

# Competence-Based Training and the Employability of Graduates in Tanzania

## Monica Mtundu

School of Public Administration and Management, Mzumbe University, Tanzania

## Wilfred Uronu Lameck

School of Public Administration and Management, Mzumbe University, Tanzania

### Correspondence:

wlameck@mzumbe.ac.tz

### Abstract

This paper explores competency-based training (CBT) on the employability of VET graduates in Morogoro Municipality. Precisely, this article explores the existing relationship between competence-based training framework and its implementation in Morogoro Municipality. To this end, the study used a mixed research approach with a case study design. The target population of this study was the vocational training students in Morogoro Municipality, graduates from vocational training and employers in Morogoro Municipality. A sample size of 115 respondents was selected by using non proportionate stratified simple random sampling from a population of 1388 which constitutes students and graduates and a total of 25 employers of graduates from vocational training in Morogoro Municipality and staff were selected qualitatively. Furthermore, interviews and questionnaires instruments were used for data collection. The data was then analysed by using descriptive statistics for quantitative data and thematic analysis for qualitative data. The findings show that, vocational training graduates in Morogoro Municipality have inadequate competence required in the labour market due to insufficient training facilities to deliver CBT. Based on the findings, it is concluded that, the government must ensure conducive learning environment which is a precondition for competence-based training and graduates' employability in Morogoro Municipality.

**Key words:** Competence-Based Training, Employability, Vocational Training, Competence-Based Framework, Tanzania, Competence Assessment

### Introduction

Employability competencies are skills, knowledge and attitudes employers deem necessary for a newly appointed graduates in the work environment.

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Employability competencies does not only lead to improved performance, it also enhances wealth creation, employment generation and industrialization in any nation (Geel, 2014; Ayonmike et al., 2013) and represent a tool to improve communication in education and the labour market (Garavan & Mcguire, 2001). For students to get employability skills they must attend a competence based training. By definition, competence-based training implies a learning model in which the required level of knowledge and skills on a task must be demonstrated before advancing to the next task (Kufaine & Chitera, 2013; Ondieki *et al.*, 2018).

Globally, this model has received great attention and has been practiced for more than 40 years in different countries. The United State of America (USA) was the first nation to adopt this model in the late 1960s. The aim was to address social and political pressure related with low student achievement, inadequate teaching and training, and the high costs of education (Kanyonga, Mtana & Wendt, 2019; Rutayuga, 2014). The model was later adopted by countries like Australia, Germany, the Netherlands, and the United Kingdom (UK). One of the benefits of this model is its ability to advance science and technology by imparting students with skills that are demand driven and therefore produce graduates who are able to meet the demands of employers in the labour market (Rutayuga, 2012; Isaac & Okoye, 2015; Dadi, 2014). In Africa, CBET was adopted for the first time in South Africa in 1998, following the acute shortage of professionals including engineers, technicians and artisans with employable competencies to cope with challenging issues in the 21<sup>st</sup> century of knowledge based (Kanyonga *et al.*, 2019). While in Tanzania it was adopted in the early 2000s to generate competent

graduates equipped with appropriate sets of knowledge, skills and attitudes towards the realization of Tanzania Development Vision (TDV) \_2025 of becoming middle income economy by 2025. Apart from adoption of CBET in Tanzania, other efforts to impart employability competencies to learners were introduced including Technical and Vocational Education Development Program (TVETDP) (URT, 2019).

Despite the adoption and practices of this model, unemployability of graduates has remained to be a major problem. One of the factors attributing to lack of employability is the mismatch between the labour market requirement and the skills produced by universities and vocational institutions. Although many countries have good competence-based frameworks, their implementation has not yielded the expected results. The theoretical arguments is that learning environment and learners behaviour can be important variable but the systematic analysis of these factors and the way they influence competence based learning a country like Tanzania is missing. The key questions in this paper is that: *what goes wrong? Why does the implementation of competence-based training not yield the intended results in Morogoro Municipality? and; how can learners' behaviour and learning environment explain this shortfall?*

## Literature Review

### Competence-based training

Competence based training implies a learning model in which the required level of knowledge and skills on a task must be demonstrated before advancing to the next task (Kufaine & Chitera, 2013; Ondieki *et al.*, 2018). Sumra and Katabaro (2016) identified the key skills which constitutes

competence-based training to include foundation skills, transferable skills, vocational and technical skills that ensure that the learners acquire the necessary skills. The classical theorists and empirical reviews on competence-based training have confirmed the positive relations between learning environment, behaviours of the learners and competence-based training which leads to employability of graduates (Kir et al., 2021). With regards to behavioural theory, this theory can be traced back to Watson (1962) and Skinner (1938) who emphasise on the changes of behaviour and its impact on learners. It is from this backdrop that the behaviourist insists on practical learning approach.

However, the theory is criticized by ignoring unobservable and immeasurable human behaviours which are also important for employability (Strauch, et al., 2014; Kaya & Canbal 2016). Therefore, to understand these behaviours, the learner's behaviour must be blended with the learning environment.

The learning environment is attributed with constructionism perspective by Piaget (1973) and Vygotsky (1978) which insist on effective learning environment. This in turn is expected to impacts on the ability of learners to acquire knowledge, skills, and competencies which are relevant to the community development. Various studies show the relationship between a competency-based learning environments and employability. Teaching and learning process must be related to the practical real world therefore the classroom should be designed and shaped in such a way that teacher and students can share their knowledge and experience actively, cognitive structure must always be altered and adapted according to demands of the environment, educating and teaching

should not focus on the educators but on the learners (Suhendi and Purwarno, 2018). The study by Thirunavukarasu et al. (2020) shows that, various degrees of expectation and experiences that predominated in the graduate course and were founded on the conceptual idea of graduate employability require major focus in the building of future curricula.

Selvaratnam et al. (2021) revealed that, the necessity for diverse learning environment enables collaborating, offering networking opportunities, and incorporates active learning strategies such as problem-based learning. Kenneth et al. (2021) noted the interactive and collaborative learning as the most important aspect of the online learning environment. Ertmer et al. (2019), found that, collaborative learning environment enables people to exchange information via technology immediately or later. Similarly, Bhina (2014) revealed a significant positive influence of the learning environment on graduates' competencies. Therefore, the establishment of an online learning environment ensures that participants have the opportunity to communicate with a variety of individuals, exchange knowledge and evaluate it. Therefore, to understand the factors which influence the employability of graduates, both the behaviour of learners and learning environment must be taken to account.

### ***Competence based framework in Tanzania***

Tanzania adopted CBET for transforming from knowledge-based education and training (KBET) to a CBET system to meet the objective of the Development Vision 2025, whose target is to become high level education nation at all levels (URT, 1991 in Tambwe, 2017). Education has been considered as a strategic agent for creating a well-educated society and adequately

equipped with the technical know-how (URT, 2019). By adopting CBET system, technical institutions are envisaged to produce competent personnel who can help the nation to achieve the desired vision and millennium goals (Kafyulilo *et al.*, 2012). This phase requires competent workers in areas like in welding, plumbing, installation, carpentry, masonry, teaching, and physics.

Apart from adopting CBET, the Tanzanian government took other strategies for enhancing graduate students, by ensuring that the graduates are imparted with skills. For example, VET introduced a program known as the Technical and Vocational Education Development Program (TVETDP) and additional contents in the curriculum such as communication skills in civil engineering, entrepreneurship skills and information communication technology (URT, 2013). Another initiative by the Tanzanian government was the Education Sector Development Plan (ESDP)-2016/17-2020/21. This aimed to establish a culture of human development via a commitment to hard work, professionalism, creativity, innovation, critical thinking, and problem-solving abilities (URT, 2018).

Although CBET was adopted in VET in the past 23 years, its impact on the graduate's employability is still questionable. That results in having graduates unacceptably less competent in workplace contrary to the expectations. Similarly, the government agencies, politicians and administrators are frequently accused of being incompetent and that graduates depend much more on public employment than self-employment. Further, such incompetence has been viewed to cause poor delivery of social services (Mulder, 2019).

With respect to Vocational Training and

Education, the government in Tanzania adopted CBET in VET programs in the year 2000. The goal of these initiatives was to have graduates who are skilled, and knowledgeable in their areas of specialization. For example, the shift from Traditional approach to CBET aimed to produce graduates who meet the demands of the National Development Vision of 2025 by addressing the needs of the labour market as well as improving the delivery of social services (URT, 2018). In line with this move, certain programs were adopted, namely Education Sector Development Program (ESDP 2008-2017); the National Strategy for Growth and Reduction of Poverty for both Phases I and II (NSGRP/MKUKUTA, I & II) and Sustainable Development Goals. Moreover, Education Sector Development Plan (ESDP) 2016/17-2020/21 introduced fee-free education at the primary school level to promote acquisition of competencies for entering higher education (URT, 2018).

Despite the strategies adopted in Tanzania, the implementation of CBET has several challenges. Thus, the graduates entering the job market are still incompetent. Mulder (2019) reported a massively poor performance among medical doctors and police officers in delivering services. Furthermore, Munish (2017), observed that VET graduates lack communication and problem-solving skills. Also, Nkondola *et al.* (2019) revealed that, 42 percent of graduates lacks knowledge of using modern machines. Various studies (i.e., Nombo, 2018; Tambwe, 2017; Kabombwe & Mulenga, 2019; Tolliver *et al.*, 2017; Makunja 2015) demonstrate a shortage of expert teachers and competent personnel to implement the CBET system in VET.

## Methodology

The methodology of this study was set to answer the question: *why does the implementation of competence-based training does not yield the intended results in Morogoro Municipality? and; how can the learner's behaviour and learning environment explain this shortfall?* To answer this question, the study adopted concurrent mixed approach in which the quantitative approach with Likert scale was used for descriptive statistics and Pearson Chi-square test for categorical data analysis. Besides, the qualitative in-depth interviews were used to explore the state of employability of graduates.

To this end VETA in Morogoro Municipality was adopted as a case study design. The choice of VETA was based on the fact that, it is one of the education sectors in Tanzania which adopted the competence-based training. The CBT framework has been in place over a number of years, but the quality of graduates remains questionable in the labour market. The general public and the recent evaluation have proved a mismatch between the skills produced by VETA, the demanded skills in the labour market and

the growing trend of unemployment.

### Target population and sampling

The target population for this paper included graduates, students and employers of graduates from VET in Morogoro Municipality. The VET in Morogoro has about 1233 students who graduate annually; 120 VET staff working in the institutions and 100 students constituted the target population of this study.

The two sampling techniques were used to get the sample for this research namely; stratified sampling technique and purposive sampling techniques. To begin with, various steps were used to get stratified simple random sampling for survey. The actual process began with compiling the list of final-year college student, trainers, and employers in the labour market. The three categories of population formed the three subgroups with homogeneous characteristics to be included in the sampling frame. the population of sampling units were divided into sub-groups and a sample was selected separately per each stratum as indicated in the table below.

Table 1. Target population and sample size

| Category      | Target population | Sample Size |
|---------------|-------------------|-------------|
| VETA students | 1233              | 115         |
| Graduates     | 100               | 40          |
| Grand total   | 1353              | 155         |

With respect to purposive sampling, the researcher selected the key informants for the research. With respect to this article, the key questions which guided the interviews was the learning environment, learners behaviour and the employability of graduates in Morogoro Municipality. Therefore, the key informants who were selected to provide this information

includes three (3) heads of academic units, (2) admission officers and 20 employers for VETA graduates which includes: Five (5) employers from 21<sup>st</sup>-Century Textiles, Five (5) employers from Abood Soap Industry, Five (5) employers from Cable Television Network and Five (5) employers from Morogoro Tobacco. This leads to a total of 25 respondents.

## Data Collection Methods

The actual research began with the Likert scale questionnaire administration for the

VETA staff, students and the graduates. The questionnaire was designed in a five Likert scale as indicated in the table 2 below;

Table 2. Likert scale, attributes and the scales adopted

| Variables  | Attributes researched                     | Scale adopted   | Type of scale | Measurement  |
|--|---|---|---------------|--------------|
| <b>Employability</b><br>(dependent variable)           | Employed                                  | 5= <i>Strongly Disagree</i>   | Ordinal       | Likert scale |
|  | Self-employed                             | 4= <i>Disagree</i><br>3= <i>Neutral</i><br>2= <i>Agree</i><br>1= <i>Strongly Agree</i>                                |               |              |
| <b>Learning Environment</b><br>(independent variable)  | Adequate Teaching facilities or equipment | 5= <i>Strongly Disagree</i><br>4= <i>Disagree</i><br>3= <i>Neutral</i><br>2= <i>Agree</i><br>1= <i>Strongly Agree</i> | Ordinal       | Likert scale |
|  | Quality of classrooms                     |   |               |              |
| <b>Behaviour of learners</b><br>(independent variable) | Effective Teamwork                        | 5= <i>Strongly Disagree</i><br>4= <i>Disagree</i><br>3= <i>Neutral</i><br>2= <i>Agree</i><br>1= <i>Strongly Agree</i> | Ordinal       | Likert scale |
|  | Interaction                               |   |               |              |

The data from the questionnaire were analysed through descriptive statistics to measure the respondents' attitudes towards employability of graduates in Morogoro Municipality. The completion of the questionnaire was followed with the in-depth interviews on the employability of graduates and the way in relation to the learners' behaviour and the learning environment. The interview was recorded and transcribed based on the different themes of the interview guided.

## Findings

### *Status of Employability of Graduates in Morogoro Municipality*

These sections focused on the trend of employability of graduates from Vocational Education and Training in Morogoro Municipality. With respect to this, the interview with employers and VET staff began with the interrogation on skills demand in the labour market. The interview revealed that the skills demand

varies per discipline as evidenced by the interview quotation below;

*“Yes, there are many graduates in the labour market with different skills but what I can say is that the skills which we demand more for now are electrical installation, Motor mechanic, Welder/blacksmith, Masonry/bricklaying and Carpentry. The graduates with these skills can also employ themselves”*

The interview proceeded with probing on different sectors where these graduates are employed. With respect to this, the findings indicated that, majority of sampled graduates are employed on temporary basis and few on permanent basis. The interviewed employers also argued that, employers are not interested in the levels of qualifications, they are interested in the areas of specialization and the competence of graduates. For instance, one of the interviewees said:

*“Yes, we receive many graduates who come with certificates but our interest is not academic qualifications but the competency. The graduates must have the required competence for them to be employed”*

The findings from the Likert scale presented the relatively similar picture. For example, 20 respondents strongly agreed that the training they received was not useful at all; 70 respondents agreed that the training they received was not useful while 20 respondents agreed that the training, they received was somewhat useful, while 20 respondents disagreed that the training, they received was not useful and 15 respondents were neutral. The finding from the interviews were also consistent with the Likert scale findings as the employers who were interviewed argued that the student from VET graduate without CBT lacked the requisite knowledge and skill needed in the workplace as evidenced in the interview quotation below;

*Student graduates under competence-based training are prepared more effectively for workplace challenges. This implies that, the acquisition of competences must take into consideration the requirements of organisations and industry.*

In the same vein, the interview with employers and heads of academic units indicated that, the graduates with competence-based training are more likely to be employed as compared to those who study under traditional approaches. For instance, one of the respondents interviewed argued that; “The trend of employment of graduate under competency-based training is high because the learner is prepared more effectively for real workplaces. The findings are consistent with the findings by REPOA (2021) and Chinyere, Chijioke and Benjamin (2014) who argued that CBET helps learners to become learner-focused, enabling them to gain the skills needed to do their jobs. Therefore, students with competence-based training from VET are more exposed and fit to employment opportunities.

Furthermore, the interview proceeded with the teaching techniques used by trainers and their impact on the competence acquired by learners. With regard to this, the interview with the instructors indicated that, the participatory methods of teaching are mostly used to ensure students become competent in specific technical skills. One of the interviewees responded that:

*Participatory method of teaching is mostly used to make sure our students become competent in a specific technical skill. This is implemented by forming groups that work and learn together in both theory and practice. Mostly I give them a lot of practical activities with very strictly supervision. This helps them in becoming competent in conducting their field works”*

Moreover, with respect to learners’ interest and morale in training offered under CBT, the research shows that learners’ curiosity

and motivation in the training provided are import variable. The results indicate that, forty-six 46 (63.3%) respondents agreed that, they participated fully in class. Forty respondents 40 (76.6%) agreed that assignments are submitted on time. Finally, the fifty-two respondents 52 (60%) agreed that student increased their ability to apply the learnt skills. This implies that, competence-based training and skills is associated with students' morale in their participation in class activities and submission of assignments on time.

The result on awareness of the training facilities by students shows that, 34 respondents (40.0%) agreed that, students were aware of the training facilities while 29 respondents (33.4per cent) strongly agreed that, accessibility of training facilities by students is moderate. The findings further show that, 40 respondents (46.6%) strongly disagreed that, students had the ability to research on their own while 35 respondents were neutral that, students were not able to study ahead of their trainers.

### ***Learning environment and the employability of graduates***

The purpose of the study was to determine whether the institutions had the necessary tools and resources to administer CBT technique in an effective and timely manner. The results based on trainers' interviews show that, neither the facilities nor the equipment are sufficient to permit effective and efficient use of the CBT method. The interview with the trainer revealed the lack of resources such as teaching aid, material, and books and low teacher-student ratio. For instance, one interviewee said;

*The delivery of CBT approach requires a lot of things such as the adequate number of teachers; books; workshop equipment; books. In our institution, there is a limited number of teachers*

*which is incongruent with the number of students to supervise both theory and practical experiments. Further, workshop equipment is another challenge for effective delivery of CBT.*

The results connect to Lukindo (2016), in that, the greatest obstacles to the adoption of CBE are large class sizes and a lack of time. Similarly, Bataineh and Tasnimi (2014) noted that, a competence-based approach is very costly and typically not practical because it takes a lot of time to teach just one part of the subject topic. This also is consistent with Hassan et al. (2018) who argued that, elements of interactive learning are significantly linked to students learning activities through the use of scientific tools machinery, ICT, solution-based learning procedures, and group work activities. This improves the flexibility and performance to produce graduates who are acceptable in content knowledge. It is therefore expected that there will be a positive association between interactive learning, which is evident in E-learning environments, and students' career development. Also, the creation of an E-learning environment ensures that participants have the opportunity to communicate with a diverse audience, and share and compare the information.

The findings from the questionnaire show that, twenty-one (50) respondents strongly agreed while twenty-five (65) agreed that, the availability of laboratories and workshops for the learning process is associated with employability. This supports the Chi-square test results that the availability of laboratories and workshops for the learning process has a Chi-square value of 11.768 with a p-value of 0.019 which is less than the rejection value of 0.05. This result implies that the availability of laboratory and workshop for the learning process has positive and statistically significant influence on



students' employability. Student's participation in CBT workshops would increase the probability of the students being employed. This is because, at these workshops, students are made abreast of what goes into the successful implementation of the methodology in the

field or workplace. Also, the workshops bring to light the urgent need for students to acquire skills demanded in the labour market or the possibility of an individual gaining employment in the labour market.

Table 3: Laboratory and Workshop

|   |     | Laboratory and workshop |    |    |    |    |       |
|---|-----|-------------------------|----|----|----|----|-------|
|   |     | SA                      | A  | N  | D  | SD | Total |
| Employability   | No  | 8                       | 4  | 3  | 9  | 11 | 35    |
|   | Yes | 21                      | 25 | 8  | 5  | 21 | 80    |
| Total   |     | 29                      | 29 | 11 | 14 | 32 | 115   |
| Pearson Chi-Square value = 11.768; p_value = 0.019        |     |                         |    |    |    |    |       |
| Likelihood Ratio value = 11.581, p_value = 0.021          |     |                         |    |    |    |    |       |
| Linear-by-Linear Association value = 3.087; p_value=0.079 |     |                         |    |    |    |    |       |
| Conclusion: Significant & Positive association            |     |                         |    |    |    |    |       |

With respect to the relationship between the availability of computer laboratories, e-learning and the employability of graduate, the finding from cross-tabulation shows that, all 50 respondents strongly agreed and 65 respondents agreed that the availability of computer laboratories and e-learning for the learning process is associated with the employability of graduates. This is supported by the results of the Chi-square test that, computer laboratory and e-learning for the learning process has a Chi-square value of 31.008 with a p-value of 0.000, which is less than the rejection value of 0.05. This result implies that, the availability of computer laboratories and e-learning for the learning process have a positive and statistically significant influence on the student's employability. This outcome offers helpful insight

concerning the use of information communication technologies (ICTs) in teaching and learning vis-à-vis graduate skills development and employability in the labour market.

The results align with Kenneth et al. (2021), who revealed that, e-learning environments contribute significantly to the development of students' career skills. This result is important because it puts in the spotlight the participants' belief that instructional techniques that leverage technology provide a more personalized approach to learning. This is where students are given absolute control over the time, place, path and pace of their learning, developing the prospective workforce of any economy through the acquisition of requisite technical knowledge.

Table 4: Computer laboratory and e-learning

|  |     | A computer laboratory and e-learning |    |   |    |    |       |
|--|-----|--------------------------------------|----|---|----|----|-------|
|  |     | SA                                   | A  | N | D  | SD | Total |
| Employability  | No  | 3                                    | 5  | 4 | 10 | 13 | 35    |
|  | Yes | 30                                   | 30 | 5 | 3  | 12 | 80    |
| Total  |     | 33                                   | 35 | 9 | 13 | 25 | 115   |
| Pearson Chi-Square value = 31.008; p_value = 0.000         |     |                                      |    |   |    |    |       |
| Likelihood Ratio value = 31.494, p_value = 0.000           |     |                                      |    |   |    |    |       |
| Linear-by-Linear Association value = 23.407; p_value=0.000 |     |                                      |    |   |    |    |       |
| Conclusion: Significant & Positive association             |     |                                      |    |   |    |    |       |

With respect to library and classrooms, the paper sought to find out the relationship between the availability of libraries and classrooms for the learning process and the employability of graduate students. The finding from cross-tabulation shows that, nineteen (19) respondents strongly disagreed that the presence of a library and a classroom for the learning process is not associated with employability. This is supported by the Chi-square test results

that the presence of library and classroom for the learning process has a Chi-square value of 2.988 with a p-value of 0.560. This is greater than the rejection value of 0.05 as displayed in Table 5. This result implies that, the availability of library and classrooms for the learning process has a statistically insignificant influence on the student's employability in the labour market.

Table 5: Library and Classroom

|   |     | Library and classroom |    |    |    |    |       |
|---|-----|-----------------------|----|----|----|----|-------|
|   |     | SA                    | A  | N  | D  | SD | Total |
| Employability   | No  | 9                     | 6  | 4  | 4  | 12 | 35    |
|   | Yes | 20                    | 25 | 7  | 9  | 19 | 80    |
| Total   |     | 29                    | 31 | 11 | 13 | 31 | 115   |
| Pearson Chi-Square value = 2.988; p_value = 0.560         |     |                       |    |    |    |    |       |
| Likelihood Ratio value = 3.100, p_value = 0.541           |     |                       |    |    |    |    |       |
| Linear-by-Linear Association value = 1.132; p_value=0.287 |     |                       |    |    |    |    |       |
| Conclusion: Insignificant association with employability  |     |                       |    |    |    |    |       |

With respect to the behaviour of the learners, the study investigated the relationship between discovery learning and the employability of graduate students. The finding from cross-tabulation shows that, twenty-nine (29) and thirty-seven (37) respondents strongly disagreed and agreed respectively that, the discovery learning process is associated with employability. This aligns with the findings of the Pearson Chi-square test that, the discovery learning process has a Chi-square value of 12.947 with a p-value of 0.012, less than the rejection value of 0.05. This result implies that, the discovery learning process has a statistically significant influence on the student's employability. This implies that, students increase their learning by discovering new things in their cerebritis's

associated with an increase possibility of an individual gaining employment in the labour market.

The findings are in line with Kenneth et al. (2021) that contextually, the application of discovery learning in higher education enhances student's competence in the usage of digital and electronic technology and helps to collaboratively present, design, facilitate and direct educational experience. Similarly, Lomicka (2020) and Atef & Medhat (2015) also suggested that, discovery learning provides innovative educational solutions that improve and develop students' confidence in social interaction either with their fellow students or lecturers as they prepare to enter the job market.

Table 6: Discovery Learning

|   |     | Discovery learning |    |    |    |    |       |
|---|-----|--------------------|----|----|----|----|-------|
|   |     | SA                 | A  | N  | D  | SD | Total |
| Employability   | No  | 7                  | 6  | 4  | 8  | 10 | 35    |
|   | Yes | 29                 | 37 | 13 | 12 | 24 | 80    |
| Total   |     | 29                 | 37 | 13 | 12 | 24 | 115   |
| Pearson Chi-Square value = 12.947; p_value = 0.012  |     |                    |    |    |    |    |       |
| Likelihood Ratio value = 12.556, p_value = 0.014  |     |                    |    |    |    |    |       |
| Linear-by-Linear Association value = 6.507; p_value= 0.011                                  |     |                    |    |    |    |    |       |
| Conclusion: Discovery learning is a significant and positive association with employability |     |                    |    |    |    |    |       |

### ***Cooperative and interactive Learning***

In addition, the study examined the relationship between cooperative and interactive learning among the students with trainers and the employability of graduate students. The finding from cross-tabulation shows that, twenty-eight (28) respondents strongly disagreed and agreed

that cooperative and interactive learning are associated with employability. This finding aligns with Pearson Chi-square test results that, cooperative and interactive learning has a Chi-square value of 15.910 with a p-value of 0.003, less than the rejection value of 0.05. The results imply that, cooperative and interactive learning have a statistically

significant influence on the students' employability. This implies that, as students increase their learning that makes them cooperate and interact with the trainer, the chance to discover and learn new things related to the demand of the current labour market is associated with an increase in the possibility of an individual gaining employment in the labour market. Cooperative and interactive learning facilitate the sustainable professionalization of teachers as well as the creation and adaptation of new teaching methods and curricula. Cooperative and interactive learning is necessary for accelerating the implementation and adjustment of large educational innovations that transcend individual courses and impact a curriculum in its entirety.

The results are consistent with Kenneth et al. (2021) suggestion that, interactive and collaborative learning is the most predictor of students' career development and employability. Similarly, Rohayati and Friatin (2020), proposed that, collaborative learning entails an instructional approach in which students work in groups toward a common academic goal and that collaborative learning is an instructional technique in which learners at various performance levels work together in small groups toward a common goal. Thus, their study concludes that, there is a positive relationship between students' collaborative learning and career development. Moreover, Hassan *et al.* (2018) found that, elements of interactive learning are significantly correlated with students learning activities through the application of scientific tools and machinery, application of ICT, solution-based learning procedures and group work activities. This has resulted in increased flexibility in the creation of high-

performing graduates with adequate content knowledge and therefore a wide chance of competing in the labour market.

## Conclusion

The overall conclusion is that competence-based training and learning has received prominence indifferent parts of the world first as a model of learning which can impart the required knowledge and skills for employability. In Tanzania like other countries across the globe, the competence-based training and learning was adopted as model of learning to replace the traditional approach of learning which failed to deliver to the required expectations. Since the adoption of this model in Tanzania at Vocational training and learning in the past twenty-three years, the model has not produced the required results. The implementation of this model has been problematic. The implementation of the model requires among other things; the proper learning environment and the change of the learner's behaviour. This research concludes that one of the impediments containing the success of the competence-based training and learning is the absence of the appropriate learning environment include, the class rooms, the library and tools for effective learning but the learner's behaviour which is conditional is yet to change effectively because of other factors including their learning environment. Therefore, for the government to effectively implement the CBET both the learning environment and learners behaviour are important variables to consider but also availability of the learning facilities alone is not enough. The available facilities should be relevant to the learners needs. Therefore, the paper concludes that, competence training positively influences the employability of

graduates in Morogoro Municipality. Further, CBT programs significantly improves youths' employability compared to traditional training methods. This paper found that, graduates who received training

using the conventional method are less competent in the delivery of job responsibilities and performance targets, compared to graduate counterparts who went through CBT programmes.

## REFERENCES

- Atef, H., & Medhat, M. (2015). *Opportunities for blended learning to improve education, training, and development in impoverished nations: A case study in graphic design courses*. TEM Journal, 4(4), 358
- Ayonmike, C.S. (2013). Status of technical and vocational education in rural institutions in Delta State Nigeria. *Makerere Journal of Higher Education*, 5 (1), 81 – 9
- Bhina, P. (2014). How the learning environment affects graduates' competencies. *International Journal of Research Studies in Education*, 3(10)
- Chinyere, A, Chijioke, O.P & Benjamin, O. (2014). Competency Based Education and Training in Technical Vocational Education: Implication for Sustainable National Security and Development. *Journal of Educational Policy and Entrepreneurial Research (JEPER)*, 1(2): 290-300
- Dadi, L. (2014). Effectiveness of Competency-based TVET Curriculum in Ethiopia: The Case of TVET Institutions of Oromia Regional State (Ph. D. Thesis) Addis Ababa University. Ethiopia,
- Garavan, T. N., & McGuire, D. (2001). Competencies and workplace learning: Some reflections on the rhetoric and the reality. *Journal of Workplace Learning*, Volume 13, Number 4, 2001, pp. 144-164(21).
- Geel, M. (2014). An investigation into the employment skills of undergraduate Business Management students, Entrepreneurship and Marketing Dissertation submitted in fulfilment of the requirements for the Potchefstroom Campus of the North-West University Super (Issue November). North-West University.
- Glerum, D. R., and Judge, T. A. (2021). Advancing employment: applying training evaluation to employment development programs. *Career Development International*
- Hassan, N. F. B., Puteh, S. B., & Sanusi, A. B. M. (2018). elements of technology enabled/enhanced active learning (TEAL) to enhance quality and employability of bachelor's students. In *MATEC Web of Conferences* (Vol. 150, p. 05005). EDP Sciences.
- Hewett, F. M., Taylor, F. D., & Artuso, A. A. (1969). The Santa Monica Project: Evaluation of an engineered classroom layout for children with emotional disorders. *Exceptional Children*, 35, 523–29.
- Kafyulilo, A. C., Rugambuka, I. B., & Mosses, I. (2012). Tanzania is currently in the process of implementing teaching methods that are competency-based. A case study of student teachers at the Morogoro Teacher Training College 339-347 in the eleventh volume of the *Universal Journal of Education and General*

- Studies.
- Kaya, M., and Canbal, M. (2016).** Relationship between internet addiction and ... **training.** *Br. J. Educ. Technol.* 38, 535–537. doi: 10.1111/j.1467- 8535.2007 ...
- Kafyulilo, A.C, Rugambuka, I.B & Ikupa M. (2013). Implementation of competency based teaching in Morogoro Teachers' Training College, Tanzania. *Makerere Journal of Higher Education*, 4(2): 311 – 326
- Kanyonga, L, Mtana, N & Wendt, H. (2019). Implementation of competence-based curriculum in technical colleges: The case of Arusha City, Tanzania. *International Journal of Vocational Technical Education*, 4(1):12-22
- Komba, S.C & Mwandanji, M. (2015). Reflections on the Implementation of Competence Based Curriculum in Tanzanian Secondary Schools. *Journal of Education and Learning*, 4(2): 12-23
- Koobonye, S. (2020). TVET in Botswana: a case study on its ability to develop demand- driven and competence-based skills for the labour market. Ludwigsburg University of Education and Helwan University Cairo
- Kothari, C.R., (2004). *Research Methodology: Methods and Techniques, 2nd Revised Edition.* New Delhi: New Age International (P) Limited, Publishers; New Age Techno Press.
- Kudwadi, F & Suryadi, J. (2011). Development framework of evaluation model based on skill competency standard in high school technology and vocational education (Ban dung: JPIS FPTKUPI, 2011), 22-30.
- Kufaine N, Chitera N (2013). Competence based education and training in technical education problems and perspectives. *International Journal of Vocational and Technical Education*, 5(3):37-41
- Lomicka, L. (2020). Creating and sustaining virtual language communities. *Foreign Language Annals.*
- Mulder, M. and Gulikers, J. (2009), Workplace Learning in the Horti/Floriculture Sector in East-Africa, Wageningen University, Department of Education and Competence Studies, Wageningen.
- Okoye KRE, Isaac MO (2015). Improved Technical and Vocational Education and Training (TVET) for Sustainable Development in Nigeria: Competency-Based Training (CBT) Approach. *Journal of Education and Practice*, 6(29): 66-69
- Okoye, M & Ofonmbuk, I. (2015). Enhancing technical and vocational education and training (TVET) in Nigeria for sustainable development: competency based training (CBT) Approach. *Journal of Education and Practice*, 6(29): 44-56
- Ondieki, C, Kimani, K.N & Tanui, K.E. (2018). Deficiencies of Competency Based Education and Training in Higher Education Institutions in Kenya. *Scholars Journal of Arts, Humanities and Social Sciences*, 6(7): 1437-1447
- Ormrod, J. (2008). *Human Learning (5<sup>th</sup> ed.)*. New Jersey, NY: Pearson Education, Inc.
- Ralf, A.L.F, Griethuisen, V, Kunst, E.M, Woerkom, M.V, Wesslink, R & Poell, R.P (2020). Does implementation of competence-

- based education mediate the impact of team learning on student satisfaction? *Journal of Vocational Education & Training*, 72(4): 516-535
- Rutayuga, B.A. (2014). The newly forming Tanzanian notion of competency, as well as the conditions necessary for its successful application and its further evolution. Thesis presented to the Institute of Education, University of London in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy; thesis has not been published. The University of the Institute of Education in London
- Selvaratnam, R. (2021). The link between learning spaces and employability outcomes. *Journal of Learning Spaces*, 10(2)
- Skinner, B. F. (1938). *The behaviour of organisms*. New York, NY: Appleton-Century-Crofts.
- Sumra, S., & Kataro, J. (2016). *Education foundations of the development of skills and productive capabilities* (No. 10; 71).
- Tambwe, M. (2017). Challenges facing implementation of Competency-Based Education and Training (CBET) system in Tanzanian Technical Institutions. *Education Research Journal*, 7(11): 277 – 283,
- Thirunavukarasu, G, Chandrasekaran, S, Subhash Betageri, S.V & Long, J. (2020). Assessing Learners' Perceptions of Graduate Employability. *Sustainability*, 12, 460
- URT (1991). The Tanzania Development Vision 2025. Dar es Salaam, Tanzania: Ministry of Education and Vocational Training.
- URT (1999). Tanzania Development Vision 2025, Dar es Salaam: President's office, planning commission.
- URT. (2017). *Employment and labour relations Act*. (Patent No. 47). Ministry of labour, youth, employment and persons with disability.
- URT. (2019). Voluntary national review (VNR) 2019: Empowering people and ensuring inclusiveness and equality. In *Sustainable Development Goal*.
- Watson, R. I. (1962). *The experimental tradition and clinical psychology*. In A. J. Bachrach (Ed.), *Experimental foundations of clinical psychology*. New York, NY: Basic Books.
- Yin, R. K. (2011). *Qualitative research from start to finish*. New York: Guilford Press.
- Zimmerman, J., & Zimmerman, E. (1962). The alteration of behavior in a special class situation. *Journal of the Experimental Analysis of Behavior*, 5(1), 59
- Zhou M & Brown, D (2015) *Educational Learning Theories: 2nd Edition*