of learning and innovativeness in the TVET sector, studies indicate that the potentials of TVET graduates remain largely untapped, with many of them remaining unemployed for many years after they have graduated from colleges (Mbolonzi, 2021). There are also reported cases of wasted resources due to underutilization of equipment in public TVET colleges (Sankale, 2019).

### **Statement of the Problem**

There is evidence that growth in the TVET education and training sector in Kenya has been on an upward trajectory since its inception in 2013. Statistics indicate that in 2013 there were only 753 TVET colleges in Kenya, with a student population of close to 148,009 (Statista, 2022). However, the numbers currently stand at more than 2,300 TVET institutions with a population of over 580,849 students enrolled in different colleges across the country (Kamer, 2022). Despite such a scenario calling for regular strategy reviews in the TVET sector to enhance employability of TVET graduates, this is not happening. A study by Mbolonzi (2021) on the impact of uptake of information on performance of technical training institutions in Kenya noted that many TVET institutions in the country employ technology to improve their training outcomes. However, the study did not explicitly focus on the influence of situational analysis on graduate employability. Furthermore, the study was limiting in terms of the amount of data involved. This created a methodological and conceptual gap that the current research addressed.

### **Objectives of the Study**

The objective of the study was to establish the influence of situational analysis in TVET institutions on graduate employability in Kenya. The study was guided by the below hypothesis;

- **H<sub>0</sub>**: There is no significant influence of situational analysis in TVET institutions on graduate employability in Kenya.

## **LITERATURE REVIEW**

### **Human Capital Theory**

This model was initiated in 1964 by Gary Becker and Theodore Schultz to underscore how individuals' professional capabilities are positively impacted by good educational training, especially in terms of enhancing productivity and efficiency (Becker, 1992). According to human capital theory, education and training should be viewed as a foundation for people to increase their worth in terms of employability and their prospect of earning higher income in their paid work. As a study of human resources, human capital theory further emphasizes on improving our economic value through relevant education and training. Just like people invest in their businesses through such input as better machinery and new technology so as to improve their profits, so we should invest in human capital through better education and training (Becker, 1993).

Human capital theory further argues that investing in human capital inspires growth in people, which can then be measured through an employer's staffs' abilities, work values, and skillsets. Eventually, all these lead to increased productivity, profits and a good business brand-name. Improved human qualities through education and training can increase individual talent and organizational financial output (Becker, 2009). Overall, human capital theory classifies human capital elements in terms of education, communication skills, people skills, workplace training, problem solving skills, and physical, mental and emotional wellbeing (Gillies, 2011). Related to its relevance in this study, human capital theory attempts to create a link between education, training and acquisition of the right skills and knowledge and improved work outputs by both individuals and organizations. The current study examined the influence of situational analysis in TVET institutions on graduate employability in Kenya.

### **Empirical Review**

One of the critical aspects of a credible TVET institution would include a robust curriculum for effective teaching and equipping students with the right knowledge and skills (Hordósy et al, 2018). Curriculum

development and/or review can therefore be viewed as a progressive undertaking where the institutional management is expected to conduct the review based on needs assessment. Within the context of strategy review of TVET colleges, situational analysis is a process through which organizations identify internal and external factors that can impact their operations either negatively or positively. Careful assessing of strengths and challenges can enable the organization's stakeholders to understand the level of potential opportunities and threats and work towards improving general performance of the organization from time to time (Yeok et al, 2018). Situational analysis should be pegged on the performance targets of the institution with the view to improve learning needs of the students through improved teaching contents and means of delivery of the materials by the teachers. However, there may be constraints that can impede timely and routine situational analysis in an institution as an important aspect of overall good management practices (Knox & Stone, 2018).

According to Dagnino et al (2017) situational analysis and needs assessment are critical considerations at the initial phases of curriculum development or review since this gives a clear picture to the reviewers and the top management of the organization about how things look like and what needs to be done to improve the situation. Hence, situational analysis has otherwise been described as a diagnosis of organizational needs (Yeok et al, 2018), which facilitates examining of prevailing factors in an environment where the curriculum is going to be implemented. Related to strategy review among TVET operations against the long term need of improved employability of TVET graduates, situation analysis would ideally imply trying to survey the employment environment at any given time to understand the existing gaps that can effectively be addressed through proper training of students in the TVET learning establishments. Yet, situational analysis of TVET institutes may not be tenable for respective institutions without involvement of a wide range of other investors, including the government which provides funding and regulatory frameworks on how TVET should be managed (Nugraha et al, 2020).

A cross-sectional study was carried out by UNESCO (2021) on the situational analysis of TVET in ten Southern African Development Community (SADC) member states, and noted that majority of the countries did not have the capacity to initiate research activities for effective curriculum evaluation and development. The SADC's capacity was restrained due to poor teachers' training and lack of money as well as inadequate infrastructure for initiating and sustaining research. Although some of the countries involved in the study, such as Malawi, Zimbabwe, South Africa, Zambia, and Mauritius had ingrained the aspect of research in their TVET policy frameworks, they were still unable to initiate regular and comprehensive strategy reviews for a more robust teaching and training of TVET graduates with higher employability chances in the job market (Anwar & Hasnu, 2017). To address the limited research gaps, the affected countries had resorted to collaborative research efforts with universities and other institutions of higher learning. However, limited research capacity for the TVET institutions may be a cross cutting challenge in many countries and regions.

Despite the limitations by the SADC countries where the study by UNESCO (2021) was undertaken, there were also other initiatives being undertaken by key stakeholders in strategy review to improve TVET outcomes and enhance the capacity of TVET graduates in the SADC region for their increased chances in employment arena both within and outside their respective countries (Chan et al, 2018). Such initiatives included creating more effective monitoring and evaluation (M&E) frameworks for allowing transfer of better skills to the TVET learners.

According to Asha et al (2019), although many countries across the world are aware of the need to make TVET courses demand-driven, but TVET systems in many countries are predominantly supply driven, especially in sub-Saharan (SSA) countries which often experience scarce resources and inferior technology. A major weakness in majority of the SADC countries however involves lack of clear targeted guidelines for training new entrants into the employment market. Similarly, Haßler et al (2020) noted that weak feedback mechanisms between the labour market and the TVET institutions were a common phenomenon. The same challenge was

being witnessed regarding TVET monitoring and evaluation systems which may not be robust enough to provide effective and meaningful feedback for refining delivery of the TVET training and education model.

Despite clear guidelines for most of the TVET providers in the SSA region to review their curricula after every 4 to 5 years, Kathure and Mbijiwe (2014) established that scarce or lack of financial resources prevented a good number of TVET providers in Africa from reviewing curriculum frameworks for a long time. Given the dynamic nature of the labour market where the skills requirements are changing every so often, irregular curriculum review by majority of the TVET learning institutions means that TVET graduates may not always meet the demands of current technical jobs because the training providers lack the capacity to give them the right skill sets. While such scenario was commonly associated with TVET providers in sub-Saharan Africa, Hanni (2019) revealed that the situation may not be very different in Latin America and the Caribbean where there is generally a disconnect between skills provided to the TVET graduates and the requirements of the job environment.

The views by Kintu et al (2019) are a reflection of the findings by Khan (2019) on the good governance of TVET education and training in Bangladesh which established that there were weaknesses in the policy managing TVET institutions in the country, with employers raising pertinent concerns related to public-private partnerships which would enhance performance in the sector. According to Khan (2019), the sector wide approach should be applied in the TVET training sector where several different partners are involved in designing, reviewing and implementation of the most relevant skills for the labour market. However, like many other countries especially in SSA, Bangladesh lacked the capacity to regularly institute TVET curriculum review in order to constantly align the skills being offered to the TVET graduates with the demands of the employment environment (Lythe, 2018).

Comprehensive situation analysis on TVET must be guided by strategic policy direction where there are clear development plans for the sector, but which may be lacking in a number of countries (Obwoye, 2016). A holistic approach to situational analysis in the TVET education and training sector will help address some of the common challenges identified in the TVET graduates, including negative reasoning, low-self-esteem, issues on integrity, and sociability, among others (Kintu et al, 2019). This view is supported by Ismail et al (2021), by observing that situational analysis must involve careful evaluation and understanding of the specific factors influencing a given situation. In this sense, strategic reviewers have the responsibility to contribute meaningful knowledge by carefully examining every variable with the potential to create certain impact on the situation at hand. Regarding the whole question of TVET development, strategy review and implementation, key stakeholders have the obligation to critically examine every factor through integrated processes to ensure effective teaching curriculum for long term benefit of the TVET graduates and their employers as well as for the continuity of the TVET sector.

## **METHODOLOGY**

The research used positivism as its research philosophy. The study adopted survey research design and used both quantitative and qualitative data for answering the research questions. The target population for this study constituted Ministry of Education (MOE) officials, 506 public and private TVET institutions in four Nairobi metropolitan counties of Nairobi, Machakos, Kajiado, and Kiambu. Nairobi metropolitan counties were chosen for this study due to the big concentration of TVET institutions in the region and the different unique operational challenges each one of them was likely to be experiencing. The study used stratified random sampling technique to select a representative sample from the target population. The Yamane (1967) formula was used to calculate the sample size of 353. A questionnaire was used to collect primary data from the research participants. Data analysis was carried out using descriptive, inferential, and thematic content analysis technique. SPSS version 25 computer software and excel worksheets were used to organize and analyze quantitative data descriptively and inferentially whereas qualitative data was processed by searching across the dataset to identify, analyze and report emerging themes and repeated patterns. Analyzed quantitative data was presented using tables and figures

whereas processed qualitative data was documented using narratives. Regression analysis was used to establish the relationship between situational analysis and employability of TVET graduate.

## RESULTS AND DISCUSSION

### Influence of Situational Analysis in TVET Institutions on Graduate Employability

In trying to establish the influence of strategy review in TVET institutions on employability of graduates in Kenya, the first specific objective of the study was to assess the influence of situational analysis in TVET institutions on graduate employability in Kenya. On whether the TVET institutions carried out situational analysis on regular basis where the respondents were expected to give yes or no answers, the statistics are summarized in table 1.

**Table 1: TVETs' Regular Situational Analysis**

Situational analysis	Frequency (n)	Percentage (%)
Yes	258	86
No	43	14
<b>Total</b>	<b>301</b>	<b>100</b>

As noted in table 1, 86% (258) of the respondents agreed that their institutions carried out situational analysis on a regular basis. On the other hand, 14% (43) of them said this was not happening. From these statistics, it can be deduced that a greater majority of the institutional players in the TVET sector understood the need for situational analysis to help them study the environment in which they delivering their plans. This process was also essential for the managements to develop a common reference point for setting and reviewing institutional processes and priorities.

Regarding the extent to which on a 5-point Likert scale the institutions' situational analysis was often dictated by market trends of skillsets in current employment environment, the respondents had the following responses as summarized in table 2 based on a 5-point Likert scale.

**Table 2: Institution's Situational Analysis and Market Trends**

Situational analysis & market trends	Frequency (n)	Percentage (%)
Strongly disagree	0	0
Disagree	11	4
Not sure	86	29
Agree	178	59
Strongly agree	26	9
<b>Total</b>	<b>301</b>	<b>100</b>

From the findings in table 2, 4% (11) of the respondents disagreed that their colleges were conducting situational analysis on a regular basis, 29% (86) said they were unsure, while 68% (204) agreed with this account. Cumulatively, 68% of the respondents agreed and strongly agreed that the institutions practiced regular situational analysis. Hence this implied that majority of the TVET players understood the need to frequently undertake critical governance steps and processes necessary for institutional growth and development. While justifying their reasons for backing regular situational analysis in their colleges, it emerged that this process boosted the TVETs' chances of keeping up with the pace in the ever-changing job market terrain where new skills are increasingly needed. Also, regular undertaking of situational analysis helped the TVETs to manage rising challenges in terms of matching the skills provided to the students with emerging new unique job openings in different subsectors of the economy. These explanations were summarized by DAA002 in the following manner:

*Situational analysis is essential to us in the TVET fraternity since it helps a lot in future planning in terms of upgrading the courses to offer and sourcing of adequate number of tutors with the needed requisite qualifications. As long as the government develops the right curriculum, we are supposed to do everything we can to impart skills aimed at solving the problems in the market. Therefore, we as an institution should not wait for the market to influence much of our analysis, but must be proactive in all our processes and systems. Hands on skills are currently in high demand and so that is what the market absorbs. Students identify with the skillsets that are in the market demand, and every year we do market analysis to get to know the kind of skillset the market needs and we adjust our training accordingly. You must be aware that in the current dispensation if one's skills do not match the current market demand, then you cannot have a job as soon as you would have wanted to.*

In this sense, regular situational analysis acts as a pointer to what the market requires based on the understanding that employers are always looking for skilled people who can help to turn around their businesses without having to spend too much resources to impart on-the-job training skills and knowledge to new employees. It was also established that some of the TVETs carry out annual market reviews to understand the predominating economic activities requiring certain skills and in order to get a sense of direction on where to concentrate in their training and skills development. Furthermore, regular situational analysis enables the TVET management to understand the environment to adjust accordingly so as to cope with the market demands since the market trends of skills set is essential in defining who gets employed the quickest possible.

Apart from conducting regular situational analysis by the TVETs, it was also imperative to get the TVET managements' opinion regarding factors that were likely to influence or dictate this process. Within the scope of this study, these factors included financial availability or strengths in a given institute, level of competitiveness of the courses being offered, availability of other non-monetary resources such as the right skilled teaching manpower, labs, and lecture halls or related facilities. Regarding the role of financial availability in influencing institutional situational analysis process, the findings are summarized in table 3.

**Table 3: Institution's Situational Analysis and Financial Availability**

<b>Situational analysis &amp; financial availability</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
Strongly disagree	21	7
Disagree	49	16
Not sure	88	29
Agree	116	39
Strongly agree	27	9
<b>Total</b>	<b>301</b>	<b>100</b>

The findings in table 3 showed that in a 5-point Likert scale, 23% (70) of the respondents disagreed that financial resources determined or influenced situational analysis process by TVET establishments while 29% (88) of them said they were unsure. Conversely, 48% (143) of the respondents agreed with that account. Altogether, 48% of the respondents thought that availability of money played a key role in the implementation of situational analysis in the TVET sector. These statistics may imply lack of finances may not necessarily hinder TVETs from carrying out situational analysis as an important process for determining an institution's progress and reorganization of its priorities to effectively meet its organizational short and long-term goals and objectives.

To some of the respondents who supported the need for financial resources for implementation of situational analysis in the TVET sector, they opined that money must be needed for virtually everything for the growth and performance of any institution. For instance, in the case of TVETs, money must be spent on data collection when it comes to doing market surveys to understand the trends that could further inform the kind of courses to be prioritized based on the new emerging job opportunities in the employment market. Similarly, other key

organizational departments must require financial allocations for them to function well since situational analysis is not usually done in isolation. Financial resources were also needed for miscellaneous activities during the situational analysis, such as buying stationery and snacks during planning meetings for the actual process.

On the contrary, to some of the respondents who expressed contrary opinions regarding the influence of financial resources on institutional situational analysis in the TVET sector indicated that this point was debatable. For instance, in the case of the public TVETs which receive some funding from the government, it means that if they were to entirely wait for release of money by the government for them to carry out situational analysis, then they may have to always lag behind since financial delays from the government is almost the norm. There were also suggestions that people can always brainstorm and discuss about areas to be analyzed without necessarily requiring money for facilitation of formal meetings. Overall, there was a near 50-50 agreement/disagreement that availability of financial resources often influenced situational analysis in TVET institutions.

The above views were largely a reflection of a number of previous studies reviewed in chapter two of the current research. For instance, in a study by Geleto (2017) carried out in Ethiopia, it was noted that TVET development and implementation of processes largely supported the idea of regular curriculum review despite lack of sufficient resources for the regular and comprehensive reviews. Further, like in the current study, this previous research revealed that in most countries in SSA, there were no dependable infrastructures and systems for coordinating curriculum reviews in the TVET sector as there sometimes tended to be disjointed relationships among key stakeholders in the sector. The study by Geleto (2017) further indicated that TVET curriculum development, review and implementation in Ethiopia heavily borrowed from such countries as Australia and Philippines. This implied that Ethiopia has tended to decentralize TVET strategy reviews such that different TVET institutions deal with their respective curriculum preparation based on their training needs. While this approach gave different institutions autonomy to implement what best suits their priorities and capacity in terms of delivery to the students, the downside was that a number of TVET colleges may offer what is conveniently favorable to them as opposed to what is best for the job market (Orangi et al, 2016).

As much as every TVET institutions wants to thrive in the market, especially with regard to private entities driven by profits as opposed to posterity, there were strong indications that there were existing mechanisms for the government to assess courses before they were finally taught. Yet, failure by the government to continuously closely monitor teaching and training progress of individual TVET colleges gave some of the colleges the leeway to engage in malpractices, such as exam leakages. Such professional misconducts ended up crowding the job market with TVET graduates that did not have the best of skills. Furthermore, some of the institutions did not have the capacity to undertake comprehensive regular curriculum reviews informed by the labour market demands. The study by Geleto (2017) cast doubts on the logic of the government allowing curriculum review of TVET providers at the local level since some of them were likely to carry out the strategy review that did not necessarily serve the interests of the students and those of majority of the employers.

Concerning the influence of competitiveness of courses on situational analysis, the respondents' opinions were also sought based on a 5-point Likert scale, as demonstrated in table 4.

**Table 4: Institution's Situational Analysis and Competitiveness of Courses**

<b>Situational analysis &amp; competitiveness of courses</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
Strongly disagree	17	6
Disagree	30	10
Not sure	65	22
Agree	160	53
Strongly agree	29	10
<b>Total</b>	<b>301</b>	<b>100</b>



The findings in table 4 indicated that 16% (47) of the respondents disagreed that situational analysis in TVETs was influenced by competitiveness of courses, or lack of it. At the same time, 22% (65) of the respondents indicated that they were unsure, while 63% (189) agreed with this account. Overall, 63% of the respondents agreed and/or strongly agreed that competitiveness of courses had influence on situational analysis. As an important process for helping education institutions to determine their operating environment with the aim of adjusting performance measures and targets, the respondents in this study appeared to validate the claim that situational analysis is an essential process for TVETs. However, it was evident that situational analysis was influenced by, among other factors, the competitive nature of the courses on offer vis-a-vis the existing job market situation. At the same time, the respondents who agreed with the view that competitiveness of courses was an important element when it came to situational analysis opined that relevance of skills in the job market must form the basis for situational analysis processes. As HOD004 observed:

*The government plays a central role when it comes to determining and regulating courses in the TVET sector. However, some of the courses become more competitive than others because of the skills needed by employers especially in the technical fields. Hence, we cannot train students on outdated causes that have no place in the market. The more the market absorbs trainees from a particular course the more its demand becomes competitiveness and hence forcing the TVET institutions to absorb more students in those courses. As a matter of fact, majority of the technical courses we offer at the moment attract more employers. Highly competitive courses call for good preparation and readiness on the part of the institutions as we at all times try to allow our courses to be market demand-driven. Our students must also fight for the limited employment space that can only be achieved once courses become competitive.*

The emphasis on the need for TVETs to offer competitive courses is a common practice from the government. Yet, as demonstrated in this study and other previous studies (Geleto, 2017; Ngugi, 2019), some of the TVET institutions took advantage of the government’s lack of elaborate and effective monitoring and evaluation capacity to offer courses not strictly sanctioned by the government. Notably, there were some private colleges that tended to offer courses they were not authorized by the government regulatory bodies to offer. Although there were strong confirmations by this study and others that technical courses needed a lot of preparations for the institutions to initiate and train, it was also not lost to the researcher that some of the institutions did not have the capacity to undertake comprehensive regular curriculum reviews informed by the labour market demands. In such cases, as noted by Geleto (2017), such a scenario would cast doubts on the logic of the government allowing curriculum review of TVET providers at the local level since some of them can easily carry out the strategy review that did not necessarily serve the interests of the students and those of majority of the employers.

The study also established that availability of nonmonetary educational resources significantly influenced in situational analysis in TVET institutions. In a 5-point Likert scale for measuring opinions of the respondents, these findings are presented in table 5.

**Table 5: Institution’s Situational Analysis and Availability of Educational Resources**

<b>Situational analysis &amp; Resources availability</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
Strongly disagree	10	3
Disagree	5	2
Neutral	4	1
Agree	189	63
Strongly agree	93	31
<b>Total</b>	<b>301</b>	<b>100</b>

As illustrated in table 5, 5% (15) and 1% (4) of the respondents disagreed and had neutral views, respectively about whether educational resources influenced situational analysis in the TVET sector. Cumulatively, 94% of the respondents agreed and/or strongly concurred with the opinion that educational resources played a significant role when it came to situational analysis in TVET institutions. Educational resources entail instructional items, such as workshops, seminars, and case studies among others, which are usually important in the whole process of capacity building of the tutors. Other educational resources included collaboration elements, such as online teaching and meeting forums, as well as chatting platforms which made it easier for learning, sharing information between trainers and students, and even enhance distance learning engagements. Also, there is the category of practice objects, including simulations, different software for easier learning, online labs, and research objects, among others.

Although in their explanations the respondents observed that educational resources were generally inadequate in majority of the TVET institutions, their influence on situational analysis was evident. Educational resources enable the institutions to provide high quality training and skills to the TVET students in resonance with the prevailing employment market situation. In a previous study by Oluoch (2019) to understand the role of TVET in sustainable development of the textile industry in Kenya, it was revealed that the government may be unable to produce effectively trained and skilled manpower from TVET institutions. In order for the government to revive the textile industry which had collapsed many years back, the technical training institutions needed to train students on modern techniques in the textile and apparel courses. However, lack of enough resources to roll out new teaching and training programs forced a number of the institutions to rely on older programs which did not effectively serve the current market needs. Despite the challenges facing a number of technical training institutes related to training on textile courses, the study recommended setting up of a few TVET institutions as center of excellence in textile training while emphasizing on regular curriculum reviews to cater for emerging training demands in the textile sector.

In the current research, the importance of educational resources in TVET institutions was aptly directly expressed by P020 as follows:

*When an institution has effective information sharing mechanisms, it helps the management to easily link different operational departments, and this even makes it easier for the academic staff to relate with their students. Regular review of the status of educational resources therefore becomes critical when it comes to imparting the right skills and knowledge in students. It is also not possible for the learning to go well without the right channels for sharing knowledge between the tutors and students. Generally speaking, institutions without relevant educational resources can directly affect the enrollment rates since former and even current students play a very important role in selling the name of the institutions to prospective students. Hence, it is rare that we will get referrals by our students if we are not offering the best; which is determined a lot by what we offer and how disseminate our teaching programmes.*

Through evaluation of educational resources, TVETs are able to understand how to adjust their operations based on the number of students being enrolled in the system. Lack of adequate educational resources can be very challenging to TVET institutions in relation to offering practicals to students. In a general sense, availability of educational resources greatly defines the current and future standing of an institution.

As demonstrated in this study, situational analysis is an essential component of strategy review when it comes to enhancing employability skills of TVET graduates. Similar views have been reflected by previous studies conducted in different study environments. For instance, Dagnino et al (2017) observed that situational analysis and needs assessment are critical considerations at the initial phases of curriculum development or review since this gives a clear picture to the reviewers and the top management of the organization about how things look like and what needs to be done to improve the situation. At the same time, Yeok et al, (2018) established that

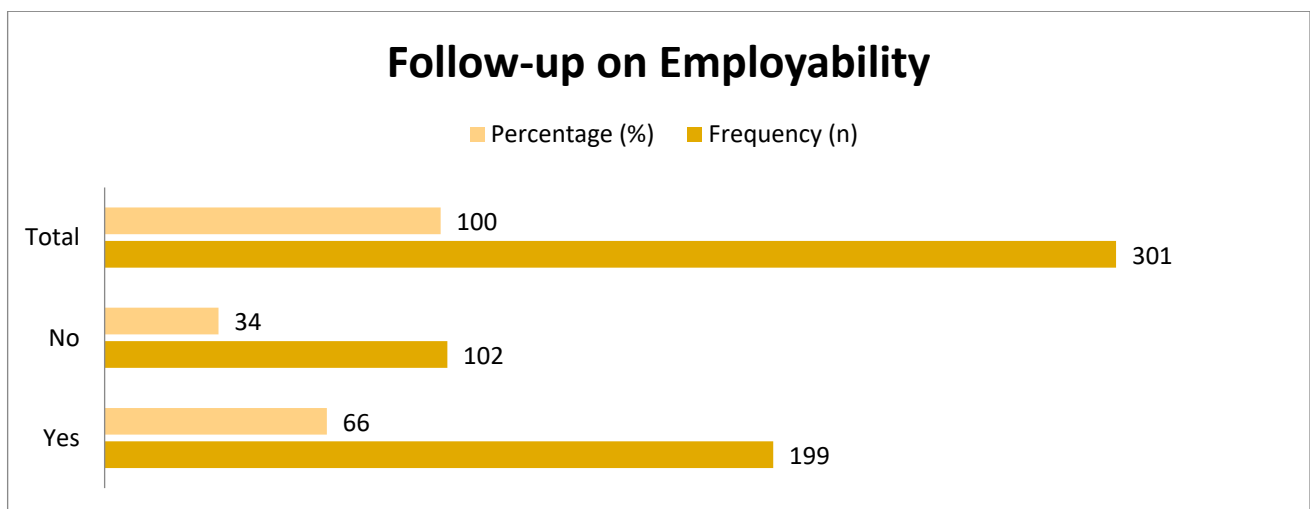
situational analysis can be seen as a diagnosis of organizational needs which facilitates examining of prevailing factors in an environment where the curriculum is going to be implemented.

As noted in other studies however, this research established that a number of TVET institutions lacked the capacity to carry out comprehensive situational analysis. In a cross-sectional study carried out by UNESCO (2021) on the situational analysis of TVET in ten Southern African Development Community (SADC) member states, it was noted that majority of the countries did not have the capacity to initiate research activities for effective curriculum evaluation and development. These countries’ capacity was constrained due to poor training of teachers, scarce financial resources, and inadequate research infrastructure. Despite some of the SADC countries such as Malawi, Zimbabwe, South Africa, Zambia, and Mauritius having prioritized research in their TVET policies, according to Anwar & Hasnu (2017) they were still unable to initiate regular and comprehensive strategy reviews for a more robust teaching and training of TVET graduates. This denied their graduates adequate employability chances in the job market for lack of the right skills. To address the limited research gaps, the affected countries had resorted to collaborative research efforts with universities and other institutions of higher learning. These sentiments were also expressed in this study, with a strong indication that public TVET institutions were aggressively engaging external partners, such as the World Bank, AFDB and JICA among others, especially for funding of their training programmes to suit the current job market.

Similarly, in agreement with the findings of this study, Nyaga et al (2017) revealed that TVET polices should as much as possible be aligned to the current job demands, while at the same time allowing involvement of the private sector through various platforms and partnerships for effective implementation of labour market-driven training programmes. Yet, a survey by the Kenya Institute of Special Education (KISE) on situational analysis of inclusive education practices in technical and vocational training institutions in Kenya noted that very few institutions offer specialized support to students with special needs (KISE, 2019). These views were also captured in this study, with the revelations that many TVET institutions lacked the capacity to offer the best to their students.

**Follow-up on Employability of TVET Graduates**

Understanding the dynamics of employability of TVET graduates should be central to the government’s agenda and to all other key stakeholders. This would ensure that any strategy reviews being undertaken are informed by empirical findings. Hence, the researcher sought to find out whether different TVET institutions made any follow-ups on their graduates to know about their employability. Figure 1 provides a summary of these responses.



**Figure 1: Follow-ups on Graduates to know about their Employability?**

Based on the findings in figure 1, 66% (199) of the respondents said their institutions made some follow-ups on employability of their graduates, whereas 34% (102) said they did not. As demonstrated by a number of studies, employability skills remain at the core of the most important attributes of TVET graduates. According to Halik and Mohd (2023), these skills determine the level of career readiness of TVET graduates. They include but are not limited to entrepreneurial, communication, critical thinking, and problem solving skills. Yet, majority of TVET institutions lack the capacity to make regular follow-ups on their graduates' employability, thus limiting role of strategy review in one way or the other.

In responding to the how they would rate the employability of TVET graduates across different sectors of the economy, both in the private and public space, the respondents expressed their views as presented in table 6.

**Table 6: Rating of TVET Graduates' Employability**

rate employability of TVET Graduates	Frequency (n)	Percentage (%)
1=Below average	0	0
2=Average	14	5
3=Above average	44	15
4=Good	129	43
5=Very good	114	38
<b>Total</b>	<b>301</b>	<b>100</b>

As indicated in table 6, 5% (14) of the respondents thought that employability of TVET graduates was average, 15% (44) above average, 43% (129) good, and 38% (114) very good. Overall, the statistics further indicated that a greater majority (81%) of the respondents had high level (good and very good) of confidence in TVET graduates in terms of the employability skills they were imparted with. These findings were in synch with a number of recent surveys on employability skills of TVET graduates which have shown that there is a gradual increase in employment of TVET graduates in Kenya, and across the world, as a result of the government's efforts to ensure that institutions in this sector offer the right skills needed in the job market (Nganga, 2023; Buunaaisie et al, 2018; Chan et al, 2018). In a recent move by the Kenyan government to further bolster employability of TVET graduates, the Cabinet through the Ministry of education launched fresh efforts to come up with a more robust curriculum for the sector through a reestablishment of TVET Curriculum Development Assessment and Certification Council (CDACC) which had been dismantled for the past two years (Nganga, 2023). Among the council's mandates is to undertake a review of curriculums for TVETs' examination, assessment, and competence certification as well as advise the Ministry on policy review and regulation matters. Through a flexible, demand-driven, and learner-centered approach, the TVET industry-led curriculums will ensure that there is an effective link of the TVET institutions and employment partners to enable training of students on the most needed skills in the job market.

This study further revealed that in the past 5 years a number of TVET graduates have been employed in different sectors of the economy, with the respondents placing the estimated number to between 55-80% of those who completed their studies at various levels. Despite some of the institutions being unable to make follow-ups on the employment status or history of their graduates over time, to those who had some capacity to keep the trail observed that the figures of their graduates who managed to secure jobs after completing their studies in TVET colleges were encouraging.

### **Inferential Analysis of the Independent Variables**

#### **Regression Analysis and Testing of Hypotheses**

Regression analysis was carried out to understand the relationship between all the variables and test hypotheses of the study. The regressions were also important in estimating the effect or influence of predictor, explanatory or independent variables on the dependent variable or outcome of the study. Before analysis for individual

independent variables and testing each of the hypotheses of the study, a model summary for strategy review was established to explain how or the extent to which this phenomenon influenced graduate employability of TVET institutions.

Further discussions of the multiple regression analysis of variables and testing of the hypotheses of the study are provided in the subsequent sections.

The first objective of the study was to assess the influence of situational analysis in TVET institutions on graduate employability in Kenya. Hence, the following null hypothesis was formulated and tested.

**H<sub>0</sub>** There is no significant influence of situational analysis in TVET institutions on graduate employability in Kenya.

Model summary was carried out to gauge the strength of the relationship between the situational analysis and graduate employability. Table 7 presents summary of the coefficient of correlation R and the coefficient of determination R square (R<sup>2</sup>).

**Table 7: Model Summary for Situational Analysis and Graduate Employability**

Model	R	R Square (R2)	Adjusted R Square	Std Error of the Estimate
1	.611 <sup>a</sup>	.373	.368	.6121

Situational Analysis (X1)

The model summary in table 7 indicated the coefficient to be 0.611, which implied a strong correlation between situational analysis and graduate employability. The statistics further showed that the coefficient of determination R square (R<sup>2</sup>) was 0.373 which meant that 37.3% of TVET graduate employability in Kenya was influenced or explained by situational analysis.

Analysis of variance (ANOVA) of the regression model was also carried out to test the good of fit of the model of the study, or establish the significance of the correlation between situational analysis and graduate employability. Table 8 presented the ANOVA findings.

**Table 8: ANOVA for Situational Analysis and Graduate Employability**

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	24.697	1	24.70	38.96	.001 <sup>b</sup>
	Residual	189.515	299	0.63		
	Total	214.212	300			

The ANOVA analysis in table 8 showed that the P-value was 0.001 and the *F* statistic (1, 299) at 95% level of significance (0.63) was less than *F* calculated (38.96). Since the p-value was less than 0.05, therefore situational analysis had a significant influence on TVET graduate employability (*F*=38.96 & p-value <0.05).

Linear regression was performed to establish the level of influence of situational analysis on graduate employability in Kenya, where the regression coefficients were summarized in table 9.

**Table 9: Regression Coefficients for Situational Analysis**

Predictor	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	β	Std. Error	Beta		
Constant	2.801	0.051		1.321	0.000
X <sub>1</sub> Situational analysis	0.331	0.105	0.411	3.211	0.001

a. Graduate employability

Based on statistics in table 9, regression equation can be written as  $Y = 2.801 + 0.331 X_1$ . The findings meant that assuming all factors were held at zero, graduate employability would be 2.801. However, a unit increase in situational analysis when other factors remained at zero would lead to a 0.331 improvement in graduate employability. At the same time, with the P-value of 0.001 which is less than 0.05 ( $p = 0.001 < 0.05$ ) at 5% level of significance, it can be concluded that situational analysis had a significant influence on graduate employability.

From the foregoing findings in table 7, 8 and 9 on Model Summary, ANOVA and Regression Coefficients for Situational Analysis respectively, we therefore reject our null ( $H_0$ ) hypothesis that there is no significant influence of situational analysis in TVET institutions on graduate employability in Kenya. Consequently, we adopt alternate hypothesis that there is significant influence of situational analysis in TVET institutions on graduate employability in Kenya.

## CONCLUSIONS AND RECOMMENDATIONS

The study concluded that situational analysis was an important element of strategy review that should be embraced by all TVET institutions. However, a number of the institutions were unable to carry out regular situational analysis due to lack of financial and human resource capacities to institute and implement this process in a regular manner and to a right scale. The study concluded that situational analysis has a significant influence on graduate employability.

The study recommended that TVET institutions should create budgets for regular and thorough situational analysis. This would ensure that they are able to regularly assess their products and services in order to clearly remain updated on the employment needs in various sectors of the economy.

### Recommendations for Further Research

Research should be carried out on the factors that constrain situational analysis in TVET institutions and how this affect employability of TVET graduates in Kenya. Such a scaled-up study should go beyond the metropolitan counties to expose challenges and/or opportunities related to strategy review in the TVET sector and how the opportunities can be better harnessed and challenges addressed to guarantee better training of TVET students and enhance their employability prospects in different sectors of the economy in Kenya and beyond.

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