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Rwandan New Competence Base: Curriculum Implementation and Issues; Sector-Based Trainers

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Abstract

This study investigates the competence-based curriculum (CBC) issues hindering its implementation. To collect data, the study surveyed 731 primary and secondary school teachers around Rwanda at the time they were in their third phase of CBC assessment training. These teachers are sector-based trainers (SBTs) whom after getting training, are supposed to train their fellow teachers around their schools in their respective sectors. Among them, 571 were males while 148 were female teachers, 256 and 453 were primary and secondary school teachers respectively with an average of teaching experience of 10 years. After analyzing data, the study found that 82 percent of respondents appreciated the new curriculum; however, they claim that it was difficult to complete it due to its loaded content. About 546 teachers were already trainers and at least 109, 180, and 195 trainers attended training once, twice or thrice, while 176, 153, and 78 in return, trained their fellow teachers at least once, twice or thrice. According to the extent that SBTs are aware of generic competences and cross-cutting issues, about 27.3 per cent know the role and tenacity of generic competences and cross-cutting issues. A statistically significant difference of .005 was found in teachers'

qualification in favor of secondary school teachers while there was no statistically significant difference in gender. According to the correlation between training attended, teaching experience and the generic competences and cross-cutting issues known, a positively weak correlation was found in line with the number of training while a negatively weak correlation was found in line with their teaching experience.

Keywords: New CBC, Old KBC, Curriculum implementation, Assessment, Sector-based trainers

Research background

In 2015, Rwanda adopted and commenced the implementation of a new curriculum. The rationale of shifting from knowledge-based to competence-based curriculum was to appreciate the skills, attitudes, and values in education rather than only knowledge. This aimed at developing generic competences, integrating ICT tools in education, and taking care of cross-cutting issues in the classroom setting in order to achieve learner-centered teaching methodologies (Rwanda Education Board, 2015).

In 2018, from 9 to 17 January, Rwanda education board (REB) with other several developmental partners such as Japan International Development and Cooperation Agency (JICA), the United Nations Children's Fund (UNCEF), *Soma umenye*, Rwanda Aid, Educate and Peace Corps organized a third phase competence-based curriculum (CBC) training (Rwanda Education Board, 2017). This phase focussed on assessment since in the 2018 school year, the first students 'cohort were expected to be evaluated based on the new curriculum (CBC) via national examination while the previous training phases aimed at introducing its philosophy to schools in 2015 and implementing practices deepening teachers' planning and delivering lessons between 2016 and 2017.

Rwanda has a political hierarchy of decentralization. It starts from national sate at the top, 4 provinces with the city of Kigali, 30 districts,

416 sectors, 2148 cells and 14 837 villages (National Institute of Statistics of Rwanda, 2006). It is in this regards, REB conducts teachers training in the cascade model. Apart from administrative stream of district education officers (DEOs), sector education officers (SEOs), and head teachers (HTs) or deputy of studies (DOS) who are in charge of monitoring the training, a technical stream on the other hand, aims at providing technical contents to all teachers in service through Continuous Professional Development (CPD). Therefore, REB develops training materials and train national trainers (NTs) ready to train their fellow Sector-Based Trainers (SBTs). These SBTs will in return train the rest of teachers at a sector level.

In the third phase training, SEOs and school HTs were requested to select 10 competent teachers—2 deputies of study, 4 secondary teachers, 3 primary teachers, and 1 nursery teacher—in a sector to attend the training. These teachers after the training were qualified to sector-based trainers expected to train their fellow in their sector or school-based workshops. This training was facilitated by national trainers from IEE (Inspire, Educate and Empower Rwanda) and teachers. Despite the assessment focus of the training, however, we wished to know how new competence-based curriculum is being implemented and what are the issues before even start of assessment training.

Related Literature

One of the main roles of education is to creating teaching and learning environments able to bring about desired changes in learners. Since the core spirit of teaching and learning any subject is to make learner able acquired the needed competences, therefore these competences should shelter the learner with more knowledge, better skills while influencing him/her with attitudes and values (Malan, 2000).

Ten Cate (2007) defined competence as the usual and prudent usage of the message, understanding, practical abilities, scientific thinking, feelings, ethics, and reflection in everyday preparation for the advantage of the individual and public concerned. The competency-

based movement was introduced in America near the end of the 1960s in response to concerns that learners are not taught the skills they require in life after school. The similar interest has been conveyed in Rwandan education during 2015. According to Malan (2000), competence-based education is built on six strong gears such as (a) explicit learning outcomes with respect to the required skills and standards for assessment, (b) flexible time frame to master these skills, (c) variety of instructional activities to facilitate learning, (d) criterion-referenced testing of the required outcomes, (e) certification based on demonstrated learning outcomes, and (f) adaptable programs to ensure optimum learner guidance. Interestingly, all of these six gears are noticeable in the outcome-based learning. This is to say that in this approach, learners are also accountable for their own achievements (Malan, 2000).

Actually, the curriculum implementation is a multifaceted chore. For instance, according to Eamon (2005), the curriculum change offers boards of management, schools and teachers with a sole occasion to involve in professional development, advance educational outcomes, and make learners overcome the future problems and grasp its prospects. Additionally, the curriculum change should occur in the classroom and it requires teachers to put the curriculum document into action, adapting the new teaching platforms and approaches, therefore giving a wide range of their learners' learning proficiencies (Eamon, 2005). The competence-based curriculum forecasts what the learner is going to do when they complete school rather than what he/she is able to retain in heads. Therefore, a time to time evaluation intended to assess mastery of skill-competence in order to achieve safe practices would evaluate the fixed competences, the learning outcomes, and criteria linked to these learning outcomes (Ten Cate, 2007).

Two of 9 criterion abilities of one medical school in Rhode Island were outlined lifelong learning and problem-solving abilities (Smith, Dollase, & Boss, 2003). For instance, while the evaluation of lifelong learning, on one hand, asks the learners to do research, analysis,

criticism, and extract evidence and necessary information from multiple sources, problem solving ability on other hand takes part in the integration and synthesis of research and experimental data and the development of a plan of action so that a complex problem will be resolved while it implements a course of action at more advanced levels (Smith et al., 2003). Nevertheless, in the study of the alignment between the Rwandan ordinary level national curriculum and national examinations (Sibomana, 2016), though the development of critical thinking skills and abilities which are recommended by the curriculum are not accounted for sufficiently in the examinations, it was found that even if the curriculum endorses the improvement of learners' communicative ability, the examinations do not evaluate learners' listening and speaking abilities.

Purpose of the study

The aim of this survey is to learn from sector-based trainers to viewpoint issues in implementing a new curriculum in Rwanda, in order to make implications to policymakers for further considerations, therefore guiding teachers to reflect on their own experiences.

The research questions governing this study are as follow:

(a) To what extent did the sector-based trainers attend the training?
(b) How do the sector-based trainers appreciate the new competence-based curriculum?
(c) To what extent sector-based trainers are aware of generic competences and cross-cutting issues?
(d) How the training attended correlate with the awareness of generic competences and cross-cutting issues?

Research Methods

Population and sampling technique

Since they are same time teachers and teacher' trainers, the school-based trainers (SBTs) served the right respondents of the present study because the study was interested in their experiences in implementing CBC, and these are the teachers who are on the field. The training intended to accommodate all 4160 teachers from 416

sectors, from 30 districts. However, as reported by the Japanese-Rwanda joint project for supporting institutionalizing and improving the quality of school-based in-service teacher training, about 3813 teachers attended and completed the training (SIIQS, 2018). The training occurred in 10 centers—GS Sainte Bernadette Save in Gisagara district, Petit Séminaire Saint Vincent Ndera in Gasabo district, ESSA Ruhengeri and Saint Vincent Muhoza in Musanze district, GS Kigeme in Nyamagabe district, Christ Roi Nyanza and Ecole de Science Louis de Montfort in Nyanza district, GS Saint Aloys in Rwamagana district, *Collège Indangaburezi* in Ruhango district, and EFOTEK Kanombe in Kicukiro district. The trainees were randomly assigned to the centers except for EFOTEK Kanombe which only accommodated nursery teachers. Each center accommodated approximately between 350-500 trainees and 10-15 training facilitators (national trainers and REB staffs). Therefore, the sample of 731 teachers was drawn from 3 centers—GS Saint Aloys, GS Sainte Bernadette, and *Collège Indangaburezi*—since the training was expected to accommodate 10 teachers from every sector.

Data collection procedure and analysis

The teachers were given the questionnaire prior to the training. The questions asked about training so far attended as trainees or as trainers, the training institutions and the training content; challenges faced in the previously attended training as well as suggesting solutions; appreciation of competence-based curriculum, and awareness of generic competences and crosscutting issues allocated in CBC. Therefore, table 1 shows the distribution of respondents.

Table 1 Description of participants

Gender		Teaching experience		Teacher 'qualification		
Male	571	Maximum	39	Master	6	Secondary school
Female	148	Minimum	1	A0	328	
		Average	10	A1	119	
				A2	256	Primary school

The percentage and frequency data were analyzed using MS Excel while t-test of means and correlated scores were analyzed using the statistical package for social science (SPSS). The quantitative data were analyzed statistically while qualitative data were analyzed thematically and descriptively.

Results presentation

Training experiences

About training experience, among 731 respondents, 76, 13, and 106 have never been a trainer, never attended any training, and in return never trained other fellow teachers respectively. Six hundred were already trainers where at least 109, 180, and 195 trainers attended any training once, twice, and thrice respectively while 176, 153, and 78 in return trained their fellow teachers at least once, twice, and thrice respectively. Apart from trainees and trainers, the most revealed institution that delivered many training was reported to be the Rwanda Education Board (REB), however, there were other organizations like JICA, VSO, VVOB, ADRA Rwanda, *Soma umenye*, British Council, Hartford University, Wellspring foundation, IEE Rwanda, and Handicap international to mention few who have independently or collaboratively with REB and ministry of education (MINEDUC) trained teachers. The most training areas stated by teachers both as trainees and trainers delivered to their fellow teachers were Introduction and implementation of CBC, while ICT integration, English literacy, Inclusive education, the Use of teaching aids, School subjects training were delivered occasionally.

However, some challenges related to training facilities, resistance to adapt the new curriculum, time allocation, poor communication of internal organizers were reported. These challenges are:

(a) Lack of enough material like laptops, projectors, and other related ICT tools, textbooks, audio-visual material
(b) Training has a lot of content but time is not enough, lack of enough time for training, time respect in training, and late closing of the training

(c) No reward, insufficient and delay of transport fees, and poor lodges
(d) Poor languages communication, Levels of teachers, Lack of skills in CBC, Lack of practice
(e) Mindset of teachers, resistance to change from KBC to CBC, negative attitudes of trainees to a new curriculum
(f) Poor organization in terms of trainees' security, poor communication while inviting trainees
(g) The internal organization of REB is not perfect, no follow up of REB and Head teachers

When asked how teachers appreciate the CBC, they appreciate it at 82% (see Table 2). The content areas of the curricula and the percentages of who appreciate (total number of respondents N) either knowledge-based curriculum (KBC) or competence-based curriculum (CBC) are presented in the table below.

CBC appreciation

Table 2 Evaluation and appreciation of the curricula

	Content	*KBC%*	*CBC%*	*N*
1	Covered useful material	16	84	712
2	Content well organized and formatted	23	77	707
3	Images and drawings well illustrated	12	88	703
4	Loaded Syllabus (difficult to complete)	64	36	708
5	Effective activities (task and exercise)	3	97	713
6	Easy to teach (implementation)	20	80	715
7	Stimulate learners' interests	2	98	718
8	Market-oriented	6	94	709
	Overall appreciation	18	82	

CBC Knowledge

To know about what teachers know about CBC, trends like group work, generic competences, cross-cutting issues, ICT integration, and learner-centeredness to list few were viewed to be much of focus by teachers after introducing new curriculum CBC. Therefore, we likely

had to ask and focus on generic competences and crosscutting issues as they appear in the lesson planning format used daily by almost all teachers in their activities.

The table 3 shows the distribution of mean scores got by teachers for every question asked.

Question	**N**	**Mean**	**Standard dev.**	**%**
Competence Based Curriculum comprises generic competences and cross-cutting issues. What do you think are these for?	731	1.6	1.151	27.3
List the generic competences	731	3.5	1.820	58.2
List the cross-cutting issues	731	4.8	2.020	60.1
/20		9.9	3.851	
%		49.9		

The first and second questions were scored on 6 scores each while the 3third question scored on 8 scores making a total score of 20. About 27.3 per cent of respondents knows the importance and purpose of generic competences and cross-cutting issues while 58.2 and 60.1 per cent were able to list generic competences and cross-cutting issues respectively.

The table 3 shows the score got by secondary school teachers (A0) and primary school teachers (A2).

Table 3 Group Statistics in qualification

	ID	N	Mean	Std. Deviation	Std. Error Mean
Score	A0	455	51.21	18.860	.884
	A2	256	47.03	19.463	1.216

It was found that secondary school teachers (A0) statistically significant performed higher than primary school teachers at a level of significance of .05 (Table 4).

Table 4 t-Test: Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					
								95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Score	Equal variances assumed	.331	.565	2.803	709	.005	4.178	1.491	1.251	7.104
	Equal variances not assumed			2.778	514.896	.006	4.178	1.504	1.223	7.132

The table 5 shows the score got by male and female teachers.

Table 5 Group Statistics in gender

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Skills on CBC	M	572	49.82	19.132	.800
	F	159	49.03	19.813	1.571

It was found that there was no statistically significant difference between male and female teachers in terms of performance (see Table 6).

Table 6 t-Test: Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed

Skills on CBC	Equal variances assumed	.842	.359	.458	729	.647
	Equal variances not assumed			0.449	245.947	0.654

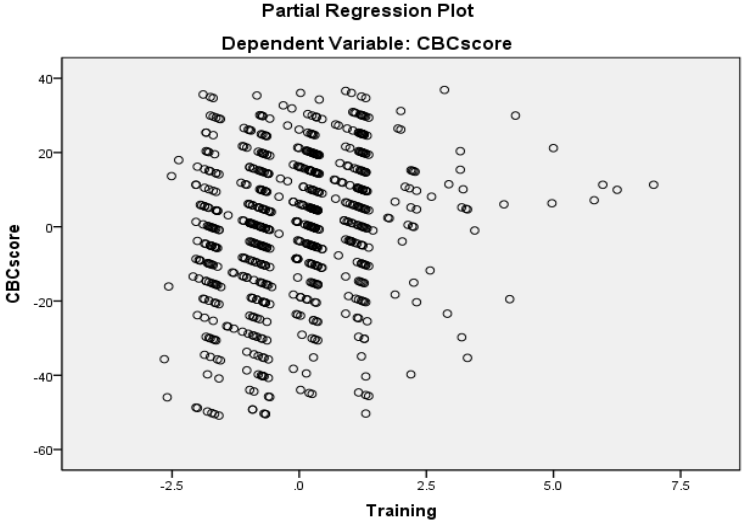
Correlation and regression analysis

When we calculated the correlation of training alongside CBC scores, we found a weak positive correlation of .20 as the table 7 shows. This means that the more teachers are trained, the more they adjust CBC knowledge, and however, the rate of correlation is weak (20%).

Table 7 Correlations of Number of training and CBC score

		CBC score	Training
CBC score	Pearson Correlation	1	.202**
	Sig. (1-tailed)		.000
	N	731	726
Training	Pearson Correlation	.202**	1
	Sig. (1-tailed)	.000	
	N	726	726

**. Correlation is significant at the 0.01 level (1-tailed).



The scatter plot also shows how the CBC test scores and number of training are distributed (Figure 1).Figure 1 Distribution of CBC test scores and number of training of SBTs

When also calculated correlation of teaching experience alongside CBC scores, we found a very weak negative correlation of -.04 as the table 8 shows. This means that the experienced teachers get a low score on CBC knowledge, and even this rate of correlation is very weak (4%).

Table 8 Correlations of Years of teaching experience and CBC score

		Experience	CBC score
Experience	Pearson Correlation	1	-.047
	Sig. (1-tailed)		.101
	N	731	731
CBC score	Pearson Correlation	-.047	1
	Sig. (1-tailed)	.101	
	N	731	731

The scatter plot also shows how the CBC test scores and years of teaching experience are distributed (Figure 2).

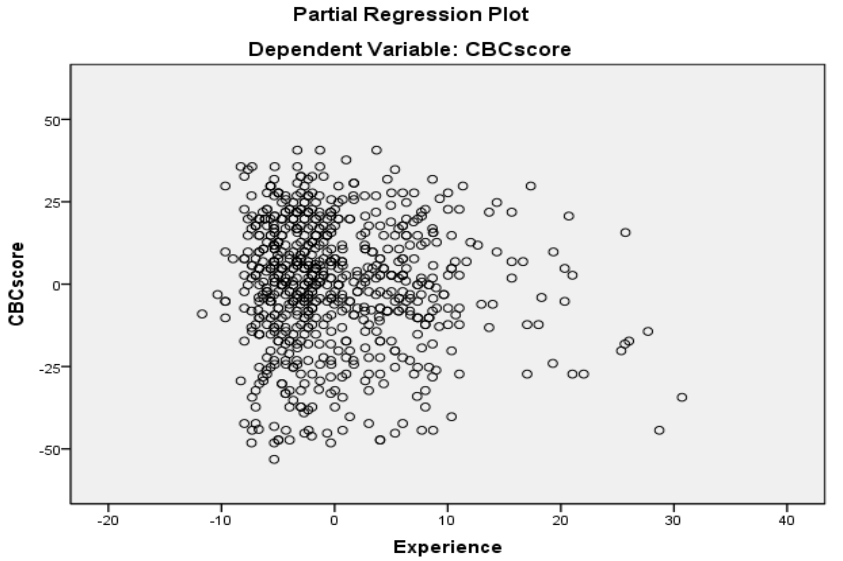


Figure 2 Distribution of CBC test scores and years of teaching experience of SBTs

Discussion of results

The Curriculum Framework principles guide the way the curriculum is constructed but they go beyond this and have an impact on teaching and learning, on the way progress is assessed, on the way teachers are trained and on the way schools are led and managed. The approaches are Learner-centered, Competence-based approach, Inclusive, Flexible, Transparent and Accountable, Integrated with ICT as a Tool, and Interconnected with Cross-Cutting Issues (Rwanda Education Board, 2015). A competence-based curriculum takes learning to higher levels by providing challenging and engaging learning experiences which require deep thinking rather than just memorization. Its focus is on what young people can do rather than just on what they know. There are two categories of competences in a competence-based curriculum: Basic Competences and Generic Competences. Basic competences such as literacy; numeracy; ICT; citizenship and national identity; entrepreneurship and business development; science and technology; and communication in the official languages are the key competences based on the expectations and aspirations reflected in the national policy documents.

It is on the basis of descriptors of these competences that the learners' profiles in each level of education, subjects to be taught and learning areas, broad subject competences and key competences are built. Generic competences such as critical thinking, creativity and innovation, research and problem solving, communication, co-operation, interpersonal relations and life skills, and lifelong learning promote the development of the higher order thinking skills. They boost subject learning as well as being highly valuable in them. They are seen as generic competences because they apply across the curriculum, and can be developed in all the subjects studied. These generic competences on one hand help students deepen their understanding of subjects and apply their subject learning in a range of situations. They, therefore, contribute to the development of

subject competence. As students develop these generic competences they also acquire the set of skills that employers look for in their employees, so the competences help prepare students for the world of work. The generic competences are also vital for enabling students to become life-long learners who can adapt to our fast-changing world and the uncertain future. The cross-cutting issues which are integrated into CBC, on the other hand, are Comprehensive Sexuality Education, Environment and sustainability, financial education, gender, Genocide Studies, Peace and Values Education, Standardization Culture, and Inclusive Education. The curriculum reflects the significance of connections between different subject areas, integrating them across years and cycles. Cross-cutting issues are integrated across learning areas appropriately. They are all important for students to learn about, but they are not confined to one subject (Rwanda Education Board, 2015).

Therefore, in the present study, SBTs liked CBC in the area of covering useful material, well organized and formatted content, well-illustrated images and drawings, effective task and exercise, its easy implementation, easily stimulating the learners' interests, and market-oriented**,** however, they showed weaknesses in the awareness of its generic competences and cross-cutting issues. This is the same results from the study of Ndihokubwayo and Habiyaremye (2018) indicating the motive to why Rwanda shifted from KBC to CBC. Thought the CBC was found loaded as the former KBC, it was found, however, to have a valuable material, easily to practice and motivating teachers, well-fitting and time management containing suitable activities, telepathic curriculum developers, learners' carrier guidance and marketplace competition (Ndihokubwayo & Habiyaremye, 2018). Additionally, it was found that there is no strong positive correlation between teachers who got more training and the mastering of CBC content. Likewise, it was the same to teachers who have been teaching for many years.

These teachers got a little score in the knowledge of the components of CBC such as generic competences and cross-cutting issues. Though

in the self-reported survey, pre-service teachers perceive their knowledge about competence-based instruction styles, practices and assessments to be high; in the interview, some of the pre-service teachers were not able even to define the term competency. It was also found that the graduates from teacher training colleges in Tanzania believed that they know the meaning of competence-based methods, however, they truly don't know how its methods are put into practices (Kafyulilo, Rugambuka, & Moses, 2013). There has been no statistically significant difference between male and female teachers in terms of CBC knowledge, however, the difference has been found in primary and secondary teachers. This may be explained that not only that secondary school teachers have more advanced academic knowledge than the primary school would have, but also the fact that most of the primary teachers are more aged than ones in secondary schools, this is obviously difficult to adjust to new change shifting from KBC to CBC.

Conclusion and Suggestions on policy implication

Though the sector-based trainers appreciated the new curriculum CBC and some of them understand the stands of it, however, some challenges were identified. The challenges faced by the trainers were that most of the time SEOs communicate the training to teachers very late. Training taking place so far at a long distance from homes and ticket do not match with the journey. REB lacks of follow up and motivation of trainers. A large number of trainees in the same room, it makes some to disturb others since many of trainees shout. As a trainee, there is not enough time for good understanding, communication barrier of language, training in the sector or in school are not well organized in terms of refreshment such as drinking water and training materials such as a computer, loudspeaker, projector, and handouts.

Therefore, according to Eamon (2005), the educational change should change teachers' beliefs while making them understand the requirement towards successful teaching practices. In this regards, teachers need to clearly understand the meaning of educational

change before they accept and adopt the new programs and tactics. However, the curriculum change requires also school-based management teams, principals and boards of management in order to lead the implementation of change in the school settings. Therefore, effective curriculum change and its implementation require not only personal interaction but also time and in-service training people interaction (Eamon, 2005).

Therefore, training facilitators should plan for enough time whereby trainees can be given chance to share ideas in order to get and give enough skills. More training will minimize negative attitudes towards CBC. For instance, identifying people who do not want to change and give them and help them to own new changes which contribute to the development of the country, avail all needed training materials on time. The DEO, SEO, and HT should be communicated beforehand. Invitation to training should be given at least two weeks before in order to allow trainers or and trainees to avail appropriate materials, using mass media to explain more the purpose of the CBC, strengthening the school based in services. Follow up on prepared programs that are going implemented, providing materials and schedule training at schools should be done clearly.

REB should train school administrators and SEO, encourage and motivate teachers by providing textbooks on time and ICT tools to trainers, and increase regular as well as time of training. REB should create new training sites nearby trainees' places. Provide enough ticket to trainees who are coming from far away. Trainers should create many groups with small members. DEOs and SEOs should also participate in training and REB should follow up and counsel the head teachers who do not give insufficient time to train their fellow teachers. Therefore, all of these recommendations will make SEOs and HTs when asked to select good teachers who can in return train others, able to select good ones, on time and sincerely.

Further research must be done to prove why trained are not motivated, test teachers awareness on other areas beyond generic

competencies and cross-cutting issues, find what me the CBC syllabus overloaded and difficult to complete as well as find strategies to smoothly ease it.

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