UNIVERSITY OF EDUCATION, WINNEBA

COLLEGE OF TECHNOLOGY EDUCATION, KUMASI

EVALUATION OF COMPETENCY-BASED TRAINING IN THE BSc FASHION DESIGN AND TEXTILES EDUCATION PROGRAMME OF UNIVERSITY OF EDUCATION, WINNEBA

BY

NAOMI AGARTHA ADZO AGBEKEY

JANUARY, 2020

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NAOMI AGARTHA ADZO AGBEKEY

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JANUARY, 2020

DECLARATION

CANDIDATE'S DECLARATION

I, **NAOMI AGARTHA ADZO AGBEKEY,** hereby declare that this dissertation, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged is entirely my own original work and it has not been submitted either in part or whole, for another degree in this university or another university.

SIGNATURE…….. DATE…….……

SUPERVISOR'S DECLARATION

I hereby declare that the preparation and presentation of this dissertation were supervised by me, in accordance with the guidelines for supervision of dissertations laid down by the School of Research and Graduate Studies, University of Education, Winneba.

NAME OF SUPERVISOR; Dr. DANIEL KWABENA DANSO

SIGNATURE…… DATE…….

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DEDICATION

This work is solely dedicated to my father Mr. Emmanuel Rexo Agbekey and my sons, Brigars Charlesmith and Gustav Charlesmith.

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ABSTRACT

The purpose of the study was to critically analyze and appraise the effectiveness of the teaching of competency-based skills in the Fashion and Textiles programme in the Ghanaian CBT space with emphasis on the programme in University of Education Winneba, Kumasi Campus. The study was descriptive with the researcher adopting the use of the mixed-method research design. Questionnaires, interviews, focus group discussions, and observation were used as the main data collection instruments for the study. The researcher purposively obtained a sample of 65 respondents consisting of instructors and students of the University of Education Winneba CBT fashion programme. The study revealed that females mostly enrolled in the fashion programme of the University of Education. The study also revealed that the most common skills in the BSc. Fashion Design and Textiles Education programme are pattern drafting, garment design, pattern construction, sewing of garments, computer aided design, millinery work and accessories production. The major objectives of the programme include providing students with employable and innovative skills, and also to enable them to find a route to gaining employment out of acquired skills. Finally, courses such as creative design and working drawing, pattern drafting, garment designing, pattern construction, fashion drawing, fashion illustration, embroidery, applique, computer aided design and millinery work were deemed very effective in the institution. The study recommends that curriculum developers should concentrate on the less effective courses by either redeveloping their modules or seek improvement to make them more effective and appealing to student.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Vocational and technical education play important roles in the social-economic development of every nation. The range of expertise and skills in this area ranges from Agriculture, Engineering, Fashion Design and Textiles, Manufacturing, Building and Construction, among others. The relevance of these specializations to national development can therefore not be underestimated, necessitating reforms by the government of Ghana to make Technical and Vocational Education and Training (TVET) more vibrant. The reforms led to the establishment of Council for Technical and Vocational Education Training (COTVET) with the responsibility of coordinating and supervising TVET education in Ghana. These reforms are also aimed at radically transforming TVET graduates and make them a credible alternative to general education (COTVET, 2010).

Competency-Based Training (CBT) was also introduced as the teaching method of all TVET institutions to improve on the skills level of graduates. CBT is a teaching approach that focuses on equipping employees with knowledge and skills needed to excel in a workplace environment (Anane, 2013; Tritton, 2008). It enables students to acquire predetermined industry specific competencies at their own pace. CBT usually transforms the role of the instructor from a teacher to a resource person or a facilitator. The approach was introduced into a teacher to a resource person or a facilitator. The approach was introduced into Ghana's vocational curricula with the assistance of Japan International Corporation Agency (JICA). CBT is credited for equipping students with specific set of skills to make them easily employable. The introduction of CBT in Ghana's TVET sector is also in response to perennial

complains from industries and businesses of skills mismatch and deficiency in graduates at all levels of schoolings especially those from TVET institutions. Therefore, the hopes are that with CBT, the skills gap can be filled and students will be equipped with the necessary competencies to impact organizations or go into self-employment. This approach to learning is popular in advanced countries like Japan, Australia, and UK and its implementation in Ghana has also displayed its numerous benefits.

The introduction of CBT has led to a lot of changes in terms of teaching methods. One of the teaching roles most affected is that of the teacher who under the new system is to be seen as an instructor. With features such as self-pace learning and setting up of learning aims with the student, much autonomy has been taken from the instructor than it is usually observed under the traditional teaching methods. These changes are teaching roles for more staff development and reorientation in terms of lecture delivery.

The study would like to delve into the teaching role and performance under CBT. As part of the reforms, teachers were taken through thorough training about how CBT can be undertaken. This present research is meant to find out how effectively this approach to learning is being undertaken. Specifically, the researcher is interested in knowing whether the instructors are equipped with enough competencies to impact their students. In addition, the researcher is interested in finding out how the students who have been impacted with the skills of the CBT programme are using them in their lives.

1.2 Statement of the problem

Even though much effort was devoted to developing a curriculum that is responsible to the skills needed for industries and businesses, another equally important consideration is the caliber of instructors who are responsible for the teaching of the skills issues of staff development and discomfort about CTT methods have dominated academic literature in countries that had the CBT system in place for a long time. Lowrie (1999) and Robinson (1993) had concerns with these issues in Australia raising concerns of a possible occurrence in Ghana. However, no particular present study has addressed the trainer's issues with regard to CBT methods in Ghana. This is the gap that this present study will seeks to fill.

In addition, after almost eight years of introducing CTS training in Ghana, it is necessary to find out how instructors are coping with the new method of teaching and find out if they have equipped themselves enough with the requisite competencies that they are expected to impact to the trainee. In the same way the study will attempt to find out if the trained students are well equipped with the requisite competencies in Fashion Design and Textiles educational programmes in Ghana.

1.3 Objectives

The objectives of the study are;

i. To identify and describe the objectives set in the CBT programme for Fashion Design and Textiles education programmes.

ii. To identify and describe the various skills in BSc Fashion Design and Textiles Education programme of the University of Education, Winneba.(Kumasi Campus)

iii. To critically analyze and appraise the effectiveness of the teaching of the competency-based skills in the Fashion Design and Textiles programme in the light of the objectives set for CBT programme in Ghana.

1.4 Research questions

The research was be set to answer the following research questions which are based on the research objectives:

i. What are the objectives for the CBT programme in schools and colleges of Ghana?

ii. What are the various vocational skills in the BSc Fashion Design and Textiles Education programme of University of Education, Winneba that are of much concern to the CBT programme?

iii. Do the instructors of the various skills possess the requisite competences?

iv. How effectively are the competency-based skills being imparted?

1.5 Assumption

The researcher in carrying out the study, has the following assumptions:

i. The first assumption is that role of TVET instructors has drastically changed with the introduction of CBT.

ii. The instructors' competencies have been enhanced to carry out CBT.

iii. The students are equipped with the requisite competencies with the introduction of CBT.

1.6 Delimitation

The study is aimed at evaluating the effectiveness of CBT in the Fashion Design and Textiles programme of the University of Education, Winneba. Among other things, CBT is expected to ensure that trainees upon completion of their courses will be equipped with necessary competencies to contribute to the country's socio-economic development. To undertake this study, the researcher concentrated on trainees within the fashion design and textiles (FDT) component of TVET in Ghana. The main goal is to find out the extent to which CBT has influenced the role of instructors within the fashion Design and textiles component of TVET. In addition, the study intends to find out if the teachers are equipped with enough competence which they transfer to the students as well as how effectively they are able to impart the competency-based skills. The study, basically, focused on the BSc fashion Design and Textiles Education programme of the University of Education, Winneba (Kumasi campus).

1.7 Definition of terms

Competency: It is a combination of knowledge, skills and personality trait and attitude for proper functioning in a professional situation (Amankwah, 2011).

Skills: Skills refers to related set of actions that are performed in a particular way to achieve a desirable outcome.

Competency-Based Training (CBT): CBT is a form of education, which is industry and demand driven and based on well-defined industry standards. It focuses on what a person can do after training rather than the process of performing the action.

1.8 Abbreviations

CBT: Competency-Based Training

FDT: Fashion Design and Textiles

TVET: Technical and Vocational Education Training

COTVET: Council for Technical and Vocational Education and Training

UEW: University of Education, Winneba

1.9 Importance of the study

The study is very essential to stakeholders in diverse ways. In the first place it provides information on how instructors perceive the current CBT introduced recently into the vocational education curriculum. This method of teaching was introduced with the hope of curbing the problems with the previous (Up-front model) one. However, to the researcher's knowledge, no study has been conducted that looked at the instructor's perspective regarding CBT. This research therefore provides detailed information on CBT skills learnt in the Kumasi campus of the University of Education, Winneba in the area of fashion design and textiles.

In addition, the study will provide important information regarding the kind of CBT skills in Fashion design and textiles that instructors or facilitators can train students on. The study also provides information on the caliber of instructors teaching in the university. It also provides stakeholders such as COTVET and Ministry of Education with vital information regarding the caliber of the CBT instructors.

The study additionally, provides a good information on the impact of CBT concept in the training of students in fashion and textiles.

Lastly, the study report serves as a reference material for other researchers who are interested in studies related to CBT.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This research aims at investigating the effectiveness of the Fashion Design and Textile Education as a CBT programme. The literature review and theory to support this study will therefore consist of the following:

- A chronological overview of the concept of Competency
- Historical Foundations of Competency-Based Education
- Definitions of Competency
- Competency-Based Training (CBT)
- Structure and Objectives of CBT
- Development of CBT programmes in Ghana
- CBT Programme Delivery
- The effect of CBT on the role of Teachers and Trainers
- Challenges of CBT
- Criticisms of CBT
- Empirical Studies

2.2 Overview of the concept of Competency

2.2.1 Conceptual review of competency

The term competency is used in several contexts and has a range of meanings ascribed to it. Various literatures reflect a debate about the nature of the concept of competency. Guthrie, Harris, Hobart, & Lundberg. (1995) explain that the concept of competency "is being shaped and molded as it travels along its exploratory way". Consequently, both historical and contemporary literature reveals the existence of

various conceptualizations of just what constitutes competency. Writers in this field acknowledge the difficulty in framing a single and comprehensive definition of competency and CBE (Hackett, 2001). Gale and Pol (1975) point out that competency, by definition, is tied to a specific position or role. The strings binding the two are abilities, knowledge, skills, judgment, attitudes and the values required for successful functioning in the specified position or role. Spady (1977) defines competencies as "indicators of successful performance in life-role activities, as distinguished from the discrete cognitive, manual, and social capacities".

Chickering and Claxton (1981) state that "competence is internal and external, situational and personal; competence is limited by a person's perceptions, neurological system, and character; achieving competencies requires diverse learning styles; competence itself is a motivational force". Ewens (1999) suggests that "competence is what the Greeks called Arete, a power which has been trained and developed so that it has become a characteristic of the person who has it".

Raylatt and Lohan (1995) take the view that "competencies are a description of the essential skills, knowledge, and attitudes required for effective performance in a work situation". While Bridges (1996) suggests that one of the features common to all forms of competence is the highlighting of what people do and how they perform appropriately in a range of settings. In the same sense, Pithers (1998) observes that "competency is about what attributes underlie successful performance".

In the view of Carraccio, Englander, Ferentz, Martin, and Wolfsthal (2002), "competency is a complex set of behaviours built on the components of knowledge, skills, attitudes, and

Competency as personal ability". The report of the National Post-Secondary Education Cooperative Working Group on Competency-Based Initiatives in Post-Secondary Education

(NPEC) at the United States (2002) states that "competencies are the bridge between traditional credit hour measures of student achievement and the learning revolution... a competency is defined as a combination of skills, abilities, and knowledge needed to perform a specific task".

In 1997, the OECD created the DeSeCo Project (Definition and Selection of Competencies) with the goal of providing "a sound conceptual framework to inform the identification of key competencies and strengthen international surveys measuring the competence level of young people and adults" (DeSeCo, 2005).

The DeSeCo framework of key competencies provides a concrete explanation and definition of competency and is in accord with my view that the concept of competence should be rooted in a holistic vision of the nature of competency. According to DeSeCo (2005) a competency is "more than just knowledge and skills. It involves the ability to meet complex demands by drawing on and mobilizing psychosocial resources (including skills and attitudes) in a particular context".

In the 21st century, individuals face collective challenges, such as balancing economic growth with environmental sustainability, as societies. In order to meet these increasingly complex challenges, individuals will need an ever-wider range of competencies. In other words, to meet their goals, individuals need competencies which require more than just the mastery of certain narrowly defined skills" or, as DeSeCo says "sustainable development and social cohesion depend critically on the competencies of all of our population – with competencies understood to cover knowledge, skills, attitudes and values" (DeSeCo, 2005). These relational

competencies would provide individuals with a strong foundation on which they can face and effectively deal with societal challenges.

Storey (2001) asserts that competence is "a dynamic process that changes as experience, knowledge and skills develop through and in practice, and such should be viewed as a continuum. Edwards, Sanchez, and Sanchez (2004) indicated that competence is a dynamic combination of attributes with respect to the knowledge and its application, to the attitudes and responsibilities that describe the results of learning a determined programme, or how the students will be able to develop at the end of the educative process.

From these definitions, it is important to recognise that there are two generally contrasting views of competency. Chappell, Gonczi, and Hager (2000) name these views "narrow and broad". The narrow view presents competencies simply as standardized training outcomes or behaviours. Thus, this view is solely concerned with the achievement of pre-specified training goals and meeting certain, pre-defined skill standards. On the other hand, the broad view does not separate performance from competency, and argues that there are a large range of attributes that underpin competencies, including social, intellectual, and emotional factors.

This broad view tends to support my perspective related to the identification of two opposite poles on a continuum. One pole sees a competency as a standardized skill (static and minimalist), while the other pole promotes a developmental and elaborative construct interrelated with its social context.

It is reasonable to view competency as the connection between various types of knowledge. This includes not only pragmatic knowledge oriented to the production process, but also knowledge that articulates concepts of learning to be, learning to do and learning to interact; all of which promote understanding. The concept of

competency is linked to, or interdependent with its application to real life situations and its relation to other knowledge. This interdependence implies that knowledge makes the best sense in relation to the whole.

The elements of competence may be fragmented, and those individual elements do not constitute competency in and of themselves. In the researcher's view, competency is learning to do in a state of conscious awareness that one is, in fact, learning to be competent at something. Competency is learning to do in an active and shifting paradigm and, as such, it is knowledge in action that seeks not only to describe reality, but also to foster change. Competency not only identifies problems but initiates a process that moves towards solutions. As a result, competency provides opportunities or windows to initiate transformations.

Competencies are developed through both formal learning and life experiences. According to DeSeCo (2005) a competency integrates three kinds of knowledge:

(1) Conceptual (learning to know);

(2) Procedural (how to do); and

(3) Interpersonal knowledge (how to relate).

The knowledge necessary to solve problems is not a mechanical transmission. Competencies allow the use of past experiences in new context. Some authors call this indefinable knowledge that suggests interdependence exists between previous knowledge and concrete experience, acquired and ongoing, in a person's personal and work life (Whitty and Wilmott, 1991).

2.2.2 Historical Foundations of Competency-Based Education

Several prominent authorities have written that the concept of CBE and its initial usages and applications are the most influential development in education in the

second half of the 20th century (Gonder, 1978). According to Guthrie et al. (1995) the earliest quoted definition of CBE was put forward by Guthrie in 1971 at the American Association of Colleges of Teacher Education Conference. The definition included three levels of descriptions, namely:

- Essential elements competencies (knowledge, skills, behaviour) to be demonstrated by the learner, criteria to be employed in assessing competencies, and assessment of the student's competency;
- Implied characteristics includes instructions is individualized and personalized, the learning experience of the individual is guided by feedback, the programme as a whole is systemic, the emphasis is on exit, not on entrance requirements, and instructions is modularized; and
- Related or desirable characteristics involve the programme is field centered, there is a broad base for decision-making, the materials and experiences focus on concepts, skills, knowledge, both teachers and learners are designers of the instructional system, the programme includes a research component and is open and regenerative, preparation is career continuous (Guthrie, 1995)

Velde (1999) indicates that the competence model "has been and is currently being perceived as one answer – some would argue the right answer and some would argue the wrong answer – to the complexities and difficulties of reform in education". Competency Based Education has been subject of intense controversy in the developed countries (Jacobus, 2007).

Although a CBE model has been adopted and practiced widely in these countries, due to a rich variety of positions about how CBE should be defined, there is an ongoing, vigorous discussion of what, exactly, CBE really means. Often this variation in

understanding is a result of the differing contexts in which CBE is applied and, as well, as protocols for its application.

The competency model has a long history and is linked to the philosophical foundations and approaches of educational and learning theories. Three of the most important learning theories are Behaviourism, Cognitive Theory, and Constructivism.

According to Schuman (1996), behaviourism is based on observable changes in individual behaviour. New behaviours need to be repeated until they become automatic responses, that is, internalized. The learner is focused on a clear goal and can respond automatically to the ordered cues that trigger the appropriate response for reaching the desired goal. In reality, however, learners may find themselves in situations where the learned or internalized stimulus for a correct response does not occur and, consequently, in such a situation, the learner may be unable to respond appropriately. For example, a worker who has been conditioned to respond to a certain cue at work will stop production when an anomaly occurs because he has not been trained to respond to the new situation.

For Donaldson (1984), cognitive theory focuses on the thought processes behind the behaviour. This process is psychological in nature and attempts to explain human behavior by understanding cognitive processes. The underlying assumption is that humans are logical beings making choices that are, or at least appear to be, most sensible to them.

Any observed changes in behaviour reflect something happening inside the learner's mind. The goal of education is to enable learners to do a task consistently. The learner learns a way to accomplish a task, but it may not be the best way, or the most suited to the learner and his or her circumstances. For example, logging onto the internet on one computer may not be the same as logging in on another computer. In a new

situation with a different computer, the learner should have the ability to construct potentially correct strategies for logging on with the different computer based on his or her previously acquired knowledge gained by means of a similar experience (i.e., logging on) with a different computer.

According to Schuman (1996), constructivism is based on the idea that individuals construct their own perceptions and perspectives of the world from both previous and ongoing individual experiences and circumstances. This adaptability and flexibility prepares the learner to solve problems in new and unpredictable situations. The learner is thus better able to interpret multiple realities and to deal creatively with real life situations. If learners can problem solve, they are better positioned to apply their existing knowledge to novel situations. In a situation where conformity is prescribed, divergent thinking and action may cause conflict.

Through a review of the historical foundations of CBE, it is possible to recognize connections between CBE and various learning theories. Researchers such as Achtenhagen and Grubb (2001) point out that the first task analysis model emerged in Moscow in the 1860s when Victor Della Vos developed the methods for task analysis based, in part, on the conditioning theory of Pavlov. Soon after, these methods were used in the American movements for manual and technical training. Biemans, Nieuwenhuis, Poell, Mulder, & Wesselink, (2004), relate a long history of competency-based education, including referencing to Bobbitt's approach in the 1920s. Bobbitt initiated a scientific analysis of human actions to identify the underlying abilities needed for higher performance. In the 1960s, a behaviourist approach for directly translating task descriptions into behavioural attainment targets triggered responses in instructional programme design.

In the United States, interest in competence-based education and training developed during the 1960s and 1970s in the context of educational and curriculum reform, and various publications on competence-based organizational training and competence-based teacher training appeared (Biemans et al., 2004).

According to Brundrett (2000), the modern CBE movement is related to the work of David McClelland, who argued that traditional academic examinations do not predict job performance or success in life. Thus, during the 1970s, a cognitive approach led the change from the automatic behaviourist instructional models to a process that emphasized the inner processes and structure of the mind as a person learns. The cognitive view of competencies includes attitudes and values as essential parts of student performance (Guthrie et al., 1995). It places emphasis on the person as a holistic being and allows for the considerable individual differences that characterized learners. Moreover, the movement to a cognitive framework poses questions about the purpose of knowledge, and highlights the importance of a more dynamic, rather than static, concept of competency (Fleming, 2006).

Wood and Power (2001) considers competency from a developmental perspective. The authors view this perspective as resting both on an integrated deep structure of understanding and on the general ability to coordinate appropriate resources (internal cognitive, affective, and other) necessary for successful adaptation. Norris (1991) suggests that this represents a very real shift in approach because the developmental approach to competency is not focused on measurable operational definitions. According to Guthrie, et al., (1995) CBE is being implemented in a multitude of forms in many and varied educational programmes throughout the world. A historical review of CBE further reveals that, initially, CBE features were influenced by vocational training and qualifications. This led to a narrowing of skills, knowledge

and occupational focus. Criticisms of a limited view of CBE, increasing experience with CBE in differing educational contexts, and a variety of philosophical foundations for CBE are three major factors that have influenced the understanding and development of CBE over the years. The proponents of competence have helped to foster a richer conception of what CBE is than was first utilized, based on more inclusive and holistic language when describing and applying the model.

2.3 Theories of Competency Based Learning

Throughout the literature, it is possible to find different classifications of competencies. The most common categories identify general or basic competencies and specific competencies. Gonzalez and Sanchez (2003) grouped competencies into categories. These include:

1. Basic competencies that are the foundation for the learning process;
2. Personal competencies that allow individuals to be successful in different life experiences; and
3. Professional competencies that guarantee that the tasks and responsibilities are successfully met.

Hearn, Smith, Southey, and Close (1995) divide competencies into two classes: technical competencies that are unique to each profession and nontechnical competencies, such as abilities, attitudes, and knowledge that are generic to all professions. According to Echeverria (2001), professional competencies are technical, methodological, participatory and personal. Other authors such as Cheetham and Chivers (1998) present some competency categories, including:

1. Meta-competencies or trans competencies, including communication, reflection, creativity, problem solving, learning/self-development, and analysis;

2. Knowledge/cognitive competencies that include a formal knowledge base for each profession, tacit-practical knowledge, contextual knowledge, and knowledge application;
3. Functional competencies that are related to the full range of profession-specific tasks, planning, monitoring, implementing, evaluating, and self-time management;
4. Personal competencies which incorporate self-confidence, persistence, interpersonal skills, and empathy; and (5) values/ethical competencies employed in such areas as adherence to professional codes, sensibility to needs and values of others, adopting appropriate attitudes, self-regulation, environmental sensitivity.

According to Parra (2006), competencies should be classified as:

1. Basic abilities that students develop independent of their academic programme including socio-cultural, problem solving, team work, leadership, entrepreneurship and communication;
2. Professional competencies which are the basis of the profession, common to the professional action and knowledge base in each profession; and
3. Specific competencies which are exclusive to the professional area of expertise, they support specific performance in the practical field

The DeSeCo Project's conceptual framework for key competencies classifies competencies in three broad categories. Each category, with a specific competency focus, poses a challenge in developing and implementing educational programmes. Firstly, individuals need to be able to use an extensive range of knowledge and abilities for interacting effectively with their environment. This suggests that students need to understand how to use their knowledge and abilities interactively. Second, in an increasingly mutually interdependent world, individuals need to be able to engage with others from different cultures and traditions because they will meet people from

a wide range of backgrounds over time. Third, individuals need to be able to take responsibility for managing their own lives, for adjusting their lives within a broader social context as needed or desire, and for acting autonomously (DeSeCo, 2005).

In identifying key competencies, it is necessary to consider psychosocial pre-requisites for a successful and a well-functioning life. There are specific key competencies necessary for adapting to a world characterized by constant change, complexity and interdependence (DeSeCo, 2005). According to DeSeCo (2005), a framework of key competencies consists of a set of specific competencies connected in an integrated approach. Consequently, the underlying features across the categories of competencies are:

- **Moving beyond taught knowledge and skills**

In many developed countries, the value of the educational system is based on flexibility, entrepreneurship, and personal responsibility. Not only are individuals expected to be adaptive, but they must also be innovative, creative, self-directed and self-motivated. As a result, key competencies involve the mobilization of cognitive and practical skills, creative abilities, and other psychosocial resources, such as attitudes, motivation, and values (DeSeCo, 2005). The critical component in this category is "the ability of individuals to think for themselves as an expression of moral and intellectual maturity and to take responsibility for their learning and for their actions" (DeSeCo, 2005).

- **Reflection: the heart of key competencies**

Reflective thought and action is an underlying feature of this category. "Thinking reflectively demands relatively complex mental processes and requires the subject of a thought process to become its object" (DeSeCo, 2005). Therefore, reflection involves the use of meta-cognitive skills "creative abilities and taking a critical stance.

It is not just about how an individual think, but also about how an individual constructs experiences more generally, including thoughts, feelings and social relations" (DeSeCo, 2005).

- **Combining key competencies**

The special characteristic of diversity in the socio-cultural context demands a further link between specific competencies. Consequently, "any given situation or goal may demand a constellation of competencies, configured differently for each particular case" Beckett and Hager (1995). Individuals confronting different situations will apply a variety of competencies depending on the specific situation. Some factors affecting the development and implementation of new competencies include cultural norms, technological access, and social and power relationships (DeSeCo, 2005).

The above categorization of key competencies demonstrates that each competency involves knowledge, skills, attitudes, and values. Beckett and Hager (1995) indicate that, from a relational and integrated view of competency, these attributes are not discrete and independent. As well, all competencies are developed and practiced in different contexts. It is important to emphasize that the competency of reflection is best viewed as an opportunity to constantly review, evaluate, and incorporate new competencies that allow the individual to better respond to continuous and inevitable change.

2.4 Characteristics of CBT Curriculums

According to Gregory (1999) "research into competencies has not been reported extensively in higher education. Nevertheless, there are useful and thoughtful resources about how to implement competencies. For example, the competency model has been adopted at universities in the United Kingdom, Europe, Asia, United States,

New Zealand, Australia, Mexico, Cuba, Venezuela, Costa Rica, Colombia, and Chile. In these settings, a CBE approach is the basis for the curricula in numerous professions, including medicine, nursing, law, business administration, education, engineering, and social work.

In the last twenty years, the questions of how to learn and how to know have being challenging educational paradigms and, as a result, have produced a series of changes in viewpoints, processes, and educational practices. CBE recognizes or acknowledges the results of learning acquired both from formal educational processes and recognizes relevant knowledge, abilities, and capabilities that have been acquired outside of school in other contexts (Gonzalez and Sanchez, 2003).

After examining the concept of competence its historical, international and contemporary Australian contexts, Guthrie et al., (1995) present three main characteristics that capture in their thinking on CBE. First, CBE is no longer the narrow, task-based concept that it once may have been seen to be in some countries only a decade or two ago. It is, rather, a much more dynamic, humanistic and holistic concept than it was first thought to be. Second, CBE is more context-bound than is often acknowledged. Third, CBE programmes themselves are constantly changing. In fact, one of the principles of the systemic approach is that programme shape and texture is continually being refined based on feedback. The essence of CBE is "essentially good practice" (Guthrie et al., 1995).

The CBE curriculum considers global or general knowledge, professional knowledge, and practical experiences for the purpose of better recognizing the needs, and better understanding the problems, of reality. As mentioned above, each curriculum is more than simply the sum of its knowledge components (domains) and, for this reason, presents the possibility of curriculum designers combining and complementing

different viewpoints during the process of curriculum development. CBE also defines the methodology for developing and designing a learning process. To do that, the main task is to identify the basic components of the educational processes. In other words, the CBE model attempts to address the following questions:

1. Who are the beneficiaries of the learning?
2. What do the students need to learn?
3. How do students learn and develop abilities and attitudes?
4. How do students incorporate personal qualities for acquiring competencies?
5. How and when do students demonstrate the mastery of competencies?

Current models of curriculum design are moving from models that focus on teaching to models that focus on the learners. Such models seek to describe and promote activities that reinforce the capabilities for life-long learning, transferability and self-regulation. It is important that the learning process consider how students perceive, decode, and elaborate information; how they transform information into knowledge; and how they apply knowledge to problem solving and the generation of new knowledge. Thus, CBE seeks to support the development of appropriate dynamic, practical and adaptable capabilities that will be applied in future job experiences. In the case of post-secondary education, there are two main aspects in programme design to consider: inclusion of professional competencies and skills in educational programming, and the development of generic competencies such as team work and communication, among others.

The CBE curricula model strives to stimulate learning experiences that meet the educational needs of students. As well, it is necessary to consider the opinions and suggestions of students in the planning and organization processes of the class. CBE

curricula, as with other curriculum approaches, including constructivism, critical pedagogy and emancipatory, considers each student's prior learning and recognizes student competencies already attained. Thus, the student's previous knowledge is the base line of the learning process. This approach allows greater flexibility and self-directed learning for students according to best practices, rather than simply attaining minimum standards of performance.

When CBE is working properly and a student demonstrates a competency, she or he can gain credit for it without necessarily having to follow a course at all. In other words, students might be permitted to enter a programme at different levels and/or receive credits without necessarily having to take a specific course for each credit attained (Whitty and Whillmont, 1991). This proposition is related to the Prior Learning Assessment (PLA) process that is defined as: the process of identifying, assessing and recognizing skills, knowledge, or competencies that have been acquired through work experience, unrecognized training, independent study, volunteer activities, and hobbies. The PLA process may be applied toward: academic credit, requirement of a training programme and for occupational certification (Human Resource Development, Canada (HRDC)).

Related to PLA is the concept of Recognition for Prior Learning (RPL). RPL assumes that, in addition to formal education and training programmes, real and important learning takes place in many other settings and through many other activities. These other settings include the workplace; family and community life; volunteer work, church and union involvement; and travel and hobbies. Both processes assume that all relevant learning that can be identified, described and documented deserves to be recognized and/or credited. In this approach individual, organizations and communities put together a comprehensive and systematic inventory of what they

know and can do. These lifelong learning inventories and the opportunities to expand them through new learning options and challenges, will be increasingly necessary in our constantly changing society.

To draw summaries from the main characteristics of CBE curricula presented above, it is helpful to consider the interrelationships and transformations within CBE approaches. Velasquez (1997) indicates that the learning process is iterative and flexible, and proposes the following sequence for implementing the CBE model:

(1) Stage one, called programme immersion, is comprised of initial core classes integrated in four semesters that take the student to a pre – technical professional profile level;

(2) Stage two involves six semesters and is equivalent to a technical profile;

(3) Stage three is a consolidation of learning in 10 semesters and results in a professional profile accreditation.

Flexibility is reflected in the possibility of entering the curriculum structure at any point or stage and in any thematic area (according to the existing skills and knowledge of the student), receiving credits for previous learning, and the validation of knowledge acquired in previous experience. Each thematic module includes practical experiences and specific activities defined according to the professional profile (Velasquez, 1997).

In my experience with CBE as a social work practitioner, it is remarkable how competencies can empower people through the connection of theoretical knowledge and practical experience. In 1999, the Competencies Certification Process (CCP) was implemented in a large construction company in Chile. The goal of this process was to identify the level of theoretical knowledge of carpenters and bricklayers. As a result

of the CCP, the company obtained useful information about the training needs of workers.

For workers who achieved more than 80% in the certification test, the challenge was to demonstrate their knowledge in a national construction contest. Four company workers went to the contest and won first place. The experience was significant and meaningful for those workers and they subsequently decided to take further formal training in the field. The company realized that the combination and connection of theoretical knowledge and practical experience, measured through the certification process, provided highly qualified workers and put it at the forefront of the construction industry. This experience was part of an important initiative known as The National Labour Project of Competencies Certification (NLPCC), implemented in Chile during the 1990s in the context of continuous learning. The project seeks to improve the quality of the human capital under the supervision of the Ministries of Education, Economy and Finance. In collaboration with educational institutions, the project's aim is to connect the training needs of each labour sector to more effective and realistic formative opportunities.

2.5 Definition of Competency

Competency is a term that has generated a lot of debate from scholars with differing definitions been proposed. These disagreements were noted by Hoffman (1999) who conceded that multi-faceted nature of the competency ranging from narrow definitions that considers only a single element of human performance to broader definitions that considers a lot of human elements are the cause of these disagreement.

Stevenson (1995) defined 'competency' from two angles. From the first view, competency refers to the completion of a set of tasks or occupation which is carried

out in a proficient manner. The second definition of competency simply puts it as a desirable outcome. Further, Education Unit (1984) of the United Kingdom (UK) defined 'competency' as means of possessing and developing of necessary skills, appropriate attitudes and experiences for successful outcome in life. Evers, Rush and Berdrow (1998) noted that competency is any skill that might be judged at the level at which one sequences and use whiles skills referred to a related set of actions that are performed in a particular way to achieve a desirable outcome. Therefore an undesirable skill such as murdering will not be considered as a competency. In addition, the acquisitions of these skills are based on a progression from the level to an advanced one. The Australian National training Board (1992) also defines competency as the concentration on what employees are expected to do at work rather than the learning process. It encapsulates the transfer and application skills and knowledge to new situation and environment.

The definitions by far show that competency is a shift in ideology from a theory which is concerned with what people know to a more practical paradigm, which focuses on what people, can do (Norris, 1991). Competency can therefore be seen as behavioral or set of standards of performance.

2.6 Competency-Based Training (CBT)

Even though there is no generally accepted definition for CBT, there has been a general consensus, that, it is task or outcome oriented, based on industry competencies or standards and assessed based on established criteria (Tritton, 2008). CBT is defined as a form of education, which is industry and demand driven and based on well-defined industry standards. The focus is on what the employee can do at the workplace as opposed to what they know. It is geared towards equipping

employees with knowledge and skills needed to excel in a workplace environment (Anane, 2013; Tritton, 2008). Smith and Keating (2003) considered certain distinct features of a CBT programmes. These features are not expected to be evident in all training programmes but a substantial portion needs to form the major components to be considered as a good programme. These features are; a) based on competency standard; b) outcome not input focused; c) involvement with industry; d) recognition of prior learning; e) modularized; f) self-paced; g) skill-based assessment not norm-referenced; i) flexibility in delivery using large and small groups j) competencies that are widely recognized.

Other characteristics that are embedded in a CBT programme are 1) integration of theory with practice skills; 2) provision of detailed training materials that helps in acquiring the needed competencies; 3) the method of learning involves mastery learning which presumes that all participants can master the required skills or knowledge if they are given sufficient time and appropriate training methods; 4) upon entry into the programme, participant skills and knowledge are tested and those who have satisfactory level of knowledge are made to bypass education and training on the competencies they have already acquired.; 5) A variety of support materials such as prints, audiovisuals and simulations; 6) satisfactory completion is based on acquisition of specified competencies (Anane, 2013).

However, the evolution of CBT is not without controversy with many-divided opinion. Smith et al (1996) cited in Tritton (2008) noted that the introduction of CBT in Australia for instance faced a lot of obstacles because the mode of its introduction was not ideal, leading to a lot of oppositions from teachers and trainers. This Harrison et al (1995) believed was due to lack of common definitional which led to a lot inconsistency of purpose at times. Other critics also view it as a reductionist,

rigid, atomized, narrow and pedagogically unsound, limiting a holistic approach to curricula, restricting student's creativity among others. Other professional bodies have also noted by only focusing on what a person can do as a result of training rather than the process involved with training, makes CBT narrow with little reference to life skills that are essential in a work environment.

Some of the critics also focuses on the absence of theory in CBT arguing that its makes more of a management and organization endeavor rather than an educational and learning process (Hellwig, 2006).

2.6.1 Structure and Objectives of CBT

Structure of CBT

According to Norton (1987), there are five main elements of CBT, which are;

i. Careful identification and verification of competencies to be achieved and are made public in advance.
ii. Explicit statement of the benchmarks to be used in assessing achievement and the conditions under which they are achieved which are made public in advance.
iii. A training programme that provides a basis for development and assessment of trainees' competencies
iv. Participant's knowledge and attitude are considered in addition to competencies when assessing the trainee.
v. Progression from one stage to another is done at the pace of the trainee after they have demonstrated proficiency in a predetermined skill.

Objectives of CBT

According to Anane (2013), the objective of any CBT programme is to set clear standards that can be measured; develop competent individuals with relevant skills; link education and training to skills needed by employers; provide a qualified standard in which all users and participants are confident of; ensure full development of individual potential as well as promoting the concept of lifelong learning.

2.7 Development of CBT programmes in Ghana

The introduction of CBT in Ghana was part of Governments policy to drastically reform Technical and vocational education Training (TVET). The government of Ghana in 2004 issued a white paper on education, which called for a radical transformation in quality of TVET graduates so as to make them credible alternative to those who pursue general education. These reforms started with the setting up of Council for Technical and Vocational Education and Training (COTVET) in 2006 and mandated to coordinate and oversee all aspect of TVET in Ghana.as part of reforms by COTVET, CBT was introduced as a mode of delivery in all TVET institutions. COTVET defined CBT as an outcome based workers that meet industry's demand as well as prepare them for self-employment (COTVET Quarterly Newsletter, 2010). However, Braimah (2014) and Amankwah (2011) pointed out that CBT was practiced in Ghana way before COTVET's introduction in 2006. They cited Netherland University Foundation of International Corporation (NUFFIC) who implemented CBT programmes in Agriculture Engineering, Automotive Engineering, Civil Engineering, and Fashion and Design at Higher National Diploma (HND). Also Japan International Cooperation Agency (JICA) introduced CBT in Mechanical

Engineering at the HND level. In addition, the Canadian international Development Agency also implemented CBT programme in Automotive Bodyworks and Information Technology at Accra Technical Training Centre and Kumasi Technical Institute. However, Turkson, Gyeke-Dako, Oduro, & Baffour et al (2012) cited in Braimah (2014) noted that these programmes were implemented with different models and terminologies and there was therefore the need to harmonize these programmes and the COVET was set up to facilitate this process.

2.8 CBT Programme Delivery

Since the aim of CBT curriculum is based on occupational standards, there is often a consultation with institutions and business to generate quality and valid occupational standards into what is known as Learning Unit Specification (LUS). This LUS specifies the scope, level and scope of competence that must be achieved by the learner. These LUS's are also done in recognition to national standards and agenda Anane, 2013). Usually, there are four key elements of LUS, which are a) Learning Outcome, b) performance criteria; c) Range Statement and d) Evidence Requirement.

2.9 The effect of CBT on the role of Teachers and Trainers

CBT being a new concept introduced into TVET curricula has changed the focus and practice of teachers. Trainers and teachers therefore needs accommodate their everyday practice in other to accommodate CBT. According to Cleminson and Bradford (1996), professional educations, which are workplace oriented that academic should among other things, extend learning beyond immediate task at hand to others issues such a professional culture as well as norms and values specific to workplace. In addition, learning through experience is best when trainee is provided with

concepts, knowledge and skills that can be challenged and transformed in the workplace. This means that successor otherwise of the CBT curriculum to a large extent is dependent on the trainers and teachers. Unlike like the input mode of teaching (up front) where the teacher inculcates knowledge to the students, a CBT programme is designed to make the teacher/trainer a facilitator.

Earlier studies have established some problems that trainer encounter with the introduction of CBT. A common problem with the introduction of CBE is resistance from trainers who are used to the so-called up-from model of learning. Such instructors find it difficult to make the transition from a teacher to a facilitator. As part of a CBT students are expected to work at their own which the teachers expected to provide assistance. In addition, the learning outcome is shared and well known to the student. These factors have been known to generate a lot of resistance and discomfort to teachers who are already using the up-front model (Harris et al. 1995; Lowrie, 1999). Stanton (1989) cited Robinson (1993) cited the instance where in Britain, college staffs role shifting from teaching to tutoring and their expertise in need analysis, individual programme design, and evaluation has become more essential than their ability to present their material in a very interesting manner.

Another issue with CBT is staff development. The introduction of CBT must be accompanied with staff development and training with regards to the necessary competencies that will be impacted. Where these training are absent or inadequate, the outcomes of CBT aren't likely to realize. Smith and Nagle, (1995) and Choy (1996) cited in Lowrie (1999) have all cited staff development as one of the biggest obstacles that are faced during the introduction of CBT.

2.10 Competency-Based Assessment

Since the concept of competency-based human resource management was first proposed in the 1970s as a critical differentiator of performance (Boyatzis, 2009), it has become a predominant workplace reality, commonly used as an organizational development tool for the learner (McCarthy & Garavan, 2001). Built upon earlier work on skills, abilities, and cognitive intelligence (Campbell, Dunnette, Lawler, & Weick, 1970), it became a tool for understanding the talent and capability of human capital within an organization.

Assessment ratings obtained from self and others constitute its core (Tornow & London, 1998). The benefit of collecting data of this kind is that the person gets to see a panorama of perceptions rather than just self-perception, thus affording a more complete picture.

The fundamental premise is that data gathered from multiple perspectives are more comprehensive and objective than data gathered from only one source (Dyer, 2001). Many organizations use some form of the 360-degree feedback assessment inventory process (Nowack, 2005), and it is implemented in a variety of ways. Self-ratings are the first step to development for the feedback recipient, and value lies in the diversity of information it provides to the feedback recipient and how it is interpreted. It can be perceived as a positive self-development platform in stark contrast to the traditional top-downward evaluation process. Under ideal circumstances, it is used as an assessment for personal development rather than evaluation (Tornow & London, 1998). Widespread in many organizations around the world (Brutus et al., 2006), this process is reportedly used by 90% of Fortune 500 companies in the U.S. (Carruthers, 2003). The popularity of this practice has stimulated much research enthusiasm in the academic field (Dai, De Meuse, & Peterson, 2010).

2.10.1 Kirkpatrick's Four-Level Training Evaluation Model

Donald Kirkpatrick, former Professor Emeritus at the University of Wisconsin, first published this model "Evaluating Training Programmes" in 1959. The "New World Kirkpatrick Model" is the revised edition of this model introduced in 2016 to evaluate training programmes. The four levels are Reaction, Learning, Behavior, and Results.

Level 1: Reaction

It is always important that trainees have a feeling of the value of a particular training programme. Measuring how engaged they were, how actively they contributed, and how they reacted to the training helps the trainer understand how well they received it. This enables the trainer to make improvements to future programmes, by identifying important topics that might have been missing. Kirkpatrick believes the following questions must be asked of trainees when asking for reactions on a programme.

- Did you feel that the training was worth your time?
- Did you think that it was successful?
- What were the biggest strengths and weaknesses of the training?
- Did you like the venue and presentation style?
- Did the training session accommodate your personal learning styles ?
- Were the training activities engaging?
- What are the three most important things that you learned from this training?
- From what you learned, what do you plan to apply in your job?
- What support might you need to apply what you learned?

Level 2: Learning

Level 2 focuses on measuring what trainees have and haven't learned. In the New World version of the tool, Level 2 also measures what they think they'll be able to do

differently as a result, how confident they are that they can do it, and how motivated they are to make changes. This demonstrates how training has developed their skills, attitudes and knowledge, as well as their confidence and commitment.

To measure how much your trainees have learned, it is important to identify what to evaluate. Training sessions should have specific learning objectives , so make those your starting point. Learning can be measured in different ways depending on the objectives. But it's helpful to measure these areas both before and after training.

Before the training begins, trainees must be tested to determine their knowledge, skill levels and attitudes. Then, when the training is finished, trainees must be tested for a second time to measure what they have learned or measure their learning with interviews or verbal assessments.

Level 3: Behaviour

This level helps to understand how well people apply their training. It can also reveal where people might need help. But behavior can only change when conditions are favorable.

Effectively measuring behavior is a longer-term process that should take place over weeks or months following the initial training. Questions to ask include:

- Did the trainees put any of their learning to use?
- Are trainees able to teach their new knowledge, skills or attitudes to other people?
- Are trainees aware that they've changed their behaviour?

One of the best ways to measure behavior is to conduct observations and interviews. Another is to integrate the use of new skills into the tasks that you set your team, so that people have the chance to demonstrate what they know.

Level 4: Results

This is where the final results are analyzed. This includes outcomes that are deemed relevant to be learnt from the programme. The biggest challenge for any trainer is always how to identify which outcomes, benefits, or final results are most closely linked to the training, and to come up with an effective way to measure these outcomes in the long term.

Modern trainers often use the Kirkpatrick model backward, by first stating the results that they want to see, and then developing the training that is most likely to deliver them. This helps to prioritize the goals of the training and make it more effective.

2.11 Challenges in using the Competency-Based Education curriculum model

Transferring competencies from curriculum objectives to educational practice presents a serious challenge. For the actors in the teaching and learning processes, pedagogical considerations must be considered. For example, professors need to be aware that the pedagogy required for encompassing intellectual, cognitive, and attitudinal dimensions is a long and complex process (Velazquez, 1997). At the same time, students need to practice their new skills in order to acquire new competencies. According to Gregory (1999), a first step is to provide opportunities for academics to have individual and collective reflections about the theoretical approaches underpinning CBE. Along with these reflections, the educational community needs to be knowledgeable about current challenges in the teaching and learning process, with special attention paid to pedagogical strategies and didactic features. These considerations have implications for teacher training. Teachers cannot be transformed overnight and, as a result, it is strongly recommended that experienced teachers be re-trained in university programmes to update their professional competencies.

Whitty and Willmont (1991) indicate that a distinctive competency-based approach implies that competencies play a more significant role than is generally recognized in the planning and implementation of university courses. There are, however, legitimate concerns about the extent to which this approach can undermine existing positive components of programming already in place. All course designs should consider the characteristics of the learners who are expected to benefit from it. Thus, in a competence-based course, it might be expected that those learner characteristics that provide a basis for entry into the course will be identified and articulated in greater detail. Thus, it becomes necessary to take into consideration each learner's previous knowledge, experience, values and principles. This process should facilitate a common understanding of the skills, knowledge and attitudes that potential students bring to the course and afford a foundation upon which the programme of study will be build.

The process of curriculum renewal in a competency-based education programme, and related decisions to strengthen the competency elements in existing curricula, requires shared, ongoing efforts among administrators, teachers, students and other stakeholders.

Treal (2003) posits that there are common practices that can enhance the probability of success for those wishing to undertake CBE initiatives. The key elements in the implementation process are a leader/facilitator to create a culture of institutional change and stakeholders who fully participate in identifying, defining, and reaching a consensus about required competencies.

Competencies are defined at a sufficient level of specificity that they can be assessed. Multiple assessments of competencies provide useful and meaningful information that is relevant in decision-making and policy development contexts. Faculty and staff

participate fully in making decisions about the strongest assessment instruments that will measure specific competencies, including the precision, reliability, validity, credibility, and costs of each such instrument considered. A competency-based educational initiative is normally embedded within a larger institutional planning process and the related assessments of competencies are directly linked to the goals of the learning experience. The assessment results, reported in a clear, meaningful way, are also used in making critical decisions about strategies for improving student learning.

According to Velasquez (1997) the decision to implement CBE is related to improving the interconnections among different educational programmes at local levels and the educational system at the regional or national level. CBE avoids the traditional fragmentation found in academic programmes focused solely on content. According to Guthrie et al., (1995) some of the characteristics of such traditional programmes are "content-focused, time-based, emphasis on inputs, subjects, delayed feedback, narrow range of learning approaches and styles, limited field experience" (p. 29). On the other hand, CBE considers the previous learning experiences of students and uses a flexible, modular and integral curriculum design. In addition, in the formulation of CBE curricula, it is important to have an integrative axis that Considers:

1. Basic, professional, socio-humanistic, and thinking competencies as a part of the curriculum from an epistemological approach. From this perspective, the model must be modular and connected to the contexts, including previously-acquired knowledge and the validation and homologation of courses;
2. Flexibility implying a diversity of programmes, widening of accessibility opportunities, and permanency and mobility within the system;

3. Conceptualization and contextualization of the curriculum that incorporates orientation principles, including philosophical, epistemological, ontological, sociological, anthropological, physiological, and legal assumptions or premises;
4. Determination of the problematic nucleus of the programme related to its profession, discipline, and practical field. As a result of this process, it becomes possible to identify the problematic nucleus and research areas of the curricula; and
5. Definition of the thematic nucleus, represented by knowledge modules, that is constructed on the basis of the problematic nucleus. The knowledge referents of the modules should be developed from conceptual map integrating the multidisciplinary and interdisciplinary. The articulation of knowledge modules related to the thematic nucleus results in a thematic block.

One of the main challenges to implementing CBE is the training of academic members (professors and leaders). This challenge is related to the acquisition and development of pedagogical and methodological competencies. In other words, it is necessary to create a programme for academics focused on the continuous improvement of curricular qualifications, as well as pedagogical, methodological, and investigative strategies. This approach should provide professors with the opportunity not only to question CBE, but also to do research and develop theories, concepts, methods and innovative pedagogical practices in CBE.

These ideas illustrate why and how the CBE model could be an option, among several curriculum designs. In my view, the use of the competency model provides many challenges for curriculum review and reorientation, related to the roles of professors and students, pedagogical strategies, and the evaluation process. The development of participatory strategies is necessary for a more appropriate system of evaluation and

for the incorporation of practical educational experiences in programme design. The current and potential ways that CBE can be conceptualized and utilized in both post-secondary education and the professions are complex, diverse, and growing in number as ever more educators recognize its adaptability to a wide range of circumstances (Gonczi, 1997; Biemans et al., 2004).

2.12 Criticisms of the Competency-Based Education model

2.12.1 Conceptual pitfalls

The concept of competence and CBE has often created controversy and confusion. Jansen (1998) indicates that the language and terminology associated with CBE are too complex, confusing and, sometimes, contradictory. From my point of view, the real issue is not about terminology (a technical problem relating to the imprecise use of language or the assigning of more than one meaning to a term), but about recognizing and understanding of the different ideas and viewpoints underlying the terminology (i.e., conceptual considerations about the nature of education).

Ashworth and Saxton (1990) argue that the concept of competency reveals serious ambiguities and inconsistencies because "competences [have] an unclear logical status and the meaning of competence had not yet clearly defined...it is not clear whether a competence is a personal attribute, an act, or an outcome of behaviour". Brown (1994) describes competencies as traditionally focused and strongly embedded in the rational-positivistic paradigm, as well as being imposed, hierarchical, and deterring emancipation or independent and free thought. In the same sense, Hyland (1993) asserts that the conception of competence "is founded squarely on behaviouristic learning principles and suffers from all weaknesses traditionally identified with such programmes". From Hyland's perspective, competence is

concerned with what people can do, rather than with what they know, and he asserts that the advocates of competence need to explain what sort of knowledge is meant to underpin their approach, and how the connection between knowledge and competence is to be conceptualized.

2.12.2 Ideological and political implications

Theoretical work on competence indicates that competencies "represent the fusion of behavioural objectives and accountability which support a new ideology for those seeking accountability and input-output efficiency in the new economic realism of the 1980s" (Fagan, 1984). According to Hyland (1993) in the 1990s, there was a marked movement away from narrow behaviouristic conceptions of competency toward a generic version "which identifies the role played by knowledge and understanding in the generation and development of competence". The confusion and debate about the precise nature of competence has created a situation that is epistemologically equivocal and theoretically suspicious (Hyland, 1993). In other words, CBE exhibits incoherence in both its logical and epistemological basis. Thus, the competency model relies on a crude form of behaviourism that attaches a great deal of importance to performance over knowledge and understanding, and artificially separates the mental and physical components of performance (Hyland, 1993). Another apparent risk is the consideration of alternative or broader conception of CBE, such as the generic and cognitive versions identified by Norris (1991). For Hyland (1997), competence strategies cannot carry the weight of alternative models that incorporate understanding, values and a wide-ranging knowledge component because CBE is primarily concerned with the assessment of performance, not with learning and development. As well, CBE strategies are more closely associated with techniques and managerial assumptions and, as a result, cannot accommodate the ethical and

epistemological foundations of professional practice. Elliot (1993) observes that: CBE strategies, although now somewhat discredited in the academic domain, continue to linger in the political domain as an ideological device for eliminating value issues from the domains of professional practice and thereby subordinating them to political forms of control. The introduction of CBE approaches have led to widespread DE professionalization by marginalizing the foundational values of professional activity. For Hodkinson and Issit (1995) this marginalization or disconnection of a profession's ethical values and principles make the profession much more vulnerable to the managerial policies of market-oriented influences.

The critical perspective sees the competency-based education and training movement as embedded within a particular set of existing economic, social, and political power relationships that are anti-emancipatory and exploitative. From this perspective, competency-based descriptions of work cannot be divorced from the ways that they are used to continue the exploitative nature of work as organized in so-called free market economies (Chappell et al., 2000). From this perspective, CBE is tied to a neoliberal model of education that adopts and utilizes narrow, functional approaches to education.

2.12.3 Educational consequences

Jacobus (2007) analyses criticisms of CBE based on the design and implementation process of the CBE model in education thusly:

1. Early CBE programmes focused on competencies to the detriment of the role of knowledge. Complex professional education could not be completely conceptualized or defined by a list of key competencies;

2. CBE ignores the educational process and focuses solely on measurable and practical outcomes;
3. Criticisms against the behaviourist approach to CBE include the view that a behaviourist-CBE is narrowly utilitarian and uses an instrumental approach that implies a fragmentation of subjects. Behaviouristic CBE is criticized for ignoring: the connections between tasks; the attributes that underlie performance; the meaning and intention, or disposition to act; the context of performance; and the effect of interpersonal and ethical aspects; and
4. CBE reduces education to a form of human engineering because it views education as instrumental to attain specific, pre-defined ends. Systematic means-ends programme design thus attracts labels like technical and technocratic because it has an unbalanced focus on competencies and neglects values and the technical precision of outcomes (atomized list of functions). It presents education as a product rather than a process.

Roberts (1986) argues that the method itself by which a CBE curriculum is implemented carries hidden assumptions about reality and the social order that serve to support the existing socio-economic model, that is, the status quo.

According to Kerka (1998) for the critics, the CBE model is: excessively reductionist, narrow, rigid, atomized, and theoretically, empirically, and pedagogically unsound…the behaviourist breaks down competence into the performance of discrete tasks, identified by functional analysis of work roles. This analysis is the basis for competency statements or standards upon which competence is assessed and toward achievement of which CBE is directed (Kerka, 1998).

The emphasis on behaviours and performance, rather than on the mastering of cognitive skills, is consistent with the view that perceives competence in terms of

basic attributes. This view not only tends to produce narrow technical skills, but also ignores the students‟ and workers‟ meaningful experiences in the practical field (Dall‟Alba and Sandberg, 1996).

The competency model is classified as a tool that, if defined and assessed too narrowly, can actually work to hinder education and training. In some cases, if the model is used as a curriculum document to teach discrete tasks, or used to assess superficial competency standards, then the resulting curriculum may become narrow in content (Kerka, 1998).

Critics of the competence model suggest that it contains an inappropriate and reductive representation of learning. According to Jacobus (2007), the competence model is educationally and philosophically inadequate and there is no basis choosing any one specific, theoretical definition of competency from the almost unending inventory of competencies.

According to Chappell et al., (2000, competency models pursue, develop and exercise only a reductionist list of behaviours and the competency approach effectively ignores the human capabilities of thinking and reflecting. All competencies are seen as mechanical responses that are built on a behaviourist foundation.

Gonczi (1997) indicates that in recent years there has been an increasing interest internationally in the relationship between education and the workplace.

Countries in almost every part of the world, including Scotland, England and Wales, Canada, the United States, Mexico, many South American countries, Australia, New Zealand, Sweden, France, Spain, Kuwait, Indonesia, Korea, and Thailand, have all undertaken, or are about to undertake, substantial reforms of their educational post-secondary systems (Gonczi, 1997). To implement this systemic reform, many of the

countries mentioned are committed to selecting a particular curriculum approach, and the adoption of the CBE model is one option.

Adopting a CBE model, however, constitutes a risk if the decision does not entail a vigorous debate and full discussion of both the conceptual issues underpinning CBE and the practical problems involved in the implementation of a CBE model (Gonczi, 1997).

According to Gonczi, (1997), one way to address the complex range of risk factors associated with CBE and the practical application of using the model, is to ask important questions like:

1. Who are the main actors on the learning process?
2. What are the values and principles underpinning the educational programme?
3. Are the pedagogic and teaching models responding consistently to the curriculum approach?
4. How does the educational programme ensure quality?

These questions, and many others, are indispensible in the discussion of a rationale for the selection of CBE as an alternative to guide curriculum change. CBE curricula have been adopted by both radical conservative policy makers and progressive educational reformers (Gonczi, 1997). To understand this seeming contradiction, Gonczi (1997) indicates that it is necessary to consider the following factors:

1. the conjunction of an agenda that simultaneously includes authority control on the learning process and meets the requirements of industry standards;
2. The dominance of educational curricula by disciplinary and professional boundaries;
3. The reduction of the gap between practice and theory; and

4. The breaking down of the dominance of institutional learning and the consequent democratizing education.

These considerations illustrate the complexity of the debate on CBE. While opponents claim that CBE is just a manifestation of a conservative political agenda, its supporters see CBE as a potential tool to change such agendas. There is no doubt that analyzing and reflecting on the consequences and benefits of CBE is a necessary task before selecting or rejecting the approach.

Identifying the weaknesses and pitfalls of the CBE model at the beginning of curricula design or renewal provides an opportunity for those who are leading the curricula change to avoid mistakes. Analyzing and reflecting on the issues associated with the selection and implementation of a CBE curriculum is an indispensible part of responsible and thoughtful decision making.

Considering the overview of the philosophical and theoretical foundations of CBE presented in section 2.5 of this chapter, it is possible to say that the vision of contemporary CBE advocates appreciates and acknowledges that learning objectives should cover the whole spectrum of knowledge, skills, capabilities, attitudes, and values. This means that a richer, more educationally attractive conception of competency is indeed necessary

2.13 Empirical Studies

Robinson (1993) conducted a study at the Camberra Institute of Technology (CIT) to find out how the teachers were dealing with changes to their role as a result of CBT. The study employed interview and observation as the study instrument and found that CBT was mainly about mastery of individual skills instead of how they are integrated and applied. Some of the teachers who were interviewed from the fashion department

of CIT were particularly concerned about how the skills were broken down in very smaller pieces, which in their view were irrelevant or unnecessary. The findings also revealed that trainers do not believe knowledge can be inferred through performance such as tests or examination. The CBT programme was also found to have added extra load to the teachers especially in the area of assessment and record keeping. The teachers do not however believe that CBT has led to significant changes to their teaching style but only reduced their autonomy.

Lowrie (1999) also studied the effect CBT has had on the role of instructors in the vocational sector in Australia. The study was conducted using a multifaceted survey method that involved case studies and focus group discussion and interview was used to gather information from the instructors regarding the effect CBT has had on their work. The findings revealed that most of the instructors who participated in the study had a positive opinion about CBT with majority of them indicating a high proficiency in term of their understanding of the concept of CBT. The instructors also agreed that courses were well aligned with industry competence standards. Lack of resources and staff development was identified as the factors that were impeding the smooth running of CBT programmes.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter discusses the methods and procedures used in collecting data for the study. It involves the description of the research design, the targeted population, sample and sampling techniques, instruments used, data collection procedure and data analysis plan.

3.2 Research Design

For the purpose of this study, the researcher adopted the mixed method design. Creswell and Clark (2007) defined mixed method design as "a research design with philosophical assumptions as well as quantitative and qualitative methods". According to them, this design allows the researcher to collect and analyze data or information using both qualitative and quantitative approaches in order to produce a better and in-depth understanding of the research questions.

The main aim of this design is to allow the researcher complement the weakness of a quantitative design with the strength of a qualitative design. This design is also used for direct comparison of qualitative and quantitative results (Creswell and Clark, 2007). For quantitative part, the cross-sectional survey design was employed. It is a type of descriptive research that produces a 'snapshot' of a population at one or more point in time and concerns with the present status of a phenomenon.

Second part was the qualitative paradigm, which involved the use of semi-structured interviews. The purpose of this was to find out what was actually on the minds of the participants by selecting few of them (Fraenkel & Wallen, 2006). In as much as the quantitative questionnaire allows the researcher collect data from a large sample; it

does not give the in-depth data that the researcher could get through interviews. Thus, interviews give the participants the opportunity to respond to questions in their own words. Third stage is the triangulation process where the quantitative and qualitative data were jointly analyzed. This process allowed the researcher to interpret the data based on the quantitative and qualitative paradigms.

The study is concerned with how instructors perceived CBT and how it has influenced or changed their roles as instructors. In addition, the study also considered whether the CBT designers possess enough competencies to impart into their trainees and how effectively the competencies are imparted into the students/trainees. This study was a fact-finding exercise that was cross-sectional in nature and employed varied survey techniques such as interview, focused group discussion and observation to gather information from the respondents.

3.3 Study Population

According to Polit and Hungler (1999) a population is an aggregate or totality of all the objects, subjects or members that conform to a set of specifications. According to Kusi (2012), population is a group of individuals or people with the same characteristics and in whom the researcher is interested. The study population was made of all FDT instructors (teachers) and students (trainees) across the various vocational and tertiary institutions in Ghana. However, surveying the entire study population is practically impossible and the researcher only used a subset of this population.

3.4 Sampling Procedure and Technique

To ensure that the study had an adequate validity, the researcher carefully selected the respondents for the study to ensure that only those views are relevant were obtained for the study. As a result, a non-probability sampling was appropriate for the study. In determining the perception of instructors regarding CBT, the views of the instructors who were using previous teaching methods prior to the introduction of CBT was crucial. Therefore, they study sampled instructors who have been on the job for at least one year before the introduction of CBT into TVET curriculum. Therefore a purposive sampling technique, which is a non-probability sampling technique, was employed. To sample the students or trainees, the study employed a purposive sampling where only trainees whose instructors were part of the study were selected for the study. Purposive sampling is a sampling technique where sampling is done based on the researcher's judgement that those chosen are the key individuals who can provide required information for the study.

3.5 Sample size

Francis et al, (2010), defines sample as the number of observations that constitute and represents the population entirely. Mostly denoted by the letter 'n' the sample size is an important feature of any empirical study in which the goal is to make inferences about a population from a sample. In practice, the sample size used in a study is determined based on the expense of data collection, and the need to have sufficient statistical power.

Purposive sampling technique was employed targeting the instructors and students of the Department of Fashion design and textiles education of University of Education Winneba-Kumasi campus. The samples were drawn from the total students and

instructors. In all, sample of fifty (65) was considered for this research consisting of five (5) instructors, and sixty (60) students.

3.6 Study Instruments

The study instrument employed in the study was interview, focus-group discussions, observation and questionnaires.

3.6.1 Interviews

Interviews seeks to describe and the meanings of central themes in the life world of the subjects. The main task in interviewing is to understand the meaning of what the interviewees say. (Kvale, 1996). A qualitative research interview seeks to cover both a factual and a meaning level, though it is usually more difficult to interview on a meaning level. (Kvale,1996). Interviews are particularly useful for getting the story behind a participant's experiences. The interviewer can pursue in-depth information around the topic. Interviews may be useful as follow-up to certain respondents to questionnaires, e.g., to further investigate their responses. (McNamara,1999). The researcher used the general interview guide approach. This was used to ensure that the same general areas of information are collected from each interviewee; provided more focus than the conversational approach, but still allowed a degree of freedom and adaptability in getting the information from the interviewee.

The researcher engaged the instructor's with semi structured interview guides. The semi structured guide was used to ensure that whiles the respondents were expressing their views on questions posed to them, they had the guide to streamline the conversation to what the research intended to achieve. Both instructors and trainees

were interviewed when assessing the impact of CBT on their roles and how effectively the learning process has been.

3.6.2 Focused Group Discussion

A Focus Group Discussion (or FGD) is a qualitative research method in the social sciences, with emphasis and application in the developmental programme evaluation sphere.

FGDs are predetermined semi-structured interview led by a skilled moderator. The moderator asks broad questions to elicit responses and generate discussion among the participants. The moderator's goal is to generate the maximum amount of discussion and opinions within a given time period. (Ajibade, 2003.)

Focus group discussion is frequently used as a qualitative approach to gain an in-depth understanding of social issues. The method aims to obtain data from a purposely selected group of individuals rather than from a statistically representative sample of a broader population. Even though the application of this method in conservation research has been extensive, there are no critical assessment of the application of the technique. In addition, there are no readily available guidelines for conservation researchers.

The researcher conducted two focused group discussions composed of instructors and trainees. The aim of this focused group discussions were to determine the general perception of the instructors and students on various issue relating to CBT.

3.6.3 Observation

Observation is a systematic data collection approach. Researchers use all of their senses to examine people in natural settings or naturally occurring situations.

Observation of a field setting involves:

- prolonged engagement in a setting or social situation
- clearly expressed, self-conscious notations of how observing is done
- methodical and tactical improvisation in order to develop a full understanding of the setting of interest
- imparting attention in ways that is in some sense 'standardized'
- recording one's observations

The researcher employed the participant observation technique. Participant observation "combines participation in the lives of the people being studied with maintenance of a professional distance that allows adequate observation and recording of data" (Fetterman, 1998). Participant observation underscores the person's role as participant in the social setting he or she observes. The range of roles one may play as a participant observer have been describe by Gold (1958), Adler and Adler (1984) and others. Bernard (1998) suggests that participant observation must be learned in the field. However, he identifies several skills associated with participant observation.

Observation featured prominently in the data collection. The researcher observed the attitude of instructors in an environment where they used CBT as mode of lecture delivery. This observation was very critical in determining instructors and students' behaviour in a CBT environment. More importantly, the researcher observed to know whether the teacher and students have been influenced with the CBT paradigm of teaching and learning in the lecture rooms and laboratories.

3.7 Analysis of Data

In conducting the research, the researcher observed the highest level of ethical consideration. All information's were collected from the respondents out of their own freewill. Confidentiality of the information received and the anonymity of the respondents were protected. The information obtained from the respondents was used only for this research. The field data were collated, sifted through and screened in order to address questions that have been answered partially or not answered. After editing and coding, the data were entered into the computer using the Statistical package for the Social Sciences (SPSS) version 21 software. Before performing the desired data transformation, the data were cleaned by running consistency checks on every variable. Rectifications were made after verification from the questionnaires and the database was generated. The responses were analysed using basically descriptive statistics involving mainly frequency distributions. The descriptive statistics allowed the researcher to use numerical values to represent scores in the sample. It also provides the researcher with data that allow for inferences on the population and direction for answering the research questions. The returned answered questionnaires were scored and coded for analysis and answering of the research questions. The percentage, mean and the standard deviation of the responses for each research question was given. Tables and charts were used for the presentation. A summary of the conclusion and findings were presented, based on the findings and supported literature.

CHAPTER FOUR

PRESENTATION AND DISCUSSION OF FINDINGS

Overview

The purpose of the study was to critically analyze and appraise the effectiveness of the teaching of competency-based skills in the Fashion and Textiles programme in the Ghanaian CBT space. This section of the study provides an analysis and discussions of data collected from the study.

4.1 Section A: Bio-Data on Respondents

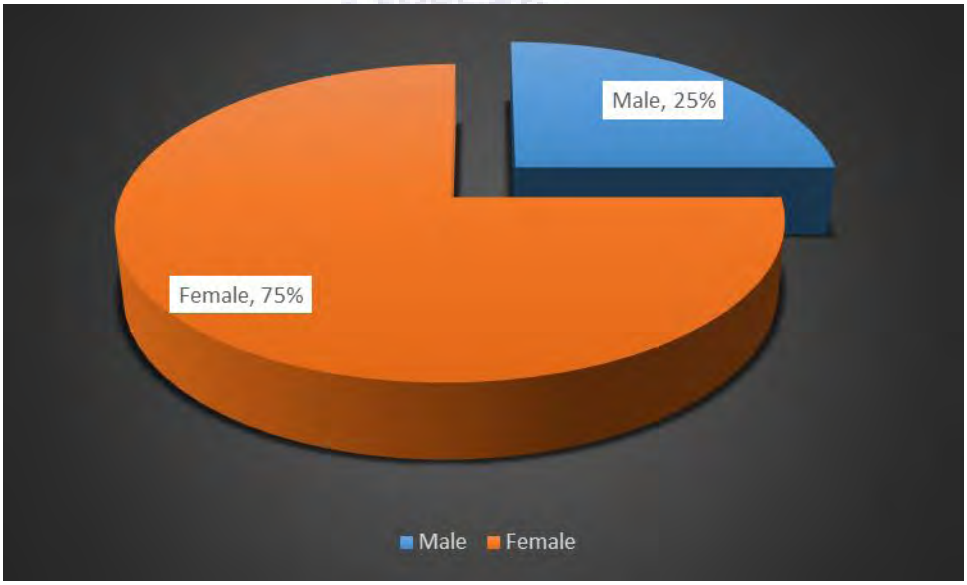

Figure 4. 1 Gender distribution of respondents Source: Field data, 2018

Figure 4.1 shows the gender distribution of the respondents who took part in the survey. Out of a total of 65 respondents to whom the questionnaires were distributed, 25% of them were males while the remaining 75% were females. This clearly shows that females dominates the BSc Fashion Design and Textiles

in programme studied. This result is not surprising because fashion design and textiles programmes are mostly dominated by the female population.

Table 4.1: Age of respondents

Age (years)	Frequency(n)	Percentage (%)
20-25	18	28
26-30	25	38
31-35	16	25
36- 40	2	3
40 and above	4	6
Total	65	100%

Source: Field Data, 2018

Presented in Table 4.1 is the age distribution of respondents who were considered for the survey. The information reveal that majority of the respondents 43 which constitutes 66% were 30 years old or younger. Moreover, 16 of the respondents (25%) reported to age between 31 and 35 years. Additionally, 6 respondents epitomizing 9% were people who have attain 36 years or older. This result show that the sampled respondents studying fashion design and textiles are young.

Level of Education of the Respondents

The researcher sought to find out the level of education of the respondents who were considered for the study. The result is presented in Table 4.2.

Table 4.2: Qualification of respondents

Qualification	Frequency (n)	Percentage (%)
WASSCE/SSCE	9	13.8
NVTI	0	0.0
Intermediate	6	9.2
Advanced	22	33.9
Diploma/HND	10	15.4
First Degree	18	27.7
Total	65	100

Source: Field Data, 2018

Table 4.2 shows the educational levels of respondents who responded to the questions in the study. Out of the 65 respondents who provided answers on their educational qualification, 22 of them, representing 33.9% had advanced qualification. Diploma / HND and first degree holders were 10 and 18 respondents respectively representing 15.4% and 27.7%. WASSCE certificate holders were 9 representing 13.8%. Overall results show that most of the respondents in the BSc Fashion Design and Textiles had a very strong educational qualification.

Length of Study (students)

The length of study of the BSc Fashion Design and Textiles programme in the University of Education, Winneba was assessed by the researcher (Table 4.3)

Table 4.3: The length of study of Fashion design and Textiles programme

Length of study	Frequency (n)	Percentage (%)
First year	5	8.3
Second year	9	15.0
Third year	31	51.7
Fourth year	15	25.0
Total	60	100

Source: Field Data, 2015

Table 4.3 reports the responses to questions posed to respondents on how long they have been pursuing their degree programmes at University of Education (UEW). Table 4.3 clearly shows that majority (51.7%) of the respondents were in their third year of pursuing their degree programme. Again the information in Table 4.3 indicates that, 25% of the student respondents were fourth year students. Furthermore, a few, 14 student respondents (23.3%) were either in their first year or second year of pursuing their degree programmes. The results generally showed that respondents were dominated by third and final year students, which is likely to add more credibility to their responses since they are nearing the completion of their study.

4.2 Section 'B': Students Professional Programme studied

4.2.1 Prior Fashion and Textile background of students

Table 4.4 Students Prior Fashion background

Responses	Frequency	Percentage
Yes	56	93.0
No	4	7.0
Total	**60**	**100**

Source: Field Data, 2018

Presented in Table 4.4 is the student respondent's responses to their professional programme studied prior to pursuing BSc programme at UEW. The result in Table 4.4 shows that majority of respondents has fashion background before enrolling for the BSC programme at UEW. This is confirmed by an overwhelming 93% of the 60 respondents who answered the question. Only 4 respondents representing 7% had no fashion background prior to enrolling on the programme. This clearly shows that majority of the respondents had a foundation knowledge in fashion and design and are enrolled on the programme to increase and enhance their knowledge and skillsets.

4.3 Objectives of the CBT programme for Fashion Design and Textile educational programmes

Respondents were asked on the objectives set for the Fashion Design and Textile education as a CBT programme at the University of Education Winneba. Responses were gathered from the questions of the interview guide submitted to both lecturers and students of the programme. A qualitative analysis of the responses is provided below. Based on the set objectives of major CBT programmes, majority of the respondents outlined that the CBT programme enable participants to gain employable skills and serve as a model of innovation. Particularly most respondents stated that fashion as a CBT programme provided them with apprenticeship enabling them to escape the issue of unemployment after school. These views were also shared by the instructors of the fashion programme. One respondent stated "I never had the chance for formal education, this is a good opportunity for me to learn a trade'. This in the researchers view is a major objective of the programme as almost all instructors agreed that the CBT programme is a self-help programme providing students on-the-

job experience, mentoring, training and development courses, programmes and activities.

With regards to the instructors' views, majority of the responses were centered on encouraging students to improve their competencies through multiple activities such as creative design, working drawings, modelling, pattern drafting, garment designing, pattern construction and handling of sewing equipment among others.

The instructors also drew emphasis on the fact that fashion as a CBT programme provides for clear performance by measurable standards, assesses achievement of competencies, and recognizes previous education and training and aim at personal professional growth and development.

Lastly, respondents were asked to indicate the type of fashion design and textiles-related programmes they studied prior to joining UEW. The respondents' responses were varied but majority of the respondents had undertaken programmes like advanced fashion, fashion design and textile, clothing and textile among others. However, some respondents have also indicated studying programmes like textile design, technical drawing, and merchandising among others.

4.4 Types of Competency Based training skills being studied

Competency based training emphasizes what a person can do in the workplace as a result of completing training or through relevant experience and learning that has taken place in the workplace or elsewhere. Competency includes the capacity to:

- Perform individual tasks
- Manage a range of different tasks
- Respond to contingencies, emergencies or breakdowns
- Deal with responsibilities of the workplace

Table 4.5: Types of Competency-based training skills studied in the BSc programme

CBT Skills	Yes	No	Total
Creative Design	54	9	61
Working Drawings	52	10	62
Modelling	48	14	62
Beauty Culture	45	17	62
Pattern Drafting	64	1	65
Garment Designing	64	1	65
Pattern Construction	59	4	63
Handling of Sewing Equipment	48	13	61
Fashion Drawing	50	12	62
Fashion Illustration	48	14	62
Embroidery	56	7	63
Applique	50	13	63
Dyeing	48	15	63
Computer Aided Design	62	2	64
Millinery Work	62	2	64
Dressing	34	25	59
Accessories Production	59	4	63

Source: Field Data, 2018

Using the student's response in Table 4.5, it is clear that the main skill being taught as per the programme are, Pattern Drafting, Garment Design, Millinery Work and Accessory Production. These skills had less than 5 of the respondents responding No indicating their popularity and possible importance in Fashion Design and textiles Programme.

On the Other hand, skills such as Dressing, Dyeing and Beauty Culture had more respondents (15 and above responding NO indicating their limited role in the programme. It can be an indication that these courses are advanced or optional skills where students have the option to choose or not. It could also indicated their less importance as core competences.

Lastly, the responses, shows skills in Creative Design, Working Drawing, Modelling of Sewing Equipment, Fashion Drawing, Fashion Illustration, , and Applique are intermediate skills. Students who responded NO were between 5 and 15.

4.5 Effectiveness of the teaching of the competency-based skills in the Fashion Design and Textiles programme

High-performance organizations realize that their success depends on how capable their people are. They also recognize that formal education doesn't necessarily provide employees with the appropriate skills required to succeed in the workplace. The solution lies in training staff to meet the **specific requirements of your organization**. This is where competency-based training comes in.

Competency-based training is developed around the competency standards that have been identified for a specific job. To be assessed as competent, a person must demonstrate the ability to perform the job's specific tasks.

Table 4.6: Effectiveness of the teaching of CBT in Fashion Design and Textiles Programme

CBT Skill	Very effective	Effective	Neutral	Non effective	Mean	Mean rating
Fashion Drawing	17(26.2%)	34(52.3%)	8(12.3%)	6(9.2%)	3.9	1
Applique	16(24.6%)	29(44.6%)	5(7.6%)	15(23%)	3.8	2
Millinery Work	28(43.1%)	23(35.3%)	4(6%)	10(15.3%)	3.7	3
Computer Aided Design	17(26.1%)	34(52.2%)	8(12.3%)	6(9.2%)	3.6	4
Pattern Construction	16(24.6%)	29(44.6%)	5(7.6%)	15(23%)	3.5	5
Creative Design	32 (49.2%)	12 (18.5%)	7 (10.7%)	14 (21.5%)	3.4	6
Embroidery	19(29.2%)	28(43.1%)	10(15.3%)	8(12.3%)	3.4	7
Working Drawing	28(43.1%)	23(35.3%)	4 (6.0%)	10(15.3%)	3.2	8
Accessories Production	23(35.3%)	28(43.1%)	4(6.0%)	10(15.3%)	3.2	9
Garment Designing	30(46.1%)	23(35.3%)	6(9.2%)	6(9.2%)	3.1	10
Pattern Drafting	25(38.4%)	20(30.7%)	0 (0.0%)	20(30.7%)	3.0	11
Fashion Illustration	21(32.3%)	23(35.3%)	15(23%)	6(9.2%)	3.0	12
Dyeing	6 (9.2%)	7(10.7%)	20(30.8%)	32(49.3%)	1.89	13
Modeling	12(18.4%)	6(9.2%)	14(21.5%)	33(50.7%)	1.70	14
Beauty Culture	14(21.5%)	7(10.7%)	13(20.0%)	31(47.6%)	1.54	15
Handling of Sewing Equipment	12(18.4%)	9(13.8%)	13(20.0%)	31(47.6%)	1.33	16

Very effectiveness= (4), effective = 3, neutral = 2, non-effective 1 Source: Field Data, 2018

Table 4.6 reports the responses regarding the effectiveness of CBT skills they acquire from fashion as a CBT programme. The students were asked to rank the effectiveness on four- point likert scale which were labelled, very effective (4), Effective (3), Neutral (2), and Non Effective (1). The responses to each skill were then aggregated and the mean (average) value computed and reported in Table 4.6. The respondents reported that, all the understudied CBT skills were effective. This was evidence that all the understudied CBT skills were rated above 2. Notwithstanding, respondent's rating all the skills as effective, some CBT skills were rated above others.

From Table 4.6, more than half (78.5%) of the respondents, reported that Fashion Design was very effective or effective (M=3.9). Again, 45 representing 69.2% asserted applique (M=3.8) was effective. Furthermore, millinery work (M=3.7) was the next very effective CBT skills respondents attested to. Again, about 78% asserted that, computer Aided design (M=3.6) was an effective CBT skill.

Moreover, 45 respondents representing 69.2% said pattern construction was effective (M=3.5), 44 representing 67.7% agreed that Creative design was effective (M=3.4) and 47 representing 72.3% affirmed Embroidery (M=3.2) was effective.

Majority of the respondents also agreed to the efficiency of working drawing (72.3%), accessories production (69.2%), and garment designing (78.3%), pattern drafting (78.4%) and fashion illustration (78.4%).

On the contrary, majority of the respondents refuted the effectiveness of the following as they apply to the fashion design programme; handling of sewing equipment (50.7%), beauty culture (47.6%), modelling (49.3%) and dyeing (49.3%)

4.6 Discussion of Findings

Competency-based training (CBT) was introduced into the curriculum of NVTI as a way of upgrading the skillsets of students to support national development. The present study had two main objectives, first is to determine the course content of BSc. Fashion Design and Textiles programme at UEW in the light of CBT. Secondly, the study also tried to determine the effectiveness of these courses that make up BSc Fashion Design and Textiles.

The finding revealed that majority of the respondents had prior information on the fashion programme before they enrolled in it at the CBT level of the University. The most common courses in the BSc Fashion Design and Textiles were Pattern Drafting,

Garment Design, Pattern Construction, Computer Aided Design, Millinery Work and Accessories Production. These courses as basics give them the ability to make garment from pattern design to sewing of garments.

These findings agrees with the view of Guthrie et al., (1995) who stated that the essence of any CBT programme is good practice. This view is buttressed by Stevenson (1995) who posited that any competency sets out task to be completed sequentially in a proficient manner. In Rush and Berdrow (1998) view competency is any skill that might be judged at the level at which one sequences and use whiles skills referred to a related set of actions that are performed in a particular way to achieve a desirable outcome. The researcher recognizes that all the courses of the CBT programme a jeered towards completing a specific goal of producing a good fashion design.

In the light of findings, most of the students identified them as the main courses in their programme. This indicate that the emphasis is on garment making. CBT is touted as skills focused and practically-based instead of theory based. The courses identified from the study shows an emphasis on the practical knowledge and less about the theoretical foundation.

According to Anane (2013), a CBT programme is put in place to develop competent individuals with relevant skills; link education and training to skills needed by employers; provide a qualified standard in which all users and participants are confident of; ensure full development of individual potential as well as promoting the concept of lifelong learning. These views were buttressed by the study with majority of the respondents (both instructors and students) asserting that CBT programme is a self-help programme providing students on-the-job experience, mentoring, training and development courses, programmes and activities.

Finally, the study tried to determine how effectively the courses identified were. For majority of the courses identified, only modeling, beauty culture, handling of sewing equipment and accessories production were identified by respondents as being less effective. However, their average responses fall within neutral on the scale. This probably means that these courses are not necessarily ineffective but not as effective compared to the other courses in the programme. The other remaining courses were found to be effective from the responses. However. None of these courses rated very effective by the respondents with the average responses showing the courses are only effective. The above finding is in contrast with the view of Whitty and Willmont (1991) who indicated that a distinctive competency-based approach implies that competencies play a more significant role than is generally recognized in the planning and implementation of university courses. In Treal's (2003) view the key elements in the implementation process are a leader/facilitator to create a culture of institutional change and stakeholders who fully participate in identifying, defining, and reaching a consensus about required competencies.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction:

The purpose of the study was to critically analyze and appraise the effectiveness of the teaching of competency-based skills in the BSc Fashion Design and Textiles programme in the Ghanaian CBT space with emphasis on the programme of University of Education Winneba, Kumasi Campus. This section of the study presents the summary of the findings, conclusion, recommendations and suggestions for future studies.

5.2 Summary of Findings

Competency based training (CBT) has been introduced into Ghana's technical and vocational training recently to improve the skills set of students who prior to these were considered inadequately skilled. CBT is often recommended because of its focus on practical skills rather than theory.

The present study investigated CBT is BSc. Fashion Design and Textile at UEW. The study objectives was to determine the course content of BSc. Fashion Design and Textile and how effectively they are taught and learnt. The study utilized self-administered questionnaire that were administered to students and instructors and the result analyzed with SPSS software.

The first finding revealed that students had prior knowledge before they enrolled in the fashion course of the institution's CBT programme. Moreover, the most common courses in the BSc. Fashion Design and Textiles were Pattern Drafting, Garment Design, Pattern Construction, Sewing of Garment, Computer Aided Design, Millinery

Work and Accessory Production. These courses at its basics gives them the ability to make garment from pattern design to sewing of garments.

Furthermore, the study revealed that the fashion course in the CBT programme enable students to gain employable skills and serve as a model of innovation. Respondents felt the programme provided them with apprenticeship enabling them to escape the issue of unemployment after school.

Finally, the study tried to determine how effective the courses identified were. For majority of the courses identified, only modeling, beauty culture, handling of sewing equipment and accessories were identified by responsive to be less effective.

5.3 Conclusions

It can be concluded grounded on the findings that majority of the students who enrolled in the fashion programme were female and that almost all students had prior knowledge in the course before they enrolled. It must be stated that teachers and students recognized the important role fashion as a CBT programme plays in the lives of students and the community in general.

Skills such as Pattern Drafting, Garment Design, Millinery Work and Accessory Production, Dressing, Dyeing and Beauty Culture, Creative Design, Working Drawing, Modelling of Sewing Equipment, Fashion Drawing, Fashion Illustration, and Applique were integral skills respondents acquired from the study of the fashion programme.

Finally, most of the courses offered in the fashion programme were deemed effective with few not being effective.

5.4 Recommendations

The study found the following courses were not ranked effective. These are modeling beauty culture, handling of sewing equipment and accessories production. The researcher, therefore, recommends for curriculum developers to concentrate on these courses by either redeveloping this module or seek improvement to make them more effective and appealing to students.

Another recommendation is for a general improvement and upgrading in the fashion design and textile programme. One of the findings revealed that none of the courses was ranked as very effective. This suggests that there are areas of the programme that needs continuous improvement and this can help upgrade the level of application by students. This can be achieved by involving students in the improvement process by soliciting their views at the end of each year to provide valuable feedback. This can go a long way in improving the effectiveness of student learning experience.

5.5 Suggestions for further Studies

The following has been suggested as an extension to the present study.

- The effects of CBT curriculum on the employability of Technical and Vocational graduates.
- How CBT curriculum has transformed the teaching strategies of teachers in Ghana.

REFERENCES

Achtenhagen, F., & Grubb, N. (2001). Vocational and occupational education: Pedagogical complexity, institutional diversity. Washington: AERA.

Adler, S., & Adler J. (1984). A framework for evaluation of secondary data sources for epidemiological research. International Journal of Epidemiology, 25(2), 435-442.

Ajibade, L. T. (2003), A methodology for the collection and evaluation of farmers indigenous environmental knowledge in developing countries indigenous African. *Journal of indigenous knowledge systems, 2 (99-105).*

Amankwah, E. (2011). Relevance of competency based training in Polytechnic education for national development. . Journal of Education and Practice, 49-58.

Anane, A. C. (2013). Competency based training: Quality delivery for technical and vocational education and training (TVET) institutions. (Vol. 6). Educational Research International.

Ashworth, P., & Saxton, J. (1990). On competence. Journal of Further and Higher Education, 14(2), 3-25.

Australian National Training Board. (1992). National Competency Standards, Policy and Guidelines (2nd edi). Canberra: National Training Board Limited.

Beckett, D., & Hager, P. (1995). Philosophical underpinnings of the integrated conception of competence. Educational Philosophy and Theory, 27(1), 1-24.

Bernard, P. (1998). Nascent entrepreneurship and the level of economic development. Small Business Economics, 24(3), 293-309a

Biemans, H., Nieuwenhuis, L., Poell, R., Mulder, M.,& Wesselink, R. (2004). Competency-based VET in the Netherlands: Background and pitfall. [Electronic version]. Journal of Vocational Education and Training, 56(4), 523-538. Retrieved November 4, 2007, from http://www.bwpat.de/7eu/biemans_etal_nl_bwpat7.shhtml.

Boyatzis, R. E. (2009). Developing emotional, social, and cognitive intelligence competencies in managers and leaders in educational settings. *Handbook for developing emotional and social intelligence: Best practices, case studies, and strategies*, 359-378.

Braimah, C. A. (2014). Competency based Education Training: A new perspective for employability and employment creation. International Journal of Innovative Research and Studies, 3(3), 94-107.

Bridges, D. (1996). Competence-based education and training: Progress or villany? [Electronic version]. Journal of Philosophy of Education, 30(3), 362376. Retrieved October 1, 2007, from http://www.blackwellsynergy.com.libproxy.uregina.ca:2048/doi/pdf/10.1111/j.14679752.1996.tb00406.x.

Brown, R. (1994).Reframing the competency debate: Management knowledge and meta-competence in graduate education". Management Learning, 25(2), 289-299

Brundrett, M. (2000). The question of competence: the origins, strengths and inadequacies of a leadership training paradigm. *School Leadership and Management*, *20*, 353-370.

Campbell, J., Dunnette, B., Lawler, J.J. & Weick, M. (2012). Student professional development: Competency-based learning and assessment in an undergraduate industrial technology course.

Carracci, C., Englander, R., Ferentz, K., Martin, C., & Wolfsthal, S. (2002). Shifting paradigms: From Flexner to competencies. [Electronic version]. Journal of Academic Medicine, 77(5), 361-367. Retrieved October 1, 2007, from http://www.intmed.uiowa.edu/Retreats2005/Education/carraccio2002.pdf

Chappell, C., Gonczi, A., & Hager, P. (2000). Competency-based education. In G. Foley (Ed.), Understanding adult education and training. (pp.191-205). St. Leonards, N.S.W.: Allen & Unwin.

Cheetham, G., & Chivers, G. (1998). The reflective and competent practitioner: A model of professional competence which seeks to harmonise the reflective practitioner and competence-base approaches. [Electronic version]. Journal of European Industrial Training, 22(7), 267-276. Retrieved November 12, 2007, from

Chickering, A., & Claxton, C. (1981). What is competence?. In R. Nickse & L. McClure, (Eds.), Competency based education. (pp. 5-41). Oregon: Northwest Regional Educational Laboratory

Cleminson, A., & Bradford, S. (2014). Professional Education: The relatiosnhsip between academic and experimental Learning. Journal of Vocational Education and Training, 48(3), 249-259.

COTVET. (2010). TVET in Ghana. COTVET Quarterly Nesletter, 2(1).

Creswell, J. & Clark, R. (2007). Research design: Qualitative and quantitative approaches. California: Sage Publications, Inc.

Dall‟Alba, G., & Sanderberg, J. (1996). Educating for competence in professional practice. Instructional Science, 24(6), 411-437.

DeSeCo, O. E. C. D. (2005). The definition and selection of key competencies. *Executive summary. OCDE-USAID. Recuperado de: http://www. deseco. admin. ch/bfs/deseco/en/index/02. html*.

Donaldson, M. (1984). Children's minds. London: Fontana.

Dyer, J. E (2001). Effects of teaching approach on problem-solving abilities of agricultural education students with varying learning styles. Journal of Agricultural Education, 37(4), 36-43.

Echeverría, B. (2001). Configuración actual de la profesionalidad. Revista de Letras Deusto, 31(91), 160-167

Edwards, M., Sanchez, C., & Sanchez, L. (2004). Achieving competence-based curriculum in engineering education in Spain. Ingenio Working Paper Series. Retrieved July 16, 2009,fromhttp://digital.csic.es/bitstream/10261/14228/1/Achieving_competencebased_curriculum_in_Engineering_Education_in_Spain%5b1%5d.pdf

Ehrenreich, J. (1995). The altruistic imagination: A history of social work and social policy in the U.S. Ithaca, NY: Cornell University Press.

Elliott, J. (1993). Reconstructing teacher education. London: Falmer.

Ewens, J. (1999). Reconstructing teacher education. London: Falmer

Evers, F. T., Rush, J. C., & Berdrow, I. (1998). The Basic of Competence: Skills for Lifelong Learning and Employability. San Francisco: Jossey-Bass Inc.

Fagan, E. (1984). Competence in educational practice: A rhetorical perspective. In E. Short, (Ed.), Competence: Inquiries into is meaning and acquisition in educational setting. (pp. 656-670). New York: University of America Press.

Fetterman, D. (1998). Empowerment evaluation: Collaboration, action research, and a case example. *Recuperado el*, *15*.

Fleming, M. (2006). The use and mis-use of competence frameworks and statements with particular attention to describing achievements in literature. International conference: Toward a common European Framework of reference for languages of school education. Council of Europe, Language Policy Division, and the Jagiellonian University. Retrieved August2, 2009 from HYPERLINK "http://www.coe.int/t/dg4/linguistic/Source/Fleming-paper.doc"

Fraenkel, J. R., & Wallen, N. E. (2006). How to design and evaluate research in education (6th ed.). New York, NY: McGraw-Hill.

Gale, L., & Pol, G. (1975). Competence: A definition and conceptual scheme. Journal of Educational Technology, 4(20), 19-25.

Gold, L. (1958). Research at grass roots. Pretoria: Van Schaik.

Gonczi, A. (1997). Future directions for vocational education in Australian secondary schools. Australian and New Zealand Journal of Vocational Education Research, 5(1) 77-108.

Gonder, P. (1978). The competency challenge: What schools are doing? Virginia: National School Public Relations Association.

Gonzalez, C., & Sanchez, L. (2003). El diseño curricular por competencias en la educación médica. Escuela Nacional de Educación Pública. 17(4), 42-49.

Gregory, D. (2002). Developing competency models to promote integrated human resource practices. *Human Resource Management: Published in Cooperation with the School of Business Administration, The University of Michigan and in alliance with the Society of Human Resources Management*, *41*(3), 309-324.

Guthrie, H., Harris, R., Hobart, B., & Lundberg, D. (1995).Competency-based education and training: Between a rock and a whirlpool. Melbourne: Macmillan education Australia PTY LTD.

Hackett, S. (2001). Educating for competency and reflective practice: Fostering a conjoint approach in education and training. Journal of Workplace Training, 13(3), 103-112.

Harris, R., Guthrie, H., Hobart, B., & Lundberg, D. (1995). The Role of Generic Skills: Enhancing the Learning and Employability of Graduates: A position Paper. Business/Higher Education Round Table.

Hearn, G., Smith, B., Southey, G., & Close, A. (1995). Generic and professional competencies: Implications for education and development of professionals. Australian Journal of Career Development, 4(1), 42-47

Hellwig, S. (2006). Competency-Based Training: Different Perceptions in Australia and Germany. *Australian Journal of Adult Learning*, *46*(1), 51-74.

Hodkinson, P., & Issitt, M. (1995). The challenge of competence. London: Cassell.

Hoffmann, T. (1999). The meaning of Competency. Journal of European Industrial Training, 47(6), 275-286.

Hyland, T. (1993). Competence, knowledge and education. [Electronic version]. Journal of Philosophy of Education, 27(1), 57-68. Retrieved October 1, 2007, from http://www.blackwellsynergy.com.libproxy.uregina.ca:2048/doi/pdf/10.1111/j.14679752.1993.tb00297.x

Jacobus, F. (2007). A framework for the design and implementation of competency-based teacher education programmes at the University of Namibia. Unpublished Doctoral dissertation, Stellenbosh University, Namibia. Retrieved April 27, 2008, from HYPERLINK

"http://ir.sun.ac.za/dspace/bitstream/10019/624/1/EngelBrecht, +F.D.J.pdf" http://ir.sun.ac.za/dspace/bitstream/10019/624/1/Engelbrecht,+F.D.J.pdf

Jansen, J. (1998). Curriculum reform in South Africa: A critical analysis of outcomes-based education. Cambridge Journal of Education, 28(3), 321330

Kerka, S. (1998). Competency-based education and training: Myths and realities. Retrieved November 2, 2007, from http://www.cete.org/acve/docgen.asp?tbl=mr&ID=65

Kusi, H. (2012). Doing Qualitative Research: A Guide for Researchers. Accra-New Town: Emmpong Press

Kvale, A. M. (1996). Optimal number of response categories in rating scales: reliability, validity, discriminating power, and respondent preferences. Acta Psychological, 104(1), 1-15.

Lowrie, T. (1999). Policy Innovation in the VET sector: The role of instructors in a competency based environment. Australian Association for Research in Education.

McCarthy, A. M., & Garavan, T. N. (2001). 360 feedback process: Performance, improvement and employee career development. *Journal of European Industrial Training*.

McNamara, G. (1999). An evaluation of the training needs of staff in the further education sector in the republic of Ireland. *Journal of Adult and Continuing Education*, *11*(2), 155-169.

NPEC. (2002). Defining and Assessing Learning: Exploring Competency-Based Initiatives. Report of the National Postsecondary Education Cooperative Working Group on Competency-Based Initiatives in Postsecondary Education. Brochure [and] Report.

Norris, N. (1991). The trouble with competence. [Electronic version].Cambridge Journal of Education, 21(3), 331-342. Retrieved October 1, 2007, from http://web.ebscohost.com.libproxy.uregina.ca:2048/ehost/detail?vid=3&hid=5&Sid=23cda1bb-021a-47e0-8fc2-240a76356024%40SRCSM2

Norton, R. E. (1987). Competency-Based Education and Training: A Humanistic and Realistic Appraoch to Technical and Vocational Instruction. Paper presented at the Regional Workshop on Technical/Vocational Teacher Training in Chiba City. Japan: ERIC:ED 279910.

Nowack, K. M., (2005). Longitudinal evaluation of a 360 feedback program: Implications for best practices. In *20th Annual Conference of the Society for Industrial and Organizational Psychology in Los Angeles, CA. Retrieved July* (Vol. 30, p. 2006).

Parra, H. (2006). El papel de la universidad en la transformación de la sociedad. 6to Congreso Internacional: Retos y expectativas de la Universidad. Universidad Autónoma de Chihuahua, Mexico. Retrieved Agugust 6, 2009, from http://www.congresoretosyexpectativas.udg.mx/Congreso%206/Eje%202/Ponencia_212.pdf

Pithers, R. (1998). Improving learning through effective training. Katoomba: Social Science Press.

Polit, D. F., & Hungler, B. P. (1999). Nursing research: principles and methods. Phildelphia: JB Lippincott Company

Raylatt, A.,& Lohan K. (1995). Creating training miracles. Sydney: Prentice-Hall.

Robert J.D, (1986), The Boundary less Career: A Competency-Based Perspective. Journal of Organizational Behavior, Vol. 15, No. 4, pp. 307-324Published by: Wiley

Robinson, P. (1993). Teachers Facing Change: A small scale study of teachers working in a competency based environment. NCVER.

Rush, J. C., & Berdrow, I. (1998). *The Bases of Competence. Skills for Lifelong Learning and Employability*. Jossey-Bass Publishers, 350 Sansome Street, San Francisco, CA 94104.

Schuman, L. (1996). Perspectives on instruction. Retrieved May 2, 2008, from HYPERLINK "http://edweb.sdsu.edu/courses/edtec540/Perspectives/Perspectives.html"

Smith, B. & Keating, J. (2003). From Training Reform to Training Packages. Tuggerah, NSW: Social Science Press.

Spady, W. (1977). Competency based education: A bandwagon in search of a definition. [Electronic version]. Educational Researcher, 6(1), 9-14. Retrieved October 1, 2007, from: http://www.jstor.org/cgibin/jstor/printpage/0013189x/ap040060/04a00050/0.pdf?backcontext=page&dowhat=Acrobat&config=jstor&userID=8e039814@uregina.ca/01cce4405f00501cb66b3&0.pdf

Stanton, G. (1989). Curriculum implications in competency based education and training. London: Burke John Falmer Press.

Stevenson, J. (1995). The Metamorphosis of the Construction of Competency, Inaugural professorial Lecture, 10th October, Andy Nimmo Auditorium. Griffith University.

Storey, L. (2001). The concept of competence. Proceedings of a bord altranais. Assessment of competence conference a bord altranais. Retrieved July 14, 2009, from http://linkinghub.elsevier.com/retrieve/pii/S0964339704001211#SECX9

Treal, J. A. (2003). Assessing students' performances in a competency-based curriculum. *Academic medicine*, *78*(1), 97-107.

Tritton, B. (2008). Competency based learning in Higher Education. Unpublished MSc Dissertation.

Turkson, F. E., Gyeke-Dako, A., Oduro, A. D., & Baffour, P. T. (2012). Employment Effects of Different Development Policy Instruments: The Case of Ghana. *Rd4 project (retrieved from http://www. r4d-employment. com/papers/publications/)*.

Velasquez, H. (1997). Diseño curricular por competencias integrales para la educación superior. Congreso Internacional de Investigación Educativa. Venezuela. Retrieved 21 April, 2008, from http://inie.ucr.ac.cr/congreso/memoria/archivos/ponencias/hernandovelasquez.pdf

Velde, C. (1999). An alternative conception of competence: Implications for vocational education. Journal of Vocational & Training, 51(3), 437- 447.

Whitty, G. & Willmott, E. (1991). Competence-based teacher education: Approaches and issues. [Electronic version]. Cambridge Journal of Education, 21(3), 309-409. Retrieved October 1, 2007, from http://web.ebscohost.com.libproxy.uregina.ca:2048/ehost/detail?vid=3&hid=117&Sid=a5d5b18b-e318-4125-9802-e013bffad44e%40sessionmgr109

Wood, A. & Power, R. (2001). Social Work Education in Canada: Inching toward the progressive. Portularia 1, 131-149.

APPENDIX

UNIVERSITY OF EDUCATION, WINNEBA (KUMASI CAMPUS)

DEPARTMENT OF FASHION DESIGN AND TEXTILES EDUCATION

QUESTIONNAIRE FOR FASHION DESIGN AND TEXTILES INSTRUCTORS AND STUDENTS

This questionnaire is designed to help facilitate an academic research study titled "Evaluation of competency-Based Training (CBT) in the BSc Fashion Design and Textiles Education programme of the University of Education, Winneba".

As an instructor or student your views and opinions are much needed to help ensure the success of the study.

The information you provide will only be used for academic purposes and treated with utmost confidentiality.

Section A: Respondents' demographic information

1. Please indicate your Gender.

   A. male ( ) B. female ( )

2. What is your age group?

   A 20-25 years ( ) B. 26- 30 years ( ) C. 31-35 years ( ) D. 36-40 years ( )

   E. 41 years and above ( )

3. Please what is your level of education?

   A. WASSCE/SSCE ( ) B. NVTI ( ) C. Diploma/HND ( )

   D. Intermediate ( ) E. First Degree ( ) F. Second Degree ( )

4. Please specify your length of study of the Fashion Design and Textiles programme (**students only)**

   A. 1 year ( )

   B. 2 years ( )

   C. 3 years ( )

   D. 4 years ( )

SECTION B: CBT-RELATED SKILLS IN THE BSc FASHION DESIGN AND TEXTILES EDUCATION PROGRAMME OF UEW.

Please indicate "Yes" or "No" answers to various competency-Based skills that are taught in the BSc Fashion Design and Textiles Education programme. (Please tick appropriately)

	CBT SKILL	**YES**	**NO**
1	Creative Design		
2	Working drawing		
3	Modelling		
4	Beauty culture		
5	Pattern Drafting		
6	Garment Designing		
7	Pattern construction		
8	Handling of sewing Equipment		
9	Fashion Drawing		
10	Fashion illustration		
11	Sewing of garments		
12	Production of Quality Garments		
13	Embroidery		
14	Applique		
15	Dyeing		
16	Computer-Aided Design		
17	Millinery work		
18	Dressing		
19	Accessories Production		

Others

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SECTION C: Effectiveness in the Teaching of Competency-Based skills

In your opinion, how effective are the following competency-Based skills being imparted to students in UEW's Fashion Design and Textiles education Programme.

Please indicate by ticking the right option

	CBT Skill	Very Effective	Effective	Neutral	Non-Effective
1	Accessories Production				
2	Applique				
3	Beauty culture				
4	Computer-Aided Design				
5	Creative Design				
6	Dressing				
7	Dyeing				
8	Embroidery				
9	Fashion Drawing				
10	Fashion illustration				
11	Garment Designing				
12	Handling of sewing Equipment				
13	Millinery work				
14	Modelling				
15	Pattern construction				
16	Pattern Drafting				
17	Production of Quality Garments				
18	Sewing of garments				
19	Working drawing				

Others

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Thank you for participating.