POLICY INNOVATIONS IN THE VET SECTOR: THE ROLE OF INSTRUCTORS IN COMPETENCY-BASED TRAINING IN GHANAIAN TVET INSTITUTIONS

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Abstract: *Technical and vocational education and training (TVET) institutions in Ghana aim at providing learners with the required knowledge, skills and attitudes to perform effectively in the rapidly changing scenes in the workplace. Upgrading all polytechnics institutions into technical universities and introducing Free Education policy for all trainees in TVET institutions are recent major transformation in the TVET system in Ghana. Among the features that are emphasized in this transition is the method of teaching and learning in an environment of competency-based training (CBT). The study therefore examines what form of teaching learning strategies undertaken by instructors in CBT in order to equip trainees with the requisite competencies to perform professional tasks in the world of work. The study reveals that the pedagogical skills of instructors in CBT have not changed from the traditional system and calls for comprehensive staff development programmes for CBT teachers to establish long-term changes in their mindsets, belief systems, values, intentions and theories to match their new roles and tasks.*

Keywords: innovations, competency-based training, technical and vocational education, instructors.

INTRODUCTION

Over the years, attempts at teaching and learning innovations has been based on the criticism about the conventional seminar or lecture model in the higher education institutions where the lecturer is seen as 'sage on the stage'(Brewer & Tierney, 2010). Various labels such as chalk and talk, teacher-centred, one-way process establishing no contact between the lecturer and the student, up-front teaching model incapable of stimulating academic discussion of any value have been associated with these kinds of teaching methods (Figgis, 2009).

The need to identify innovative practices in the teaching and learning process is particularly crucial in the VET system because VET helps prepare people for work, develops their professional skills and knowledge while at work so that they can adapt to new or different occupations or working environment. The pressure for change in teaching and learning in the TVET systems has become even more necessary due to reasons such as global economics, industry restructuring and policy initiatives from the government. Various attempts to explore creative ways have resulted in individual-centred approaches, small group teaching, peer group

learning and group assessment (Hillier, 2009). The aim is to enable students to be actively involved in group work and also learn at their own pace. This learning process aims at enhancing the ability of students to be able to progress on the basis of mastery. One of such teaching and learning patterns particularly in the VET systems that seek to identify and develop key competences and relevant future skills to meet the needs of the labour market is competency-based education (CBE). The development and application of skill standards derived from the curricula of CBE is one major teaching and learning approach that is believed to have a strong potential to increase skill levels, reduce unemployment rate, increase productivity and to achieve international competitiveness (Smith & Blake, 2005, Konwar, 2011).

Competency-based education is an approach to training that focuses on outcomes of learning related to the changing labour needs. Training is geared towards acquiring knowledge, skills, attitudes and behaviours to effectively perform in the real world. Unlike the traditional education that is mainly content-driven and time-based system, the CBT pathways is a mastery learning, modularized, meta-cognitive and experiential learning that promotes transfer of learning outside the classroom (Serdenciuc, 2013). It replaces a knowledge-based pedagogy with skill-based without necessarily reducing the underpinning knowledge, attitudes, values and behaviours and emotions linked with a profession. Through learners' interaction in the real-world settings, they are able to acquire key competencies, core skills, foundation and essential skills necessary of transfer of learning experiences and life-long learning. In the light of this competency-based instructors need to adopt multi-dimensional roles with varied and wider range of competencies and strategies to be effective educators in their training delivery.

What is innovation?

Innovation is defined as the implementation of a new and improved knowledge, ideas, methods, processes, equipment and tools leading to new and better products, services and processes (Williams, 1999). Innovation is therefore, about individuals or groups implementing a creative method, ideas or new approach to bring about an intended change in their practices, roles, functions in the context of their wider world of work or community. Innovation can be 'supplied-pushed' by the availability of technological possibilities in production or 'demand-led' which is usually based on cultural, market or societal needs (Brewer & Tierney, 2010).

Innovations in education may take the form of (a) organization and management, (b) curriculum and (c) teaching and learning (Mitchell et al, 2003, Mulder, 2004). Though, the focus of the study is on teaching and learning, innovation in this area does not differ very much from the other two areas in the sense that, they all play complementary roles in the institution to achieve set goals in education. For instance, innovation in the curriculum may influence the way the teachers teach and students learn. New teaching and learning method would affect the entry and exit of learners, re-organization of courses, time-tabling and assessment procedures in the departments and faculties. Confronted with such structural changes, management has the responsibility to build the capacities of the staff, acquire equipment and materials, organize

workshops and conferences with its attendant cost implications. Clearly, innovation process is not only cyclical but also a complex journey characterised by uncertainties, problems and conflicts and that participants need a great deal of commitment in order to achieve a successful change.

Why innovation in TVET system in Ghana?

Innovation in the training system in the Ghanaian VET system is needed to bring out new teaching methods that will lead to better outcomes and performance of learners. Such outcomes include relevant knowledge, skills and competencies that are marketable either for the organization and their staffing demands, or for individuals to secure greater employability in the wider world of work.

Technical and vocational education and training (TVET) institutions particularly in developing countries need to provide increasing number of students with specialized skills because specialists are increasingly in demand in all sectors of the world economy. Furthermore, it must provide the kind of education that encourages flexibility and innovation to allow the continual renewal of economic and social structures relevant to the fast changing world (Brown et al, 2008). Both technical and core competencies have become increasingly valuable in the rapidly changing labour market that requires employees to adapt to new development in technology and working operations (World Bank, 2008). Against this background, it is crucial for developing nations to adopt a more innovative view of learning that emphasizes active intellectual engagement, participation and discovery, rather than passive absorption and reproduction of facts. This reform requires re-design, review and implementation of new curricula of academic programmes that would transform the teaching and learning process. Effective reform or innovation in TVET in developing countries also requires high-level support from educators, industry, government, prospective students and other relevant stakeholders. Such innovation must be customized to fit the nation's stage of development, political system, social structure, economic capacities, history and cultural system (OECD, 2004).

Competence based training
Competence-based training (CBT) has been defined as an approach to training that places emphasis on what a person can actually do as a result of training (ACCI, 1992). NCVER (2008) also defines CBT as training which develops the skills, knowledge, and attitudes required to achieve competency standards. The main idea behind the introduction of CBT in the VET of many countries is to move away from the time-served approach of training to one based on the mastery of competency standards. Secondly, it is a shift from the supply or producer/educator-driven approach to and industry-led training system. Other reason is that training activities in the most VET systems do not match with the skill needs of the industry. It is believed that countries that invest more in high-level skills tend to increase productivity; intermediate-level skills also address unemployment, while lower-levels skills reduce social inequities and vices in an economy (Keating, 2008). As a result, both governments and industry have attached

importance to the VET system to provide all levels of skills as a means to reduce unemployment rate, increase productivity and achieve international competitiveness.

Contextual factors for CBT reforms from the international perspectives

Even though socio-political factors may account for the introduction of CBT in some countries, the demand for well-educated and innovative workforce at all occupational levels has been a major reason for CBT reforms in the VET systems of many countries. Countries such as the United States of America (USA), the United Kingdom (UK), Australia and the Netherlands have several decades of experience in the implementation of CBTin their VET systems. Central to the literature on CBT about these countries is the growing concern and dissatisfaction over the relevance of the content of formal educational programmes to the workplace environment. There is a commonly expressed belief that institution–based courses too often emphasize on theoretical knowledge at the expense of the ability to apply knowledge to perform required competenciesin the workplace.Even though these countries have different contexts for CBT reform in terms of their socio-economic, cultural, political and industrial settings, the major reasons that necessitated for CBT reforms were theory-based curricula, recessionary economic conditions and high rate of unemployment particularly among the youth (Winterton et al, 2005, Keateng, 2008).

In the UK for instance, it is argued that courses and programmes in the VET concentrated on gaining knowledge and theory to the neglect of performance (Keep, 2000, Boreham, 2002). In Australia, CBT was viewed not only as the foundation for reform in vocational and post-compulsory education but also the means of increasing skill levels and productivity (Keating, 2008).

In the US, the vocational curriculum was usually prepared by teachers who placed more emphasis on book knowledge other than practical activities. The result was over-reliance on certification as the main criterion for hiring employees or workers (Carter, 2005). As a result, new models of delivering skills and credentials were adopted in the education and training system to prepare students adequately for a globally competitive workforce (Levesque et al, 2000).

In the Netherlands, the curricula in the vocational education was theory-based and for that matter, most of the students left school without adequate level of skill training leading to high level of structural unemployment particularly among the youth (Cedefop, 2010).

In South Africa, the Outcome-Based Education (OBE), a variant of the CBT was introduced to provide skill training among the labour force in order to reduce unemployment and achieve economic development (Allais, 2003). Like the challenges in other countries, increasing rate of graduate unemployment particularly from higher education institutions in Ghana has been a major challenge facing the government and the industry community.

CBT as policy innovation in Ghanaian TVET system.

In Ghana, CBT was introduced as teaching and learning innovation in the TVET system to equip graduates with the required workplace and professional skills so as to reduce graduate unemployment. A report from the study undertaken on the TVET in Ghana by the Japanese International Cooperation Agency (JICA) revealed that 'the Curricula of Higher National Diploma (HND) were more theory-oriented than the craft and technician courses, with theory-based form of assessment' (JICA, 2001, p.49). In a labour market study on the performance of tertiary graduates in Ghana, Boateng and Sarpong (2001) observed that some employers took prospective employees through longer orientation and probation schemes after which the best performing candidates were selected.

It is in the light of these challenges that the Council for Technical and Vocational Education and Training (COTVET) was established in 2006 among other things to ensure the introduction of an industry-driven CBT in the TVET systems in Ghana. In this regard, the Ministry of Education (MOE) in collaboration with donor agencies such as the Canadian Development Agency (CIDA), JICA and the Netherlands Organisation for International Cooperation in Higher Education (NUFFIC) have introduced CBT to improve the quality of technical and vocational education at the pre-tertiary and tertiary levels.
Introduction of CBT in Ghanaian TVET system ensures that

- content is directly related to work;
- delivery is oriented to performing tasks to meet the standards expected in the workplace;
- Assessment is based upon industry competency standards in occupation (Ministry of Education, 2018).

The strategy for transforming TVET in Ghana to a demand-driven form of CBT is based on coherent implementation of several related system elements, including:

- Integrating TVET planning in to a national human resource development;
- Establishing qualifications framework;
- Organising Industry sectors and sub-sectors into national representative bodies;
- Developing occupational standards based on industry needs and used as curriculum development;
- Certification of skills by national qualification awarding bodies and issuance of professional licenses based on occupational standards in the qualifications framework (Ministry of Education, 2018).

In addition, the conversion of the polytechnics to technical universities among other related matters aimed at providing TVET institutions through the use of competency-based and practice –oriented approach in teaching, organisation and delivery of programmes (MOE, 2016).

Differences between CBT and traditional training methods

The methods of CBT are regarded as suitable alternative to the traditional forms of training for several reasons. In CBT, training is divided into learnable units or elements of competence targeted towards specific skill development. Traditional training is often generic, and not so much focused on bridging specific skill gaps to improve job performance. Furthermore, CBT training is flexible, not time-based and learning is student-centred, where learners progress through modules individually or in small groups at their own pace while the role of the instructor is that of a coach, mentor or facilitator (Eggink & Werf, 2006). In the traditional programmes, training is centred on subject contents, and the instruction is time-based and teacher-centred, where the role of the instructor is typically restricted to that of the expert, while class size is large and the teaching style is lecture-oriented.

CBT is organized in modules, performance-based, practically-oriented, and theory is taught mainly as underpinning knowledge usually at a workshop and workplace or in a simulated environment. Many traditional programmes merely focus on the acquisition of large amounts of knowledge, with a small emphasis on structured practical activities often performed simultaneously by all class members within a classroom setting. Assessment in the traditional training is primarily based on performance of written test and practical assignment and achievement is compared with other students taking the course (norm-referenced). In CBT, assessment is geared towards clearly specified criteria or standards in the industry and the outcome of the training is measured against a single performance criterion (criterion-referenced) which can either be demonstrated as competent (pass) or not yet competent (fail).

In the traditional training, there is no structured system of recognition of prior learning (RPL) and that credit for prior learning is open to interpretation. In CBT however, trainees who already possess special skills through previous formal training, work or life experience can receive credits for or exemption from modules which contain those specific competencies. CBT is also customized to meet the skill development needs of an organization and its employees than the traditional training that is often generic in nature. In short, CBT allows for a more precise match between educations / training and on-the-job needs.

Study purpose

The purpose of this study is to explore the research literature on instructor competencies that might prove useful in developing the required competencies in trainees to perform effectively in the world of work. to achieve this, It attempts to explore the theoretical approaches in the delivery of CBE, examines the difference between CBT and the traditional system in relation to teaching and learning strategies, identify the new roles of instructors in CBT delivery and the extent to which CBT instructors adopt these new methods in their training delivery. A possible CBT instructor's profile by several researchers has been explored. This affords the opportunity to identify gaps and challenges in order to make recommendations for teachers to improve on their pedagogical roles and to inform a uniform and coherent implementation in the TVET institutions.

METHODOLOGY

The study investigates the role of instructors in competency-based training in Ghanaian TVET institutions. The review on this study was based on relevant literature and policy papers from several databases including Academic Search Elite, Science Direct, Educational Resources Information Centre (ERIC) and Web of Science in order to explore the CBT experiences among the countries. The search on the databases was conducted using combination of keywords such as competence, innovation, implementation, assessment, and training with the following descriptors; instructional strategies, competence-based training and teaching and learning processes and assessment practices. The research involved two main analyses, namely; contextual and pedagogical roles. Contextual analysis was used to explore some relevant similarities and differences in the educational, economic and social contexts that influenced the CBT reforms in other countries. On the pedagogical roles, relevant scholarly literature and policy documents were thoroughly examined to obtain insights into teaching and learning theories and pedagogical skills for CBT instructors. The outcome of the analysis was used to generate conclusions to support the instructors' roles and strategies for CBT delivery in Ghana.

Theoretical approaches of competence-based education (CBE)

Competency-based education can be traced from two main perspectives; namely; the behaviourist tradition as practised in the USA, UK and Australia, and the holistic tradition in France, Germany, Netherlands and Austria (Biemans et al, 2004; Le Deist & Winterton, 2005). Particularly, the behaviouristic conceptualisation of competence originated from the USA in the 1960s where the term competency (emphasis on 'y' and 'ies') was associated with the performance-based teacher training and labeled as competency-based education (Chappell et al, 1995). It was based on the views of educational theorist Ralph Tyler (1902-94) who promoted the idea of developing behavioural objectives into the design of curriculum and instruction which provided three related components, namely; performance, standards, and conditions,for breaking down learning objectives in curriculum design. It was thought the learning programmes should be assessed in terms of changes that occur in learner's behaviour. Unlike the traditional sequenced programmes, learners could achieve mastery of prescribed competencies at their own pace while students' performances were evaluated by criterion-referenced assessment (Chappell et al, 1995; Murray, 2009).The behaviourist defines CBE in a narrowly-focused and occupationally-specific manner. It places too much emphasis on what the individual can do and pay little attention to the underpinning knowledge, values, attributes, meaning, intention and effect of interpersonal and ethical issues (Gonczi,1996).

The Holistic approach rather views CBE in a broader context and integrates personal aptitudes, cultural values and ethical standards underpinning certain professions or human and community servicesin the training program. In the holistic perspectives competence is viewed from the context in which it will be used, together with the personal or behavioural, cognitive and ethical components (Cheetham and Chivers, 1996). It also means that training delivery and assessment processes must be interrelated and must occur in relevant workplace or simulated contexts. The holistic approach is based on the premise that, the main goal of education is to

prepare an individual for life, which involves not one occupation or role but a multiple of roles in order to function effectively in one's community. Recent attempts to capture both generic and occupationally-specific competencies in the definition and conception of competence have led to the development of three competency models; namely the behaviourist, generic and cognitive approaches (Weigel et al, 2007). The behaviourist emphasizes on the importance of observing effective job performers in order to distinguish high and low performers. The generic approach identifies the common abilities that explain differences in performance. The cognitive approach includes all the mental resources of individuals that are used to acquire knowledge, perform tasks and achieve successful performance.

Teaching and learning theories in CBE

The roles of instructors in competence-based vocational education emphasize two main teaching theories namely; the cognitive apprenticeship model and the acquisition and participation metaphors of learning (Hager, 2004). The cognitive apprenticeship model specifies four dimensions necessary for designing and implementing competence-based learning environments in VET systems (Seezink & Poell, 2010). These include *content, method, sequence* and *sociology*. While the 'content' describes different types of knowledge, such as domain-specific or heuristic and learning strategies, the 'method' considers teaching strategies in CBE such as modeling, coaching, scaffolding, articulation, reflection and exploration. The 'sequence' dimension prescribes the logical arrangement of learning materials to meet the needs of different learners under three main principles; increasing complexity, increasing diversity and global before local skills. The 'sociology' dimension also refers to the social context of the learning environment, particularly in authentic conditions (Loyens and Gijbels, 2008).

The second framework for CBE theory of teaching is the 'acquisition and participation metaphors of learning'. The acquisition metaphor of learning refers to the process of acquiring knowledge from the outside world into the learners' cognitive structure or mind. The learner's prior knowledge and experiences must be recognized, commonly referred to as recognition of prior learning (RPL), refined to be used as cognitive framework for advanced learning. The participation metaphor, also referred to as 'enculturation' regards learning within the social context where newcomers master specific skills and knowledge from the experienced ones in order to become active participants in the socio-cultural practices of a community (Seezink&Poell, 2010).

It must be stressed that these theories of learning are not mutually exclusive and that some elements of parallels can be drawn between them. For instance, the participation metaphor is closely related to sociology dimension of the cognitive model as both emphasize learning within the social contexts. In the same way, the acquisition metaphor of learning is very much related to the principles within the content dimension of the cognitive apprenticeship model because both dimensions refer to the need for teachers to recognize the prior learning of learners so that future learning can be built on it. Essentially, these theories emphasize the fact

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that instructional process in CBE is based on constructivist learning principles that allow students to be actively involved in the learning process within an authentic learning conditions (Loyens and Gijbels, 2008).

The facilitative role of the teacher is based on the assumption that training is focused on the outcome of training and this must be made known to the students before the beginning of the training programme. As students become aware of the required learning outcomes, they are likely to learn on their own whiles the teacher provides feedback to shape their learning experiences towards the attainment of the goal.

Instructors' roles in Competence-based vocational education

The concept of quality teaching is both complex and contested as it is not easy to identify what constitutes a good quality teaching or define suitable methods to evaluate and develop the teaching workforce (Peng et al 2013). However, recent studies identify three broad areas as teaching variables that are positively associated with students' achievement. These are teacher professional competence and related beliefs and attitudes, teacher classroom practice and professional activities and classroom and school level environment (Scheerrens, 2007 and OECD 2010, cited in Peng et al 2013). Studies in educational innovation recognize that teacher training has to be a priority for the success of every reform in education (Kleickmann et al, 2012 cited in Serdenciuc, 2013. In this regard, the introduction of CBE demands new roles and pedagogical skills in the teaching profession. Teachers in CBE need to change their traditional role as an information provider to become an expert, coach, assessor, educational developer, researcher and manager (Wesselink, 2010). Bawane & Spector (2009) also consider CBT instructor as content and process facilitator, advisor /counselor, technologist, designer, resource provider, co-learner and manager/administrator. While roles such as facilitator, advisor/counselor, assessor technologist and resource provider are considered central (related to close interactions with trainees) others like manager, designer, researcher are classified as peripheral roles(Serdenciuc, 2013).

According to Serdenciuc, 2013, several authors continue to provide possible teacher's profile or roles in CBE as; ability to design learning experiences taking into account the comparability between the student needs and the educational offer, related to efficient task performing in real situations, having a critical approach to reality (Michaeli, 2011), helping students to transfer outcomes of learning outside the classroom (Houghton, 2001), using technology in alternative ways and an extended *cultural competence* (Forzani, 2009), opened to change (Michaeli, 2011), stimulating active forms of learning (Houghton, 2001), sustaining the collaborative work of students (Forzani, 2009), involved as a partner in the process of emotion regulation; able to perform action research (Volk, 2009); effective classroom management skills (Stronge et al, 2011), designer of effective learning opportunities; having effective communication skills; using the maximum potential of learning opportunities; thinking in alternatives; acting in a proactive way; building a learning community; shifting emphasis from *knowing* to *doing* inside or outside the classroom; learning facilitator, having a skill-oriented approach to

learning; fair and respectful in relationship with students (Stronge et al, 2011); considering assessment as an integrated part of the learning process (Serdenciuc, 2013).

On their part, Spector & Bawane (2009) propose a set of eight integrated roles of instructors' in CBT devoid of duplication and overlapping is presented by in Table 1.

Table 1. A set of eight comprehensive roles of CBT instructors

Instructors' Roles	Activity
Professional	- Comply with ethic and legal standards - Communicate effectively - Undertake efforts to update knowledge - Demonstrate commitment and favourable attitude
Pedagogical	- Design instructional strategies - Develop appropriate learning resources - Implement instructional strategies - Facilitate participation among students - Sustain students' motivation
Social	- Maintain a cordial learning environment - Resolve conflict in an amicable manner - Refrain from undesirable behaviours - Promotes interactivity within the group
Evaluator	- Monitor individual and group progress - Assess individual and group performance - Evaluate the course/program
Administrator	- Manage the time and course - Demonstrate leadership qualities - Establish rules and regulations
Technologist	- Access various technological resources - Select the appropriate resource for learning - Develop different learning resources - Suggest resources to the students (resource provider)
Advisor/Counselor	- Suggest measures to enhance performance - Provide guidance based on student needs
Researcher	- Conduct research on classroom teaching - Interpret and integrate research findings in teaching.

Different insights have been provided by several researchers in Bigatel et al, (2012) to represent the construct 'competency' within a range from higher to lower or broader to specific. According to Bawane (1999), instructors' roles can be broken down into tasks, tasks into competencies, and each competency into a related group of specific skills. Spector and Bawane (2009) consider goals, competencies, sub-competencies and objectives as hierarchy of competencies for instructors that represent a continuum of broader to specific outcomes. Other instructional designers begin with a domain, competencies and performance statements (IBSSTPI, 2007) cited in Spector & Bawane (2009). Identifying competencies for effective teaching, Chickering and Gamson (1991) cited in Bigatel et al, (2012) identify seven principles

of competencies that serve as an evaluative framework for improving the quality of teaching and learning experience. The principles are (a) encourage contact between students and faculty, (b) develop reciprocity and cooperation among students (c) encourage active learning (d)give prompt feedback (e) emphasise time on task (f) communicate high expectations and (g) respect diverse talents and ways of learning. For learner-centred learning, Young (2006) cited in Spector & Bawane (2009) found that there is the need for interaction and active participation whilst Boston, et al (2009) cited in Bigatel et al, (2012) suggest that social interaction remains a crucial factor for student retention and increased understanding of content.

DISCUSSION

Instructional challenges in CBT

Challenges identified in the teaching and learning process of CBT in the Ghanaian polytechnics are many and varied among the students, lecturers and administrators. These include inadequate training materials and equipment, increased workload, insufficient learning support from lecturers, learners' difficulty to study on their own due probably to the paradigm shift of the role of the teacher. In their studies, Boahin and Hofman (2012) identify lack of uniform assessment procedure and the continuous use of traditional method of teaching in CBT courses. Apparently, these challenges have been part of CBT implementation in the VET systems worldwide (Mulder, 2004). It is important to point out that, solving these problems in any VET system with or without CBT programme would improve the teaching and learning environment. In this sense, CBT must not be seen as a substitute but rather, a supplement to skill development in the VET system.

No recognition of students' prior learning experiences

Studies reveal that vocational teachers often do not recognise the prior knowledge and experiences(RPL) of students as a foundation for advanced learning, credit transfer or exemption from certain courses in the training (Seezink & Poell, 2010, Boahin & Hofman 2012). Though RPL forms part of the Australia, UK, and Netherlands' pathways to vocational qualification, its implementation has not been very effective in the VET systems due to factors such as inadequate resources, time, and complex processes of gathering evidence about applicants. (Mayet, 2006). The issue of de-recognising the prior learning of trainees is not only seen as unnecessary repetition of competencies, skills and knowledge but also a disincentive to skill development and achievement of vocational qualification. Palmer (2009) notes that RPL is important to facilitate an individual's move from informal to formal economy, and from less to more productive employment.

Inadequate support and feedback

Like any other teaching innovation, the success of CBT implementation also depends on the quality of teachers. This is because CBT is built on the philosophy that almost all learners can learn equally well if they receive high quality of instructors and sufficient time (Smith, 2010).

However, given the intense concentration of the content in the CBT modules, teachers often do not have sufficient time to support the students properly during the training sessions, for example by offering the opportunity for re-submission of task, feedback and coaching (Boahin & Hofman, 2012).

IMPLICATIONS FOR PRACTICE FOR TVET INSTRUCTORS

Providing timely and task-oriented feedback

As the basis of CBT is self-paced and mastery learning, trainees need to be supported with coaching, frequent promptings, task–oriented feedback and corrective advice to build learners' self-esteem to be responsible for their own learning and progress towards the achievement of competencies required for professional tasks (Hattie, 2009, Boahin and Hofman, 2012). Teachers need to provide opportunity for regular interaction with students, initiate feedback dialogue with students and peers throughout the learning process to enhance innovation and creativity.

Instructors need to supplement their training with learning packages such as student direction sheet, learning guides or self-contained modules that provide detailed instructions and wide variety of learning resources and activities such as books, media, diagrams, or hands-on practice, self-check and tests to facilitate learning at students' own pace.

Need for teamwork and collaboration in the performance of instructors roles

Performing new roles in CBT has rather led to many complaints among instructors, including increased workloads, complex administrative procedures and labour-intensive and time-consuming exercises to the extent that certain roles get neglected or less emphasised (Hellwig, 2006). Certainly, no single teacher can fulfil all these roles in training activities which implies the need for teamwork and collaboration among colleagues from different disciplines together with workplace trainers and assessors to achieve the desired outcomes. More importantly, teachers and other stakeholders need to improvise and customise some principles, ideas and structures in local conditions, to achieve a sense of ownership and the expected outcomes.

Assessment beyond students' level of proficiency

Studies show that most instructors/assessors in CBT believe their role is to assess students' level of proficiency or achievement of grades without further interpretation (Hattie, 2009, Wesselink, 2010). On the contrary, assessors' roles in CBT entail not only 'assessment of learning' (i.e., summative assessment), but more importantly, 'assessment for learning' (i.e. formative assessment) and 'assessment as learning' (i.e., ongoing self-assessment) by students in order to monitor, reflect, and make adjustments on their own learning to achieve deeper understanding. Outcomes and interpretations of the assessment thus must involve short, written comments and corrective advice to address how and what students understand and misunderstand, along with directions and cues to improve processes that can lead to the achievement of learning goals

Use of RPL as integral part TVET learning pathways

For Ghana to achieve a large stock of human capital for its economic development, RPL needs to be an integral part of the TVET system to provide access to learning pathways for the large number of Junior and Senior High schools (JHS & SHS) leavers without qualification as well as those engaged in training in various trades in the informal sector. To this end, RPL could be organised in a modular approach in the TVET system to assist applicants to obtain a qualification after completion of the module.

TVET institutions must use RPL as a tool for social inclusion into formal education by making it part of the entry requirements for disadvantaged groups, part-time and mature students who want to move from informal or academic into the TVET system.

Instructors to acquire industrial experience

The role of teachers as agents of transformation also means that they must ensure their own continual professional growth. Beyond meeting institutional demands for professional development, teachers may undertake periodic, part-time internships or workplace training to acquaint themselves with current and future workplace operations and professional practices. Teachers with workplace experience or who work on a part-time basis as a professional in an enterprise have the most current workplace experiences (Wesselink, 2010).

Teaching strategies must involve variety of activities in different settings

Competency-based education is described as 'a true workforce solution' with the potential to close the increasing gap between the workforce and training institutions (Henrich, 2016). Moreover, it emphasizes learning within social context for students to actively participate in the socio-cultural practices of a community (Seezink & Poell, 2010).This means that teaching strategies and assessment practices must involve variety of settings to ensure acquisition of employable skills to perform professional tasks. Potential activities include role playing, simulations, team and group projects, brainstorming, modeling, coaching, scaffolding and exploration, portfolios and problem-solving tools depending on the kind of employability skill(s) to be acquired. Also to be considered is a wide range of settings for training such as direct interaction, video conferencing, on-line, on-and off-the-job and workplace learning so that learners can experience and apply their relevant skills. The aim is to ensure that teaching strategies meet the diverse needs of learners while students connect what they already know from the outside world in the learning process.

Comprehensive staff development programmes for CBT instructors

There is a clear need for comprehensive staff development programmes for CBT teachers to establish long-term changes in their mindsets, belief systems, values, intentions and theories to match their new roles and tasks. Teachers need opportunities for consistent professional development, access to new data and industrial experience in the emerging technologies to achieve a sustained growth for teaching and learning (Ferdig, 2014). Learning delivery in CBT

requires individualised and personalised instructions to meet diverse needs for students, therefore; teachers require not only 'one-size-fits-all'methods of instruction but also 'just-in-time' content to be able to use varying tools and strategies in different learning environments. When students receive high quality of instruction, sufficient time and adequate learning materials, they can achieve the required competencies.

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