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Teacher Preparedness for the Implementation of Competency Based Curriculum in Kenya: A Survey of Early Grade Primary School Teachers' in Bomet East Sub-County

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Abstract

This paper explores teacher preparedness for the competency-based curriculum in Kenya. Competency based curriculum was introduced to Kenya's Education system in 2016 as a pilot of curriculum to be rolled out under 2-6-3-3-3 education system that is replacing the three decades old 8-4-4 system. The new curriculum is seen by many as a panacea to the problem of graduate employability in Kenya. The 8-4-4 graduates have been blamed for lacking relevant job skills. Competency based curriculum aims at engaging learners in applying knowledge through demonstration as opposed to content overload. This study focused on early grade primary teacher's preparedness to successfully implement the competency-based curriculum. Concerns have been raised at the pilot stages on the capacity of those implementers. Stufflebeam's CIPP curriculum Evaluation model was used to interrogate the CBC as currently implemented. The objectives of the study were to find out early grade Education teacher's understanding of CBC, establish their capacity to realign teaching/learning resources to CBC, determine their preparedness to realign teaching/learning approaches to the demands of CBC and their capacity to evaluate a CBC curriculum. Data was collected using questionnaires and interviews. Analysis of data reveals that teachers are inadequately prepared. Their knowledge of CBC is vague and this has hampered their delivery and evaluation. It is also recommended that KICD and ministry of education plans for more training sessions to bridge capacity gaps highlighted in pedagogy, Assessment and preparation of teaching documents.

Key Words: *Preparedness, Assessment, Competency based curriculum, Early Grade Education, Kenya.*

1. Introduction

Education is a vehicle for social and economic change. Countries with superior growth education systems have registered impressive economic and technological advancement. It is imperative therefore that curriculum is constantly reviewed to keep abreast with the demands of the present society. In Kenya three fundamental education reforms have been undertaken since independence. First change was in 1964 that changed the structure and content necessitated by the needs to decolonize the education system was seen as segregative. The second change was in 1985 when the system was changed from 7-4-2-3 to 8-4-4 following the recommendation of Prof Mackay led commission. The third will be in 2019 where massive re-structuring of the system both in structure and nature will be rolled out. Competency based curriculum is currently being piloted in Kenya. Competency based curriculum is introduced at a time that Kenya is vigorously pursuing vision 2030. To propel the impetus of achieving the vision require skilled workforce. Reviewed employers have questioned the skills and capacity of university graduates in the past.

The 8-4-4 system has been criticized as placing much emphasis on content recall and exam oriented. The system taught the students to cram and pass examinations. Critics of the system felt that it doesn't allow students to identify their talents and exploit them early enough (Wanzala, 2018). Competency based curriculum on the other hand place emphasis on attainment of relevant skills as opposed to academic certificates. A major challenge of the current system is that it's too rigid and has limited opportunities to align basic education with children's career interests, aptitudes and abilities (Njengere, 2017).

Unlike the current system where learners transit to the next class based on exam performance, competency-based curriculum allows students to progress through classes upon demonstrating mastery of prescribed competencies. Strugies (2015) cited in momentum schools gives a five-part working definition of competency-based education:

- i. Students advance upon demonstrated mastery
- ii. Competencies include explicit, measurable and transferable learning objectives that empower students.
- iii. Assessment is meaningful and positive learning experience
- iv. Students receive timely, differentiated support based on their individual learning needs.
- v. Learning outcomes emphasize competencies that include application and creation of knowledge along with the development of important skills and dispositions (Strugies, 2015).

Competency based curriculum was introduced to Kenyan schools in 2017 as a pilot with the eventual adoption in January 2019. The competency-based curriculum was to be rolled out in January 2018 but was felt that the country was not prepared for its implementation. Teachers haven't been sufficiently prepared while the support learning resources were still being developed. Competency based education in Kenya arrived at achieving the following seven core competencies; Communication and collaboration, critical thinking and problem solving, creativity and imagination, citizenship, digital literacy, learning to learn and self-efficacy. Learning of these competencies goes hand in hand with imparting of core values. These core values are; Love, responsibility, respect, unity, peace, patriotism, social justice and integrity. Learners are expected to master and incorporate these values and competencies for their application in life.

Teacher preparedness in terms of knowledge, attitude and skills will determine a curriculum receptibility (Nthulanyane, 2004). A pilot study done by KICD and reports by Teachers Service Commission indicates that teachers are ill-equipped for the competency-based curriculum. KICD report (2018) indicates that only 3% of teachers feel adequately prepared for the new curriculum while 20% they were prepared.

This report by the curriculum development agency paints a grim picture that CBC has started on the wrong footing. The implementers of a curriculum ought to be thoroughly prepared through in-service, seminars and workshops. Sensitization will make teachers own the project and put full focus. Research done by Rop (2013) on teacher preparedness for the integrated English curriculum in Kenya, it was concluded that teacher preparedness impacted on the curriculum outcome. Unprepared teachers are impediment to the successful implementation of a curriculum. Teachers unions in Kenya have argued that the competency-based curriculum is being imposed on unprepared tutors. The Secretary General of the Kenya National Union of Teachers has raised concern on the Tutor's ambivalent position on the new curriculum (Wanzala, 2018).

According to Witty and Gaston (2008) assessment needs to abide by the following principles and must be:

- Current - Assessment should take place within a short time of learning.
- Valid - All components that are to be assessment must be assessed. There must be sufficient evidence to ensure that the candidate meets the competency specified by the current standard. The candidate must not be asked to provide evidence for or be assessed against activities that are outside the scope of the unit standard.
- Reliable - The assessment must be able to stand up to scrutiny. That is, other assessors should reach the same conclusion. A number of evidence-gathering methods can be used to ensure consistency.
- Flexible - There is no single approach to competency-based assessment. Evidence can be collected using different methods, at different times, under a variety of conditions. It must be responsive to the needs of the situation and the candidate.
- Fair - Assessment must not discriminate against individuals or groups. Different people and different situations need different assessment methods and, where necessary, reasonable adjustments to meet individual requirements must be made.
- Safe - All work and all assessment must comply with occupational health and safety requirements.

It is important to note that a variety of learning outcomes requires different assessment approaches. For instance, in mathematics, the outcome is – to a point – either right or wrong. The trainee is either competent or not yet competent. There is room for some variation; a few percent either way with a mathematics answer can still be considered, in most cases, as competent because, in the real world, very few things that are either manufactured or that occur naturally attain 100% precision.

This also applies to laboratory-based assessments where it is not always possible to achieve 100% accuracy because

of real-world limitations of the equipment and components. All equipment and components have tolerances within which they work best. These are generally determined by and specified by the manufacturer. Therefore, provided the candidate has achieved these tolerances, which can, in extreme cases, be as broad as 20% to 30%, they must be considered competent. However, if the candidate got all the numbers correct in their calculation but had the decimal point in the wrong place, would the project work? It would either blow up or fall to pieces or just not operate. On the other hand, a project that was constructed to within a few percent of 100% and was within the specified tolerances should work.

Witty and Gaston (2008) further note that at the other end of the scale, the qualification contains theory based and research-based activities where candidates cannot attain 100% accuracy because of the subjective nature of these components. A candidate can be competent in a subject while not attaining 100% accuracy. There will most likely be as many answers as there are candidates for theory-based learning, and provided they have met the requirements of the unit standard, they must be assessed as competent. It is up to the assessor to determine the range for competency and then judge if the trainee is competent within that range.

Competency does not mean expert. It means that the candidate has attained sufficient skill and knowledge to perform the activity or service to a degree and quality that is acceptable to the industry and the customer in a time within which a competent person at the level could reasonably be expected to perform the task.

Momentum schools, an innovative programme from the Oklahoma public schools' resource centre in USA was commissioned to carry out research on competency-based education abroad. It focused on countries that perform above USA in Pisa examinations. Pisa is a program for international student Assessment run by the organization for economic cooperation and development in member and non-member nations intended to evaluate educational systems by measuring 15 year old school pupils' scholastic performance in science, mathematics and reading OECD (2016). Its report highlights from Canada, Finland and Scotland.

It reported that British Columbia adopted CBC under K-12 innovation strategy. The focus is to make more flexible to better enable teachers to innovate and personalize learning. British Columbia's plans to offer more autonomy to teachers who permit students choose how they demonstrate competency on deeper learning outcomes. Teachers are encouraged to maximize innovation, personalization, creative thinking and collaboration to address the needs of diverse learners in different context.

Finland's National curriculum framework provides general learning objectives and goals into local schools decide on standards, learning objectives, teaching methods and detailed outcomes (Momentum schools, 2015). Scotland curriculum for excellence give schools explicit flexibility to provide a range of progression pathways appropriate to students needs and local circumstances. It focuses on formative assessment in the classroom through clear pedagogical strategy that relates learning goals that students can clearly articulate.

Intervention programmes that have been put in place enhance EGE teacher's capacity to implement CBC curriculum in Kenya are:

- i. PRIDE - Kenya GPE Primary Education Development (PRIDE) project. The objective of the project is to build teacher's capacity preparedness to infuse competency-based curriculum aspects in early grade mathematics. Early Grade Math midline survey carried out in January 2018 indicates varied performance in the various mathematical operations is shown in Table 1.
- ii. TUSOME PROGRAMME - TUSOME programme is another innovation that train teachers of languages pedagogical skills with critical focus on sounds patterns in English and Kiswahili. This programme is to enhance the core competencies of communication and collaboration and consequently build on the other competencies.

Table 1: Pupils Performance by Mathematical Operation in the both Baseline and Midline EGMA Pupils Achievement Test

Task	No of items	Benchmark	Baseline study %<50	Midline study %
Addition	5	<3	79.7%	83.2%
Subtraction	10	<5	79.1%	76.9%
Number Patterns	4	<2	57.3%	64.4%
Multiplication	3	<2	62.6%	51.7%
Division	3	<2	68.2	51.3%
Total	25			

Source: World Bank (2018)

The World Bank report shown in Table 1 indicates performance of learners against given baseline study. Pupils attaining 50% benchmark in number patterns increase by 7.10% and 3.50% in addition, there was a drop in number of pupils attaining the 50% benchmark in multiplication (10.90%), Division (6.9%) and subtraction (2.2%). It can be inferred from the research findings that there are challenges facing implementation of the curriculum teachers' capacity preparedness could be one of them.

One very useful approach to educational evaluation is known as the CIPP, or Context, Input, Process, Product approach, developed by Stufflebeam (2000). This provided a systematic way of looking at many different aspects of the curriculum development process. There is a risk, however, that it may be directed only by experts or outsiders, and for this reason it is vital to identify ways in which various stakeholders can be meaningfully involved. There are four dimensions studied for quality evaluation at school level which focus on the aspects of educational objectives, mission and goals, including the different dimensions of context, input, process and product. Context refers to the need and opportunities that defines the goals and objectives on the basis of which the outcomes are attained. Input involves the resources, infrastructure, curriculum and content needed to implement the teaching learning processes. Process includes the teaching learning processes, evaluation and activities; it includes all the processes that are necessary for the implementation of different activities and their formative evaluation. Product evaluation involves skills, values, attitudes and results that are needed to identify the outcomes and effectiveness of the educational program (Stufflebeam, 2000).

2. Methodology

The study used survey research design and was conducted in Bomet East Sub-County of Bomet County. The study intended to cover an area that has been involved in piloting of the competency-based curriculum in Kenya. Bomet County was purposively selected based on convenience (Creswell, 2007). Competency based curriculum is uniformly being introduced across the Country. The study area is seen as representative of the general implementation of the curriculum in Kenya.

Random sampling was used to pick one sub-county from the five sub-counties. Each sub-county was assigned a number. The folded papers were randomly picked and yielded Bomet East as the location of study. The seventy Early Grade Education (EGE) teachers from public primary schools were randomly selected from the 210 teachers teaching early grade classes. Teachers selected constitute 30% of the study population (Creswell, 2008; Kothari, 2008). Teachers in public schools were selected because they are trained, registered a veteran as qualified and deployed by the Teachers Service Commission. Questionnaires were used to collect information from teachers. Purposive sampling was to select five Curriculum Support Officers (CSO's) to be interviewed (Creswell, 2007). This was because the number was manageable and could all participate in the study. Interviews were also meant collaborate information gathered from teachers' questionnaires as curriculum support officers are the Quality Assurance and Standards personnel who monitor and advise teachers on curriculum implementation.

Questionnaires were administered to EGE teachers to collect data on four areas:

- i. Their perceptions towards CBC in early Grade.
- ii. Their understanding of the aspects of CBC.
- iii. Their preparedness to implement was sought on their ability to make instrumentation objectives based on CBC.
- iv. Their knowledge of CBC lesson preparation/delivery their capacity preparedness to evaluate a CBC curriculum.

3. Findings and Discussions

The Questionnaires had four critical areas. The first question sought EGE teachers understanding of the levels of CBC. 60% affirmed that they understand what CBC entails. 35% have slight understanding while 5% have no clue what CBC was. It was concluded that there wasn't sufficient stakeholders' engagement especially in training the implementers before piloting the curriculum. Findings further indicate that 80% of the respondents have attended at least two workshops on CBC while 16% have attended once and 4% haven't attended any as indicated by figure 1. It emerged that trainers at such workshops are not curriculum development experts but teachers and curriculum support officers who themselves were hurriedly prepared for the roll out. They lack the authority and confidence to prepare teachers on CBC.

The second section of the questionnaires sought the teachers' capacity to prepare instructional tools. 69% respondents reported challenges in preparing schemes of work that conforms to the CBC. This confirms the findings of KICD evaluation report on the implementation of CBC in early grades in Kenya's Primary Schools which indicates that teachers are unprepared to prepare this critical document. A majority of the respondents (90%) felt that they couldn't adequately prepare a lesson plan, they reported challenge in deciding on learner's activities and teacher's activities that would enable learners acquire competencies.

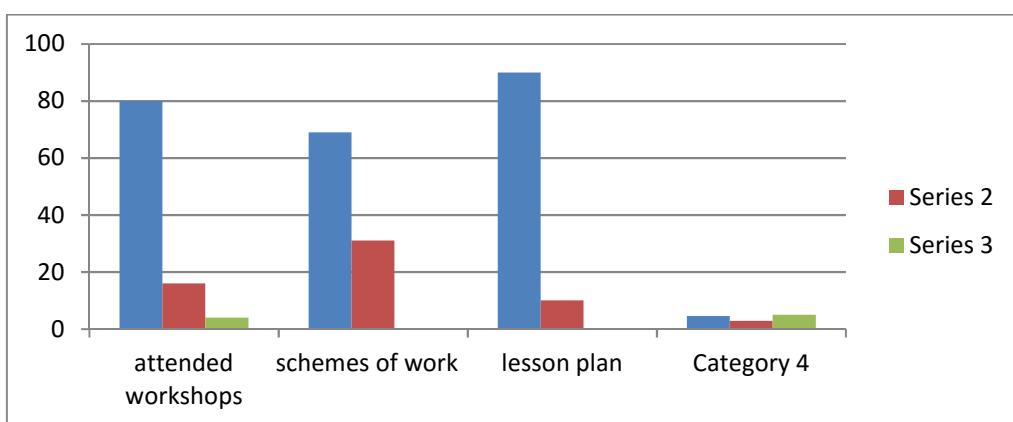


Figure 1: Bar graph Representing Teachers' Responses

Challenge of Competencies to be Imparted

There is another challenge of which competencies are to be covered under certain topics. Teachers tend to teach content as opposed to building competencies. Instructional materials were cited by 20% of the respondents as not clear on the skills. Integration of the core competencies is another challenge reported.

Challenges Faced when Implementing CBC in Class

100% of the Curriculum Support Officers (CSO's) said that teachers have challenges in implementing CBC. They indicated that teachers are still employing teacher centered approaches as opposed to the discovery methods that allow learners to utilize their interest and talents to acquire skills and competencies through personalized learning. 75% of CSO's opined that in-service training for teachers' impact on the lesson delivery. All CSO's interviewed (100%) have faith in the books prepared by KICD. They said that they are rich in content and are sequentially ordered to facilitate building up from what the learners have learnt to new discoveries. Learning activities that enhance developing competencies are well laid out. This contradicts reports from teachers who found the books to be confusing and full of errors. Teachers felt that instructional materials were hurriedly produced to meet the government's curriculum implementation schedule.

TUSOME and PRIDE programs haven't impacted much since no effort has been made to prepare teachers of in other subjects offered in the lower grades beside mathematics and languages. However, the quality of assessment directly correlates to the quality of learning. If there are clear learning objectives that are reflected in the assessment material then the student has a clear understanding of what they have to learn to what depth they have to understand what they are learning and how they are expected to demonstrate their knowledge and understanding.

Indeed, the backwash effects of assessment arguably determine what is learned more than do formal curricula and teaching methods themselves. (Biggs, 1996 pp.2).

4. Conclusions

A majority of Early Grade Education teachers are challenged in designing and preparing a CBC test. Most teachers rely on commercial exams that are set by vendors. Most of these exams are set to cover topics not to test competencies. They are content oriented. KICD 2018 in its report indicated that a majority of teachers have problems in evaluation.

CBC emphasize on continuous assessment to give feedback on the attainment of competencies. A few teachers in early grades are giving end of lessons exams. Such exams are used to grade and rank students which are a great discrepancy from what CBC entails. KNEC is yet to develop evaluation framework for CBC. Teachers are therefore left groping in the dark.

Witty and Gaston (2008) summarized the benefits of competency-based assessment as:

- Allows trainees to build on skills gained in a natural progression within a timeframe.
- Is part of a constructive and cooperative approach to developing the skills of trainees and it can identify the training needed to address gaps in competence; and
- Candidates can gain a nationally recognized qualification.

The assessment process should be considered to be part of the learning process identifying gaps as learning opportunities to develop skills, not failures. It is a collaborative process to be negotiated with the trainee and not a one-off event that is imposed. In the setting of a training provider, trainees can be given many opportunities to demonstrate skill and the assessment process should allow for the capturing and recording of these demonstrations. (Erick & Gaston. 2008)

5. Recommendations

This study made the following recommendations:

- i. In service training of teachers should have specific focus on the competency-based curriculum.
- ii. There is an urgent need to infuse aspects of CBC in teacher training curriculum /programmes/ syllabus.
- iii. KICD should develop clear and comprehensive manuals for teachers and the Curriculum Support Officers.
- iv. Teacher's pedagogical skills in the implementation of CBC in the classroom should be enhanced.

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