Assessing Teacher Knowledge and Skills for Competency Based Formative Assessment of Mathematical Activities in Public Pre-Primary Schools in Gem Sub-County, Kenya

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ABSTRACT

Competency Based Curriculum (CBC) is a reform initiative in Kenya's education that focuses on Competency Based Formative Assessment (CBFA) practice. The conduct of CBFA requires teachers to be knowledgeable on the new assessment strategies, expected to be attained after training. However, only 42.79% of the pre-primary teachers in Gem have been trained on the CBC, a percentage lower than other sub-counties in Siaya. Further, mathematical activities in Gem registered lowest ranking in performance compared to other learning areas.This raises questions whether the teachers poses the requisite knowledge to conduct formative assessment, which aids learning and achievement. The purpose of the study was to assess teacher knowledge and skills for CBFA of mathematical activities in public pre-primary schools in Gem.Objectives were to establish teacher pedagogical content knowledge to conduct CBFA, determine teacher knowledge of feedback provision to conduct CBFA, examine teacher knowledge of goal setting to conduct CBFA and to determine teacher knowledge of ICT to conduct CBFA. The study was based on Schildkamp et al. (2020) model which places acquisition of knowledge as key requisite for competency based formative assessment of mathematical activities. The study employed descriptive survey research design using mixed methods of data collection. The sample size for the study was 76 teachers, 1 Sub-County ECD Coordinator (SCECDC) and 10 headteachers. Data was obtained using questionnaire, classroom observation checklist and interview schedule. Quantitative data was analyzed using descriptive statistics involving frequency distribution tables, percentages and means while qualitative data was analyzed using thematic categories. Findings indicate that teachers have limited knowledge on using formative assessment tools, setting lesson goal and use of Information Communication and Technology (ICT). They could not differentiate formative from summative evaluation when giving feedback. The results imply that there is need for better structured inset based on prior identification of teachers needs.

Keywords: Competency Based Curriculum, knowledge and skills, prerequisites, mathematical activities

BACKGROUND OF THE STUDY

The practice of conducting assessment in education is necessary in establishing the attainment of learning goals and objectives by the learner for curriculum adjustment and maintenance. In Kenya, 8.4.4 education curriculum was implemented in 1985 as a result of the need for a system that would guarantee learners'

independence in promoting their career prospects in both the formal and informal sectors even though the curriculum's focus has been on exams, too theoretical and failing to nurture students' talents, abilities, and interests early enough to prepare them for the workforce (Mwanzia, 2019). In response to this, CBC was recommended by the 2012 task-force report on the realignment of the education sector to Kenya vision 2030 and the 2010 Kenyan Constitution, which resulted to the government develop Sessional Paper No. 2 of 2015- Republic of Kenya (RoK, 2012). This led to the implementation of CBC (2.6.6.3) education system in 2019 and emphasis made on CBFA to track learner's progress and acquisition of talents and abilities (KICD, 2017).

Competency Based Education (CBE) was first introduced in the United States in the 1960s to impact technical competence abilities to enable learners compete globally for opportunities. The curriculum has subsequently been adopted globally, regionally and nationally to impart 21st century skills to the learners for instance in Germany, 2012; Steinhaeuser, Chenot, Roos, Ledig and Joos (2013), in Rwanda, 2015; Habiyaremye and Ndihokubwayo (2018), in Tanzania, 2005; Komba and Mwandaji (2015), and Kenya in 2019 with the first cohort transiting to junior secondary school in the year 2023. Kenya National Examinations Council - KNEC (2021) on Competency Based Assessment (CBA) for early years of education, tasks teachers to develop practical mathematical assessment activities with resources derived from immediate environment and use recommended formative assessment tools.

The study was hinged on Schildkamp, Van der Kleij, Heitink, Kippers and Veldkamp (2020) model which places acquisition of knowledge and skills (pedagogical content knowledge, feedback, goal setting and ICT) as requisite for conduct of formative assessment. In this model, pedagogical content knowledge is necessary to enable teachers give learners prompt feedback for their achievements and better address areas of challenge. Feedback will inform learners, parents and relevant education stakeholders on successes and challenges in assessing various learning areas. Goal setting which should be measurable and within learners' retention ability to meet the KICD (2017) requirement and according to Dilova (2021), each teacher and learner should understand what their goal is. ICT is key in recording and reporting learners' accomplishments (KICD, 2017; Van der Kleij & Adie, 2018).

Formative assessment is not a new phenomenon in education system in Kenya and prior to implementation of CBC according to Odera, Odundo and Onyiengo (2020) it was attempted in the form of Continuous Assessment Tests (CATs), Random Assessment Tests (RATs) among others. However, this kind of assessment did not have the intended purpose of influencing the learning process and were not taken into consideration in final grading of learners. CBC focuses on assessment for learning (KICD, 2017) and therefore incumbent upon curriculum developers and trainers to ensure that the teachers are equipped with the new curriculum's content and assessment strategies to achieve its objective. This attempt has been made through training of teachers in Siaya between 2016 and 2018. Table 1.1 indicate status of the CBC training in Siaya.

Table 1.1 Status of teacher training on Competency Based Curriculum (CBC) in Siaya County as per the year 2022.

No.	Sub-County	Number of Trained Teachers	Percentage Trained
1.	Gem	95	42.79 %
2.	Ugunja	98	56 %
3.	Ugenya	104	68.87 %

4.	Rarieda	117	56.79 %
5.	Alego Usonga	136	53.54 %
6.	Bondo	112	56.56 %

Source: Siaya County Early Child Development Education (ECDE) office 2022 data.

The data above indicate deficiency in the percentage of trained teachers in Gem Sub-County at 42.79% compared to other sub-counties. Subsequently, mathematical activities performance is ranked lowest according to the pre-primary teachers in the sub-county. The purpose of the study was to assess teacher knowledge and skills for CBFA of mathematical activities in public pre-primary schools in Gem. Study objectives were to establish teacher pedagogical content knowledge to conduct CBFA of mathematical activities,determine teacher knowledge of feedback provision to conduct competency CBFA of mathematical activities, examine teacher knowledge in goal setting to conduct CBFA of mathematical activities and to determine teacher knowledge of ICT to conduct CBFA of mathematical activities.

LITERATURE REVIEW

The literature was organized based on the themes forming the study objectives; teacher pedagogical content knowledge, teacher knowledge of feedback provision, teacher knowledge of goal setting and teacher knowledge of using ICT.

Pedagogical content knowledge refers to teachers' knowledge about broad principles and strategies of understanding how students learn, methods of teaching and assessment in line with educational objectives. Teachers carry out formative assessments when they have thorough understanding of their mathematical cognition and conceptual development (Izci, 2016 & Govender, 2019). However, studies indicate that both trained and untrained teachers have inadequate pedagogic knowledge to carry out assessment for learning to promote active learning (Isaboke, Mweru & Wambiri, 2021; Mahlambi, 2021). CBC is a new phenomenon in Kenyan education system that extensive literature needs to be established on teachers' knowledge of formative assessment especially in formulation of formative assessment tasks, preparation and use of various assessment tools in order to provide insights for the study implications.

When providing feedback, teachers establish if learning took place and any challenge experienced by learner in understanding a concept. Feedback should be constructive, meaningful, timely and sufficiently detailed (Schildkamp et al., 2020 & KNEC,2021) as it will aid in tracking learners progress in acquisition of knowledge, skills and attitudes. Even though use of Assessment Work Sample Method (AWSM) during training has realized increased teacher's use of formative assessment particularly feedback practice (Beesley, Clark, Dempsey & Tweed, 2018), other scholars are of the school of thought that teachers still have challenges in differentiating between formative and sumative evaluation (Hasim, Di & Barnard, 2018; Figa, Kebede & Tarekegne, 2020). This can be necessitated by a number of factors such as duration and frequency of the in-service teacher training. It is with this backdrop that the researchers established duration of CBC training Gem ECDE teachers attended as it could be a possible cause of low ranking of mathematical activities performance.

Formative assessment technique relies on formulation of assessment goals and targets to allow teachers and learners receive feedback on their progress toward established objectives. Studies show learners are capable of creating their own goals and producing evidence of their progress toward their academic goals hence needs support from teachers (Brookhart & Moss, 2009; Brookhart, Long & Moss, 2008;

Nordengren, 2019). Even though good performance is achieved through setting lesson goal (Dotson, 2016), among factors found to hamper the practice includes unclear goals (Chepsiror, 2020).

Combining formative assessment with the use of technology improves learning outcomes and assessment flexibility (Elmahdi et al., 2018; Cosi et al., 2020; Ogange, Agak, Okelo & Kiprotich, 2022 & Webb et al., 2018). Competence Based Assessment (CBA) provides for integration of ICT to maintain and report learners achievement qualitatively. According to Rr, Fox-Turnbull, Earl-Rinehart and Calder (2020) the use of technology has helped teachers deliver captivating lessons and timely formative assessment feedback despite constrains such inadequate ICT facilities in schools and ill-equipped teachers on basic ICT skills (Murithi and Yoo ,2021) hence need for capacity buiding programs (Abdullahi, 2019; Musungu, Ogula & Munyua, 2021). Considering the use of ICT is a practical activity, were the ICT gadgets availed for ECDE teachers practice on their use during training? Are ICT gadgets available in various pre-primary schools in Gem for the conduct of formative assessment? And have the teachers in the sub-county attended capacity building programs on the use of ICT? These are the questions addressed in this paper.

METHODOLOGY

Study research employed descriptive survey design. The design was appropriate for survey of opinions on effectiveness of teacher training from the large number of respondents (Castro, Kellison, Boyd & Kopak, 2010). The design was suitable to provide a wide range of information pertinent to study objectives.

The target population was 95 teachers, 95 headteachers and 1 Sub-County ECD Coordinator. These were the key respondents on the concerns of the study.

The sample size was 76 teachers , 10 headteachers and 1 SCECDC. The sample size of teachers was obtained using Krejcie and Morgan (1970) sample size estimation table. The sample of headteachers was determined by drawing 10% of the population of headteachers. The sample size was based on Mugenda and Mugenda (2003) who recommends manageable size for interview purposes. Simple random sampling was used to select teachers and headteachers while purposive sampling was used to select SCECDC.

Data collection instruments were questionnaire for teachers interview schedule for headteachers and SCECDC and classroom observation checklist.

Upon approval of the study by the Maseno University Ethics Review Committee (MUSERC) and obtaining research permit from the National Commission for Science, Technology and Innovation (NACOSTI). Data was collected by researchers in person. The respondents were informed about the research and measures taken to ensure confidentiality of responses as well as their voluntary participation. After which the sampled teachers and headteachers were asked to consent by signing consent forms before taking part in the study.

Content and face validity was achieved by submitting instruments of data collection for review by experts in the School of Education to ensure they measured stated objectives of the study.

Reliability coefficient of the questionnaire instrument was determined through a pilot study on 10% of the targeted teachers and who did not take part in final study through test- retest using Pearson's correlation coefficient and a computed reliability of .83 was obtained. Interview and classroom observation checklist reliability was ensured through expert review in the school of education (Bogdan & Biklen, 2007).

Quantitative data was analyzed using descriptive statistics involving frequencies, percentages and mean scores with the help of Statistical Package for Social Sciences (SPSS).Qualitative data from the telephone recording interview with the SCECDC was transcribed and together with the one-on-one interview with headteachers findings were coded, synthesized and patterns drawn according to specific themes (Bogdan

& Biklen,2007). Based on the Likert scale statistical interpretation, possessing of knowledge in assessment was indicated if the aspects investigated weighted mean fell between 3.01 and 5.00 while inadequate knowledge of the practice 1:00-3.00.

RESULTS AND DISCUSSION

The findings are based on teachers' pedagogic content knowledge, feedback provision, goal setting and use of ICT in comparison with the previous studies.

Teacher Pedagogical content knowledge

Teachers' ability to formulate practical assessment activities, time of assessment and competence in using formative assessment tools was sought. Findings are indicated in Table 4.1 below;

Table 4.1 Teacher n=72 (94.7%) responses on Pedagogic Content Knowledge in the survey Questionnaire

S/No	Statement	Strongly Agree f (%)	Agree f (%)	Undecided f (%)	Disagree f (%)	Strongly Disagree f (%)	Mean $\bar{x}$
1.	Teacher presents mathematical activities assessment in practical activities	-	4(5.6%)	25(34.7%)	42(58.3%)	1(1.4%)	2.44
2.	Teacher assess learners during mathematical lesson	1(1.4%)	7(9.7%)	28(38.9%)	32(44.4%)	4(5.6%)	2.57
3.	Teacher assess learners after mathematical lesson	14(19.4%)	28(38.9%)	30(41.7%)	-	-	3.78
4.	Teacher use Checklist for assessment Teacher use Rubrics for assessing mathematical activities	1. -	6(8.3%)	21(29.2%)	45(62.5%)	-	2.46
5.	Teacher use Observation schedule for assessment	10(13.9%)	42(58.3%)	19(26.4%)	1(1.4%)	-	3.85
6.	**Weighted mean**	-	5 (6.9%)	20(27.8%)	44(61.1%)	3(4.2%)	2.38 **2.91**

KEY: 5- Strongly Agree   4-Agree   3- Undecided   2- Disagree   1- Strongly disagree

Based on the study's statistical mean interpretation, the weighted mean in Table 4.1 above demonstrates that the teachers are ill-equipped on their pedagogic knowledge to conduct formative assessment and hence need to reskill them on the use of checklist, observation schedule as well as presentation of practical

assessment task to improve on their knowledge of assessment. During classroom observation, all of the teachers observed did not use checklist while only 3(37.5%) of them utilized rubrics when conducting formative assessment.

During an interview with the Sub-County ECD Coordinator and headteachers, the findings were presented based on the following theme.

1. Frequency of CBC training and use of formative assessment tools

The SCECDC who was a trainer and oversees curriculum implementation at ECDE upon being interviewed reported that in addition to the assessment tools (Checklist, Observation schedule, and Rubrics) listed, teachers were also trained on creating learner portfolios for assessment. However, the SCECDC bemoaned the fact that teachers hardly ever used the tools while assessing learners. The SCECDC reported that;

"*the trainings were conducted more than thrice from 2019 and a part from the assessment tools listed, the teachers were also trained on preparing learner portfolios and we insisted that they carry out lesson observation throughout after teaching a sub-strand to ensure no child is left behind, however the teachers rarely use the tools when assessing learners in class*".

Similarly, in an interview with the headteachers, 8 out of 10 of them noted that despite the regular trainings conducted, teachers rarely prepared assessment tools and remarked need for more teacher sensitization on their preparation and use. Their sampled responses are indicated below;

One head teacher said;

"one of my ECDE teachers attended the CBC training during the holidays however, she hardly use the assessment tools when teaching."

Another one responded;

"when it comes to using assessment tools, I can confidently confirm that none of my teachers are doing so especially during the lesson…"

The teachers indicated they are well trained and positive towards the use of rubrics during assessment from their mean score of 3.85 even though the classroom observation findings showed that majority (62.5%) did not use it. Subsequently, during the interview 8 out of 10 head teachers and the SCECDC reiterated that the training did not adequately prepare the teachers on the formulation and use of the tools. The disparity in teacher responses on the use of rubrics could be as a result of a few of them familiarity with the assessment tools as witnessed in the classroom observation. The study findings concurs with those of (Isaboke et al., 2021 & Chemeli et al., 2019) who remarks that teachers have difficulties in conducting assesment for learning even as Govender (2019) emphasizes on acquistion of knowldge before carrying out the practice. The study results provide valuable insights on the need for intervention measures especially on reskilling Gem ECDE teachers on the use of checklist and observation schedule to meet Schildkamp et al. (2020) model expectation that teachers inform learners on their achievement.

Teacher knowledge of feedback provision

Teacher capability to provide feedback on various aspects as well as ability to differentiate formative and summative assessment was sought and results indicated in Table 4.2 below;

Table 4.2 Teacher n=72 (94.7%) responses on Feedback in the survey Questionnaire.

S/No	Statement	Strongly Agree f (%)	Agree f (%)	Undecided f (%)	Disagree f (%)	Strongly Disagree f (%)	Mean x̄
1.	Teacher provides written feedback to inform learners on attainment of mathematical abilities	3(4.2%)	32(44.4%)	20(27.8%)	13(18.1%)	4(5.6%) 3.	3.24
2.	Teacher gives verbal feedback to inform learners on their abilities.	48(66.7%)	17(23.6%)	5(6.9%)	2(2.8%)	-	4.54
3.	Teacher provides assessment feedback during teaching.	1(1.4%)	6(8.3%)	24(33.3%)	30(41.7%)	11(15.3%)	2.39
4.	Teacher gives assessment feedback after teaching.	43(59.7%)	26(36.1%)	2(2.8%)	1(1.4%)	-	4.54
5.	Teacher able to differentiate formative and summative evaluation	2. -	2(2.8%)	24(33.3%)	35(48.6%)	11(15.3%)	2.23
	Weighted mean						**3.39**

KEY: 5- Strongly Agree   4-Agree   3- Undecided   2- Disagree   1- Strongly disagree

Based on the findings in Table 4.2, teachers are knowledgeable in providing feedback when carrying out assessment practice from their mean score of 3.39. The teachers however still expressed dissatisfaction on ability to differentiate formative and summative evaluation and provision of feedback during the lesson. During classroom observation, only 12.5% of the teachers provided written feedback with majority (75%) giving verbal feedback with the findings depicting a possibility of compromising the importance attached to written feedback such as for reference purposes (KICD, 2017 & Schildkamp et al., 2020). The interview findings with the SCECDC and headteachers on the subject matter were presented in the following theme.

1. Ability to independently provide assessment feedback

The SCECDC responded that teachers were trained to provide feedback through formulation of assessment tasks and use of appropriate tools however lamented that some pre-primary schools' headteachers were supplying teachers with commercial assessment materials, some of which had content outside the recommended design. The SCECDC noted;

"*the teachers were trained to independently provide feedback however, during supervision I noted that some head teachers had outsourced assessment materials from a cyber cafe for play groups and pre-primary one, some of which had irrelevant content*"

Majority of the headteachers (70%) on the other hand noted that teachers were still negative on assessing learners' during the lesson as they perceived it was time consuming. In a statement made by a headteacher;

"our teachers regularly conduct assessment after completing a sub-strand, some does after the lesson while in most cases they give tasks to learners as home assignments"

Another headteacher commented;

"I interact with the pre-primary teachers in my school and they tell me conducting assessment after the lesson makes them cover a lot of work within the lesson..."

The survey questionnaire results indicated teacher satisfaction with the training to enable them deliver assessment feedback. However, from the lesson observation and interview it emerged that teachers still needed to address their weaknesses especially on distinguishing between formative and summative evaluation to help close the gap between where the learners are and where they need to be when making references to individual learners' achievement. The study findings support the conclusions made by Hasim, Di, and Barnard (2018) and Figa, Kebede and Tarekegne (2020) that teachers lacked the training required to differentiate between formative and summative evaluations.

Teacher knowledge of goal setting

Teacher capability to set short-term goals that meet learner needs and take into account their individual differences when conducting formative assessment was investigated. Table 4.3 displays the results

Table 4.3 Teachers n=72 (94.7%) responses on Goal setting in the survey Questionnaire

S/No	Statement	Strongly Agree f (%)	Agree f (%)	Undecided f (%)	Disagree f (%)	Strongly Disagree f (%)	Mean $\bar{x}$
1.	Teacher set short term mathematical activities learning goals that meet learner need	4. -	4(5.6%)	31(43.1%)	29(40.3%	8(11.1%)	2.43
2.	Teacher formulate mathematical activity's goal that caters for individual differences	-	2(2.8%)	20(27.8%)	40(55.6%	10(13.9%	2.19
	Weighted mean						**2.31**

Key: 5 - Strongly Agree   4-Agree   3- Undecided   2- Disagree   1- Strongly disagree

The teachers'weighted mean score was 2.31, showing low level of readiness to develop formative assessment goals during teaching in spite recommendations from Nordengren (2019), KICD (2017) and Schildkamp et al. (2020) on timely, student centered, short term assessment goals that meet learner need and that are both measurable for teachers and learners. The observation findings showed that more than half (62.5%) outlined assessment goal before the lesson and in contrary with teachers findings. The dissonance could mean that the teachers are setting and informing learners on the lesson goal unknowingly but again poking holes on whether the trainings adequately enlightened them on how lesson goals are formulated and if they were taken through practical examples.

Teacher knowledge of Information communication technology

The study sought to find out if teachers are trained to use ICT for recording assessment outcome during and after the lesson as well as in reporting assessment outcome through capacity building programs. The findings are shown in Table 4.4 below.

Table 4.4 Teachers n=72 (94.7%) responses on Information Communication Technology (ICT) use in the survey Questionnaire

S/No	Statement	Strongly Agree f (%)	Agree f (%)	Undecided f (%)	Disagree f (%)	Strongly Disagree f (%)	Mean $\bar{x}$
1.	Teacher use ICT to record assessment outcome during the lesson	5. -	3(4.2%)	8(11.1%)	43(59.7%)	18(25.0%)	1.94
2.	Teacher use ICT to record assessment outcome after the lesson	-	-	10(13.9%	43(59.7%)	19(26.4%)	1.88
3.	Teacher report learner outcome using ICT through capacity building programs.	-	6. -	17(23.6%)	45(62.5%)	10(13.9 %)	2.09
	Weighted mean						**1.97**

KEY: 5- Strongly Agree   4-Agree   3- Undecided   2- Disagree   1- Strongly disagree

The teachers are dissatisfied with the training in respect to equipping them with the necessary skill to use ICT for formative assessment as indicated in their mean score of 1.97 in Table 4.4 above. To justify the results, classroom observation was conducted and in all the 8 schools, no teacher used ICT during formative assesment. Additionally, interview with the SCECDC and headteacher responses on the subject matter is made as per the theme below;

7. Availability and use of ICT during assessment

The SCECDC reported that very few teachers were using ICT majorly during digital literacy lessons to occasionally show learners pictures related to the lesson content and not for formative assessment. He reported;

"I have very few teachers who have knowledge on using ICT, though they usually use it for ICT literacy lessons to sometimes show pictures to learners and I can report that pre-primary school teachers in Gem were not trained on using technology for assessment, since only Trainer of Trainers (ToTs) had access to laptops during the exercise."

The interview with the headteachers to find out on the available ICT gadgets in their schools used for assessment indicated that they lacked ICT gadgets as well as infrastructure to support its use in their various ECDE section notwithstanding expectation of the new curriculum that ICT should be integrated in all lessons. One headteacher categorically stated;

"since the roll out of the CBC we have not received any ICT gadget for use in pre-primary school, however we hope that the government through the Ministry of education will look into it…"
Another responded;
"talking about availability of ICT gadgets in our ECDE is like a nightmare since even if they were available, our classes do not have electricity to support their use…"
A third one added that;
"during headteachers' meetings we have always been promised that relevant stakeholders will ensure ICT gadgets are supplied in our ECDE schools to enable ICT integration during lessons but till now I have not seen any…"

The teacher responses, classroom observations as well as the interviews are in agreement that availability and use of ICT gadgets in the pre-primary schools in the sub-county is still a cause for worry. A number of constrains such as inadequate ICT facilities and teachers lack of the requisite skills still hampers the practice (Murithi & Yoo, 2021; Rr et al., 2020) despite a requirement by KICD (2017) and suggestion by Schildkamp et al. (2020) that all lessons must be ICT integrated. This raises gaps on availability of ICT gadgets, infrastructure and teacher competence which ought to have been filled during piloting before the implementaion of the curriculum.

CONCLUSIONS

The study concludes that the teachers lack requisite knowledge and are ill-trained to provide learners with practical mathematical assessment tasks, still experiences challenges in using checklists and rarely use rubrics in conducting assessment. Additionally, there is low utilization of observation schedule during assessment practice. On feedback provision,they are ill-trained to provide written feedback since most prefer giving verbal feedback during teaching, despite the importance linked to written feedback including reference purposes. Notably, even after receiving in-service training on CBC to refresh their knowledge of assessment strategies, majority still cannot differentiate formative and summative evaluation. Similarly, the teachers have limited knowledge in setting lesson goal and lacks training on the use of ICT with pre-primary schools in the sub-county lacking the necessary ICT gadgets to support CBFA practice. '

IMPLICATIONS FOR FORMATIVE ASSESSMENT POLICY AND PRACTICE

The effort to review Kenya's education curriculum to one that would focus on learners talents and abilities based on the 2012 education task-force report on the realignment of Kenya's education system to vision 2030 (RoK, 2012) resulted to implementation of competency based curriculum with focus on assessment for learning. In the new dispensation, the teachers are tasked with planning and conducting assessment during the learning process with feedback necessary for the curriculums review and maintenance. Schildkamp et al. (2020) model outlines key aspects for the conduct of the practice including ICT intergration, a 21st century skill that teachers should be conversant with and in line with KICD expectations. However, the study findings indicate that there is no framework to guide the implementation of the CBC through formative assesment at the elementary stage hence calling for a more structured in-service training based on identification of teachers needs by the relevant education stakeholders.

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