

REFLECTION ON DESIGN, IMPLEMENTATION AND ASSESSMENT OF COMPETENCE –BASED CURRICULUM OF UNIVERSITY OF RWANDA: FOCUS ON SCIENCE AND LANGUAGE IN COLLEGE OF EDUCATION

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ABSTRACT

Curriculum refers to what to be taught and how it should be taught and assessed to prepare a well-equipped individual able to cope with the life challenges. This paper focuses on teaching, learning and assessment in Higher Education in Rwanda by examining challenges in Science and language Competence Based-curricula (CBC) as the mismatch between curriculum and the job market bears serious unemployment problems. Three questions guided this paper: 1. what knowledge, skills and attitudes are worth to incorporate in Higher Education programs to enable prospective graduates meet the requirements of the job market? 2. How should that knowledge be taught and assessed? 3. What are the challenges associated with the implementation of the science and language curricula 4. How should these challenges be mitigated? After analysis, we suggested that the Science and language CBC should incorporate skills and knowledge that will enable graduates to be job makers rather than job seekers.

Keywords: Science; Language; Competence – Based curriculum; higher- education teaching; skills, knowledge and attitudes, challenges.

INTRODUCTION

The concept of Competence-based or Competency-based education (CBE) is interpreted in many ways in education systems all over the world, resulting at one end of a continuum into a tick list of skills and at the other into a set of generic abilities that transcends disciplinary knowledge and skills (Kouwenhoven, 2003). In developing countries, many higher education institutions experience a growing gap between their curricula and the demands from society, business and industry for a more flexible workforce with high competencies in problem solving, team work and project management. A competence-based curriculum is therefore dependent on the context of the institution offering curriculum.

PROBLEM STATEMENT

Research originates from dissatisfaction with what we know and/or have today and the need for more in order to improve the current conditions as regard the gap between theory and practice (Sibomana qtd in Bazimaziki, 2017). While Higher education should be a solution rather than a challenge to the community, today there is a big number of young unemployed graduates although much is being attempted to make jobs for the problem solution but in vain. African Economic Outlook (2012) explains that unemployment [in Rwanda] remains a major challenge to achieving inclusive growth. Thus, the mismatch of skills, limited job growth and expansion are major causes of youth unemployment due to a big number of graduates while the job market is still insufficient to accommodate them. Recent reports posit that in Rwanda more than eight thousand jobs were created in 2017 but the problem of unemployment stagnates. In this regard, this paper aims to critically analyze the relevancy of the programs taught in University of Rwanda and show how they can much more align with the requirements of the prospective graduates' job market.

STUDY OBJECTIVES

This paper aimed to the following objectives:

1. To identify knowledge, skills and attitudes to incorporate in Higher Education programs to enable prospective graduates meet the requirements of the job market;
2. To examine how knowledge should be taught and assessed;
3. To identify challenges associated with the implementation of the science and language curricula;
4. To suggest the way these challenges can be mitigated.

STUDY QUESTIONS

This study was guided by the following questions: 1. What knowledge, skills and attitudes are worth to incorporate in Higher Education programs to enable prospective graduates meet the requirements of the job market? 2. How should that knowledge be taught and assessed? 3. What are the challenges associated with the implementation of the science and language curricula 4. How should these challenges be mitigated?

THEORETICAL CONSIDERATION

Competence is a set of skills, knowledge and behaviors someone needs to have achieved in order to perform tasks or activities at school and in the world of work (Sullivan, 2005 cited in Mosha, 2012). Kouwenhoven (2003) defines competence as the capability to choose and apply an integrated combination of knowledge, skills and attitudes with the intention to realize a task in a certain context. In this paper, we

define competence as the ability of students to do a particular activity or task to a prescribed standard emphasizing what they can do rather than what they know. A curriculum that is competence-based, therefore, contains specific outcome statements that show the competencies to be attained (Mosha, 2012) and the demand for greater accountability in education towards community involvement in decision making gave great impetus to the concept (Brundrett, 2000). Competence-Based Education (CBE) as CBC is widely known movement originated from teacher education curricula in the United States in the 1970s arising out of the need to have a curriculum that results directly from the problems, issues and characteristics of the changing society (Schilling & Koetting, 2010; Mulder, 2004; Fletcher, 2000, Kliebard, 2004). The need for improved efficiency and increased production in the industries also led to a thinking about best ways to fulfill a task (Goodman, Henderson & Stenzel, 2006; Kouwenhoven, 2003). Competence-based education movement grew out of dissatisfaction with programmes in the post-secondary education because many colleges and universities offered programmes that had no clear objectives with respect to what the students were actually being trained to do or be (Mulder, 2004). The adoption of CBC in secondary education, in Tanzania for example, was preceded by a rapid survey which found that the traditional curriculum did not specify competencies required to be attained by students by the end of the course of study, thus resulting into change from content based curriculum to a competence-based curriculum (URT, 2004).

METHODOLOGY

This study uses qualitative methods. Researchers relied heavily on information collected through day to day observation during their teaching exercises. Discussion is basically analytical where researchers thoughtfully and critically examined the science and language competence - based curricula.

DISCUSSION

The American Association of Teacher Education and the Partnership for 21st Century skills (2010) suggested possible skills for graduates to cope with life challenges. Such skills are related to information media and technology, life and career skills, literacy, learning and innovation skills which should transform learners into active, creative, innovative, self-reliant and confident citizens, thus adaptive and productive individuals of Rwanda and the world (REB, 2015). Inherently, Mahatma Gandhi said, "Live as if you were to die tomorrow, learn as if you were to live forever" an idea echoed by Rwanda Education Board (2015) that the Rwandan curriculum should focus on young people's roles and responsibilities in/to their families,

community and society; by engaging with the world of the work and with employers. Effective learning accordingly, ought to relate to the immediate context of the learner.

For prospective graduates, Competence-based learning as a paradigm shift from the traditional knowledge-based learning is imperative. Framed on the principle that teaching, learning and assessment activities need to be closely linked with the real situations of the labor market, this approach should contribute enough in the new knowledge and skills to be taught simply because students need be effectively prepared to perform the professional tasks offered by the market. Two positions can be adopted: building on the following competences in the professional sphere, or developing them within the academic sphere prior to career such as:

(1)**Instrumental competences** which function as means to an end, combining manual skills and cognitive capacities that are needed for professional competence including skills of handling ideas and the environment in which persons, craft skills, physical skills, cognitive comprehension, language ability and academic achievement all come into play. (2)**Interpersonal competences** which require personal and relational abilities to act with generosity and understanding toward others, to know oneself, to objectify, identify and inform feelings and emotions to foster social interaction and co-operation and (3) **Systemic competences** which involve skills and abilities related to entire system combining imagination, sensibility and ability to see how the parts of a whole are conjoined and related.

STRATEGIES AND METHODOLOGIES TO BE USED IN SCIENCE AND LANGUAGE TEACHING

The successful use of learner-centered pedagogy can play a significant role in shaping individuals needed for national development as education fosters economic, social, and cultural activities in society (Hallak cited in Pârgaru et al., (2009). Similarly, the 21st century education has embraced the new methodologies that make the learner the center of interest unlike the traditional method rooted in the behaviourist epistemology whereby learners are perceived as passive receivers of knowledge with minds taken as blank boxes or empty vessels waiting to be filled.

Moate & Cox (2015) say that in learner centered pedagogy, teachers create a learning environment encouraging students to actively engage in and take ownership of their learning experiences, an environment inspiring students to think deeply about how they might apply what they are learning to their future practice, a mean that places learners at the heart of the learning process and meeting their needs.

Learner - centered pedagogical paradigm must have enough room in the teaching of new skills in favour of young people who constitute a big part of the country's population (African Economic Outlook, 2012).

Actually, to best teach these skills, knowledge and attitudes, it is worth applying approaches that involve learners to a great extent like humanism which respects students' ideas, allowing them to have their say, and affording them some opportunities to take control of their learning process are among the tenets of humanism (Kamran, 2012). Humanism makes a reference to a thinking paradigm to solve others' problems or taking somebody's emotions and feelings into consideration. In other words, it is worth siding in this regard with Piaget (1973) who premised on helping students to discover their own learning styles, understand their motivation for learning and acquire effective study skills that will be valuable throughout their lives, thus a kind of futurism whereby the teacher needs to set goals for this learner and act as a facilitator in a bid to provide learners with the skills and knowledge to help them cope with the future.

For both science and language subjects, Competence assessment calls for different techniques and procedures depending on what is to be evaluated (Wolf, 1995). Both formal and informal assessment can be used with an emphasis on practice to ensure learners are getting how things are done rather than how they stand only.

CHALLENGES IN SCIENCE AND LANGUAGE COMPETENCE-BASED CURRICULA

There are various challenges associated with science and language competence Based curricula. While laboratory-based teaching helps students to develop scientific and practical skills, problem-solving ability and learning through investigation, inadequate laboratories in schools deprives learners of opportunities to become scientists and engineers in the future. Provision of teaching and learning resources can be one of the strategies to mitigate this challenge. In fact, University of Rwanda- College of Education should ensure that adequate and enough teaching and learning resources are allocated and supplied to all schools.

Competence - Based curriculum (CBC) is also affected by overcrowded classroom often times considered as an impediment of its implementation. While the CBC requires learner centered interactive teaching methods, it is often hard to implement learner-centered approaches in bigger classes. To cope with this issue, enough rooms well equipped with facilities should be availed. The way curriculum is developed is

another challenge. Considering the role they play in the implementation of the curriculum, University of Rwanda lecturers must or continue to be involved in making decisions regarding curriculum change.

Some of students joining College of Education are not ready to accept learner-centered approach is perceived as another challenge hindering effective competence-based curriculum implementation. Because students were not prepared for competence-based teaching and learning from secondary school it became difficult for them to make adjustments when they join university. To remedy this issue, the selection of secondary school students should be done carefully. The cut-off points for students selected to join College of Education should be high enough to ensure that only qualified students' progress to University of Rwanda-College of Education schools as they are trained to be future teachers.

Assessment is another challenge perceived by the lecturers. Assessment is an inseparable part of the learning process in the development of competencies. In the conventional class, assessment is concerned with the students' hard skill through the fixed mechanism of examination while in the CBC class both hard skills and soft skills of the students are assessed. Thus, it is important to assess not only cognitive but also affective and the Psychomotor objectives. In Bloom's revised Taxonomy terms, this assessment should mainly rely on creativity and innovation understanding and mostly applying where learners could show that they are able to use or implement the skills and knowledge they have acquired. The medium of instruction cannot be expelled among the challenges affecting higher education today in Rwanda in particular. The problem of medium of instruction impedes communication and understanding or content mastery is affected. Efforts need be made to enhance English language not only as a subject but also as an instruction language.

Other challenges are related to teachers' need and goals to cover the contents in the syllabus, lack of interest from students' side because of various reasons including the students' culture of memorizing the teachers' handouts and some teachers lecture methods where a teacher is still believed to be the sole authority in classroom. Students' bad culture of learning for job while the government is promoting learning for self-employment is another challenge. As a remedy, students and teachers have to accept to take a new direction and accept to change and know that innovation for a better future after they graduates.

CONCLUSION

Education is better when it benefits the trainees and the trainer's pride lies in his students' better future lives. Competence-based education can be an answer to the call for more practice-oriented education. While the University of Rwanda, College of Education is doing its part to provide learners with skills necessary to help them all along their lives, job market is still a big problem for university graduates. To cope with this issue, new programs that are more marketable can be incorporated in education for graduates to ensure that after they leave school they will generate income for themselves and their families as well. Rwanda Education Board has to ensure that a unified and effective education and training system relevant to both individual and national socio-economic developments is being well implemented. As this paper based on authors' observation in higher learning institution, the gap in it can be bridged by a quantitative research in the same area of contention.

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