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The 2005 Secondary School Curriculum Reforms in Tanzania: Disjunction between Policy and Practice in its Implementation

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Abstract
The growing need for education system to produce school leavers with capabilities in terms of knowledge, skills and attitudes useful for solving social and economic challenges has prompted education reforms in Tanzania. Recent education reform involved the introduction of competence-based curriculum in secondary schools. This paper reviewed recent research on the implementation of competence-based curriculum reforms in Tanzania and compare the findings with the original policy intentions to establish the congruence between the two. The paper has established that classroom teaching, learning and assessment in most secondary schools has remained traditional contrary to the competence-based curriculum demands. Lack of comprehensive orientation to the reformed curriculum for the teachers and poorly resourced learning environment are among many drawbacks to the implementation of the reformed curriculum.
Keywords: Competence, Competence-based curriculum, Curriculum implementation.

1. Introduction

The growing need for education system to produce graduates with capabilities has received significant attention in the recent education reforms in Tanzania (United Republic of Tanzania (URT), 2000; MoEVT, 2010). This is because it has been realized that growth and development cannot be attributed to increase in traditional inputs alone (Land, Labour, capital) but to the improvements in knowledge and skills of labour force and changes in technology also (Lewin, 2000). This has been expresses in the Tanzania's Development vision 2025 which stipulates that:

> *"Education should be treated as a strategic agent for mind-set transformation and for the creation of a well-educated nation, sufficiently equipped with the knowledge needed to competently and competitively solve the development challenges which face the nation. In this light, the education system should be restructured and transformed qualitatively with a focus on promoting creativity and problems solving"* (URT, 2000 p.19)

It was recognised that education system could no longer afford to produce graduates with no employable skills which are deemed crucial for the academic, social and economic survival in the modern world. Thus, the system was in need of significant reform so that schools could produce graduates who could generate knowledge, think creatively and solve the kinds of complex social and economic problems they will face in the society (Hamilton, Mahera, Mateng'e & Machumu, 2010). Competence-Based education (CBE) was perceived to be desirable for aligning education provided to the dynamic social and economic demands of the society. It appeared to be an answer to the concerns raised about the capability and employability of the school graduates as it emphasized the attributes (competencies) to be achieved by learners (Maodzwa-taruvinga & Cross, 2012).

Thus, as part of the efforts to achieve the policy ambitions stated above, in 2005 the government of Tanzania through Tanzania Institute of Education (TIE) revised the secondary school curricula into competence-based curricula (CBC) with the aim of equipping school graduates with sufficient knowledge and life skills for them to survive academically and socially in the modern world (Kitta & Tilya, 2010). The revision process involved shift in paradigm from content-based to competence-based. Content-based curriculum has been criticized because it equips students with knowledge and skills which do not tally with the demands of the job market. It has been characterized by lack of integration between theory and practice with students having vague ideas of why they learn and how they should apply theory when doing practical work (Cremers & Eggink, 2006).

2. Purpose of the review

This paper examined the congruence between the policy intentions in the implementation of competence-based curriculum and the actual practices at the classroom level in secondary schools in Tanzania. At the intention level competence-based curriculum documents such as secondary school syllabi and curriculum frameworks were reviewed to identify policy intentions on how competence-based curriculum should be implemented. To ascertain actual practices at the classroom levels, findings from the recent studies on the implementation of competence-based curriculum in secondary schools (Timothy, 2011; Banda, 2011; Shemwelekwa, 2008; Kahwa, 2009; TIE, 2011) were reviewed. Synoptic view on competence-based education is provided in the next section prior to the details on policy intention in the implementation of competence-based curriculum in secondary schools in Tanzania.

3. Competence-Based Education (CBE): An overview

According to the *Greenwood Dictionary of Education* competence-based education is the education in which the curriculum is derived from analysis of desirable practical skills, roles, or competencies, and that certifies student progress on the basis of demonstrated performance of those skills, roles, or competencies (Collins & O'Brien, 2011). Central to this approach to education is the concept of 'competence' which is multi-dimensional and its use depends on the context of the user (Mulder, Weigel & Collins, 2006). For example, Eraut (2003) defined competence as the ability to perform tasks and roles required to the expected standards while in vocational education context, it is conceived as the capability to use knowledge in practice (Mulder, et al., 2006). Yet another author drawing on human resource development and management perspectives defined it as the capability of a person to reach specific achievement (Mulder, 2001).

Although the origin of competence-based education has been traced differently by different authors (Achtenhagen & grubb, 2001; Nijhof, 2003; Mulder, et al., 2006; Tuxworth, 2011) literature shows that most of them concur with a point that CBE has most directly descended from behavioral objective movement of late 1950's and early 1960's (McAshan, 1979; Bowden, 1997; Tuxworth, 2011). Early interest in CBE movement by greater educational community was centred up on the uses of behavioral outcome statements to ensure the validity of the content selection for curriculum and to improve teacher evaluation practices (McAshan, 1979). Further the movement was spurred by increased demands for accountability, instructional designs that allow students to learn at their own pace and increased general program quality that is relevant to the goals of the society (McAshan, 1979). More specifically, teachers placed stronger emphasis on instructions that is tailored to meet specific goals with success being determined by evidence collected through criterion-referenced measurements of specific behavioral outcome performances.

Despite the popularity of CBE especially during its early inception, this innovation lost its favour due to its behaviouristic character during the 1970s and 1980s. This is because CBE programs were characterised by detailed analysis of behavioural aspects of a professional tasks into specific components resulting into long list of fragmentised behavioural elements which was used as a basis for curriculum development. This backward mapping of learning trajectories from job requirements enhanced the development of procedural and technical workers instead of reflective problem solvers and innovators (Boer & Nieuwenhuis, 2002). The approach turned out to be unfruitful thus decreasing interest in the original competence movement in the 1980s (Mulder, 2003).

Despite objections against the original behaviouristic competence-based education approach, the innovation has now made a comeback and is more alive than ever (Mulder, 2004). Competence-based education programs are now popular in both developed world (United Kingdom, France, Germany and Netherlands) and developing world (South Africa, Tanzania, Mozambique and Ethiopia) (Mulder et al, 2006; Tilya & Mafumiko, 2010; Maodzwa-taruvinga & Cross, 2012). The emphasis on competence-based education is due to the growing recognition of the need for direct development of capabilities and not just at acquiring qualifications, as capabilities are perceived as pre-requisite for employability and also a link between education and labour market (Mulder, 2004). Desirable capabilities (knowledge, skills and attitudes) eventually formed the basis for the development of curriculum which is termed competence-based curriculum.

In the recent perspectives, a holistic approach to competence-based education is much favoured than the disintegrative (behaviouristic) approach (Biemans et al., 2004). In this approach competence is viewed as an integrated performance oriented capability of a person or an organization to reach specific achievements (Mulder, 2001). Current competence-based education programs are characterized by learner-centred constructivist approaches to teaching and learning. Constructivism is based on the view that knowledge and skills are not the products that can be transferred from teacher to learner rather they are the result of learning activities done by learners themselves individually or in groups(Wisselink et al., 2007; Tuxworth, 2011). This calls for teachers to use varieties teaching strategies such as small groups, discussions and practical activities. Teaching and learning activities are to be featured by inquiry predominantly focusing on real life phenomenon in classroom, outdoors or in the laboratory where students are given opportunity to investigate and construct their own truth (National Research Council (NRC), 1996; Wisselink et al., 2007).

In addition, a more formative assessment process done formally and informally before, during and after the learning process is usually advocated in competence-based education programs (Mulder, 2004; Wisselink et al., 2007). It is focused on both subject specific competences and key competences using authentic assessment methods such as portfolios, interviews, performances, investigative reports, writing essays and peer assessments (NRC, 1996; Kouwenhoven, 2003). Authentic assessments unlike conventional paper and pencil tests engage students in tasks similar in form to the tasks in which students will engage in their life outside the classroom and probes for students' higher-order skills such as critical reasoning and problem solving rather than simply checking for memorized information (NRC, 1996). Further, assessment practice emphasizes on the provision of feedback which continuously, timely and constructively inform learners about the strength and weakness of their performance. Feedback is normally descriptive, directly linked to learning goals and pin point what is well done, what needs improvement and how to improve (Black & William, 1998).

Even under the recent holistic approach, competence-based education programs are still criticized for the over emphasis on authentic assessments of competencies which is labour intensive and time consuming as it requires structured classroom observations (Jellema, 2003). Moreover, planning, designing and implementing learning activities that is aligned to the workplace or real world situation may be easier said than done to most teachers and therefore should not be underestimated. In the next section the intended competence-based curriculum for secondary schools in Tanzania is discussed by drawing on policy intentions as expressed in the formal curriculum documents such syllabus and curriculum frameworks.

4. Competence-based curriculum for secondary schools in Tanzania

As previously mentioned, competence-based curriculum in secondary schools was introduced in 2005 following the review process. The revised curriculum is characterized by the following:

First, it emphasizes on competence development than acquisition of content knowledge. The introductory parts of the syllabi clearly states that "the revision process has been focused on the change in paradigm from content-based to competence-based curriculum" (MoEC, 2005 p. iv).This means that teaching and learning activities in classrooms should have to focus on the development of prescribed competences by students. Thus, for each subject competences to be achieved by students have been stated and they include general subject competences and class or grade level competences in addition to six general curriculum competences. For example, in biology subject one of the general competence states that "student should have ability to make appropriate use of biological knowledge, concepts, skills, and principles in solving various problems in daily life" (MoEC, 2005 p. v). Additionally, class level competences for each subject have been stated. For example, one of the competences to be developed by form one students is the "ability to demonstrate appropriate use of biological knowledge, concepts, principles and skills in everyday life" (MoEC, 2005 p. 1). Though all these implies that emphasis is on competences and that content will be used as a means to an end and not an end in itself (Tilya & Mafumiko, 2010), when browsing through the revised syllabi one may realize that the competences stated are not directly related to the content to be taught. The syllabus is still overloaded with the content compromising the possibility that teachers will encourage students spend most of the instructional time engaging in learning activities that focus on the development of competencies. Teachers may resort to cover the prescribed content which is often used as a criterion for judging their accountability rather than striving to balance between content coverage and development of competences.

Second, the curriculum emphasizes on the use of learner-centred activity-based pedagogy during teaching and learning process. The revised syllabus clearly states that "teachers are advised to use participatory teaching and learning strategies as much as possible to help learners demonstrate self-esteem, confidence and assertiveness" (MoEC, 2005 p. vii).This implies that teachers are emphasized on the use of learner-centred pedagogy as opposed to teacher-centred pedagogy which dominated secondary school classroom teaching prior to the competence-based innovations (Osaki, 2004). Learner-centred teaching strategies advocated for the implementation of competence-based curriculum in secondary schools include but not limited to role plays, problem solving, projects, case study, and outdoor activities. In learner-centred teaching for competence development, teacher is supposed to switch from the role of an expert who transfers knowledge to a coaching role facilitating and guiding learning process (Biemans et al., 2004). Students are supposed to take responsibility for their own learning through direct exploration, experimentation, contextualization and experience, where as the teacher used to be in charge. On the other hand teachers are supposed to design effective learning activities geared towards the development of specified competences, thus student spend most of the instructional time engaging themselves in doing learning activities than listening or watching what teacher lectures or demonstrate. The advocated pedagogy for the implementation of the revised curriculum in secondary schools seems to contradict with the overloaded syllabus which contains long list of content areas to be covered and most teachers complain that there is too much to teach in short time given (Tilya & Mafumiko, 2010).

Third, it emphasizes on use of formative assessment focused on the prescribed competences. The revised curriculum emphasizes teachers to assess students frequently using authentic assessment methods focusing on the prescribed set of knowledge, skills and attitudes. It is stated in the syllabus that "...It shows what and how to assess students with regard to the knowledge, skills and attitudes to be developed for each specific objective" (MoEC, 2005 p. vii). Teachers are emphasized to use authentic assessment methods such as portfolios, classroom or field observation, projects, oral presentations, self-assessment, interviews and peer-assessment (Kitta & Tilya, 2010). Authentic assessment methods are more useful for competence-based curriculum than other forms of assessment because they provide opportunity for students to demonstrate the competencies they have mastered in real life or analogous situation. More importantly, teachers are required to change from norm-referenced to criterion referenced judgment of learners' capabilities or competencies as supported by Kouwenhoven (2003) who argued that in competence-based education, performance assessment is carried out by giving the learner a clearly defined task and a list of explicit criteria for assessing the performance or product. Criteria are often given in the form of rubrics that can be either analytic (specification of parts) or holistic

(looking at overall performance). Finally, teachers are supposed to provide continuous, timely and constructive feedback to inform student about the strength and weakness of their performance.

Forth, it emphasizes on application of knowledge to integrate theory and practice in real or analogous life situation. Phased out secondary school curriculum was criticized for being content-driven compelling teachers to adopt transmission approaches such as lecturing to cover overloaded curriculum content by emphasizing students to memorize their lecture notes which are deemed crucial for passing examination which often tested ability to recall memorized facts, knowledge and principles (Chonjo et al, 1996; Osaki, 2004). Now, the revised curriculum emphasize on the application of knowledge by stating that "student should have ability to make appropriate use of biological knowledge, concepts, skills, and principles in solving various problems in daily life" (MoEC, 2005 p.1). This policy statement appears to be supported by literature on competence-based education. For example, Mathijssen-Jansen (1999) cited in Kouwenhoven (2003) criticized learning of isolated knowledge and skills and later integration, arguing that learning environment should emphasize on contextualization (from theory to situation, from general to specific) and de-contextualization (from situation to theory, from specific to general). Thus, teachers are required to design a learning task which is to be carried out in a realistic context or authentic learning environment so as to develop the desired competences.

It can be realized that at intention level competence-based curriculum for secondary schools in Tanzania share many features typical of competence-based curricula elsewhere in the world (South Africa, Indonesia, New Zealand and Australia). For example, South Africa's Curriculum 2005 in very much similar way to Tanzania's competence-based curriculum embraces Paulo Freire's ideals of learner-centred pedagogy, problem-based curriculum aligned with learner's experience of life and collaborative learning (Maodzwa-taruvinga & Cross, 2012). Curriculum 2005 was also featured by pre-specification of outcomes (competences) which displaced the emphasis on content and emphasis on formative assessment focused on the pre-specified outcome.

However, the fundamental question which needs to be answered seven years since competence-based curriculum for secondary schools was introduced is whether this curriculum innovation is being implemented as intended by policy makers. The question is of great concern because the implementation of competence-based curricula elsewhere in Sub-Saharan region has faced myriads of challenges (Jansen, 1999; Spreen & Vally, 2010). Thus, the potential of this curriculum to deliver its promise of being a panacea to incapable and unemployable school graduates has been uncertain. In the subsequent section findings from the recent studies on the teachers' instructional practices in implementing the revised competence-based curriculum in secondary schools in Tanzania is reviewed.

5. The implementation of competence-based curriculum in secondary schools

Generally, findings from the recent studies on teachers' classroom practices in implementing the revised competence-based curriculum in secondary schools (Kahwa, 2009; Shemwelekwa, 2008; Banda, 2011; Timothy, 2011, TIE, 2011) shows that majority of secondary school teachers are not implementing the revised competence-based curriculum as directed in the formal policy documents such as syllabus and curriculum frameworks. This is because teachers have narrow understanding of competence-based curriculum and its repercussion on classroom practices. Thus, they have continued to teach and assess using the traditional teaching and assessment methods. Detailed discussion is presented in the next subsections.

5.1. Teachers' awareness and knowledge of competence-based curriculum

It can be argued that for curriculum policy to be effectively translated into classroom reality; teachers who form the most single factor which determines the quality of education a child receives (Cooper, 2011) should understand the policy intention clearly. However, findings from the recent study on the implementation of competence-based curriculum in secondary schools in Tanzania are depressing. This is because most of the secondary school teachers have narrow understanding of competence-based curriculum and its repercussions on their classroom practices as observed by Timothy (2011) who reported that most of the physics teachers in the sampled schools had low understanding of the revised curriculum since none of them had attended any in-service training for orienting them to the intended curriculum. The findings confirm earlier results by Shemwelekwa (2008) who reported that mathematics teachers in the studied schools had narrow conception of competence-based education to the extent of affecting its implementation within classroom. Other researchers (Kahwa, 2009; Meena, 2009; Tilya, 2010) repeatedly reported similar findings on teachers' awareness of competence-based curriculum innovations. From these findings it can be argued that teachers who vaguely understand competence-based curriculum innovations and its repercussion on their classroom practices are very unlikely to implement it as ambitiously intended by policy makers. Lack of clear understanding on competence-based curriculum even among the key policy makers and implementers has been mentioned as a big challenge to the implementation of competence-based curriculum (Meena, 2009; Tilya & Mafumiko, 2010; Tilya, 2010). Similar observations on South Africa's Curriculum 2005 as reported by Jansen (2009) showed that teachers in South African schools did not have the philosophical, psychological, sociological and even curriculum base from which to engage with the underlying tenets of outcomes-based education, given its shifting and inaccessible terminology. The author

concluded that under such circumstances it was difficult to translate an ill-understood curriculum policy into practice.

Narrow understanding of teachers on competence-based curriculum and its underlying tenets has been attributed to lack of comprehensive in-service training to orient teachers to the intended competence-based curriculum innovation and its requirements (Kahwa, 2009; Banda, 2011; Timothy, 2011). This was confirmed by findings from the earlier study by Shemwelekwa (2008) who found that only 2 of the 12 mathematics teachers in the sampled schools attended in-service training on competence-based curriculum. Concurrently, recent study by Timothy (2011) also found that only 1 of the 8 physics teachers in the sampled schools attended in-service training for orienting them to the revised curriculum. The researchers argued that poor teacher orientation in the studied areas hindered the implementation of competence-based curriculum.

It is also interesting to note that Tanzania Institute of Education (TIE) which is the authority responsible for designing curriculum and thus training teachers on the curriculum innovation introduced admits its failure to orient teachers to the intended curriculum innovation as exhibited in this quotation:

> *"TIE (*Tanzania Institute of Education*) has however been unable to reach all the teachers on learner-centred due to financial grounds. Monitoring reports indicate that majority of teachers are still using teachers-centred methods as opposed to competence-based demands"* (TIE Newsletter, April-June, 2011 p. 4).

The preceding quote confirms that secondary schools teachers have not been versed on competence-based curriculum thus they are implementing the revised curriculum contrary to the curriculum demands. Without comprehensive in-service training for orienting teachers to the intended curriculum reforms, it will be difficult for teachers to pioneer innovative practices in the classrooms.

5.2. Teaching methods used in the implementation of competence-based curriculum in secondary schools

Recent studies show that secondary school teachers in Tanzania have continued to teach in habitual ways despite the change in curriculum which demand change in teaching approaches. This entailed the use of traditional teacher-centred teaching methods such as lectures, demonstrations and brainstorming (Timothy, 2011; Banda, 2011; TIE, 2011). Teachers explain or demonstrated concepts and write notes on the chalkboard for students to copy. Sometimes teachers intersperse lecturing with recall-based closed-ended oral questions which elicit minimal thinking among students. On teaching methods Timothy (2011) reported that most physics teachers in the studied schools were still applying teacher-centred instructional methods such as lecture and demonstrations than learner-centred instructional methods. This confirmed earlier findings by Shemwelekwa (2008) who found that majority of teachers named lecture method followed by questions and answers as the teaching methods they most frequently used.

Monitoring reports by TIE (2011) which stated that "…majority of teachers are still using teacher-centred methods as opposed to competence-based curriculum demands" (p.4) also confirms the findings repeatedly reported by Banda (2011), Kahwa (2009), Timothy (2011) and Shemwelekwa (2008). This practice appears to contradict with the current perspectives in teaching and learning where the emphasis is on active involvement of learners in teaching and learning processes. Learning is something that students do, not something that is done for or to them. Thus, both 'minds on' and 'hands on' activities are essential ingredients in any learning process (NRC, 1996).

Secondary school teachers put forward various reasons for not using the advocated learner-centred pedagogy in their day to day classroom practices. These include lack of adequate knowledge and skills on how to use the advocated pedagogy, large class size, shortage of relevant textbooks, and lack of cooperation from students (Tilya, 2010); the reasons similar to those reported by Spreen and Vally (2010) as barriers to the implementation of learner-centred pedagogy in South African schools. Teachers admitted that they have no adequate skills on how use the innovative approaches in the actual classroom teaching and learning despite the fact that they have been introduced to the advocated teaching approaches during the pre-service teacher education programs. Banda (2011 p.52) substantiated this point by saying that "the reason for chemistry teachers not applying constructivist approach was the lack of adequate knowledge and skills on the approach". Teachers' claims may be further substantiated by findings from the recent study by Hardman et al. (in press) who found that in teacher education colleges, student teachers are lectured on how to use innovative approaches to teaching and learning e.g. they were lectured on how to use practical work in science and how to use group work in language teaching. This finding confirms that the advocated pedagogies are only theoretically taught and learned in initial teacher education colleges. This denies student teachers from learning how the innovative practice are applied in actual classrooms, thus they graduate ill-skilled on the innovative approaches to teaching. This situation appears to be the order of the day even other African countries where a similar reform has been introduced. In South Africa for example, Spreen and Vally (2010) reported that learner-centred practices and other intervention have not been implemented since teachers still teach the way they were taught as their embedded assumptions about teaching has not been challenged through practical experience. Teacher training for the most part does not yet confront the embedded assumptions in teachers, nor does it provide workable alternatives conducive to the classroom

contexts facing teachers in the most challenging environments (Spreen & Vally, 2010).

5.3. Assessment strategies used in the implementation of competence-based curriculum

As discussed in section two the revised curriculum emphasized formative assessment focused on the pre-defined competences using authentic assessment strategies such as portfolios, performance-based assessments, self-assessment, projects, and observations (MoEC, 2005). However, recent studies shows that assessment practices by majority of secondary school teachers in Tanzania has generally remained traditional involving the use of recall-based paper and pencil assessment methods such as tests, quizzes, examination and oral questions contrary to the directives stipulated in the revised syllabus (Shemwelekwa, 2008; Kahwa, 2009; Timothy, 2011; Banda, 2011). For instance, recent observation by Shemwelekwa (2008) revealed that assessment practices by mathematics teachers in the sampled secondary schools was limited to exercises, quizzes and home works. The researcher observed that teachers mainly asked factual questions which encouraged superficial learning of mathematics concepts. Innovative modes of assessment require teachers to move from the routine limited factual questions to more open-ended questions and problem solving tasks which evoke broad ranging discussions and thinking in classroom (Black, Harrison, Lee, Marshall & William, 2005). Teachers cited number of reasons for continued reliance on traditional paper and pencil assessments.

First is large class size. Findings by Shemwelekwa (2008) showed that a teacher-student ratio in most community secondary schools was as high as 1: 68. Thus, teachers were unable to provide assessment tasks at required frequencies using the advocated assessment methods. Also, Timothy (2011 p. 74) reported that "physics teachers complained of having many students per classroom as a factor that contributed to non-use of varieties of assessment procedures".

Second is shortage of time. Majority of teachers in schools were overloaded with administrative responsibilities thus their concentration on teaching activities has been weakened (Shemwelekwa, 2008; Timothy, 2011). For example, due to shortage of time teachers do not mark or grade students' responses to the quizzes and assignments thus students rarely receive feedback to ascertain their progress towards the learning objective (Shemwelekwa, 2008) and even if they receive feedback it is not descriptive and constructive (Kyaruzi, 2011). Competence-based curriculum in Tanzania emphasize on the use of formative assessment with the provision of continues feedback to monitor students' learning progress and improve classroom instruction by teachers. Feedback to the learner, both to assess their current achievement and to indicate what the next step in their learning trajectory should be is crucial and without it little learning yields (Black et al., 2005).

Lastly, teachers mentioned lack of skills on how to design authentic assessment tasks focusing on the competences developed by students. This is because they had no training on the competence-based curriculum (Shemwelekwa, 2008; Kahwa, 2009; Mangilima, 2012). It is uncertain whether the traditional paper and pencil assessment methods commonly used in secondary schools are effective for assessing students' competences.

5.4. Emphasis on competence development and application of knowledge in teaching and learning process

Although the revised curriculum emphasizes on the development of competence and application knowledge in solving real life problems, recent studies shows that the main focus of teaching in secondary schools has remained to be passing final summative examination administered by the National Examination Council of Tanzania which is used to select candidates for the higher levels of education. This was evident in studies by Banda (2011) and Charles (2012) who observed that teachers directed their efforts to the activities that contributed to their students passing the final examination. This means that development of competences was not prioritized as directed in the competence-based syllabus. Likewise, emphasis on application of knowledge particularly integration of theory and practice was constrained by shortage of relevant teaching and learning resources. Thus, teachers are teaching only the theoretical part of the subject (Banda, 2011). This practice is contrary to competence-based education programs which are mainly characterized by specification, development and assessment of competences which are relevant to real life and job situations (Bowden, 1997). It appears that no opportunities are in place for secondary school students in Tanzania to integrate theory and practice or apply what they have learned in solving real life problems. In this situation, the policy ambition for education system to produce competent graduates who can utilize knowledge and skills acquired from schools to solve real life social and economic problems (Poverty, diseases, unemployment, and environmental destruction) is unlikely to be achieved.

5.5. Teaching and learning resources available for the implementation of competence-based curriculum

Generally, findings from the recent studies (Shemwelekwa, 2008; Kahwa, 2009; Timothy, 2011) indicate that most secondary schools in Tanzania are facing acute shortage of teaching and learning resources relevant for the implementation of competence-based curriculum. The lacking resources include books aligned with the revised curriculum, laboratory supplies and equipments, models, charts and so on. Regarding the resources Timothy (2011 p.77) observed that "most secondary schools in the studied areas lack instructional resources for physics especially textbooks and reference books". The researcher further observed that in some schools book-student ratio was as high as 1:15 or even higher. Consequently, teachers are mainly using old textbooks intended for the phased out curriculum, chalks and chalkboard during teaching and learning process (Shemwelekwa, 2008). For

mathematics subject the old textbooks used lack a topic on 'trading account' which has been added in the new syllabus (Shemwelekwa, 2008). Further, Timothy (2011) reported that most secondary school students either had no culture of purchasing their own books or could not afford to do so due poor economic status of their parents particularly in community secondary schools.

From the reviewed findings it is evident that the implementation of the revised competence-based curriculum in secondary schools is being constrained by acute shortage of relevant resources. It is argued that teachers must be provided with resources, time and opportunities, if they are to make changes as prescribed in the program and system standards (NRC, 1996).

6. Disjunction between policy and practice in the implementation of competence-based curriculum

From the previous description of competence-based curriculum (Section two), it was established that the competence-based curriculum reforms emphasized on the use of innovative teaching and assessment strategies which entailed learner-centred teaching and authentic assessment methods. Teachers were required to change from teaching for content coverage using transmission approaches to teaching for competence development using activity-based interactive approaches. Moreover, assessment practices were to focus on the competences developed by students. However, findings from the recent studies confirmed that teaching and assessment in most secondary schools has remained traditional. This entailed the use of traditional teacher-centred methods where teacher lectured and writes notes on the chalk board for students to copy and memorize later. Assessment practices on the other hand involved the use of traditional paper and pencil assessment methods which measured factual knowledge. More importantly, teaching has focused mainly on enabling students to pass final examination which is used to select students for further education. Therefore, it can be realized that the policy intentions as expressed in the formal curriculum documents and instructional practices as reported in the reviewed findings from the recent studies on the implementation of competence-based curriculum in secondary schools symbolize two disjoined scenarios. In fact practice appears to oppose policy demands.

In this review it is argued the concerned authorities (Ministry of Education and Vocational Training, Tanzania Institute of Education and other education stakeholders) should engaged themselves in instituting urgent measures to overcome myriad of drawbacks facing the implementation of competence-based curriculum in secondary schools if the desired outcomes are to be achieved. Provision of comprehensive in-service training and mentoring programs for teachers may be the appropriate beginning to overcome the ill-conception of teachers on competence-based curriculum.

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