

## Towards strengthening the mentoring of Teacher Training College (TTC) tutors through the co-teaching approach in the Eastern Province, Rwanda.

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### Abstract

*This study was an evaluation of the mentoring of Teacher Training College (TTC) tutors through the co-teaching approach in Rwanda. The study's purpose was to determine the extent of the implementation of the approach so that necessary adjustments to strengthen it can be suggested midway. A qualitative multi-case study approach of two TTCs was adopted which focused on individual interviews and questionnaires. Participants were sampled purposefully. The study was approached from a Social Constructivism Theory perspective of Lev Vygotsky that emphasises collaborative teaching and learning from significant others. Thematic data analysis which is inductive in nature was used to analyse the collected data. The findings revealed strengths and shortcomings of the approach. The study concludes that the existing shortcomings if left unchecked may hinder the full achievement of the programme outcomes and recommends adjustments in the form of introducing a programme implementation framework to strengthen the program activities.*

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**Keywords:** Collaborative-teaching, Co-teaching mentoring, Co-teaching, Teacher Training Colleges, Co-teaching implementation.

### Introduction

Co-teaching is a growing trend in educational reform and transformation aimed at achieving the Sustainable Development Goal (SDG) 4 pertaining to Quality education (UNDP, 2023). Several countries, including France, Canada, USA, Zimbabwe, Zambia, Tanzania and Rwanda, have transformed their education institutions through adopting co-teaching, particularly, in Competence-Based Curriculum (CBC), (Akala, 2021; REB, 2020). Although co-teaching has been popular in special education schools and in inclusive education schools since the Salamanca Declaration (1994), its evolving nature has been marred by implementation challenges particularly where it requires a mentoring approach (Friend & Cook, 2007; Cordie & Lin, 2020). The co-teaching mentoring approach dimension is relatively of recent application internationally and is often used at teacher education institutions when inducting new staff (Cordie & Lin, 2020). The approach is also used during student-teacher training attachments and when introducing novel curriculum content and pedagogical approaches (Jeannin & Sing, 2018). However, despite a wide research coverage that shows the evolving nature of co-teaching to a mentoring approach recently, little is known about the extent of the programme implementation, particularly at Teacher Training Colleges (TTCs) in Rwanda, which the current study aims to address. It is important to address this dimension to determine the extent to which the mentoring of TTC tutors using a co-teaching approach has been implemented so far, mid-way the two-year programme. Therefore, it was necessary to embark on this formative evaluation of the two-year programme to come up with appropriate and timely interventions that may contribute to its successful implementation for the realisation of the intended outcomes.

### **Co-teaching and mentoring defined**

Co-teaching has been defined as two professionals teaching together with a joint delivery of instruction to a heterogeneous group of students and sharing responsibilities in planning, instruction and evaluation (Friend et al., 2010). There are various types of co-teaching put forward by Friend and Cook (2007) and Friend and Bursuck (2009). These types include: 1 one teach, one observe, involving one of the co-teachers leading large-group instruction while the other teacher gathers academic, behavioural, or social data on specific students or the class group: 2 station teaching, that involves dividing students into three groups and rotating the groups from station to station taught by the co-teachers at two stations and working independently at the third: 3 parallel teaching, requiring each of the co-teachers to instruct half of the students presenting the same lesson in order to provide instructional differentiation and increased student participation; 4 alternative teaching, involving one teacher providing instruction to the majority of students while the other teacher works with a small group for remediation, enrichment or assessment: 5 teaming, which requires the co- teachers to lead large-group instruction by both lecturing, representing different viewpoints and multiple methods of solving problems: and 6 one teach, one assist, also identified as supportive teaching, involves one co-teacher leading instruction while the other teacher circulates among the students providing individual assistance. From this definition, it can be deduced that co-teaching is not stagnant but a continual and varied approach towards the strengthening of teaching and learning activities. For this study, further attempts will be made to show how co-teaching could be effectively used in mentoring contexts to strengthen the CBC curriculum transformation at TTCs in Rwanda.

Mentoring has been defined as a supportive professional relationship in which an experienced peer educator is required to nurture and give guidance on best practices in the teaching and learning activities to their less experienced (Rooks et al., 2022). This definition shows that mentoring evolved from co-teaching in that, a teacher may not practice mentoring without co-teaching at institutions of learning, making it a more powerful educational approach. For the purpose of this study, mentoring through co-teaching is defined as a professional development approach whereby expatriate subject specialist tutors are involved in mentoring their less experienced local tutors through co-teaching in all educational activities for purposes of effective Competence Based Curriculum implementation.

### **Background to the study**

The current study focuses on evaluating the mentoring of Teacher Training College (TTC) tutors through the co-teaching approach in the Eastern Province of Rwanda. It was inspired by the belief that the co-teaching approach to mentoring TTC tutors in the country is a means to the effective implementation of the CBC curriculum contributing towards the Ministry of Education's efforts in achieving SDG 4 of quality education by 2030. The study was also motivated by the idea that the mentoring of TTC tutors through co-teaching approach could be a means to their professional development, English language proficiency and academic achievement. The other motivation comes from the belief that the co-teaching mentoring of TTC tutors approach helps in further aligning the Rwanda education system to international standards, making it more relevant to their context and globally.

The mentoring of TTC tutors through co-teaching approach is a relatively recent application in Rwanda, yet alone the use of Zimbabwe education professionals. The approach came out of a Memorandum of Understanding (MoU) between the Republics of Rwanda and Zimbabwe in 2021. The MoU was for the recruitment of competent Zimbabwe education specialist professionals to work in Rwanda through partnering them with local tutors to co-teach for purposes of providing support, mentorship and capacity development for the achievement of a Competence-based Curriculum (CBC). The hiring of the Zimbabwe education professionals was also the Rwanda Ministry of Education (MINEDUC) strategy to enhance the development of the 21<sup>st</sup> Century skills and English proficiency levels in both tutors and students. Examples of these skills include digital literacy, cultural competence, innovativeness, emotional awareness, entrepreneurship, collaboration, critical thinking, and problem-solving (Cordie & Lin, 2020). The programme was done in the awareness of Rwanda's transition from French and Kinyarwanda as mediums of instruction to English as a sole medium of instruction in 2008 (Tabora, 2015; Curriculum Framework for Teacher Training Colleges, 2020). It was, therefore, done in the awareness that the quality of an educational system cannot exceed the quality of its teachers. As such, the enhancement of the acquisition of 21<sup>st</sup> century skills and English proficiency level of tutors and students for the effective implementation of the CBC curriculum made the programme approach justifiable.

This study was done in July 2023, towards the end of the first academic year of the two-year term covered by the Zimbabwe Rwanda MoU, which was mid-way the programme. It is worth noting that training on the mentoring through co-teaching approach were conducted in all 16 TTCs. The trainings were conducted through Continual Professional Development (CPDs) facilitated by TTC-based pedagogical and research advisors from Zimbabwe and the Rwanda Education Board (REB) staff. The training was done for programme implementation reinforcement purposes because TTC tutors deserved support in upgrading themselves in alignment with the CBC expectations. Since the Rwanda REB expects tutors to be compliant in implementing the programme for the full realisation of the CBC requirements, the study therefore aims to determine the extent of the programme implementation approach for purposes of making recommendations, mid-way, for its strengthening.

### **Rationale for the study**

While many studies seem to accept the idea that the co-teaching mentoring approach enhances the effectiveness of curriculum transformations, there appears to be scant research on the concept particularly at teacher education contexts in Africa. Largely, literature on co-teaching in special education schools and inclusive education schools is prevalent, which is different from the co-teaching mentoring approach in this study. Earlier studies highlighted the advantages of mentoring through co-teaching approach such as leading to highly collaborative and authentic outcomes, individual advancement in academia, innovativeness, improving problem-solving skills, teaching styles, troubleshooting, collegiality, further acquisition of 21<sup>st</sup> century skills and shared goals to improve students' learning outcomes (Brookfield, 2017; Cordie & Lin, 2020). However, while the advantages of co-teaching are acknowledged, and the practice is not a new phenomenon in Rwanda, its application as a mentoring through co-

teaching approach in TTCs using Zimbabwe subject specialist professionals is new and the topic has not been explored. Furthermore, no study has been conducted so far to appraise the stakeholders of the extent to which the programme has been implemented. Such an evaluation mid-way was crucial in that it helps to illuminate the existing gaps that may be impacting negatively on the effective implementation of the programme. The early identification of such gaps is necessary in informing policy and practice to make adjustments towards strengthening the programme where necessary.

### **Statement of the problem**

Although the Rwanda Ministry of Education has taken the initiative to promote the mentoring of TTC tutors through a co-teaching approach, the programme has not yet been evaluated mid-way, after the completion of the first academic year to determine the extent of its implementation. The current study was inspired by the fact that the mentoring through co-teaching approach offers immense advantages to teaching and learning processes, particularly at TTCs. Some such advantages are that the mentoring through co-teaching approach on TTC tutors is a form of professional development. It is therefore an invaluable tool for improving professional growth based on reflective dialogue, development and maximises instructional competence. Also, mentoring through co-teaching approach on TTC as a form of professional development has a potential to improve pedagogical practices and scholarship for both tutors and students (Friend et al., 2010; Rooks et al., 2022). Thus, if a formative evaluation of this nature were not conducted mid-way, this was going to hinder the early identification of possible gaps impacting negatively on the achievement of the programme anticipated outcomes in the absence of interventions. Thus, despite the increasingly use of co-teaching as a mentoring approach in curriculum transformations, teacher training, teachers' professional development and the acquisition of 21<sup>st</sup> century skills, few studies have evaluated the programme implementation mid-way. The programme evaluation mid-way was necessary in order to contribute suggestions for adjustment that may further empower tutors when handling complex situations in their practice. The likelihood of complex situations arising are high because the programme requires teachers to master the 21<sup>st</sup> century skills alongside developing effective pedagogical models to help their students develop those skills and in turn impart them in school practice to suit the global standards. While earlier studies concentrated much on co-teaching mentoring, at higher education, few studies have been done so far on mentoring through co-teaching at teacher education, yet alone in Rwanda.

### **Research questions**

The study was guided by the following research questions;

1. How is the mentoring through co-teaching approach understood by TTC tutors in the Eastern province of Rwanda?
2. What are the TTC tutor's experiences of the mentoring through the co-teaching approach in the Eastern Province in Rwanda?
3. How can the mentoring of TTC tutors through the co-teaching approach in the Eastern Province in Rwanda be strengthened?

### **Brief literature review**

Although co-teaching has a wide research coverage internationally, most such studies concentrated on its use in special education and inclusive education schools, and not as a mentoring approach in teacher education (Friend et al., 2010, Heck & Dahlberg, 2011). Some such studies highlighted on what co-teaching entails, the forms it takes, its importance and implementation issues (Friend & Bursuck, 2009; Brookfield, 2017). However, studies on co-teaching later transitioned from regarding it as merely a joint delivery of instruction to a heterogeneous group of students to its use as a mentoring approach (Jeannin and Sing, 2018; Harkki et al., 2021). The studies include Sachs, Fisher and Cannon's (2011) study in the USA on collaboration, mentoring and co-teaching in teacher education. The study recommended that co-teaching can be utilized as an essential mentoring tool as it takes advantage of the mentor expertise and experience, improves problem-solving skills, teaching styles, collegiality, and shared goals to improve students' learning outcomes. In another USA study in Higher Education, Cordie and Lin (2020) found that mentoring through co-teaching at that level helped in the development of staff within the profession and individual advancement in academia. Although these studies provide valuable insights on the mentoring through co-teaching approach at teacher education and higher education level, the evaluation of the programme implementation dimension, yet alone, mid-way is missing, which this study is about. In Finland, Harkki et al.'s (2021) study on teachers' challenges on a contextualised co-teaching model found that despite facing some challenges, teachers experienced professional development. In South Africa, Jeannin and Sing's (2018) self-study on co-teaching in international collaboration settings at one university regarded the approach as a key driver for productive professional development. The study acknowledges the increasing trend in international collaboration of academic staff and mobility within and across the African regions for co-teaching and mentoring purposes. In Rwanda, the co-teaching approach has been practised through the use of volunteers from the Japan International Cooperation (JICA) since 1987, the Organisation Internationale de la Francophonie (OIF) since 2019, and USA Peace Corps since 1994 among other organisations (New Times 2022; Dana 2011). There are no studies on the mentoring of TTC tutors through co-teaching known by the authors and this justifies this study.

### **Methodology**

A qualitative case study design of two Teacher Training Colleges (TTCs) was chosen to collect data. The case studies were chosen from a population of 16 TTCs in Rwanda. The case study method of two TTCs was chosen for strategic reasons. The choice of two TTCs sounded sensible given the size of the research, the proximity of the study locations and time available to complete it. Furthermore, the case study method of two TTCs was chosen because it is an intensive study of two cases within a bounded setting in order to exemplify the issue. The two cases were also chosen so that different aspects of the issue can be illustrated in order to come up with a broad understanding of the issues being studied (Creswell & Creswell, 2018). Informed by the Social Constructivist theory of Vygotsky (1978) whose principles emphasises collaborative teaching and learning from significant others, the study purposively sampled 20 participants (10 from each TTC comprising 2 administrative staff and 8 co-tutors) from a target population of about 58 tutors. Purposive sampling allowed the researchers to deliberately choose participants for various reasons feasible to this research (Creswell & Creswell, 2018). In this case, the researchers

wanted to investigate the people they specifically wanted to hear from, which means that they were unable to reach everybody. The co-tutors were sampled for having attributes of being information-rich about the topic in question as they have been co-teaching for the whole year. On the other hand, the administrative staff were chosen for their positions and supervisory roles at the institutions. The administrative staff were in charge of monitoring the implementation of the mentoring through co-teaching programme by tutors at the study locations. Semi-structured interview guides and questionnaires were employed as data gathering instruments. The questions, which were semi-structured in nature were generated in alignment with the research questions (Jones, 2015). Semi-structured questions gave room for diversity as participants were allowed to respond from their own perspectives. Further probing when the need arose led to in-depth understanding of the topic.

The face-to-face interviews were conducted to complement the questionnaires and served to address grey areas which would have arisen from questionnaire responses. Questionnaires were administered and collected on the following day to give participants adequate time to respond. The interviews were conducted in two sessions for in-depth understanding of participants' experiences/perspectives of the mentoring through co-teaching of TTC tutors approach. Interviews were held in the science laboratory offices, far away from the staffroom for privacy and free expression of ideas whilst questionnaires were administered in the staffroom (Creswell & Creswell, 2018). The co-tutors were interviewed separately and not as a pair for purposes of confidentiality and free disclosure of information. The interviewees' responses were voice recorded and handwritten in form of notes and memos. The methods used in the study aligned well with the Social constructivist theory because Vygotsky (1978) believes that social interaction and collaboration plays an important part in teaching and learning. Both the interviews and questionnaire responses helped in highlighting the participants' mentoring through co-teaching experiences and priority intervention areas towards strengthening the programme.

Data were analysed in three themes emanating from the research questions and participants' responses. The first step used in data analysis was coding. This was in order to provide some sense out of it by focusing on the potential meanings of data in relation to the research questions, theoretical framework and literature (Bazeley, 2013). Codes were generated from the phrases of the participants in their responses through their repetitions of topics based on their experiences with the mentoring through co-teaching approach. Participants' responses were numbered in pseudonyms, which in this case was, Participant 1, Participant 2, etc. Themes were developed from similar codes that were regrouped relating to the research questions along with the researcher's notes and memos which had developed during the interview sessions. The themes that emerged were as follows; participants' understanding of mentoring through co-teaching, participants' experiences with the mentoring through co-teaching approach and suggestions to strengthen mentoring through co-teaching in TTCs.

## **Findings and Discussion**

The findings in this section are discussed under each themes generated from the research questions and participants' responses.

### **Participants' understanding of mentoring through co-teaching**

The study found from both interviews and questionnaires that, although the Rwanda and Zimbabwe co-tutors, and administrators had embraced the mentoring through co-teaching at its inception, all the 20 participants (100%) loosely described what co-teaching entails and largely left out the mentoring aspect. Participants described co-teaching as a joint planning and delivery of lessons by two tutors on an equal basis, indicating a lack of awareness of the mentoring role of the Zimbabwe tutors. It is also worth noting that all the Zimbabwe tutors rarely made reference to their mentoring role in their descriptions. The issue of a missing link in the use of co-teaching as a mentoring approach was concerning in that the quality of the programme's desired outcomes might be compromised. The weak descriptions of the mentoring through co-teaching approach could be attributed to a lack of foundational knowledge about the topic at inception of the programme. The foundational knowledge could have been in form of training manuals shared with stakeholders. Training workshops in form of Continual Professional Development (CPDs) at institutions to unpack the programme approach in terms of what it entails, its rationale and anticipated outcomes helps to bring awareness on the topic. The findings were similar to Friend and Cook's (2007) study in the USA schools that attributed the co-teachers' a lack of understanding of co-teaching to non-training of members. This indicates the importance of training members when introducing a new programme to bring awareness about what it entails and the duties expected of the members. The argument about the need to train TTC tutors is similar to Sachs, Fisher and Cannon's (2011) study that emphasised the training of members as crucial when introducing co-teaching programmes. However, this argument is conflicting with Chitiyo's (2017) study, who, despite acknowledging the importance of training when introducing novel approaches, further argues that in some instances, a lack of understanding may continue to exist even after the training of members due to members' negative attitudes. The implications are that a once-off training alone when introducing a new programme may not be adequate to win the members' understanding and buy in. In this regard, more CPDs may be used to reinforce more knowledge and understanding about the programme approach, contributing towards its effective implementation. This indicates that, when members have adequate information about a topic, they tend to embrace it whilst inadequate information may cause non-compliance.

It was found from the questionnaires that, even though CPDs were conducted by pedagogical and research advisors, and the Rwanda Education Board at the country's 16 TTCs in the second term of the academic year, two out of sixteen participants (12.5%) were non-compliant to the programme approach for various reasons. Some of the reasons put forward were a congested timetable that does not give room for co-planning. The other reason put forward was that co-teaching was time consuming given the need to complete the syllabus on time in preparation for the national examinations. The findings indicate that, training may fail to influence all members into compliance given some circumstances, which in this case are issues to do with work overload. The finding is in line with Brendle et al.'s (2017) study that argued that increased awareness even after training does not mean compliance. The finding is also consistent with Chitiyo's (2017) study that indicated an issue of by standers to co-teaching implementation whilst others sit on the fence. Although the number of non-compliant tutors might seem insignificant, it is problematic in that it may lead the compliant members to be reluctant or to stop on the way,

compromising on the quality of the programme (Bacharach, Heck, & Dahlberg (2011). The implications are that full compliance with the programme approach could be motivational, leading to the achievement of the intended outcomes. The interpretation has particular relevance for the need to have a programme compliance enforcement strategy in TTCs to help strengthen the co-teaching mentoring approach of tutors. It may therefore be difficult to deal with non-compliance in the absence of an enforcement strategy for the programme. The absence of such a strategy might cause members to either ignore, downplay or stop on the way ultimately compromising the CBC outcomes.

### **Participants' experiences of co-teaching**

The participants' experiences with the mentoring through co-teaching approach indicated that the programme was on course despite some existing gaps that may be negatively affecting the effective implementation of the programme.

Participant 5 reiterated the idea that co-teaching is motivational to tutors and students, improves teaching styles and leads to professional growth. She said, *Co-teaching is going on well so far, we are benefiting from the programme. We have embraced it. You are forced to have a thorough lesson presentation because of teaching with a colleague and we share expertise, covering up for each other. Students are now more motivated during lessons and their English proficiency has greatly improved.* The proposition points to the idea that the co-teaching mentoring approach has been implemented and was appreciated by participants to the best benefit of students. It also points to the fact that mentoring through co-teaching improves one's teaching strategies which is in line with the programme purpose. Such acquisition of new teaching strategies is an indication of professional growth in the mentoring through co-teaching for co-tutors which in turn has immense benefits to students. The findings are similar to Brendle, Lock and Piazza's (2017) study that indicated that the mentoring model can lead to highly collaborative and authentic outcomes such as individual advancement in academia. Similarly, the findings are consistent with Rooks et al.'s (2022) study that mentoring through is a professional development and an invaluable tool for improving teacher professional growth based on reflective dialogue, development and maximising instructional competence, pedagogical practices and scholarship for both tutors and students (Friend et al., 2010). The proposition points to the idea that participants were benefiting from the co-teaching mentoring approach in various ways which was the reason for its implementation.

Both the administrative and tutor participants expressed lack of knowledge about the co-tutor expected roles/duties. This led to some co-tutors to fail to work as a pair and to mistrust each other. Participant 1 argued that *We just fell into this exercise from nowhere and we do not know the purpose of co-teaching because it is time consuming. I do not even know how we are supposed to co-teach because of lack of time.* This observation reveals the participants' frustration about the mentoring through co-teaching programme approach. The finding that co-teaching was considered time consuming by some participants from both the questionnaires and interviews is in contrast with Gladstone-Brown (2018)' study findings proposing that co-teaching serves time. The finding that co-teaching is time consuming is also a disjuncture of Friend et al. (2010)'s descriptions of what co-teaching ought to



be. The same authors indicated that with proper planning, co-teaching cuts on time and workloads among other benefits. It is therefore crucial that institutions explore other interventions strategies to make co-teaching less time consuming for co-tutors. This calls for the need to continue providing relevant and contextual information in the form of CPDs to tutors that may alleviate the issue of non-compliance citing time constrains. Training sessions that are not continuous may lead co-tutors to fail to understand the implementation procedures. Increased frequency in training of members in a newly introduced programme such as the mentoring through co-teaching approach is therefore necessary as it allows everyone to continue 'on the same page', and it empowers its users and identifies potential misunderstandings or problems in advance. Such frustrations may hinder the participants from viewing the programme in a positive manner. The negative perceptions may derail the progress and timelines at which the programme is implemented. The finding is similar to that of Graziano and Navarrete's (2012) who found that a lack of appreciation of co-teaching may lead teachers to misunderstand the purpose of the programme leading to non-cooperation. The findings appreciating the importance of training in strengthening co-teaching are supported by Faraclas (2018) and Gladstone-Brown (2018) that showed that teachers who participated in professional development training on co-teaching had significantly higher post test scores on a co-teaching performance assessment than those who did not participate in training. Interventions to increase co-tutors' understanding of the mentoring through co-teaching approach through CPDs is therefore necessary for its successful implementation.

Additionally, some co-tutors expressed facing challenges that include the failure to consistently co-teach, and the inconsistent use of English as the language of instruction for teaching and learning. Participant 3 said, *Some co-teachers plan and teach separately. Others remain marking when their co-teacher goes to teach in order to meet deadlines. My co-teacher is not free with me when it is time to go for a lesson. He is not consistent in teaching using English.* This response shows that the mentoring through co-teaching approach could be underutilised due to a lack of tutor coordination in teaching roles and the inconsistent use of English by local tutors. The co-tutor's lack of coordination is problematic in that it impedes the effective implementation of programme activities as disagreements may arise. The inconsistent use of English by some tutors is a disjuncture to the Ministry of education's purpose to use the co-teaching mentoring approach on TTC tutors to enhance their proficiency levels. The co-tutor's lack of coordination could be attributed to their incompatibility, causing uneasiness in the mentee. The findings concur Faraclas' (2018) study that acknowledged co-teachers' incompatibility as concerning in co-teaching programmes. The finding is also in agreement with Sachs et al.'s (2011) study that attributed co-teachers' lack of co-ordination to inadequate time in their schedules causing them to fail to co-plan the teaching and learning activities. This implies that when tutors fail to co-plan, chances are high that they may fail to be compatible. The incompatibility of co-tutors is problematic as it may interfere with the effective implementation of the programme. There is thus the need to decongest the lesson schedules in order to give adequate time for co-teaching mentoring activities. This could be done through increasing the teaching staff in TTCs. The other intervention strategy could be to allocate time for co-planning on the institutional timetable to help enforce compliance and for tracking purposes.

The study findings also reveal that, despite some CPD and REB interventions highlighted earlier, inconsistencies in co-planning and lesson delivery continue to exist in some cases. Participant 16 argued that, *Although, before the interventions there was no co-teaching at all, we still have not yet gone to the point when we are simultaneously teaching. We fail to plan due to lack of time. Our co-teaching is not consistent, sometimes we do it twice a month instead of daily.* The finding reveals that while some interventions have been offered in the second term of the academic year, challenges are still persistent, particularly inadequate time and inconsistencies when implementing the approach. In this regard, if such challenges are left to continue unchecked, they may be impacting negatively on the realisation of the programme's intended outcomes. The continued inconsistencies in co-teaching experienced by tutors could be attributed to the tutor work overload that may 'kill' the zeal to co-teach. The finding is in agreement with Brookfield's (2017) study that argued that some tutors may continue to encounter difficulties conceptualising the model and working collaboratively as teaching partners. This calls for the need to introduce further strategies to help the co-tutors who continue to face such challenges for the enhancement of the programme. The need to reduce the tutors' workload to avoid burnout is motivational to tutors and may improve their attitude towards the programme.

### **Suggestions to strengthen the co-teaching programme**

Participants raised suggestions that centred around increased training frequencies to empower tutors with more information about the topic thereby enabling the effective implementation of the programme. An implementation framework to cater for tutor training needs and the programme implementation procedures as well as for monitoring and evaluation purposes was also suggested. The suggestions are in line with Harkki et al. (2021) that suggested the need for an implementation framework when introducing co-teaching programmes to give direction for which co-teachers work under. Such a framework standardises the mentoring through co-teaching activities. The implementation framework will also work as a reference point to TTC administrators when enforcing compliance and may serve as a blue print for all decisions relating to the programme. An implementation framework also helps to benchmark the programme outcomes through monitoring and evaluation (Cordie & Lin, 2020). Thus, the absence of the mentoring through co-teaching implementation framework could be an impediment factor to the effective implementation of the programme. The absence of an implementation framework could imply that there is no means to benchmark the programme outcome in line with the CBC curriculum requirements and the development of the 21<sup>st</sup> century skills. Furthermore, if an implementation framework is absent in a programme, it may mean that there is no framework for monitoring and evaluating the tutors' performance in as far as implementing the programme is concerned. Therefore, the framework guides the work of tutors, TTC administrators, pedagogical and research advisors and inspectors. A framework will also assist in post programme evaluations, such as whether the programme failed or delivered the expected benefits and to inform future programmes.

## Conclusions and Recommendations

The study concludes that the mentoring through co-teaching programme has the potential to transform the education system in Rwanda if the shortcomings of implementation framework absence and few continuous professions training are addressed. The study believes that the effective utilisation of the mentoring through co-teaching programme is an enabler to the acquisition of 21<sup>st</sup> century skills and effective transformation of the CBC curriculum. The effective educational transformation using mentoring through co-teaching helps in further aligning the Rwanda education system to the global standards and enhancing its competitiveness. This also helps to make the Rwanda education system more relevant to their context and globally. Based on the findings, it is apparent that training about the topic prior to the programme implementation is crucial for in-depth understanding of its purpose contributing to its effectiveness. Prior training to the programme implementation therefore brings institutional members on the 'same page' in as far as the topic and its implementation requirements entails leading to an appreciation of its purpose and a common understanding. REB should develop a mentoring through co-teaching implementation framework for TTCs and similar future programmes. The implementation framework may include components of what it entails, co-tutor roles, implementation procedures and timelines and should address issues of non-compliance. Increased frequency in training workshops such as CPDs in TTCs are also critical in bringing more direction and ultimately changing the attitudes of the inconsistent and non-compliant tutors. There is also need by the Ministry of Education to reduce the tutor's workloads to give space for collaborative activities in teaching and learning in line with the CBC requirements.

## Limitations

We acknowledge that this research was conducted at two TTCs in the Eastern province of Rwanda and the findings may not be generalised to institutions with different contexts. Also, the study does not include students' perceptions of the mentoring through co-teaching programme. Their perceptions may be different from the tutor' experiences.

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