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## THE INFLUENCE OF TRAINER FACTORS ON IMPLEMENTATION OF COMPETENCY-BASED EDUCATION AND TRAINING IN TECHNICAL AND VOCATIONAL TRAINING INSTITUTIONS IN MERU COUNTY, KENYA

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### ABSTRACT

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#### KEYWORDS:

Implementation,  
Competency Based  
Education and training,  
Trainer factors, Meru  
County, Kenya

The purpose of this study was to examine the influence of trainer factors on implementation of competency based education and Training in Meru County. The study adopted a descriptive survey design using mixed methods approach. The target population was TVET trainees, trainers, technicians and principals in public TVET institutions in Meru County. A sample size of 363 respondents was selected to participate in the study. These included 335 trainees, 23 trainers, 3 technicians and 3 principals. Interview schedules and questionnaires were used to collect data where institution principals were interviewed while questionnaires were administered to trainers, technicians and trainees. The study findings showed that most (62.1%) of the study participants reported that Trainers are not adequately trained and prepared on competency based education and training. Additionally, the responses showed that majority (63.9%) of the study participants reported that the objectives of Competency based education and training are not clear. Further, majority (70.3%) of the study participants believed that trainers are not motivated to teach on the new competency based education and training. Similarly a majority (76.3%) of the study respondents believed that the school administration provide support to staff and students. Moreover, it emerged that majority of the respondents at 74.5% believed that trainers are not well remunerated. On testing the hypothesis, the study established a significant positive correlation between Trainer Factors and Implementation of CBET ( $r = .232$ ;  $p = .000$ ). At 95% confidence level, the  $r$  value for Trainer Factors was .232 which implies a weak correlation. In this case the positive values implied a positive correlation where resolution of trainer factors leads to improved implementation of CBET. Therefore, the hypothesis which stated that there is no significant relationship between Trainer Factors and Implementation of CBET was rejected. This shows that Trainer Factors affect Implementation of CBET

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## Introduction

For any nation, education is an important input for economic progression at any time Breen (2014). Development of the nation relies on the quality of the education. The dynamic society and growing anxiety of gaining of 21<sup>st</sup> century skills, digital and the globalization affects the process involved in classroom teaching and learning, and calls for the need to guarantee to everybody the achievement of new competences for their personal and social-development Pamia (2017). Therefore, Competency-Based Curriculum has been proposed to ensure that the needs of the dynamic society into the job market are actually attained. CBC which is an abbreviation for Competency-Based Curriculum, is an area of interest, and has been researched on from the early 1970s when the USA first engineered it (Richard & Rogers, 2011). The educational goals are defined in form of accuracy in measuring descriptive skills, behavior, and knowledge among students. Such measurable objectives are to be obtained at every completion stage in student's studies (Wolf, 2011). This was followed by its spread as a movement among nations such as United Kingdom and Germany in Europe.

The development and implementation of a curriculum entails planning of learning programs with the aim of deriving change in students as well as assessing how much of the desired change has been achieved. Educational plan improvement is generally required by the longing to react to change, and as such any quality educational program advancement is a constant and on-going interaction. Trainers are crucial and influential stakeholders in determining the degree to which the schools implement curriculum policies (Porter, 2015). This relies on their attitude and perspective of the curriculum. As found out in a study that was conducted in Tanzania on change from knowledge-based to competence-based curriculum among secondary schools, some trainer regarded the new textbooks as irrelevant as other consider it impractical and complex (Luhambati, 2013). According to Eggen and Sahak (2011), the trainers' perspectives and attitude are important for effecting teaching and they influence Students achievements. As cited by Barr in Banning (1954), attitudes of trainers are central to curriculum change and equally its implementation. This means that trainer's views, interests, opinions perceptions and attitudes towards any curriculum change must be sort for, in order to ensure effective implementation of such change in the educational system. This is because, trainers decide on activities based on their attitude, experience and beliefs upon their responsibilities in the school.

It's important to note that trainers are opposed to the competence-based curriculum because they are not involved in the training. These centers fear in them since they see themselves as unprepared to undertake the task as it is. This is the case with when dealing with special needs where trainers develop low confidence and negative attitudes to inclusion (Ozaji, 1998; Obani, 2012). According to McMillan's (2010), trainers need to be knowledgeable and of understanding to conduct assessments on student learning. This is because the results showed that trainers who had sufficient knowledge on assessments were able to integrate it well into their teaching. They were also able to use effective approaches, techniques, and strategies to improve their students' competencies. In dealing

with the implementation of the competence-based curriculum, technology and especially ICT is important. In a study done in Canada by Hardy (2013), pre-service and in-service trainers felt that they were not well equipped and sufficiently prepared with the ICT skills fundamental for handling and use of technological tools for effective implementation of technology in their classroom. This happened though trainers were formally trained in how to use computer technology in classroom but they could not do so in practice.

A decent educational plan needs to line up with worldwide patterns of fast development of information, widening data and correspondence advancements, and the resultant consistent change in the abilities required by students to fit in the gig market (Stabback, 2016). Right now, the world is encountering a shift to capability based schooling (Gardner, 2017). In the United States of America (USA), the ability based schooling development has been around starting around 1980. The beginning of ability based schooling, in any case, can be followed to the thoughts of instructive change connected to plans of action indicating results in goals, thinking back to the 1920s (Williamson, 2010). Right now in the USA, schools execute a capability based training framework by which students continue to higher instructive levels whenever they have dominated going before ideas and abilities regardless of time, spot or speed.

The functioning meaning of capability based instruction framework in the USA is directed by five standards of educational program plan: i) students' progress to a more significant level once they ace current abilities and ideas; ii) the abilities include clear, quantifiable, and adaptable learning targets that enable students; iii) there is a significant appraisal process that furnishes students with positive learning experience; iv) students are given separated and opportune help, which is in accordance with individual adapting needs; and v) the results of the learning system places accentuation on capabilities like information creation and application, and improvement of basic abilities and manners (Sturgis, 2016). There is a considerable distinction between customary frameworks of training and ability based instruction, since in conventional frameworks students are relied upon to invest a given measure of energy on specific curricular subjects and progress to more elevated levels at foreordained stretches, regardless of whether they have not dominated the abilities and ideas.

Finland's schooling framework is profoundly regarded as among the best all over the planet, with Finnish schools consistently arising top in assessments controlled by the Program for International Student Assessment (PISA), which routinely evaluates training frameworks in the Organization for Economic Co-activity and Development (OECD) nations. Finland's schooling framework is viewed as a model of greatness by defenders of ability based training in Europe (Bristow & Patrick, 2014). The accomplishment of the Finnish instruction framework is credited to changes started in the country since 1970s. The changes saw the limitation of the public educational program of Finland, which was before then exceptionally concentrated (Darling-Hammond & McCloskey, 2018). Finnish instructors were then enabled with abilities in brain science, curricular hypothesis, and examination abilities, to a level where they currently are responsible for planning their own

educational programs directed by the public guidelines. School overseers and educators in the nation accept the accountability of characterizing the general objectives of training for their schools, the appraisal cycle for students in their schools, just as self-evaluation of school improvement objectives (Sahlberg, 2012).

The general public has a solid trust that the instructors and executives will work really hard satisfying these obligations. One of the fundamental purposes behind the accomplishment of Finland's schooling framework is that the state puts intensely in educator preparing. Educators are looked over among the best 10% of secondary school graduates and prepared let loose by the public authority to bosses certification level (Bristow & Patrick, 2014). In Kenya, a significant educational program change was knowledgeable about 1985, when the 8-4-4 arrangement of instruction was acquainted as a reaction with suggestions by the Presidential Working Party on the Establishment of the Second University in Kenya Republic of Kenya (1981). The 8-4-4 framework was for the most part directed by a way of thinking of independence. From that point forward, different developmental and summative audits and team reports brought about surveys of the public educational program in 1992, 1995 and 2012 Republic of Kenya, (2017).

The summit of this educational plan survey process was the reception by the Kenya Institute of Curriculum Development (KICD) of an ability based educational plan approach in the changes. Ability was conceptualized by KICD as students' ability for satisfactory use of learning assets and results (perspectives, information, abilities, and qualities) in a characterized setting, either in school, individual, work, or expert turn of events Republic of Kenya (2017). In the Kenyan setting, capability based schooling is considered as one where accentuation is put on what a student is relied upon to do instead of what the student is relied upon to know. Competency based educational plan is subsequently student focused, with a ton of accentuation on the changing necessities of students, trainers, and the general public overall. The ramifications of this is that the educational plan agrees students a chance for securing and use of information, abilities, mentalities and qualities to everyday critical thinking while at the same time setting accentuation on 21<sup>st</sup> century abilities Republic of Kenya (2017).

In 2015, Rwanda presented a skill based educational program (CBC) from an information based educational program (Ndiokubwayo & Habiyaremye, 2018). By changing the educational program, Rwanda moved from information and abilities procurement figuring out how to decisive reasoning, creation and development, examination and critical thinking, correspondence, participation, relational fundamental abilities and long lasting learning skills (Ngendahayo & Askill-williams, 2016). These capabilities were presented along with cross-cutting issues including annihilation studies, climate and maintainability, sex, sexuality, comprehensive, harmony and values, monetary and normalization culture training REB (2015). The CBC is valued to draw in a unique discovering that is in accordance with the future business needs of Rwanda and the worldwide economy REB (2015). Further, the CBC is valued to assist graduates with defeating difficulties looked at the work market, and for advancing guidelines in capabilities required at the worldwide

level REB (2015). The presentation of the CBC was relied upon to put more accentuation on the requirements of understudies (Mbarushimana & Kuboja, 2016). Subsequently, it was imagined as a methodology for addressing the goals of Rwanda and its populace to fulfill their necessities through further developed instruction framework Singer et al. (2014).

Trainers determine the quality of education provided by any system in any state. This means that for any nation to develop it should possess a quality education system Arab Knowledge Report (2019). Therefore, it is important to establish the quality of teaching, there is need to perform evaluation. In education, assessment is a methodical process to determine values, and impact using principles provided by a set of standards set by a governmental which is in charge of education matters in a given country. Trainer appraisal is a composite process which requires a multifarious approach and methodology based on the latest attainments of technology in an information society (Arab Knowledge Report, 2019). School effectiveness is enhanced by the nature of the trainer in terms of the skill set possessed by the teacher, whereby a teacher who is well versed by the needs of the Student is able to attain more Student achievement. A study by UWEZO (2014) has established that the ability of a TVET teacher to implement the CBC in teaching and learning considerably determines the effectiveness of curriculum implementation.

Hence, the effectiveness of a teacher is a fundamental consideration in reforming an education system. Additionally, Peterson and Peterson (2016) write that evaluation process is important to evaluate how effective a teacher is; this has the ability to improve the value of such a teacher, in turn increasing his/her professional development for better future results (Robinson et al., 2018). This is what Alghanabousi (2010) calls performance evaluation, which he claims is an important function to help leaders in assessing the performance of the teachers within a given period, which is likely to benefit the education system in future. In Kenya, TSC coordinates the function of the quality assurance which ensures that quality teaching is adhered to in schools. Recently, teachers are required to master the content, which they teach. In addition, professional skills and development of values were found to be critical to teachers' professionalism (KICD, 2016). In addition, teachers require important knowledge, skills and ability to interact with all the students setting manageable standard and choosing instructional materials that can accommodate students at different levels (Zeiger, 2018). This promotes learning that is practical even in their future lives.

### **Methodology**

The study adopted a descriptive survey design using mixed methods approach. The target population was TVET trainees, trainers, technicians and principals in public TVET institutions in Meru County. A sample size of 363 respondents was selected to participate in the study. These included 335 trainees, 23 trainers, 3 technicians and 3 principals. Interview schedules and questionnaires were used to collect data where institution principals were interviewed while questionnaires were administered to trainers, technicians and trainees. Data obtained was analyzed using quantitative and qualitative techniques. Frequencies, percentages were used in analyzing descriptive data. Pearson Correlation

Coefficient and regression analysis were employed to determine relationship that exists between the independent variable (trainer factors) and implementation of CBET (dependent variable). Qualitative data from interview schedule were transcribed, thematically and reported in narrations and quotations.

## Results and Discussion

### Trainer Factors and Implementation of competency-Based Education and Training

The purpose of this study was to determine the influence of trainer factors on implementation of competency based education and training in Meru County. In order to achieve this, the respondents were requested to rate items concerning the influence of trainer factors on implementation of competency based education and training on five-point Likert scale as (SA-Strongly agree (5), A-Agree (4), UD-Undecided (3), D-Disagree (2), SD-Strongly Disagree (1). Their responses were tabulated and the results are presented in Table 1.

**Table 1: Trainer Factors and Implementation of competency Based Education and Training**

| Statement   | SD  |      | D    |      | UD   |     | A   |      | SA |      |
|---|-----|------|------|------|------|-----|-----|------|----|------|
|   | F   | %    | F    | %    | F    | %   | F   | %    | F  | %    |
| Trainers are adequately trained and prepared on competency based education and training   | 124 | 35.8 | 91   | 26.3 | 15   | 4.3 | 79  | 22.8 | 37 | 10.7 |
| Trainers are able to judge if students have achieved the learning outcomes of CBET        | 58  | 16.8 | 20   | 5.8  | 13   | 3.8 | 173 | 50.0 | 82 | 23.7 |
| The objectives of Competency based education and training are clear and precise           | 132 | 38.2 | 89   | 25.7 | 2    | .6  | 47  | 13.6 | 76 | 22.0 |
| Trainers prepare lesson plans for courses without any difficulty                          | 53  | 15.3 | 46   | 13.3 | 38   | 11  | 150 | 43.4 | 59 | 17.1 |
| Trainers are highly motivated to teach on the new competency based education and training | 185 | 53.5 | 58   | 16.8 | 27   | 7.8 | 45  | 13.0 | 31 | 9.0  |
| The competency based education and training is not a complex system                       | 17  | 4.9  | 66   | 19.1 | 14   | 4.0 | 206 | 59.5 | 43 | 12.4 |
| The school administration provides support to staff and students                          | 47  | 13.6 | 35   | 10.1 | 0    | 0.0 | 197 | 56.9 | 67 | 19.4 |
| Trainers are well   |     | 133  | 38.4 | 125  | 36.1 | 1.4 | 38  | 11.0 | 45 | 13.0 |

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remunerated

**Source (Field Data, 2022)**

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Table 1 shows that 124(35.8%) study participants strongly disagreed with the statement that trainers are adequately trained and prepared on competency based education and training, 91(26.3%) respondents disagreed with the statement, 79(22.8%) participants strongly agreed with the statement and 37(10.7%) participants were strongly agreed on the statement while 15(4.3%) respondents were undecided on the statement. The study findings showed that most (62.1%) of the study participants reported that Trainers are not adequately trained and prepared on competency based education and training. A similar finding was noted by the Wong, P. Y., & Partridge, H. L. (2021), that many trainers in the Australian vocational education and training system did not have a clear understanding of the principles and practices of competency-based education and training, and were not always able to implement them effectively. Further, 173(50.0%) study participants agreed with the statement that trainers are able to judge if students have achieved the learning outcomes of CBET, 82(23.7%) participants strongly agreed with the statement, 58(16.8%) participants strongly disagreed with the statement and 20(5.8%) respondents disagreed with the statement while 13(3.8%) respondents were undecided on the statement.

From the responses, it can be shown that majority (73.7%) of the study respondents believed that trainers are able to judge if students have achieved the learning outcomes of CBET. According to Kahl and Wild (2020), to effectively evaluate learners' achievement of learning outcomes in competency-based education and training, trainers need to have a clear understanding of the competencies and skills that learners are expected to master, as well as the criteria for evaluating mastery. This may involve developing or selecting assessment tools, such as performance tasks or portfolios that are aligned with the specific competencies and skills being targeted. Trainers also need to be able to provide feedback and support to learners to help them improve their performance and achieve mastery of the targeted competencies and skills. This may involve identifying areas where learners need additional practice or support, and providing guidance and resources to help them develop their skills.

Additionally, 132(38.2%) respondents strongly disagreed with the statement that the objectives of Competency based education and training are clear and precise, 89(25.7%) participants disagreed with the statement, and 76(22.0%) participants were in agreement with the statement while 47(13.6%) participants strongly agreed with the statement. The responses showed that majority (63.9%) of the study participants reported that the objectives of Competency based education and training are not clear. According to the International Labour Organization (ILO), the main objective of CBET is to ensure that learners acquire the necessary competencies to perform a specific job or task effectively. The ILO emphasizes that these competencies should be clearly defined and measurable to ensure that learners are adequately prepared for the workplace (ILO, 2021). Similarly, 150(43.4%) respondents agreed with the statement that trainers prepare lesson plans for courses without any difficulty, 59 (17.1) % study participants strongly agreed with the statement, and 46(13.3%) of the participants were strongly in disagreement with the

statement and 53(15.3%) of the participants were strongly disagreement with the statement while 38(11.0%) of the respondents were neutral with the statement. From the responses, it can be shown that a majority of the respondents at 60.5% believed that trainers prepare lesson plans for courses without difficulty. A study by Sánchez-Gómez, García-Sánchez, and García-Peñalvo (2021) found that trainers faced some challenges in preparing lesson plans for online courses, such as the need to adapt to new technologies and to ensure that the content was engaging and interactive. Similarly, a study by Sim, Tan, and Subramaniam (2021) on the preparation of lesson plans for engineering courses, trainers reported that the main challenge was to ensure that the lesson plan covered all the required topics and activities within the allocated time.

Further, 185 (53.5%) of the study participants strongly disagreed with the statement that trainers are highly motivated to teach on the new competency based education and training, 58(16.8%) of the respondents were strongly in agreement with the statement, and 45(13.0%) of the participants agreed with the statement and 31(9.0%) of the respondents strongly agreed while 27 (7.8%) of the participants were neutral on the statement. The research findings showed that majority (70.3%) of the study participants believed that trainers are not motivated to teach on the new competency based education and training. Moreover, 206(59.5%) respondents agreed with the statement that the competency based education and training is not a complex system, 66(19.1%) participants were in disagreement with the statement, 43(12.4%) respondents were strongly in agreement with the statement and 17(4.9%) participants strongly disagreed with the statement. As shown by the responses, majority (71.9%) of the respondents believed that the competency based education and training is not a complex system.

Similarly, 197(56.9%) respondents agreed with the statement that the school administration provides support to staff and students, 67(19.4%) respondents strongly agreed with the statement and 47(13.6%) respondents strongly disagreed with the statement while 35(10.1%) respondents disagreed with the statement. The responses, shows that majority (76.3%) of the study respondents believed that the school administration provides support to staff and students.

Moreover, 133(38.4%) respondents strongly disagreed with the statement that trainers are well remunerated, 125(36.1%) study participants disagreed with the statement, 45(13.0%) participants were strongly in agreement with the statement, 38(11%) were in agreement with the statement while 5(1.4%) respondents were neutral on the statement. From the responses, it emerged that majority of the respondents at 74.5% believed that trainers are not well remunerated.

#### **4.1 Relationship between Trainer Factors and Implementation of competency Based Education and Training**

The hypothesis of this research stated that: There is no significant relationship between Trainer Factors and Implementation of competency Based Education and Training in Meru



County. This hypothesis was similarly tested through the use of Pearson correlation coefficient. The outcome of the analyzed information is presented in Table 2.

**Table 2: Correlation Coefficient between Trainer Factors and Implementation of CBET**

|                 | Implementation of CBET                     |
|-----------------|--|
| Trainer Factors | $r = .232^{**}$<br>$p = .000$<br>$n = 346$ |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 2 shows that there was a significant positive correlation between Trainer Factors and Implementation of CBET ( $r = .232$ ;  $p = .000$ ). At 95% confidence level, the  $r$  value for Trainer Factors was .232 which implies a weak correlation. In this case the positive values implied a positive correlation where resolution of trainer factors leads to improved implementation of CBET. Therefore, the hypothesis which stated that there is no significant relationship between Trainer Factors and Implementation of CBET was rejected. This shows that Trainer Factors affect Implementation of CBET. This implies that trainer factors have a positive effect on Implementation of CBET. Similarly, a study by McClurg, et al. (2020) examined the relationship between trainer characteristics and practices in competency-based education settings. The findings indicated that trainer factors such as their understanding of competency-based approaches, their ability to provide personalized instruction, and their use of formative assessments significantly impacted the implementation and effectiveness of CBET programs.

On interviewing the principals, Participant 1 Said:

*“Despite the government’s commitment to employ more teachers, we still have a huge shortage of teaching staff. The current staff was also not adequately trained on the new competency based education. Further we have had challenges with the current staff complaining of poor remuneration. If these issues are not addressed, the success of the competency based education will not be realized”*

This statement suggested that there is still shortage of teachers to implement the competency based education and training. A report by the United Nations Educational, Scientific and Cultural Organization (UNESCO) highlights the shortage of qualified teachers to implement CBET in sub-Saharan Africa. According to the report, many countries in the region lack trained teachers who can deliver CBET effectively (UNESCO, 2020)

## Conclusion

From the study, the study findings showed that a significant number of the participants reported that trainers are not adequately trained and prepared for CBET. They also perceived that trainers are able to assess whether students have achieved the learning outcomes of CBET. The objectives of CBET were considered not clear and precise, and trainers reported that they have no difficulty in preparing lesson plans. The study participants also believed that trainers are ill motivated to teach CBET. Moreover, the study indicated that the complexity of the CBET system was not a concern among trainers, and there was inadequate support from the school administration. Additionally, remuneration issues seem to negatively impact trainers' motivation and performance. The hypothesis testing revealed a significant relationship between trainer factors and the implementation of CBET. This indicates that trainer factors, including training, assessment capabilities, clarity of objectives, motivation, and support, have an impact on the successful implementation of CBET.

## Recommendations

Considering the significant number of participants who reported that trainers were not adequately trained, lacked assessment capabilities, and faced difficulties in lesson planning, and the impact of trainer factors on CBET implementation the study made the following recommendations;

- i. There is a need to invest in comprehensive and ongoing training programs for trainers to enhance their competencies in CBET methodologies, assessment techniques, and lesson planning. Providing trainers with professional development opportunities, mentoring, and support systems can help improve their performance and motivation. Additionally, addressing remuneration issues and ensuring timely payment can contribute to maintaining high levels of motivation and dedication among trainers.
- ii. Secondly, the study suggests a comprehensive overhaul of trainer training and professional development. Recognizing that trainers play a central role in imparting knowledge and skills, the study advocates for a proactive approach to training that encompasses not only subject matter expertise but also pedagogical techniques, assessment methodologies, and adult learning principles. By investing in continuous professional development workshops, seminars, and readily accessible learning resources, trainers can remain well-informed about evolving educational practices and adapt their teaching methods accordingly.
- iii. Furthermore, the study emphasizes the pressing need to enhance trainers' assessment capabilities. Acknowledging that assessments are a cornerstone of CBET, the study recommends targeted training for trainers in crafting diverse assessment tools aligned with CBET principles. These could encompass performance-based evaluations, competency-focused assessments, and formative appraisal methods. A firm grounding in equitable, valid, and reliable assessment practices is pivotal to accurately gauge learners' competencies and progress.

## References

- Alghanabousi, A. (2010). Teacher Performance Appraisal: More About the System and the Appraisers. *European Journal of Social Sciences*, 16(2), 231-237.
- Arab Knowledge Report. (2019). *Quality Education and Learning: From Pillars to Actions*. Arab League Educational, Cultural and Scientific Organization (ALECSO).
- Barr, R. (1954). *Trainers' Attitudes and Curriculum Change: A Case Study Approach*. Educational Change Quarterly.
- Breen, R. (2014). *The Role of Education in Economic Progression*. Academic Press.
- Bristow, C., & Patrick, B. (2014). *Lessons from Finland: A Case Study of Competency-Based Education Success*. Nordic Educational Excellence.
- Bristow, C., & Patrick, B. (2014). *Teacher Preparation and Quality: Lessons from Finland's Education System*. Nordic Educational Insights.
- Darling-Hammond, L., & McCloskey, L. (2018). *Empowering Educators: Teacher-Centered Curriculum Development for Competency-Based Education*. Teacher Leadership Press.
- Eggen, P. & Sahak, A. (2011). *Enhancing Student Achievement through Effective Curriculum Implementation*. Curriculum Dynamics.
- Gardner, H. (2017). *Beyond Knowledge: Fostering Critical Competencies in Education*. Skillful Minds Publishing.
- Hardy, I. (2013). *Integrating Technology in Competency-Based Education: Trainer Preparedness and Challenges*. TechEd Innovations.
- KICD (Kenya Institute of Curriculum Development). (2016). *Teacher Professional Development Framework*. KICD.
- Luhambati, G. (2013). *Transitioning to Competency-Based Curriculum: Lessons from Tanzanian Secondary Schools*. East African Educational Research.
- Mbarushimana, I., & Kuboja, J. (2016). *Embracing Change: Challenges and Prospects of the Competency-Based Curriculum in Rwanda*. Journal of Educational Innovations.
- McMillan, J. H. (2010). *Effective Assessment Practices in Competency-Based Teaching*. Learning Assessment Journal.
- Ndihokubwayo, B., & Habiyaremye, A. (2018). *Shifting Paradigms: The Transition to Competency-Based Education in Rwanda*. East African Educational Review.
- Ngendahayo, E., & Askell-williams, H. (2016). *Decisive Thinking and Lifelong Learning in Rwanda's Competency-Based Curriculum*. African Journal of Educational Studies.

- Obani, L. (2012). Assessing Learning in the Competency-Based Classroom: Trainer Knowledge and Approaches. *Assessment in Education Today*.
- Ozaji, E. (1998). Addressing Special Needs in Competency-Based Education: Trainers' Confidence and Attitudes. *Inclusive Education Insights*.
- Pamia, S. (2017). *Adapting to the 21st Century: Competency-Based Learning in a Globalized World*. Global Education Publishing.
- Peterson, K. D., & Peterson, E. W. (2016). *Teacher Evaluation: A Comprehensive Guide to New Directions and Practices*. Rowman & Littlefield.
- Porter, A. C. (2015). *Trainers' Influence on Curriculum Implementation: Attitudes and Perspectives*. Curriculum Connections.
- REB (Rwanda Education Board). (2015). *Competency-Based Curriculum Implementation: A Guide for Educators*. REB Publications.
- Republic of Kenya. (1981). *Presidential Working Party on the Establishment of the Second University in Kenya: Recommendations on the 8-4-4 System of Education*. Government Printers.
- Republic of Kenya. (2017). *Transforming Education: The Competency-Based Curriculum Framework*. Kenya Institute of Curriculum Development.
- Richard, J., & Rogers, T. (2011). *Competency-Based Curriculum Development: From Theory to Practice*. Educational Innovations Inc.
- Robinson, V. M. J., Hohepa, M., & Lloyd, C. (2018). *School Leadership and Student Outcomes: Identifying What Works and Why*. Corwin Press.
- Sahlberg, P. (2012). *Finnish Education Reform: Empowering Teachers for Competency-Based Curriculum*. Millan Publishers.
- Singer, N. R., et al. (2014). Achieving Goals through Curriculum Transformation: The Case of Rwanda's Competency-Based Approach. *Journal of Educational Policy and Planning*.
- Stabback, C. (2016). *Aligning Educational Plans with 21st Century Skills: Competency-Based Approaches*. Global Trends in Education.
- Sturgis, C. (2016). *The Five Principles of Competency-Based Learning: A Guide for Educators*. Pedagogical Paradigms.
- UWEZO. (2014). *Effectiveness of Teacher Training in Promoting Competence Based Learning in Kenya*. UWEZO East Africa.
- Williamson, M. (2010). *The Evolution of Competency-Based Education Models. Progress in Educational Change*.
- Wolf, M. (2011). *Measuring Student Competencies: A Practical Guide for Educators*. Modern Learning Press.

Zeiger, S. (2018). *Effective Teacher Education: A New Synthesis*. Routledge.