

*Full Length Research Paper*

# Competency based education and training in technical education problems and perspectives

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The article presents a discussion of the challenges faced by the Technical Entrepreneurial Vocational Education and Training (TEVET) system in Malawi as it attempts to provide quality technical education. The study involved 40 instructors, 8 principals, 3 TEVET center managers, the TEVETA<sup>1</sup> head of Training, and the Directorate from the Ministry of Education Science and Technology. The findings show lack of clarity on and differences between the objective of Competence Based Education and Training (CBET) as viewed by TEVETA and that viewed by training providers instructors and students. Furthermore findings show that CBET widens the already existing disconnection being what the student achieves at the end of technical education and the employer's expectation. This paper argues that TEVETA should prioritise the desired purpose of broadening access and implementation of CBET, address training providers and learners attitude towards new approaches, and empower training providers with necessary resources and human capacity to effectively achieve the quality technical education and CBET envisioned by the TEVET of the system.

**Key words:** Access, equity, quality, CBET, quantity, competence.

## INTRODUCTION

This article discusses the challenges faced by the Technical Entrepreneurial Vocational Education and Training (TEVET) system in Malawi in its attempt to broaden access to skills and competences in technical education while upholding the quality of its training through a Competency Based Education and Training (CBET) approach. CBET is a human resource development approach which according to Biemans et al. (2004) has given expectation to stakeholders that the gap between labour market and education will be reduced. This means CBET approach targets making the students acquire skills that are necessary for the industry; hence the approach demand participation of industry during training so that the competence experience the students demonstrate is relevant for the industry. This paper explores what the instructors identify as challenges in their

respective institutions and how they feel this affects the implementation of CBET. Therefore this discussion is guided by the following questions.

1. What are the challenges instructors face when using the CBET approach as the teaching and learning methodology?
2. How do these challenges affect the objectives of CBET?

## BACKGROUND OF TECHNICAL ENTREPRENEURIAL VOCATIONAL EDUCATION AND TRAINING IN MALAWI

Technical and Vocational Education in Malawi, as in

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other countries, is perceived to be key for development. This conviction has led to different efforts by governments many through its education agencies to make TEVET accessible, and successful.

Since 1999 there have been efforts to achieve TEVET reform in Malawi, with an emphasis on developing a TEVET training system, with CBET as the delivery method (Government of Malawi, 1999). Hence, this reform was designed to respond to industry and offer opportunities for gainful employment outside formal sector.

In an effort to increase the number of artisans in the industry, since 2007, broadened access to technical, entrepreneurial and vocation education and training by extending the responsibility to train TEVET public students to private technical colleges. As part of agreement between TEVETA and these technical colleges, the delivery of new TEVET curriculum modules using CBET without considering the challenges and implications of the CBET approach. This required defined reality about requirements for training providers to understand before embarking on CBET approach.

Previously, technical colleges offered TEVET programmes using traditional instruction (TI) mode of delivery. This mode of instruction is a teacher centred approach of teaching and learning while the new CBET approach uses a student-centred approach. Under CBET a student takes control of his/her learning and the instructor takes the role of a facilitator.

## RELATED LITERATURE ON TEACHING AND LEARNING

The ultimate goal of teaching or training is to ensure that learning takes place. Von Glaserfeld, (1987) defines learning as a process by which behaviour is either modified or changed through experience or training. Therefore learning can be looked at as a change resulting from some form of experience or interaction. For this to take place teacher must have some knowledge and understanding of learning, and be able to apply them.

### Competency Based Education and Training

CBET, as indicated earlier, is a human resource development approach which can be defined as education based on outcomes and pre-determined standards on what students can do (Biemans et al., 2004); but according to Brockmann et al. (2008), competence is multidimensional which means the capacity building targeted need to be specified. In the case of Brockmann et al. (2008), study competence can either be knowledge based or skill based. This will be interpreted differently according to the objective and the structure of the programme.

In the CBET approach, the competence is not singled out but as a process of learning, students assume

responsibility of their own learning, manage their own time for learning, evaluate their own progress, and assume responsibility for obtaining knowledge. Since this approach requires a lot of participation by students to enhance hands on experience relevant for the industry, therefore both instructors and student are expected to understand the concept and methodology.

Hence, effective implementation of CBET depends on the capacity of the student, instructor and institution, it is especially necessary to understand CBET implementation in terms of objective, capacity, experience and perception of students, instructors and training institutions Lum (1999).

### Critiques of Competency Based Education and Training

Comparatively, traditional instruction only keeps students busy few days before the examinations and the pass is ascertained regales of the previous performance. But self management approaches like CBET are student centred approach and ensures that students attend all learning experiences as this improve their rate of learning and achievement of competencies. As discussed above, in CBET, the student coordinates all activities and manages his/her time: this makes the student to become involved in decision making. But this can only work well if the student is highly motivated. In CBET, the student is not allowed to choose the degree of achievement in the courses they intend to pursue. The student must or is supposed to achieve all competencies required, if they fail, they will recycle the teaching and encounter the assessments again. This is subject to de-motivating the students considering that the course forced to pass are not the preferred ones. Automatically this calls for the instructor to be more creative and innovative so that instructional methods and materials are alternated to make learning interesting and participative as well as formulate different assessments of the same level and outcome. This is in line with Lum (1999) who indicated that the CBET approach was based on the untenable assumption. The grading system of CBET is non-discriminating in that all students are expected to perform to the same standard or level. However, careful designing and developing of instructional materials and offering of quality instruction can improve this aspect (Houston, 1979).

Despite the criticisms leveled against CBET. It can also be seen that CBET, other than giving the student skills and knowledge, has the potential to build the personality of the student in terms of responsibility and habits that enrich performance. Therefore the adoption of this mode of training is envisaged to benefit both the student in training and the graduate at work on condition that the approach is based on realistic assumptions on the expected outcome (Lum, 1999).

## THE STUDY METHODOLOGY

The research report describes the process used to determine the experience and developments associated with the implementation of CBET in private technical colleges. Because of the nature of the information required, the study adopted a qualitative research approach (Macmillan and Schumacher, 2006:26).

The study was guided by stratified approach, and the sample in this study was 8 technical training colleges in Malawi. Selected 40 instructors (five from each college) based on their willingness to take part in the study, 8 principals (one from each college). The participants were selected guided by stratified approach (Macmillan and Schumacher, 2006:26) as well as their willingness to participate in the study.

The instruments were piloted with two private technical colleges; the data collected was used to establish validity of the instruments. The data collection process employed in this study included in-depth individual interviews with the principals of each college, focus group discussions with the five instructors in each college, and document analysis which involved the reviewing and analysis of official documents that were useful in terms of the information and themes the research is investigating. The documents included policy documents, circulars.

## GROUNDING THEORY ANALYSIS

In this study we used grounded theory analysis in analyzing the data collected. Grounded theory analysis is described as a qualitative research approach that uses a systematic set of procedures to develop an inductively derived grounded theory about a phenomenon (Strauss and Corbin, 1998). The primary objective of grounded theory is to expand upon an explanation of a phenomenon by identifying the key elements of that phenomenon, and then to categorize the relationships of those elements to the context. In other words, the goal is to go from the general to the specific without losing sight of what makes the subject of a study unique.

Furthermore, the data analysis in this study proceeded both during and after data collection. The first step involved transcribing all interviews in our transcription; we aimed for consistency while acknowledging the analytical process that transcription involves and the challenges inherent in attempting to produce accurate representation of taped conversations (Lapadat, 2000 in Tilley and Powick, 2002).

## FINDINGS AND DISCUSSION

The principals who participated in the study were all males. Almost all had over 10 years of technical college leadership. The instructors who participated in the study: 14 female and 26 male. The instructed were all experienced in technical college teaching. The longest serving had 23 years of teaching and the least serving had 7 years of teaching in technical college. According to the college principals and their instructors in the technical colleges visited all students were expected to follow the CBET approach as a method of learning and teaching and of assessment as explained in Extract 1.

### Extract 1

*As training provider we accepted the adoption of the*

*TEVET curriculum and use of CBET in totality. We are implementing with struggles. Of course we are implementing with parallel classes because some of our students opt for other qualification than CBET because it is not known by industry.*

The expectation of TEVETA was that all private technical colleges would follow the CBET approach as agreed. Extract 1 reveals that principals of these private colleges together with their instructors agreed and they tried to embrace CBET in totality in their respective colleges. However, this study reveals that there were a lot of challenges that these technical colleges came across as they tried to implement the CBET approach in their colleges.

In addition to the condition put forward by TEVETA, TEVETA had to induct both instructors and the students separately on this particular approach. This study found that there were a number of issues that have overshadowed the intended purposes of introducing CBET. Below is the discussion of these issues.

*Increase in teaching load and paper work for CBET overshadow the objectives of teaching and learning.*

An increase in paper work and teaching load was raised by almost all instructors interviewed in this study; they complained of heavy teaching loads due to the large intake of students requiring CBET approach. This is shown in extract 2.

### Extract 2

*To be honest with you CBET has brought a lot of paper work, which takes much of our class preparing and teaching time. The assessment is even worse; you are expected to assess students on each and every topic which is more paper work as well. In short there is more of paper work than teaching itself.*

The increase in paper work and teaching load can thus be attributed to two factors. Firstly, CBET as a teaching approach demands more paper work, in particular due to the nature of the assessment. Secondly, the situation has worsened with the larger intake requiring the CBET approach.

We argue that the challenge of coping with an increased work load may overshadow the objectives of teaching and learning. By encouraging technical colleges to embrace CBET, TEVETA aims to build in students the responsibility and habits that enrich performance, particularly for when they begin to work in the industry. Such an aim requires instructors to have the same vision. However, coping with the heavy teaching load and more paper work may disturb the focus of the instructors on developing students with the necessary competencies.

It has been noted that TEVETA does induct instructors into the CBET methodology. However, it is not clear what this induction focuses on. Obviously it is necessary to focus on the methodology of CBET, but it may also be necessary to focus on developing amongst instructors a shared vision of what type of students is required in industry.

*Assessment outcome in CBET contradicts CBET's objectives*

The instructors suggested that students following the CBET approach are not as motivated as the students not following the approach. The instructor in Extract 3 attributed this to the opportunities provided for re-assessments in the CBET approach.

**Extract 3**

*There is a big difference between the TEVETA student following CBET approach and other student following old curriculums. Class participation and artifact production is not taken serious. They lack hard working spirit. I think its because they are allowed when they fail to be assessed as many times as possible.*

As discussed earlier, CBET aims to build a sense of responsibility in the students. However, this data suggests that the re-assessment may militate against this goal. If this is the case, what has gone wrong for CBET to achieve the opposite of its intended purpose? It may be because CBET students are allowed to repeat as many times as they like when they fail. However, one may argue that there may be a problem with student motivation not in general, since not all students repeat the exams so many times.

It has already been reported that students go through induction, what type of induction do these students go through? It appears that students take advantage of the assessment procedures in CBET, but the argument is induction should include the change of mindset of students using the CBET approach.

There is a problem created during administration of CBET where instructors push students forward and/or giving students the same examination every time they are repeating the assessment as reported by an instructor in extract 4.

**Extract 4**

*When you fail a student in CBET it is like punishing yourself because you will be expected to repeat examining the student I don't know how many times until one passes. This really disturbs because you have other students progressing well. This forces the Instructor to*

*devise safer way of dealing with this student. It's either you take the student to the next level or give the student the same examination.*

Extract 4 shows that instructors find themselves having students at different levels within the same class. As a result, a student may be pushed forward without passing the CBET. This defeats the whole purpose of CBET as a competence and skill enhancing training approach. Furthermore, extract 4 shows that instructors end up repeating the same examination until the student passes the paper. The fact that it is possible for instructor to push students to another level appears to defeat the aim of CBET assessment.

*CBET methodology: Very expensive to run vs. mix up in priorities*

All the technical colleges involved in this study expressed concern that they do not have enough training materials as required for the teaching and learning using CBET approach. This is shown extract 5.

**Extract 5**

*The biggest challenge I have come across with CBET is the training materials. Specific modules to be achieved require specific materials in large quantities enough for every student. This means we have to be fully equipped. We are contemplating to approach different organisation that we are training TEVETA students under CBET. They may help us as they do, but if we seat idle CBET will fail and student will not graduate because there is a condition that a student will not graduate until all modules are covered. Therefore if we fail to secure materials then CBET methodology will fail us.*

In Extract 5 the instructor explains that CBET is very expensive to run as it needs a lot of materials for teaching and learning.

It is not surprising, therefore, that most managers/principals in these technical colleges spend most of their time begging for funding in companies. Others are even contemplating withdrawing from the program.

CBET requires a lot of teaching and learning materials since it emphasises practical experience and immediate assessment. The obvious question is what needs to be introduced first, the CBET approach or the teaching and learning materials, or vice versa, or simultaneously? The ideal situation might be simultaneously or materials first then CBET approach. However, CBET requires up-to-date teaching and learning aids as technology keeps on changing. Therefore, for CBET to be successful the materials also needs to change and should change fast so that graduates from technical colleges are relevant to the industry.

### *Disconnection between students'/instructors' priorities in CBET*

In the views of all the instructors, the traditional mode of assessment is much better than that used in CBET as shown in extract 6.

#### **Extract 6**

*There is no clear determination of student passing level. Students need to work hard for them to sit and pass their examination for them to have a certificate.*

It is clear from Extract 6 that instructors would like to have the previous approach rather than CBET where students have to sit for exams as this would mean students would have to work hard so that they do not fail the exam. The observation made by the instructor in this extract is that students concentrate and read because they are afraid of failing Exams. It appears that students when they know that there is an exam coming ahead they work hard. This shows that to students what really matters is that they pass the exam, have a certificate and start working. But CBET's emphasis is the acquisition of both knowledge and skills in students and certification comes second.

#### **SUMMARY OF THE FINDINGS AND CONCLUSION**

The findings of this paper show that implementation of CBET approach in the TEVET system is overshadowed by a number of factors discussed in this paper which include; CBET being viewed as expensive to implement; misunderstandings of CBET objectives; private technical colleges not fully embracing CBET; disconnection between student priority and CBET objectives; increased work load and too much paper work for instructors. It has been revealed through this study that the adoption of CBET approaches was somehow agreed in principle between TEVETA and private technical colleges because by the time this study was undertaken some technical colleges were offering training using old curriculum and teaching method other than CBET.

CBET approach aims at building responsibility and skills in the students. However, it is not automatic. A CBET approach on its own cannot build responsibility.

Rather, it needs the right attitude and mindset of both instructors and students. It also appears that it requires clear link between student and instructors on priorities of CBET.

This study indicates that the a CBET approach requires a lot of preparations such as;

1. Deliberate effort to change the mindset and attitudes of instructors and students, which tend to be taken for granted.
2. Supply of teaching and learning materials should on time, and materials should be up-to-date and relevant.
3. Comprehensive induction of instructors and students should include methodology as well as the conceptualization of the approach.

Therefore we recommend that factors presented above should be addressed for CBET to be a success story.

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