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EXPLORING THE INFLUENCE OF NON-GOVERNMENTAL ORGANIZATION-LED INITIATIVES IN TEACHERS' CONTINUOUS PROFESSIONAL DEVELOPMENT ON LEARNERS' ACADEMIC PERFORMANCE IN KINIHIRA AND TUMBA SECTORS, RULINDO DISTRICT, RWANDA

James Harindintwari,
Claudine Yumvuhore,
Steven Mugunga,
Josue Michel Ntaganira,
Jean Damascene Dusabimana,
Noel Bavugirije[i]
Kibogora Polytechnic,
Rwanda

Abstract:
The study sought to examine the relationship between continuous professional development (CPD) on learners' academic performance in Rwandan primary schools. This focused on the following specific objectives: What is the relationship between teacher in-service training and learners' academic performance in Rulindo primary schools, To what extent teacher peer learning platforms relate to learners' academic performance in Rulindo primary schools, What is the relationship between teacher coaching and mentoring and learners' academic performance in Rulindo primary schools. The descriptive research design was used. Quantitative and qualitative approaches were used to analyze data. 158 people were used as the target population and 103 as the sample size to represent the whole population. Data were collected using structured questions with 5-point Likert scales and an interview. Quantitative data were analyzed using frequencies, percentages, standard deviation, means, and regression analysis while qualitative data were analyzed using a thematic method that helped in analyzing qualitative data. The finding from the study concluded that there is a significant relationship between continuous professional development and learners' academic performance in Rwandan primary schools. SPSS and the thematic method were used to calculate the regression analysis of the study: based on the findings from the study, the researchers revealed that some gaps need to be solved by different organs such as non-governmental organizations (NGOs) across the world. The results indicated that

[i] Correspondence: email harindintwarijames@gmail.com, claudineyumvuhore@gmail.com, m.steven.baros@gmail.com, josuemichelntaganira@gmail.com, noelbavugirije@gmail.com

there is positive and significant effect of teacher coaching and mentoring on learners' academic performance (B = 0.894, P value >0.00). The study recommended providing frequent continuous professional development in schools across the country. The study recommends REB survey how continuous professional development (CPD) impacts the quality of education. In the same regard, the study recommends that educational-related stakeholders fund the continuous professional development of teaching and administrative staff.

Keywords: continuous professional development, learners, academic performance

1. Introduction

For education to become very successful and answer what it intends to solve and build the capacity of the people together with their welfare, it must meet specific standards. Other factors, it is deeply recommended that universal objectives be planned for education in terms of having accessibility to the quality of education, all of these oblige teachers to be experienced, qualified, and trained to perform assigned tasks effectively (TGE, 1994).

As pass many years in teaching, it is also the way an experience increases every year. In teaching and learning career, comprises but does not become an obstacle to curriculum reforms (Loucks & Pratt, 1979). To let them and empower them in the abilities to put into practice the new curriculum, most of the teachers should be engaged in continuous professional development which can be a bridge for the teachers to adopt the new change that was made in the curriculum (Bredeson, 2002). Many researchers in different kinds of literature and writings used many terms to define or to give the meaning of continuous professional development which include teachers in-service training, personnel development, progressive education, training and self-development, or self-teaching and learning. In educational institutions, there are many different types of learning activities and school administrators.

Continuous professional development is taken as a way of linking the gap between teachers' development and the demand for institutional change (Birman, Desimone, Porter & Garet, 2000). However, most of these professional development activities are not capable of helping the improvement of the opportunity for change to become accurate or effective.

The review of the writing revealed that there is a permanent investigation of the scholars to examine the problem of professional development by trying to explore what should be done to improve the effectiveness of professional development. Many researchers, such as Darling-Hammond *et al.* (2017), continued to define effective professional development as structured professional learning that results in changes in teacher practices and improvements in student learning outcomes.

Academicians examine the effectiveness of continuous professional development in terms of categories, indicators, and factors that can influence the effectiveness of professional development (Birman, 2000; Hunzicker, 2011; Hough, 2011; Desimone, 2011; Gibson *et al.* 2012; Bayar, 2014; and Abu-Tineh *et al.* 2018). According to UNESCO (2003), Professional development in a broad sense, refers to the development of a person in his or her professional role. Continuous professional development widely is defined as the improvement of an individual in his or her professional duties (UNESCO, 2003). More precisely, teacher development is the professional development that a teacher attains as an impact of getting new experience and improving his/ her teaching systematically.

Continuous professional development comprises current experience (like participating in workshops and professional conferences and meetings, monitoring and field visits, and so on) and informal experience which includes reading publications related to the career, and watching documentaries and movies that correspond with professionalism (Ganser, 2000). Continuous professional development can happen in many different ways: permanent school day at school, but before teaching and learning starts or later after the time teachers get called the day school staff can plan to provide professional development to the teachers or during the summer and others school holidays (Mizell, 2010).

The terms of professional development are wider than career improvement which is explained as the change that happens as a teacher passes through the professional vocation cycle (Sysko, 2018). And wider than staff improvement, which is the giving of organized in-service curricula planned to empower the improvement of pairs of teachers; it is the only one of the gradual interventions that must be utilized for teachers' professional development (Glatthorn, 1995, p. 41).

Once a person emphasizes professional development, one can analyze the accuracy of experience, how professional development be done, and the process in which it will be implemented (Ganser, 2000; Fielding and Schalock, 1985). Teachers' professional development can bring a difference to the student's performance depending on the kind of program undertaken and the help that is being given. Precise factors such as the years of attending training (in-service training, teachers' fluency in the instructional language, mastering of the content, having teaching facilities such as books and materials and having the capacity to use those materials, teachers' expectation of learners' academic performance, time allocated to the classroom preparation of pedagogical documents, monitoring and evaluating students achievement and provision of feedback, all of these have been highlighted as factors which influence the quality of students and teachers performance.

Many reviews that were made revealed that there was no specific or single meaning of professional development. According to Speck, B. W. (2001), "*professional development is a lifelong collaborative learning process that nourishes the growth of educators both as individuals and as team members to improve their abilities and skills*". Bredeson (2002), in his definition, highlighted three interdependent concepts (learning, engagement, and

improved practices), and he defined PD "*as learning opportunities that engage educators' creative and reflective capacities in the way that strengthens their practice".*

Training is a kind of professional development where beneficiaries attend the lecturing of workshop categories (Austin, Marini & Croteau, 2005). Training gathers the trainees in a non-active role, for examples because an expert in a given discipline transmits the contents to the teachers to focus on the planned activities in the daily agenda, this strategy ensures that teachers must change their attitudes and values to learn (Sparks & Loucks-Horsley, 1989).

According to Joyce and Shower (1988), someone has to decide what will be the substance of training, which will provide training, when and where the training will be held, and for what duration. Training "*can be short and/or long term; it is cost-effective as it can target more teachers in one place with a small number of trainers using materials that can be reused with other cohorts*" (Al-Ghatrifi, 2016). Monitoring is among the ways of professional development programs for teachers that are commonly part of training new teachers in the schools in the activities called induction. According to Allen & Casbergue, 1997).

According to Flynn, Lissy, Alicea, Tazartes, and McKay (2016), it was confirmed that mentoring activities benefit the mentees also mentoring activities benefit the mentors, and the schools themselves in many ways. For the mentees, the activities give them confidence and professionalism in their careers and even support them pedagogically and psychologically and for the school's academic performance to increase in school-based exams, district, and national levels.

From the Rwandan perspective, this research emphasized understanding the elements that can influence the effectiveness of continuous professional development of teachers in Rwanda.

In Rwanda education, a well-trained teacher is considered a milestone that contributes to the development of teaching and learning processes, leading to quality of education (MINEDUC, 2007).

1.1 Statement of the Problem

Nowadays, the vision and mission of the Ministry of Education "*to provide the citizens of Rwanda with equal opportunities to high-quality education through the world-class learning facilities and renowned learning institutions*" (MINEDUC, 2012). Makunja (2016) competency-based curriculum is a sort of education system that wants to improve students' capability to study and perform better at the standardized level. The elaboration of a competency-based curriculum comes at on right time because the internal and external job markets are obliging to move from traditional teaching approaches to a competency-based curriculum. In addition, the government has to make sure that the skills, knowledge, attitudes, and values given to Rwandans in education are met with the change in global markets in the 21st century (REB, 2016).

With a target of strengthening teachers, and school administrators and making sure that the implementation of a new curriculum in 2016 is effective. Rwanda Education

Board elaborated on continuous professional development at the national level. Before 2016, continuous professional development was not the thing that was known in the education system of Rwanda, it was not easy to make CPD in Rwandan schools. Upon the introduction of a competency-based curriculum, most schools and institutions started providing continuous professional development to their employees so that they could update their knowledge and skills, these were used as the ways of making effective implementation of a competency-based curriculum. It is very important to engage teachers in CPD so that the implementation of a competence-based curriculum can be effective (Bredeson, 2002; Gibson & Brooks, 2012). However, many schools do not get the opportunity to give their teachers CPD; and if this continues, the implementation of the new curriculum won't be successful, and academic performance cannot be achieved. In addition to this, school graduates will be incompetent in the labor market.

1.2 Research Questions

1) What is the relationship between teacher in-service training and learners' academic performance in Rulindo primary schools?
2) To what extent do teacher-peer learning platforms relate to learners' academic performance in Rulindo primary schools?
3) What is the relationship between teacher coaching and mentoring and learners' academic performance in Rulindo primary schools?

1.3 Objectives of Study

1) To examine the relationship between teacher in-service training and learners' academic performance in Rulindo primary schools.
2) To identify the relationship between teacher-peer learning platforms and learners' academic performance in Rulindo primary schools.
3) To Analyze the relationship between teacher coaching and mentoring, and learners' academic performance in Rulindo primary schools.

2. Literature Review

2.1 Teachers In-service Training and Learners' Academic Performance

According to Mizell (2010), when teachers are engaged in in-service training, it means that it is a formal process of educating people by using conferences, seminars, workshops, field trips, and cooperation among the teams at universities and colleges. However, in–service training can include informal teachings like discussions among work colleagues, personal research and study, observation of workmate work, and another kind of peer learning.

People use many other terms while explaining professional development, they use staff professional development, teachers training, and professional learning among others. However, one can call it, the meaning is always the same and the purpose is the

same, there is no doubt that continuous professional development provides a significant impact on learning achievement.

Many other researchers such as Casteel and Ballantyne (2010) indicated that professional development can be related to the measurable achievement in learners' academic performance and discipline of learners. Students' achievement can be the best determinant of the types of continuous professional development provided to the teachers and it can determine how that training is effective for the beneficiaries. Teacher in-service training is an obligation for newly hired and experienced teachers because the education system is dynamic means that there is always great change in policy-making, curriculum development, and policies that should be taught.

Different studies have discovered that in-service training has a significant impact on learners' academic performance in educational institutions. Rahman, Jumani, Akhter, Chisthi & Ajmal (2011) studied the relationship between in-service teacher training and effective teachers and came up with possible solutions which follow, the conclusion was that in-service teacher training has a positive relationship between effective classroom teaching and correlation showed that the positive relationship between learners' academic performance and teachers training.

In many types of research, professional development was linked with partnership and students' performance, researchers like Sullivan (2008) from quantitative research concluded that once teachers participate in professional development students' academic performance increases too because of the skills and knowledge that teachers acquire from training. In many studies about professional development conducted, teachers were asked how continuous professional development impacted students' learners' academic performance by describing the effectiveness of professional development to challenge the academic achievement of learners (Robinson, 2011).

Therefore, skilled, experienced, and updated manpower have great significance on learners' academic performance, many schools have adopted strategies for increasing academic performance but the most important technique they use is in-service training. They organized and put into practice professional development to update and upgrade teachers' skills and knowledge. Seton (2005) asserted that professional development has a positive significant relationship with teachers' development and learners' academic performance. Professional development is done systematically because it gives skills, knowledge, attitudes, and values that employees are required to perform an assigned task in an organization.

According to Olaniyan and Ojo (2008), staff training and professional development should always be done on the mission and goals of staff, which also reflect the target of staff in the future. This is because always every organization has an ambition of growing and reaching as far as possible in the future. So, no one can achieve this target without having a professional and experienced staff who is well trained and expertized.

According to Nakpodia (2010), human resources development must undergo many different forms of professional development to make it perform better an assigned

task. The findings indicated that there is a difference between human resources development and learners' academic achievement. However, the researchers revealed that school personnel have to attend many trainings, seminars, workshops, and other different professional development programs that can sharpen, update, and upgrade their knowledge and skills. And conclude that human resource experience, qualification, and training have a significant impact on learners' academic performance. Teachers' perceptions of professional development were aligned with the standards of another kind of development that teachers can attend, teachers disclosed that collaboration, dialogue open discussion, and learning about instructional facilities had a great impact on the learning and teaching process. The similarity is that having training, other forms of professional development, and collaborative learning on instructional material plays a great impact on learners' academic performance in any given school around the world (Robinson, 2011).

The most well-known staff professional development programs that are being provided in higher institutions are training, service-teaching, and being engaged in workshops, seminars, and conferences among others (Ngala & Odebero, 2010). Continuous professional development teachers receive basic knowledge and skills such as classroom management skills, assessment techniques, development of teaching methodology, and the techniques of mastering the contents. It was found that teachers have good perceptions of service training and its impacts on learners' academic performance and in classroom situations such as assignments, group works, quizzes, and exercises that are given in the classroom (Waheed, Salami, Ali, Dahlan, & Rahman, 2011). The study concluded that teachers' professional development has a positive relationship with learners' academic performance and effective teaching.

In-service teachers' education should be well-designed, planned, and implemented. Therefore, the main target can be content development and methodology designing that are used to transmit the content for improving the teaching and learning process. Now & Lauer (2005) noted that the contents of what teachers get from training are very important. They revealed that in-service training emphasis on defined curricula resulted in a much more reform-oriented program than more general professional training but reform-oriented teachers' facilities significantly relate to learners' achievement.

2.2 Teacher Peer Learning Platforms and Learners' Academic Performance

Peer learning is the transition of knowledge and skills by active facilitating and support among people with the same profession to help so that a common goal can be achieved together. Peer learning among people from the same social community, who need to develop in their career or profession by helping each other to learn. This is termed learning by collaborating with peer groups (Topping & Ehly, 1998). On the other side, the concept of peer assessment indicates the process done by learners to evaluate each other's work in group-assigned tasks. Yusuf (2004) indicated that the concept of the new

secondary school curriculum is targeted to empower the effective solving of the subject in the classroom by unprofessional teachers and inexperienced educators while developing knowledge and skills of teaching methods of experienced teachers.

Zakaria, Chin, and Daud (2010) asserted that the achievement of effective and efficient teaching and learning techniques, and acquiring of skills and knowledge and skills must not emphasize providing regulations, concepts, meaning, and procedures for learners to cram but it should be inclusive by engaging learners actively as primary beneficiary or participants. One of the best ways to attain that is peer learning which seems to be the most emphasis in this study. Moreneo and Duran (2002) defined peer learning as a method of collaborative learning based on the creation of pair of learners with a great relationship, that is, trainer and trainee who do have not the same academic capability but they share the same goal. The objective can be attained through a relationship organized by the educators. Peer learning is treated as an excellent strategy for intermediating the mastery of group competences.

Fuchs, Mathes, and Martinez (2002) indicated that socialization knowledge, experience and skills acquired or occurred during the peer learning process can benefit both sides tutor and tutees by motivating the learners or teachers to study and augment their social status among the group.

Conducted research on assessment study and reported that peer learning developed learners' motivation to study. This finding is confirmed by Whitman (2012) and Annis (2013), who highlighted that peer learning might be the most intellectual compensation of a learner's profession. Many researchers revealed that peer teaching supported learners to perform better academically than those who concentrated on reading materials for learning purposes.

Researchers like Topping (2010), pointed out that peer learning acts as an effective method to develop self-esteem in learners. Peer learning helps collaboration among groups not only academically but also in the community. One of the issues that attract public concern in most of the country is the gender stereotype in the academic achievement of learners at schools.

With the high increase of students the scarcity of resources, high augmentation of demands of teaching staff and other officials peer learning can be a solution to this kind of crisis in the education system. In addition to that, this is giving chance to the teachers and students to take responsibility for their development (Boud & Solomon, 2001) and (Ten & Durning, 2007).

Promoted collaboration is support shared by the same group members to help and motivate each other through the activities of achieving a common vision and objective. This can be in terms of provision of feedback to increase performance or division of resources. Individual responsibility and personal accountability are the core of the collaborative learning process. If members of an association understand that they are chargeable and depend on one another to achieve the same goal then the level of

responsibility in the group is great, which increases in answerability (Torre *et al.*, 2016; Johnson & Johnson, 2009; Johnson & Johnson, 2005).

Learning by cooperation assists learners in cognitively preparing and rearranging information, integrating it into current knowledge, and enhancing the holding of knowledge (Johnson *et al.*, 1998).

Teacher's perception of their academic environment has a significant contribution to their learning and meaningful studying environment, which motivates togetherness among learners and constructive emotional areas that promote teaching (Wayne *et al.*, 2013). In peer learning, this increases learning due to the trusting correlation between peers. Peer observation is defined as a systematic lesson review process that puts together a variety of different feedback sources such as feedback from students, evaluation outcomes, and learners' improvement and achievement. Byrne, Brown, and Challen (2000) pointed out that the objective of group observation can be treated as an account for, developing the quality of teaching and learning with a target of developing academic learning. This strategy can be seen as a tool for assessing teaching performance and be utilized in the performance appraisal of teachers. Teachers also need sufficient time and help to express themselves in teaching and visit one another's classrooms every week.

Teachers learn well from one another from the mistakes that can be made by colleagues, by exchanging opinions with workmates from instructional educators and staff, and from making this over the course of their profession. This kind of school-based teaching demands a shift in the school environment. It obliges to get support from skilled and experienced training from internal and outside. The findings are important according to Mednick (2004). Davys, McKenna, and Tickle (2008) asserted that peer observation aims to increase the quality of teaching and exchanging of good practices with workmates. Generally, it includes peer observation of everyone's practice to develop practice and facilitate individual and professional development.

2.3 Teacher Coaching and Mentoring

Interactions and cooperation development rely on the attribution and understanding of those participants who are engaged in mentoring (Ambrosetti *et al.* 2014). Some of the researchers concluded that the meaning or definition of mentoring and coaching is not necessary. However, it has been confirmed that the term mentoring is empowered by how it is to be utilized and they are defined according to the context it is intended to respond or depending on the users and the objective that he/she has (Jones & Brown 2011).

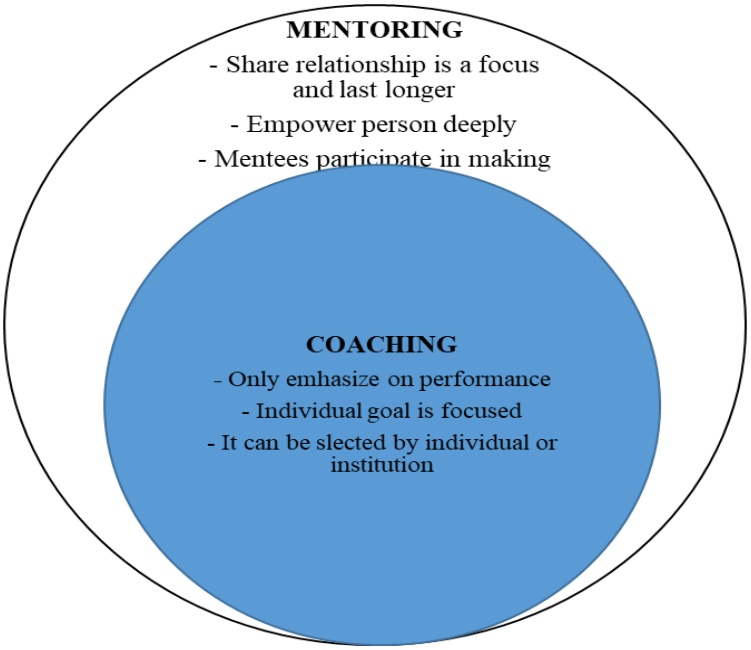
Mentoring is sometimes defined or explained as complex. Heirdsfield *et al.* (2008) stated that it is defined as a complex activity because it consists of such components as the relationship between the mentor and mentees, the desires and goals to be attained within the cooperation, as well as the context that activities occur in (Ambrosetti *et al.* 2014). In this respect, Kram's (1985) mentoring at work first identified such crucial

elements of the mentoring process. She holds that a mentoring relationship is founded on connection, needs, and context.

Kram (1985) mentioned that job first recognized such components of the mentoring process. The researcher discovered that mentoring cooperation is founded on interaction, desires, and context. Thus, mentoring consists of three elements namely cooperation (the interaction between the mentor and mentees, progressive (where desires are recognized and the progression of these facilitates the relationship), and context (for this level the context facilitates what will happen and how it occurs in the cooperation) (Lai, 2005). Confusion arises when one wants to define mentoring and ignores to include the three components that are described above and to relate with the context it tends to be used, the meaning that doesn't include both of the elements highlighted above does not reflect to maximize the potential of that word (Ambrosetti *et al.*, 2014).

Many literature reviews on education careers sometimes confuse mentoring and coaching approaches. Specifically, both approaches mentoring and coaching are related to professional development programs consisting of one expert or instructor facilitating another in a mutually beneficial way. However, the difference is that coaching directly relates to teaching and learning for academic achievement and it lasts a short or medium period of time while mentoring basically emphasizes learning for professional development and can last a medium or long period of time. Conclusively mentors can conduct the activity of coaching while coaches cannot not easily perform the activity of mentoring in any given organization. Globally, a mentee can be the one who can choose the mentor while a coaching organization unites a person who seems to be a desirable aching (Irby, 2012).

Figure 1: Mentoring and Coaching



Source: Researcher (2022)

In teaching and learning activities mentoring is essential to the teachers because most new teachers and some of the teachers of English or other languages, even other subjects are not at the same level.

That is the reason why teachers need mentoring and coaching which always lets them be updated and upgraded on educational change or reforms. Lawy & Tedder (2011), indicate that there is no specific model of mentoring they continued expressing that if mentoring programs are to be effective and efficient, they must be in favor of mentees, flexible, and modifiable to the mentee's desires and situations. However, mentors' training is all about or targeted to let them know the different possible theories that could be involved and help them to recognize and select from each theory and put the elements necessary in every mentoring activity (Kadji-Beltran *et al.* 2013). Teachers could have mentors who can always facilitate them in teaching and learning activities. Mentors don't mean someone from external institutions or experts from outside but also mentoring can be done internally by a director, director in charge of studies, and senior teachers who are experienced in teaching and learning activities or who have been trained beforehand.

Mentoring must be defined depending on the nature of the interaction: on one hand, mentoring can be developmental when it is conducted in formative ways and has a formative purpose and emphasizes individual or professional development, it must be professionally oriented, and suitable to the beneficiaries. On the other hand, mentoring can be performative when it is done in summative ways, which means that it is conducted for judgment and assessing the performance of any programs (Lawy & Tedder, 2011; Tedder & Lawy, 2009).

2.3.1 System's Theory

The theory that the researchers used in this study is a system theory which describes the input-output model. This theory was developed by a theorist called Ludwig von Bertalanffy in 1956. The theory, according to Koontz and Weihrich (cited in Martha, 2005) noted that a well-organized firm cannot exist in a vacuum, it should always happen based on the system in which it is founded. They further continued to assess that input from the system is gained by an institution, which then changes them into outputs. As was done in this research, teachers are the inputs who have many training programs designed for them and they get professionalism through the activities of teaching and learning. Furthermore, the output from an education perspective is related to students' academic performance.

However, instructional facilities like laboratories, libraries, and computer labs are considered resource inputs that contribute to teaching and learning activities in any given educational institution to achieve the desired goal. Robbins (Martha, 2005) indicated that an institution was highly explained as absorbers, processors, and generators and as an institutional system that could be described as being built up by many interconnecting

factors. And the researchers furthermore described that any sudden change can affect many other subsystems in educational institutions.

2.4 Adult Learning Theory (Andragogy)

Starting from the definition of pedagogy as the starting concept, Knowles defined andragogy (adult learning theory) as the "*art and science of helping adults to learn*" (1990, p.54). However, to understand andragogy one has to start by understanding what is adult person. Therefore, from an education perspective, Knowles (1970) asserted that there are at least two questions that can be answered for those types of questions: one, who has to be considered an adult person (social meaning)? And second, what is the self-character of an adult (psychological meaning)? Regarding the first question adult is a person who has specific responsibilities such as parents, doctors, and teachers while answers relating to the second question is an individual who became an adult psychologically at the level to which his/her status moves from dependency to independence person, means that that one is not relying on others to live. It means that an adult "*perceives herself or himself to be primarily responsible for her or his own life, actions, and decisions*" (Knowles, 1970, p.24). Knowles pointed out the role of teachers in adult learning activities, asserting that teachers are the most important members of the education system, and the teacher has a big contribution to the teaching and teaching environment (Knowles, 1970).

Therefore, Zepeda (2012) noted that continuous professional development has adult learning activities that contribute to the students, teaching, and administrative staff. Teachers' continuous professional development is a type of adult learning that occurs while they are still fulfilling their duties at the job, in workshops and training (Zepeda, Parylo & Bengston, 2014). As responsible, teachers also must be provided responsibility for their own professional development. What motivates them? What do they like to study? What would they think about their needs? Letting teachers guess what the main target of their professional development is will empower them, and highly influence the performance of teachers in their experience to be lifelong students as adults (Trotter, 2006).

Andrology as it is considered the model of the adult learning process, indicates that adopting adult teaching programs such as pre-experience, reflection, intrinsic and extrinsic motivation, and relationship should contribute to the augmentation of engagement reforms in teaching knowledge, belief, and classroom management empowering teachers on how they can facilitate the activities of teaching and learning may find out the opportunity for the teachers to develop professional development principles practices (Weber-Mayrer, 2016). Other side, many researches revealed that most of the programs for adult teachers do not involve adult learning programs and they consider them as new learners therefore educators cannot be satisfied with knowledge and skills that they could transfer to teaching programs (Puteh, Kaliannan & Alam, 2015).

Schwandt and Tobin (1999) disclosed three basic program principles for the pacification of adults' needs in the development of staff programs. In the beginning, they

should be self-driven needs of adults, secondly, is that teachers utilize acquired knowledge and skills in practical ways, which means that these programs must reflect what teachers learned while he/she is teaching in the classroom, and finally, continuous professional development must give value the prior experience.

Many sources showed that educators have little or insufficient input in either the contents or format of their previous training (Karagiorgi *et al.*, 2008). Several research by Kember, Kwan, and Ledesma (2001) however the trainers viewed educators as adult learners different from other kinds of students, they always keep on training in the ways they treat them as good. For example, Comings, Beder, Bingman, Reder, and Smith (2003) pointed out that teachers explained that learners-centered principles are more important for teachers, but sometimes some use teacher-centered methods.

However, most of the instructors are accused that they used learners centered methods in their collaboration with educators and their training is teachers centered and later they treat learners' active-centered methods like theories that are kept in documents, not as teaching methods (Karagiorgi, *et al.*, 2008).

On the other hand, it is known that teachers do not agree with the trainers' style of giving professional development, the format of the contents instead of real staff professional development. As a result of the inefficient teaching methods used by trainers, much of teachers do not get the most important information as long as they are not included in the process of decision-making one of the researchers disclosed that "*disjunction of learning and teaching styles*" and "*apparent irrelevance of the learning activity*" as two reasons that can attribute to resistance to learning (Brookfield, 1990).

Precisely, the provision of continuous professional development is the main target of all educational organizations, there are many researches and studies on effective continuous professional development. However, this theory is considered as quite potential and important to school administrators who have other responsibilities to perform, but it is only taking a few hours and was designed to the adults learning and education into consideration. Teachers' continuous professional development can become more effective (Beavers, 2009). The study analyzed adult learning programs and teachers' professional development and then revealed that teachers have to cooperate with workmates, interact with others from other institutions, and study things that can be utilized in his/ her classroom activities (Trotter, 2006).

Creating such a conducive environment offers the teachers an opportunity to share ideas, experiences, brainstorming, and discussion. And then considering teachers as a focal point of adult learners is the most important factor in effective continuous professional development for educators. Many theories explain professional development. Unfortunately, many educational institutions do not strive to implement these strategies because of a lot of tasks and other financial means which become a barrier. However, according to Beavers (2009) inserting adult learning in the education system had a significant influence on learners' academic performance.

2.5 The Training Model

The training model is well-known academically around the world and has been an important instrument that all instructors and administrative staff use to transmit continuous professional development (Little, 1994; Kelly & McDiarmid, 2002).

This model develops a capability of teachers that gives teachers the opportunities to improve their skills, and knowledge which leads them to demonstrate their competences. Around the world, continuous professional development is provided by experts in education curriculum and methodology, and the program of this professional development is always known by the experts. Teachers are seen as passive elements while conducting this professional training.

In general, training is provided in a way that is different from other professional activities and it is comprised of education experts who are in addition to outsiders from the school (Burbank & Kauchak, 2003). Training can take place outside of the schools of participating teachers because when it is provided in the interior place where trainees work, the training is criticized for not being standard or effective. (Kennedy, 2005). The training model has an implication which means that teaching and administrative staff must have additional skills and knowledge that increase their experience and expertise.

3. Research Methodology

The study used quantitative and qualitative approaches. A descriptive research design was utilized to study the significant relationship between the independent variable which is teachers' continuous professional development and the dependent variable which is learners' academic performance. This study used 9 head teachers, 5 deputy head teachers in charge of studies, and 144 teachers both from two sectors Tumba and Kinihira sectors primary schools. The researchers decided to use this kind of people because of their responsibilities, which have a relationship with teachers' continuous professional development and learners' academic performance. Therefore, the total population of the study is 158 people. This study used both probability and non-probability sampling.

Data collection instruments are the tools that the researcher used to collect the information from the respondents. There are many instruments but the researcher tried to select some of them that are relevant to the problem study (relationship between teachers' continuous professional development and learners' academic performance in Rulindo primary schools). The questionnaire is an instrument that is commonly used in social sciences while conducting quantitative data, it is very useful when the researcher wants to collect data from big number of respondents (Omari, 2011). The researcher sent the questionnaire to the teachers, directors, and directors in charge of studies to fill in their information that is relevant to the questions asked. Interviews will be used in collecting qualitative data from head teachers, and the director in charge of studies. Interview was also used, it refers to the oral communication between interviewee and

interviewer and the answers should be answered in verbal ways of exchanging information (Kothari, 2004).

Quantitative was used on closed-ended questions where the respondents had choices among many alternatives while qualitative analysis used an open-ended question which gave the respondents the chance to give his/her opinions. Descriptive statistics was utilized to make a summary of quantifiable data. Data processing used SPSS (Statistical Package for Social Sciences). Percentage, mean, and standard deviation were used in the data interpretation. The study used a Cronbach alpha to test the consistency of the questionnaire which was used during the period of data collection.

4. Presentation, Analysis, and Interpretation of Findings

Table 1: Descriptive Statistics for Teacher In-service Training and Learners' Academic Performance

	N	Min	Max	Mean	Std.
School-based training improves learners' academic performance.	113	1.00	5.00	4.2212	.83168
BLF-provided training improves learners' academic performance.	113	1.00	5.00	4.1593	.94080
British Council-provided training affect learners' academic performance.	113	1.00	5.00	4.0265	1.16082
Training incentives improve learners' academic performance.	113	1.00	5.00	4.4071	.78646
Training attendance improves learners' academic performance.	113	1.00	5.00	4.5752	.65199
Training assessments improve learners' academic performance.	113	1.00	5.00	4.2035	.83623
Post-training follow-ups improve learners' academic performance.	113	1.00	5.00	4.2655	.90650
English proficiency tests improve learners' academic performance.	113	1.00	5.00	4.0442	.94858
Training duration improves learners' academic performance.	113	1.00	5.00	4.0531	1.11676
Training frequency improves learners' academic performance.	113	1.00	5.00	4.1770	.86839
Overall Mean	**113**			**4.2132**	**0.90482**

Note: Strongly Disagree = [1] = Very Low Mean; Disagree = [1-2] = Low Mean; Neutral = [2-3] = Moderated Mean; Agree = [3-4] = High Mean; Strongly Agree = [4-5] = Very High Mean.

The findings from Table 3, indicated that the majority of respondents strongly agreed that the following factors influence learners' academic performance. They are namely: School-based training improves learners' academic performance(μ = 4.2212 and STD =.83168), BLF-provided training improves learners' academic performance(μ=4.1593 and STD = .94080), British Council-provided training affects learners' academic performance(μ = 4.0265 and STD = 1.16082), Training incentives improve learners

academic performance (μ = 4.4071 and STD = .78646), Training attendance improves learners academic performance(μ = 4.5752 and STD = .65199), Training assessments improve learners academic performance(μ = 4.2035 and STD = .83623), Post-training follow-ups improve learners academic performance(μ = 4.2655 and STD = .90650), English proficiency tests improve learners academic performance(μ = 4.0442 and STD = .94858), Training duration improves learners academic performance(μ = 4.0531 and STD = 1.11676), Training frequency improves learners academic performance(μ = 4.1770 and STD = .86839). The overall, decision is that most of the respondents strongly agree that teacher in-service training affects learners' academic performance as shown by (μ = 4.2132 and STD = 0.90482).

The findings from the interview indicated that most of the respondents approved that teachers' in-service training increases learners' academic performance because they get new knowledge and skills while they are still in their careers without letting them quit their professionalism this is an important factor that influences learners' achievement.

Table 2: Descriptive Statistics for Teacher-peer Learning Platforms

	N	Min	Max	Mean	Std.
Regular one-to-one peer support improves learners' academic performance.	113	1.00	5.00	4.3186	.71045
Occasional one-to-one peer support improves learners' academic performance.	113	1.00	5.00	4.4602	.85602
Community of practice meetings improve learners' academic performance.	113	1.00	5.00	4.2743	.89889
Peer lesson observation improves learners' academic performance.	113	1.00	5.00	4.3805	.78284
Peer feedback improves learners' academic performance.	113	1.00	5.00	4.2832	.86053
Out-of-school study trips improve learners' academic performance.	113	1.00	5.00	4.2743	.88890
Teacher group study improves learners' academic performance.	113	1.00	5.00	4.1416	.92454
Borrowing teaching aids from a peer improves learners' academic performance.	113	1.00	5.00	4.3097	.79147
Using English with colleagues improves learners' academic performance.	113	1.00	5.00	4.5487	.76755
Peer imitation improves learners' academic performance.	113	1.00	5.00	4.1593	.99612
Overall mean	**113**			**4.3150**	**0.84773**

Note: Strongly Disagree = [1] = Very Low Mean; Disagree = [1-2] = Low Mean; Neutral = [2-3] = Moderated Mean; Agree = [3-4] = High Mean; Strongly Agree = [4-5] = Very High Mean.

The findings from Table 4, showed that the majority of respondents approved that the following variables affect learners academic performance as they follow: Regular one to

one peer support improves learners' academic performance(μ = 4.3186 and STD = .71045), Occasional one to one peer support improves learners academic performance (μ=4.4602 and STD = .85602), Community of Practice Meetings improve learners academic performance (μ = 4.2743 and STD = .89889), Peer lesson observation improves learners academic performance (μ = 4.3805 and STD = .78284), Peer feedback improves learners academic performance (μ = 4.2832 and STD = .86053), Out-of-school study trips improves learners academic performance (μ = 4.2743 and STD = .88890), Teacher group study improves learners academic performance(μ = 4.1416 and STD = .92454), Borrowing teaching aids from a peer improves learners academic performance (μ = 4.3097 and STD = .79147), Using English with colleagues improves learners academic performance (μ = 4.5487 and STD = .76755), Peer imitation improves learners academic performance (μ = 4.1593 and STD = .99612). The overall, decision is that most of the respondents strongly agree that Teacher peer learning platforms affect learners' academic performance as shown by (μ = 4.3150 and STD = 0.84773).

Table 3: Descriptive Statistics for Teacher Coaching and Mentoring

	N	Min	Max	Mean	Std.
SBM mentoring improves learners' academic performance.	113	1.00	5.00	4.2478	.78525
SSL mentoring improves learners' academic performance.	113	1.00	5.00	4.2212	.72868
Headteacher's observation improves Learners' academic performance.	113	1.00	5.00	4.2478	.75037
REB mentors improve learners' academic performance.	113	1.00	5.00	4.1947	.92445
SLF guidance and coaching improves Learners' academic performance.	113	1.00	5.00	4.1858	.85093
SEI supervision improves learners' academic performance.	113	1.00	5.00	4.1858	.77400
Teacher-private mentor improves learners' academic performance.	113	1.00	5.00	4.2212	1.02412
Teacher online mentoring improves Learners' academic performance.	113	1.00	5.00	4.2832	.77309
Tutorship improves learners' academic performance.	113	1.00	5.00	4.3009	.81158
Coaching and mentoring of new teachers by the school leaders improve learners' academic performance.	113	1.00	5.00	4.3009	.81158
Overall mean	**113**			**4.2389**	**0.82340**

Note: Strongly Disagree = [1] = Very Low Mean; Disagree = [1-2] = Low Mean; Neutral = [2-3] = Moderated Mean; Agree = [3-4] = High Mean; Strongly Agree = [4-5] = Very High Mean.

The outcome from Table 5, revealed that most of the respondents strongly agreed that the following variable influences learners' academic performance. They are namely: SBM

mentoring improves learners' academic performance (μ = 4.2478 and STD = .78525), SSL mentoring improves learners' academic performance (μ = 4.2212 and STD = .72868), Head teacher's observation improves learners' academic performance (μ = 4.2478 and STD = .75037), REB mentors improve learners' academic performance (μ = 4.1947 and STD = .92445), SLF guidance and coaching improves learners' academic performance (μ = 4.1858 and STD = .85093), SEI supervision improves learners academic performance(μ = 4.2212 and STD = 1.02412), Teacher private mentor improves learners academic performance(μ = 4.2832 and STD = .77309), Teacher online mentoring improves learners academic performance (μ = 4.2832 and STD = .77309), Tutorship improves learners academic performance(μ = 4.3009 and STD = .81158), Coaching and mentoring of new teachers by school leaders improves learners academic performance (μ = 4.3009 and STD = .81158). The overall, decision is that most of the respondents strongly agree that Teacher coaching and mentoring affect learners' academic performance as shown by (μ = 4.2389 and STD = 0.82340).

Table 4: Descriptive Statistics for Learners' Academic Performance

	N	Min	Max	Mean	Std.
The rate of learners' success in district tests has increased in the last five years.	113	1.00	5.00	4.2743	.85824
Students' motivation increased in the school's internal exams in the last five years.	113	1.00	5.00	4.3894	.74921
Appreciation from the local community and administration for the learning process increased in the last five years.	113	1.00	5.00	4.2478	.92129
The number of learners getting the second seating exams decreased in the last 5 years.	113	1.00	5.00	4.3894	.71256
The number of students active participants and open during the teaching-learning process increased in the last 5 years.	113	1.00	5.00	4.2743	.77053
Number of learners who got discouraged or dropped out decreased in the last five years.	113	1.00	5.00	4.5221	.78031
The concentration of students has increased in the last five years.	113	1.00	5.00	4.4159	.72857
The time management, attendance, discipline, and the number of students having free revision increased in the last 5 years.	113	1.00	5.00	3.8230	1.10381
The number of learners unclassified in national exams was reduced in the last five years	113	1.00	5.00	4.0531	.89483
The number of learners who get high grades in national exams increased in the last five years.	113	1.00	5.00	4.0177	1.05206
Overall mean	**113**			**4.2407**	**0.85714**

Note: Strongly Disagree = [1] = Very Low Mean; Disagree = [1-2] = Low Mean; Neutral = [2-3] = Moderated Mean; Agree = [3-4] = High Mean; Strongly Agree = [4-5] = Very High Mean.

The outcome from Table 6, showed that the majority of respondents strongly that academic performance had been increased in last five years as they are indicated by the following variables: The rate of learners' success in district test has increased in last five years (μ = 4.2743 and STD = .85824), Students motivation increased in the School's internal exams in the last five years(μ = 4.3894 and STD = .74921), Appreciation from local community and administration about learning process increased in last five years(μ = 4.2478 and STD = .92129), The number of learners getting the second seating exams decreased in the last 5 years (μ = 4.3894 and STD = .71256), The number of Students active participants and open during teaching-learning process increased in the last 5 years (μ = 4.2743 and STD = .77053), The number of Students active participants and open during teaching-learning process increased in the last 5 years (μ = 4.5221 and STD = .78031), Numbers of learners who got discouraged or the drop out decreased in the last five Years (μ = 4.4159 and STD = .72857), Concentration of students has been increased in this last five years(μ = 4.4159 and STD = .72857), The time management, Attendance, Discipline and the number of students having free revision increased in the last 5 Years(μ=3.8230 and STD = 1.10381), The number of learners unclassified in national exams were reduced in this last five years(μ = 4.0531 and STD = .89483), The number of learners who get high grade in national exams increased in last five years (μ = 4.0177 and STD = 1.05206). The overall, decision is that most of the respondents had strongly agree that learners' academic performance increased as shown by (μ = 4.2389 and STD = 0.82340).

4.3. Discussion of Findings

4.3.1. Interpretation of Findings Using Correlation Analysis

Table 5: Model Summary on Teacher In-service Training

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.870[a]	.756	.726	.11253
a. Predictors: (Constant), Teachers' in-service training				

The results in Table 7, indicated that 75.6% of the variation in dependent variables (learners' academic performance can be explained by teacher in-service training. The remaining percentage can be attributed to other variables which are not mentioned in this model.

Table 6: The Analysis of Variance on Teacher In-service Training

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	.315	1	.315	24.838	.001[b]
	Residual	.101	8	.013		
	Total	.416	9			
a. Dependent Variable: academic performance						
b. Predictors: (Constant), Teacher in-service training						

The results from the variance analysis in Table 8, indicated a regression coefficient as shown in the table. There is a significant effect (P value > 0.05). Conclusively there is a significant effect of teacher in-service training on learners' academic performance. Then, the null hypothesis is rejected while an alternative is accepted.

Table 7: Regression Coefficients for Teachers in Service Training on Learners' Academic Performance

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
	(Constant)	.351	.922		-.381	.713
	Teacher in-service training	1.090	.219	.870	4.984	.001
a. Dependent Variable: Academic performance						

The results from Table 9, indicated that there was a positive and significant effect of teachers' in-service training on learners' academic performance (B = 0.870, P value > 0.01). This explains that one unit of change in teachers' in-service training, increases learners' academic performance by 1.090 units, this result corroborates with (Harindintwari *et al.*, 2020) which revealed that human resource availability contributes to school materials utilization.

Table 8: Model Summary for Teachers' Peer Learning and Learners' Academic Performance

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.894[a]	.800	.775	.10204
a. Predictors: (Constant), teachers peer learning				

The results in Table 10, indicated that 80.0% of the variation in dependent variables, learners' academic performance can be explained by teacher peer learning the remaining percentage can be attributed to other variables that are not mentioned in this model.

Table 9: The Analysis of Variance in Teachers' Peer Learning and Learners' Academic Performance

Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	.333	1	.333	31.936	.000[b]
	Residual	.083	8	.010		
	Total	.416	9			
a. Dependent Variable: academic performance						
b. Predictors: (Constant), teachers peer learning						

The results from variance analysis in Table 11, indicated regression coefficient as shown in the table there is a significant effect (P value > 0.05). Conclusively there is a significant effect of teacher peer learning on learners' academic performance. Then, the null hypothesis is rejected while the alternative is accepted.

Table 10: Regression Coefficients for Teachers Coaching and Learners' Academic Performance

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	-2.441	1.183		-2.064	.073
	teachers peer learning	1.549	.274	.894	5.651	.000
a. Dependent Variable: Academic performance						

The results from Table 12, indicated that there was a positive and significant effect of teachers' peer learning on learners' academic performance (B = 0.894, P value > 0.00). This explains that one unit of change in teachers' peer learning, increases learners' academic performance by 1.549 units.

Table 11: Model Summary for Teachers Coaching and Mentoring

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.902[a]	.814	.791	.09834
a. Predictors: (Constant): Teachers coaching and mentoring				

The results in Table 13, indicated that 81.4% of the variation in dependent variables (learners' academic performance can be explained by teachers coaching and mentoring the remaining percentage can be attributed to other variables that are not mentioned in this model).

Table 12: The Analysis of Variance in Teachers' Coaching and Mentoring on Learners' Academic Performance

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	.338	1	.338	34.993	.000[b]
	Residual	.077	8	.010		
	Total	.416	9			
a. Dependent Variable: academic performance						
b. Predictors: (Constant): Teachers coaching and mentoring						

The results from variance analysis in Table 14, indicated regression coefficient as shown in the table there is a significant effect (P value > 0.05). Conclusively there is a significant

effect of teacher coaching and mentoring on learners' academic performance. Then, the null hypothesis is rejected while the alternative is accepted.

Table 13: Regression Coefficients for Teachers Coaching and Mentoring and Learners' Academic Performance

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	14.125	3.105		-4.549	.002
	Teachers coaching and mentoring	4.333	.732	.902	5.915	.000
a. Dependent Variable: Academic performance						

The results from Table 15, indicated that there was a positive and significant effect of teachers coaching and mentoring on learners' academic performance (B=0.902, P value >0.00). This explains that one unit of change in teachers' coaching and mentoring increases learners' academic performance by 4.333 units.

5. Conclusion

The findings from the objective to examine the relationship between teacher in-service training and learners' academic performance in Rulindo primary schools, the results indicated that there is a positive and significant effect of teacher in-service training on learners' academic performance (B = 0.870, P value > 0.01). This means that the null hypothesis was rejected and alternative hypotheses were accepted. This was achieved by providing 10 statements or options about teachers' in-service training for which the respondents were asked to choose an appropriate box by Likert scales. Therefore, it was found that teachers' in-service training variables affect the overall mean and standard deviation (μ = 4.2132 and STD = 0.90482).

The findings from the objective which is to explore the relationship between teacher-peer learning platforms and learners' academic performance in Rulindo primary schools, the results indicated that there is a positive and significant effect of teacher peer learning platforms on learners' academic performance (B = 0.894, P value > 0.00). This means that the null of hypothesis was rejected and alternative hypotheses were accepted. This was achieved by providing 10 statements or options about teacher peer learning platforms for which the respondents were asked to choose an appropriate box by Likert scale. Therefore, it was found that teacher peer learning platform variables affect the overall mean and standard deviation (μ = 4.3150 and STD = 0.84773).

The findings from the objective which is to analyze the relationship between teacher coaching and mentoring and learners' academic performance in Rulindo primary schools, the results indicated that there is a positive and significant effect of teacher coaching and mentoring on learners' academic performance (B = 0.894, P value > 0.00).

This finding collaborates with the results of Harindintwari *et al*. (2020) who stated that human resources is very crucial for student performance. This means that the null hypothesis was rejected and alternative hypotheses were accepted. This was achieved by providing 10 statements or options about teacher coaching and mentoring for which the respondents were asked to choose appropriate boxes by Likert scales. Therefore, it was found that teacher coaching and mentoring variables affect the overall mean and standard deviation ($\mu = 4.3150$ and STD = 0.84773).

5.1 Recommendations

Basing the findings from the study the researcher revealed that some gaps need to be solved by different organs such as the Rwanda Education Board, and non-governmental organizations across the world. They are namely:

- REB should provide frequent continuous professional development in schools across the country.
- REB should survey how continuous professional development that they have provided is impacting the quality of education.
- Stakeholders must invest their money in giving continuous professional development to teaching and administrative staff.

Conflict of Interest Statement

The authors declare no conflicts of interest.

About the Author(s)

Dr. James Harindintwari, Lecturer of School Administration, Economics of Education, Educational Psychology, Class Management, Comparative Education, Principles and Practice of Teaching at Faculty of Education, Kibogora Polytechnic, Rwanda. He has taught different modules of education for both undergraduate and postgraduate diplomas in education since 2014. His research interests focus on issues that concern education, particularly educational resources, student performance, teachers' continuous professional development, and student disruptive behaviors. Dr. Harindintwari has authored research publications such as *Availability of Materials and School Materials Utilization in Implementing Competence-based Curriculum, Cognitive and Affective Teachers' Skills Determinants as Amalgam to Generate Students' Performance.*

Claudine Yumvuhore, Assistant Lecturer of Managing People and Operation, Introduction to Accounting, Strategic Management, Investment and Portfolio Analysis, International Finance at Faculty of Education and Business Development Studies, Kibogora Polytechnic, Rwanda.

Ntaganira Josue Michel, Lecturer of School Administration, Sociology of Education, Educational Psychology, Class Management, Deontology of Teachers, Child-friendly School and Concept, Curriculum Design and Practice, Action Research at Faculty of

Education, Kibogora Polytechnic, Rwanda. He has taught different modules of education for both undergraduate and postgraduate diplomas in education.
Noel Bavugirije is a Graduate of Faculty, Education, Kibogora Polytechnic, Rwanda.
Jean Damascene Dusabimana is a Graduate, Faculty of Education, Kibogora Polytechnic, Rwanda.

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