



**THE INFLUENCE OF CONTINUOUS IN-SERVICE TRAINING AND TEACHERS' CLASSROOM PERFORMANCE.
CASE STUDY OF PUBLIC SECONDARY SCHOOLS IN KICUKIRO DISTRICT-RWANDA**

Dr. Gacinya John, PhD, PGDE

**THE INFLUENCE OF CONTINUOUS IN-SERVICE TRAINING AND TEACHERS' CLASSROOM PERFORMANCE.
CASE STUDY OF PUBLIC SECONDARY SCHOOLS IN KICUKIRO DISTRICT-RWANDA**

Dr. Gacinya John, PhD, PGDE

Senior Lecturer: Kigali Independent University (ULK), Rwanda

Accepted: February 16, 2024

DOI: <http://dx.doi.org/10.61426/sjbc.v11i1.2863>

ABSTRACT

The need for in-service education of teachers cannot be underestimated. It is a necessity in enhancing work performance and motivation of teachers in the field. Absence of in-service training of teachers will retard professional growth of teachers as well as "missing gaps" between demands and actual achievement levels. In-service education allows for such activities that may include seminars, workshops, conferences, classes, and exhibitions etc. that are designed to develop and improve employees in an organization from the initial employment stage to retirement. The general objective of this study was to investigate the contribution of in-service training on teachers' performance in public secondary schools in Kicukiro District, Rwanda. To achieve this, the study focused on three dimensions: Professionalism Knowledge, Professionalism Skills, and Professional Teaching Values and Practices. The target population included 124 teachers from the schools drawn from the sampled public secondary schools in Kicukiro District, Rwanda. Stratified sampling technique was applied where the sample size was grouped according to their departments. Simple random sampling was applied to pick the respondents. Questionnaire and interview guides were used as data collection instruments. Data was analyzed using frequencies, percentages, standard deviations, weighted means and Multiple Regression Analysis. Quantitative data was analyzed using statistical package for the Social Sciences Version 21.0. A questionnaire, an interview schedule, document analysis guide and an observation checklist were used as tools for data collection. Data collected from the field was both quantitative and qualitative in nature. Quantitative data was analyzed using descriptive statistics such as frequency counts and percentages while qualitative data was analyzed thematically in line with research objectives. The results of the analysis was presented using frequency tables, bar graphs and pie charts. Data were analyzed both quantitatively and qualitatively. The study findings showed that there were significant correlation coefficients established between effects of in-service training and teachers' classroom performance in private primary schools in Rwanda. A positive linear relationship was established between (Professionalism Knowledge, Professionalism Skills, and Professional Teaching Values and Practices) on teachers' classroom performance in public secondary schools in Rwanda. This is shown by (0.696, 0.493, and 0.661). From the above regression equation, it was revealed that if Professionalism Knowledge, Professionalism Skills, and Professional Teaching Values and Practices were put to a constant zero, Teachers' classroom performance would be at 0.323. A unit increase on Professionalism Knowledge would lead to increase in Teachers' classroom performance by a factor of 0.215, a unit increase in Professionalism Skills would lead to increase in Teachers' classroom

performance by a factor of 0.311, a unit increase in Professional Teaching Values and Practices would lead to increase in Teachers' classroom performance by a factor of 0.112. The study concluded that relevance of in-service teacher training on professional development of teachers cannot be overemphasized. The study recommended that government of Rwanda should ensure the implementation of adequate and well planned in service training programme for teachers at all levels of the educational system in Rwanda. Further, the training equips head teachers and teachers alike with the administrative skills necessary to enable proper implementation of various education policies and programs.

Key words: In-service education, Work performance, Teacher motivation, Professional growth, Professional development, Seminars, Workshops and Conferences

CITATION: Gacinya, J. (2024). The influence of continuous in-service training and teachers' classroom performance. Case study of public secondary schools in Kicukiro District-Rwanda. *The Strategic Journal of Business & Change Management*, 11 (1), 468 – 482. <http://dx.doi.org/10.61426/sjbcm.v11i1.2863>

INTRODUCTION

Education is a continuous activity that never ends. It is the process of acquiring and developing desired knowledge, skills and attitudes (Alabi & Ige, 2014). According to Earley and Porritt (2014) this is necessary so as to deepen and widen what has already been acquired. It is from the above definition of education that the issue of teacher in-service is discussed. Education of the teacher does not end in the training but has to be continuous even after the teacher graduates and enters into the teaching service.

In-service education can simply be defined as the relevant courses and activities in which a serving teacher may participate to upgrade his professional knowledge, skills, and competence in the teaching profession. Therefore, it encompasses all forms of education and training given to a teacher who is already on the job of teaching and learning (Osamwonyi, 2016).

Report by European Union (2013) noted that since people are the greatest potential asset to any organization, the development of people and the creation of organizational conditions for full utilization of their developed talents should be of highest priority and concern to the governing body and the top management.

Therefore, the development of the human resources assumes that the process is continuous and there is always room for improvement. It also assumes that circumstances change and hence the need to cope with the changes. Training and development can be used interchangeably, and they are commonly referred to as in-service and this entails refresher courses, orientation courses, updating courses and induction courses (Lehiste, 2015). In-service education takes place at any time, either as full time or part time study during professional life of a teacher. In-service teacher education refers to all those planned courses and activities in which a serving teacher, head teacher, school inspector or educational administrator may participate in for purposes of improving his/her instructional or professional knowledge, interests and skills. It includes all knowledge, skills and attitudes provided to the professional staff in all educational strata designed to increase their competencies and enhance their professional growth. Training provides knowledge, skills and attitudes necessary for effective performances of one's role and responsibilities.

At the global level, there is a general view that there is need for the assessment of in-service training programs of teachers. The Government of China (2010) in a report entitled 'Societal Views of Education in China,' indicates that it is traditionally

believed that teachers should be examined after an undisclosed specific period of time. This report indicates that Chinese parents believe that teachers are supposed to know everything that is supposed to be done in the school environment. This has been seen as a way for keeping teachers on their toes. In most of the industrialized countries, in-service training is compulsory. In Finland, teachers are required to devote three days in a year to in-service training. In New Zealand, in-service teacher education is the responsibility of the Board of Trustees. The Board has an operations grant, which includes the professional development of their teachers. In addition, the Ministry of Education directly funds the provision of some professional development and in-service training opportunities (Viirpalu & Mikser, 2014).

In Rwanda, there have been some attempts of the in-service training programs prepared and implemented for secondary school head teachers. Starting from the one made by MINEDUC and VVOB between 2008-2011 under school management project (MINEDUC & VVOB, 2008; 2009; 2010), all secondary schools administrative staff were trained in school management and ICT. The second phase of this training programme, especially for new head teachers of secondary schools as an induction course was carried out in March 2013 (Rwanda Education Board, 2014). Another type of in-service training to mention has concerned with English language since the shift to English as the language of instruction in 2009 organized by MINEDUC in partnership with the British Council. Between 2009-2011, this training was provided to academic staff (including head teachers) across the whole country during holidays using over 1,000 trainers (British Council, 2014). From 2012 to present, the training has been carried through English language schools-based mentors at each school, but so far the priority is given to public schools. It is also worth mentioning the in-service training on Unity and Reconciliation organized by the government of Rwanda (2008-2009) for all educators in primary and secondary schools. Hence this study therefore,

seeks to investigate the contribution of in-service training for teachers towards teachers' performance in public primary schools in Kicukiro District.

Problem Statement

Ishimwe et al (2022) contends that teaching profession necessitates specific competencies that can be improved through initial education. He perceives that in order to achieve high quality education, teachers' knowledge and skills must be improved through training and other professional courses and this is the essence of in-service training.

In the current period, Teachers in active service are expected to grow continuously in terms of having upgrading courses, refresher courses, induction, ethical and moral training as well as attending workshops, seminars and research, and this is the way to go when institutions conduct in service training.

Teachers are the major key players in the achievement of educational goals in the school. Head teachers therefore, are responsible for putting up programs and activities and creating a work environment that not only generates efficiency, but also teacher satisfaction. The key to teachers' performance is motivation and commitment. It is important for teachers to be motivated and committed for them to make an effective contribution to the school's success. Motivating teachers can increase productivity and performance since they will feel valued for their work.

Along the above-mentioned line of thought, in service training institutions have not advanced well in terms of capacity building due to a lot of constraints that occur specifically the developing world. The way teachers teach has direct impact on the learning outcomes. In the case of Rwanda there are dynamics that affect the education system and this as well affects in-service teacher training activities and other professional courses that do take place.

A case in point is the competence-based curriculum introduced in Rwanda in 2015. The curriculum development required training yet the implementation of the program lacked of enough material like laptops, projectors, and other related ICT tools, textbooks, audio-visual material, Training has a lot of content but time is not enough, lack of enough time for training, time respect in training, and late closing of the training. Other than the afore mentioned, competence based training program had to cross many hurdles that amounted to; little or no rewards, insufficient and delay of transport fees, and poor lodges, poor languages communication, low level of teachers, lack of skills in Competence based, curriculum, lack of practice, mindset of teachers, resistance to change from knowledge based to competence based curriculum, negative attitudes of trainees to a new curriculum (Ndiokubwayo et al, 2019).

In addition, the 2019 statistical year book, indicates that the number of qualified teachers in secondary schools was 67.90%, up from 68% between 2017 and 2018. This demonstrates that there is a gap that should be filled by in-service teacher training activities. It is at this that

According to Ishimwe et al (2022), the government has established a program that encourages teachers to upgrade their knowledge, competencies, skills, and qualifications through structured activities of continuous professional development and distance learning where the professional will reach.

According to Ishimwe et al (2022), despite the fact that the government has aligned various frameworks to empower service teacher training activity, it has been observed that there is a gap between unqualified teachers, a lack of competency, and a lack of capacity building among the teachers that these frameworks have aligned for. Many secondary school teachers were not qualified or equipped, which resulted in a decrease in student academic performance in national examinations between 2008 and 2012 due to irregular in-service training, unqualified teachers, and a lack of school facilities that should have

allowed teachers to access distance learning (Ishimwe et al, 2022).

Harshita (2023) mentions that a variety of models for in service training have been employed and seem to offer solutions for professional development. One of the models that has been used is school-based in service training. School based in service training aligns professional development with the specific needs and goals of the school, it fosters a sense of ownership and relevance among teachers, encourages collaboration and sharing within the school community, allows for immediate implementation and application of learning. But this model also has limitations such as reliance on the availability and expertise of internal resources, lacks exposure to external perspectives and practices, limited access to specialized or advanced training opportunities. One can also talk of challenges in coordinating schedules and ensuring participation.

According to Osamwonyi (2016) in-service education program requires a lot of money to run it, and so most of the teachers who participate in it are sponsored. Sometimes it can be difficult for teachers to undergo it because of exorbitant school fees and other expenses associated with the course. There is doubt for the effectiveness of in service training because of time factor as contact hours for lectures and examinations are not enough In addition, there are discrepancies and lack of uniformity in the instruction of in service training as different institutions apply different approaches and techniques in the in service delivery. At times there may be inadequate facilities in terms of classrooms, laboratories and boarding facilities to accommodate the size of enrolment.

Rwanda government authorities and school managers alike are required to offer training for their staff at different levels, this has not been given due attention in some schools (MINEDUC, 2011). This has led to lack of morale among the teachers, inability to teach new subjects they never qualified for like entrepreneurship, lack of quality assurance procedures and strategies in the orientation to and

implementation of new syllabus, teachers funding them for training in fields not related to teaching profession and increased absenteeism from duty. It is only unfortunate that there is no study that has been carried out to establish the impact of training on teachers 'work behavior

The purpose of this study was to assess the impact of activities that improve skills and knowledge on educators' performance in secondary public schools, as well as the availability of programs that improve skills and knowledge in secondary public schools and their impact on teachers' performance in the Kicukiro district.

Research Objective

To assess the influence of continuous in-service training and teachers' classroom performance in Kicukiro district

LITERATURE REVIEW

In-Service Training

In-service education can simply be defined as the relevant courses and activities in which a serving teacher may participate to upgrade his professional knowledge, skills, and competence in the teaching profession. Therefore, it encompasses all forms of education and training given to a teacher who is already on the job of teaching and learning. According to Jones, (2013) in-service education is staff development which is a deliberate and continuous process involving the identification and discussion of present and anticipated needs of individual staff for furthering their job satisfaction and career prospects and of the institution for supporting its academic work and plans, and implementation of programmes of staff activities designed for the harmonious satisfaction of these needs. Generally, the teachers are regarded as the hub of educational development. Therefore, in-service education is concerned with the activities and courses in which a serving teacher may participate for the purpose of upgrading his professional skills, knowledge and interest, subsequent to initial training. In this case, in-service

education is designed to fill the gap of professional inadequacies of a serving teacher.

As Genivieve (2010) has rightly pointed out the skill appropriate for generation ago might no longer prepare students for the world beyond school. Students are being tasked to be more creative and thoughtful in their daily activities. In-service education is also referred to as continuing education that is designed for the retraining, reskilling and updating the knowledge of manpower. An over view of in-service training, for the good teacher, every facts of his knowledge, skills personality and interests are of potential professional value. Hence every experience he under goes during his career, however, irrelevant it may appear, may be describe as in-service training (Sim, 2011).

In-service training may therefore in the most general series be taken to include everything that happens to a teacher from the day the takes up his first appointment to the day he retires which contributed, directly or indirectly to the way which he executes his professional duties. A good deal of the education versus training controversy seems to reflect concern about the status of the teaching profession. However, distribution between education and training is not always dears, this phase in-service education and in-service training is often interchangeable used (Ahmed, 2011). In a very broad service the term in-service education or in-service training has been defined as structural activities designed exclusively or primarily, to improve professional performance. (Bruns, 2017).

According to UNESCO IICBA (2011). one major weakness of this traditional view of in-service education is the fact that it does not reflect the modern trends in education particularly the growing emphasis on the use of para-professionals and the need for the school staffs to work together as a team since the ultimate goal of in-service education is continuous improvement of students individual performances. It is in this modern world that in-service education is increasingly being Schunk *et al.*, (2012) for example defined it as all

activities involving Para-professional teachers and administrators that focus on three discrete dimensions defined operationally as.

- Teacher behavior improvement
- Retraining and
- Staff development

In essence therefore, the modern view holds out great opportunity for the professional development of all staff members who by the nature of their duties are all involved in the education in the education of the child.

In-service Training of Teacher and high academic performance of students in Secondary Schools

Over a dozen studies have estimated models of the relationship between teacher's education/training and student's achievement. Stevta (2017) provided evidence that better trained and more experienced teachers tend to get students of greater ability and with fewer discipline problems. Teaching is a social function, its aim being to guide desirable growth in others. It involves a social relationship, the interaction of the teacher and the student. Some studies such as that of the Adile and Muhterem (2012) opines that formal education in teachers' colleges is important as its provide the teachers with the required teaching process necessary for student academic achievement.

For instance, Hill *et al.*, (2015) in the National Policy for the improvement of the quality of teacher education provide ample evidence that better trained and more experienced teachers especially those who have had in service training in their teaching careers tend to get students of greater ability and academic achievement. Sukirno and Siengthai, (2011) added that through in-service training the teachers benefited in the areas of:

- Acquisition of new knowledge
- Development of new skills
- Improved competencies and
- Enhance motivation, all when added together under a learning environment ensure improved academic performance of students.

Zelege, (2012) were arguably the first to study teacher training while controlling for measured students ability. They noted for instance, that having more education other than the pre-service education teachers to be more productive and hence increased academic performance of students. They based their findings on the premise that under going further training while still on the job (in-service training) may make teachers more likely the use of modern teaching aids like the use of computers as an instructional materials, application of modern teaching techniques etc. which may in turn contribute to their productivity and therefore enhance student academic performance.

For the teacher, it enhances a genuine mastery of the academic performance of students. Another study by Vysal (2012) which time to assess teachers' productivity as it contribute to student academic achievement, noted empirically that in-service training contributes to boost, teachers moral by acting as a modifiers, it therefore enhance improved job performance of the teacher and improved academic performance of the students.

In-Service Training and Teacher's Performance

According to Ekpoh *et al.*, (2013) analyzing the impact of teacher training on the performance of teacher's in the classroom, declares that through teacher's training behaviour and performance of teachers can be changed positively. On the other hand, Paxton (2012) suggest that in-service training programmes contribute significantly to improve the education system. According to Zaslow (2014), a trained teacher is more effective and thus able to plan better strategies to assist students in various aspects. This is because different training programs, particularly the in-service training programs make teachers able to be aware of a specified function, enhanced vision, and thus become inclusive practitioners Kazmi, Pervez, and Mumtaz (2011) argue that in-service training programs make teachers equipped with logical and systematic approaches to apply in classes.

Sim (2011) suggests the following outcomes of in-service teacher training programs:

- Increase teachers' knowledge
- Build positive attitudes and beliefs
- Enhance the teaching practices

According to Sim (2011), the fundamental purpose of in-service teacher training programs is to create an environment that enables the effective practice of teaching within a classroom. Newton (2013) explore the positive impact of in-service teacher training and thus figure out that such programs provide the teachers with skill, knowledge, ability and confidence. Furthermore, Kabadayi (2016) discuss, "Teachers must be provided with growth opportunities if they are to be encouraged to meet learning needs effectively. If teachers are to develop, attention must be paid to their thinking, moral purposes and skills as change agents as well as their pedagogical and management skills and the leadership and cultural contexts in which they work"

Teacher Training and Student Achievement

Harris and Sass (2011) determining the relationship between student achievement and teacher training find a positive and significant correlation between the two variables. On the other hand, Okiror and Winterbottom, (2017) find, "marginal increases in in-service training have no statistically or academically significant effect on either reading or math achievement, suggesting that modest investments in staff development may not be sufficient to increase the achievement of elementary school children in high-poverty schools" (p. 50). Nevertheless, Naoreen, Aslam, Arshad, and Nausheen (2011) find a significant difference between the performance of trained and untrained teachers. They conclude that, regardless of their gender, trained teachers display better performance than that of the untrained teachers and thus trained teachers play an effective role in the achievement of students. In the same way, Gibbs and Coffey (2004) conclude that teacher training increases the analytical level by which teachers can assume the focus of students.

However, with the lack of training support, teachers cannot progress in the right and progressive way and result in the losing to the extent that they assume or adopt the focus of student (Ahmed, 2011).

Importance of In-service Training

According to Itegi (2012), in-service training increases the staff personnel's productivity by helping them to improve the quality and quantity of their work. It develops their productivity which enhances capabilities and their job satisfaction. In-service training promotes efficiency and effectiveness in their job thus reducing the management problems associated with absenteeism, turnover and job restrictions among the teachers. She notes that in-service training reduces the need for supervision because the staff personnel learn new work methods and how to handle equipment's and to adjust to changes. It increases the staff personnel's value and that of the institution and prepares them for promotion. An institution that grows does not keep their staff forever. It also increases the stability of the institution by creating a pool of skilled staff replacing those who leave the institution. In-service training reduces work related problems because the staff personnel gain the skills on how to handle the issues related to teaching.

According to Squire-Kelly (2012) training is the process of providing employees with specific knowledge and skills in order to enable them to perform specific tasks. It is a short term process which utilizes procedures by which non-managerial Personnel learn technical knowledge. Shakoore *et al.*, (2013) also defines training as any learning activity which is directed towards the acquisition of specific knowledge and skills for the purpose of an occupation or task. Morki, (2012) on the benefits of training pointed out that in-service course for teachers should be done at three levels, namely: pre-service, in-service and on the job. He noted that in-service training should be made mandatory, regular, longer, in duration and organized in the field.

Generally, in-service teacher training gives teachers adequate groundwork on the needs of learners and provides them with a well-integrated general education, professional training and academic orientation (Kabadayi, 2016). At its core, it aids teachers in obtaining a good grasp of the curriculum (Viirpalu & Mikser, 2014). In their study on performance of science teachers in secondary schools, Shakoor, Ghumman, and Mahmood (2013) found that by raising awareness of curricular changes to teachers, in-service teacher training led to better planning of content and delivery and improved the effectiveness of implementation of curricula.

METHODOLOGY

The research used descriptive survey research design. This research follows a descriptive approach. This design is the most frequently used method for collecting information about people's views, attitudes, habits or any of the variety of educational or social issue (Orodho, 2013) and this matches the concern of this study. The target population was 124 teachers from the public secondary schools in Kicukiro District, Kigali City schools. These included 31 head teachers, 31 deputy head teachers, and 62 teachers from each school. All respondents were drawn from the sampled public secondary schools in Kicukiro District, Kigali City schools. Kicukiro District, Kigali City, had a total of 31 (thirty-one) public secondary schools. A sample size of 95 respondents was determined from a total population of 124 individuals using the formula by Yamane (1967). Stratified random sampling technique was applied where the sample size was grouped according to Head teachers, Deputy Head teachers, and Teachers.

In order to ensure reliability of the data in this study, two methods of data collection were used. These were; interviews and questionnaires, Questionnaires were developed in line with the

research objectives and questions. In fact, to ensure reliability of the instrument, the research used respondents who were taken as sample size. To ensure validity of the instrument, Research supervisor checked the questionnaires for the consistency of the items, conciseness, intelligibility and clarity.

The Statistical Package for Social Sciences (SPSS) version 21 was used in the analysis. After data collection, the data was organized and edited to remove any inconsistencies, repetitions nor errors that made analysis difficult. The cleaned data collected was analyzed using both quantitative and qualitative methods. The quantitative data was thus enabling the responses to be grouped into various categories. Qualitative data was based on meaning expressed through words. It involved the collection of non-standardized data that require classification and are analyzed through use of conceptualization. Conceptual content analysis involved development of data categories, allocating units of data and recognizing relationships within and between categories of data to produce well-grounded conclusions. The data was analyzed in the most logical and meaningful way and relevant comments made appropriately. Descriptive statistics such as mean, standard deviation and frequency distribution was used to analyze the data. Frequency tables was used to present the data collected for ease of understanding and analysis.

FINDINGS

Correlation Analysis

The study conducted a Pearson product moment correlation analysis to determine the correlation between the contributions of in-service training on teachers' performance in public secondary schools in Kicukiro District, Rwanda, it looked at factors in terms of Professionalism Knowledge, Professionalism Skills, and Professional Teaching Values and Practices. The outcomes are presented in Table 1.

Table 1: Correlation analysis

	Teachers' classroom performance	Professionalism Knowledge	Workshops and seminars	Open distance learning
Teachers' classroom performance (r)	1.000	0.696**	0.493**	0.661**
(p) Sig. (2 tailed)		0.018	0.031	0.024
Professionalism Knowledge (r)	0.696**	1.000	0.719	0.163
(p) (2 tailed)	0.018		0.075	0.019
Workshops and seminars (r)	0.493**	0.719	1.000	0.538
(p) Sig. (2 tailed)	0.031	0.075		0.561
Open distance learning (r)	0.661**	0.163	0.538	1.000
(p) Sig. (2 tailed)	0.024	0.019	0.561	

Table 1 shows that there were significant correlation coefficients established between effects of in-service training and teachers' classroom performance in private primary schools in Rwanda. A positive linear relationship was established between (Professionalism Knowledge, Professionalism Skills, and Professional Teaching Values and Practices) on teachers' classroom performance in public secondary schools in Rwanda. This is shown by (0.696, 0.493, and 0.661).

This notwithstanding, all the factors had a significant p-value ($p < 0.05$) at 95% confidence level. The significance values for relationship between in-service training and teachers' performance in public secondary schools in Kicukiro District, Rwanda were 0.018, 0.031 and 0.024 respectively.

Pearson correlation analysis results showed that there was no significant correlation between the teaching skills and achievement. This finding is supported by Akiri and Ugborugbo (2009) and Aaronson, Barrow and Sander (2007) who found no significant relationship between teacher experience and student achievement. This is contrary to some studies (Rahman et al., 2011; Kasirye, 2009; Kingdon, 2006) which revealed that teacher training is crucial to improve school performance. This finding is also supported by Harris and Sass (2006,

2007) who found positive correlation between student achievement and teacher experience and Razali (2006) who proved a significant correlation between the IST and the effectiveness of teaching, between teaching effectiveness and student achievement, and between the IST and achievement. The level of teachers' needs for IST is high and explains the moderate student achievement. The absence of a significant relationship with student achievement may be due to less favorable student outcomes. This is contrary to the findings of Razali (2006) who found a significant relationship between the effectiveness of teaching and achievement. In real life, the skills taught are the skills that are needed and learned by the teachers in the process of R&D. The skills assist teachers in improving student achievement.

Multiple Regression Analysis

Multiple regression analysis was performed to assess the effects between the dependent variable (in-service training) and the independent variables (class room performance) on the in-service determinants on class room performances multiple regression analysis was conducted in order to establish the best combination of independent (predictor) variables would predict the dependent (predicted) variable and to establish the best model

of the study (Cooper & Schindler, 2013). Multiple regressions are an extension of simple linear regression. It is used when we want to predict the value of a variable based on the value of two or more other variables. The variable we want to predict is called the dependent variable (or

sometimes, the outcome, target or criterion variable). The variables we are using to predict the value of the dependent variable are called the independent variables (or sometimes, the predictor, explanatory or regressor variables).

Model of the study

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.884 ^a	.781	.774	.340598
a. Predictors: (Constant), Professionalism Knowledge, Professionalism Skills, and Professional Teaching Values and Practices				

Table 2 shows the model summary of in-service training and teachers' classroom performance. The study findings indicated that the value of R was 0.884 and the values for R square were 0.781. The value of R which was 0.884 was an indication of a positive linear relationship between the independent variables and the dependent teachers' classroom performance. The adjusted R square was an indication of the explanatory level of the independent variables towards establishing the relationship with the dependent variable which was 78.1%. This means that the three independent variables of the study could explain up to 78.1% of teachers' classroom performance. The difference of

21.9% of the teachers' classroom performance can be said to be contributed to by other factors other than the study variables Professionalism Knowledge, Professionalism Skills, and Professional Teaching Values and Practices.

ANOVA for the Regression model of the study

Table 3 presents the results of the ANOVA for the regression model that was used in the study. The ANOVA indicated an F- value of 105.285 with a P-value of 0.000, which was less than 0.05. This was an indication that the coefficients fitted in the multiple regression were not equal to zero therefore the model was a good fit for the variables that were being tested.

Table 3: ANOVA for the Regression model of the study

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	61.382	4	12.276	105.285	.000 ^b
1	Residual	17.169	52	.116		
	Total	78.551	56			

a. Dependent Variable: Teachers' classroom performance

b. Predictors: (Constant), Professionalism Knowledge, Professionalism Skills, and Professional Teaching Values and Practices

Coefficients of the study model

Table 4: Coefficient results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.323	1.566		4.646	.106
	Professionalism Knowledge	.215	.645	.237	2.346	.021
	Professionalism Skills	.311	.854	.236	2.890	.006
	Professional Teaching Values and Practices	.112	.312	.278	2.880	.025

From the data in the above table the established regression equation was

$$Y = 0.215X_1 + 0.311X_2 + 0.112X_3 + 0.362X_4 + 0.323$$

From the above regression equation, it was revealed that if Professionalism Knowledge, Professionalism Skills, and Professional Teaching Values and Practices were put to a constant zero, Teachers' classroom performance would be at 0.323. A unit increase on Professionalism Knowledge would lead to increase in Teachers' classroom performance by a factor of 0.215, a unit increase in Professionalism Skills would lead to increase in Teachers' classroom performance by a factor of 0.311, a unit increase in Professional Teaching Values and Practices would lead to increase in Teachers' classroom performance by a factor of 0.112.

Analysis for interview Guide

According to the interview guide, professional development can help you advance in your career and may come in the form of formal learning, which includes coursework and internships or apprenticeships, or informal learning, which may include activities such as attending conferences and seminars or networking.

"In-service training consists of education, observation and mentoring that can help to enhance the employees in a workplace. It might include training sessions or graduate classes, spending time with a mentor to observe how others handle conflict or challenges or mentoring someone else who might be new to the field," she says.

Sometimes, says Mukalurinda the learning process also occurs when employees are away from the workplace. For instance, volunteering for a local organization, serving on a board for a non-profit, or serving on a school's PTA committees are all ways in which employees develop professionally while not on the job.

Of course, how you choose to tackle your professional development depends on your personal career goals and preferred style of learning.

It takes commitment, but it's important to track the long-term effects of continuing professional development (CPD) models in order to assess their worth. For so many years in schools, professional development has been top-led and driven by initiatives that have fallen by the wayside in a short amount of time. The movement towards evidence-based practice in education can only be good. Linking professional development to practice is crucial, it needs to have direct effect on students' and teachers' development. It's a big task for CPD co-ordinators and school leaders, but it should be a priority.

On more views the following was given by the interviews;

Oh, I think we do talk about 21st Century Teacher skills. Teachers need to be flexible, lifelong learners, facilitators, and must know their students. Teacher's noticing is now more important than ever before.

It does seem that the focus has shifted to the student and the teacher has become a little forgotten, I agree. They are often seen as mere facilitators, or as some critics put it, 'entertainers'. A very interesting perspective on impact on student learning is presented in Hattie's book 'Visible Learning for Teachers: Maximising Impact on Learning'. His basic argument is that visible and interventionist pedagogies have been shown to have the most positive impact on student learning. Personal qualities of course influence teaching style but essentially, teacher's field knowledge, training and how well they scaffold learning still seem to be the most important 'ingredients' (if I may use this word) to successful teaching.

I think teachers should be flexible in adapting to new ways of how students learn in the 21st Century classroom. As such, they are required to be lifelong learners, which may include even having a virtual identity and always updating their skills in order to meet the changing demographics of students in their classrooms.

CONCLUSION

The relevance of in-service teacher training on professional development of teachers cannot be overemphasized. Our study shows that in-service teacher training has its largest influence on upgrading teachers' academic qualifications and improving their attitude towards their job. In-service teacher training also plays a big role in equipping, broadening and deepening teachers' knowledge and skills, which in turn fosters an increase in teachers' competence, reliability, and responsibility. Further, the training equips head teachers and teachers alike with the administrative skills necessary to enable proper implementation of various education policies and programs. Generally, in-service trained teachers are more professionally grounded than untrained teachers thus in-service teacher training aids the building of a qualified teaching workforce, whose effect on the teaching-learning environment instigates a reform in the education system.

According to the findings by this study, in-service training, faces a number of challenges which if not attended may retard its positive contribution to the improvement of teaching and learning process in secondary schools. Some of the revealed challenges include; limited budget which limit the number of participants as it could have otherwise been. Selection of teachers to attend in-service training programs. Other challenges included; limited time allocated to run in-service programs compared to the content to be covered, Interviewed teachers also said revealed that sometimes facilitators do not show mastery of the subject matter/content.

It was established through the current study that in-service teacher training contributes positively in academic performance. For the case of public secondary schools in Kicukiro District, there was a noted good students' academic performance in their REB exams implying that, improve teaching and learning process as by in-service training affects students' academic performance positively hence productivity.

Findings show that, proper in-service training does improve the teacher's performance. That means when in-service teacher training programmes are introduced through best strategies like, doing research to determine the needs, selecting teachers/participants as per best established criteria, being as inclusive as possible by involving many participants, using up to date and relevant teaching and learning materials, establishing appropriate intervals between one cohorts and using competent trainers, among others, bring positive results. A poorly run in-service teacher training affects teaching and learning process negatively hence poor student's performance.

Whereas in-service teacher training has been hailed for stimulating professional development, our study finds that not all in-service trained teachers provide good education. This is due to resource constraints such as insufficient instructional materials and teachers' accommodation and personal behavior challenges such as stubbornness, disobedience to leadership and alcoholism among others. Beyond

in-service training, a teacher's performance is a reflection, to a larger extent, of the context within which he or she is working. To this end, the study recommends that learning environments within education institutions be made more conducive for the teaching-learning process.

RECOMMENDATIONS

In service training should not just stop at university or college levels. The short training courses like workshops, seminars and in -service training are very necessary and should be encouraged. As such, we highly recommend that there should be serious initiatives to embark on the route of the training and professionalization of teachers and teacher education along competence lines. Those trainings and professional development programs should focus on core content knowledge, teaching skills, teaching strategies, and assessment strategies, among others. There should be an alignment of educational programs content with what teachers teach, need and experience in their classrooms.

Based on the conclusion above, the following recommendation is given government of Rwanda should ensure the implementation of adequate and well planned in service training programme for teachers at all levels of the educational system in Rwanda. Others recommendation are;

- There should be free flow of information to enable all the staff aware of the training

REFERENCES

- Adile AK, Muhterem D (2012). Teachers' views about effective use of technology in classrooms; *Turkish online J. qualitative inquiry* 3(2):30-41.
- Ahmed, H. (2011). *Building capacity of teachers and trainers in technical and vocational education and training (TVET) in Sudan: Case of Khartoum State* (Doctoral dissertation, Dresden, Technische Universität Dresden, Diss., 2011).
- Alabi, F. O. and Ige, A. M. (2014). Issues in in-service education provision for teachers in Nigeria. The way forward in this decade and beyond. *International Journal of Humanities, Social Sciences and Education (IJHSSE) Vol. 1, Issue 12, Dec. pp. 126-132 ISSN 2349-0381 (online)*
- Bruns, H. (2017). *Supporting Technical and Vocational Education and Training (TVET) Reform in Pakistan*. Giz.de.
- Chauhan, R. M. (2011). *Management of Education*. New Delhi: APH Publishing Corporation.

and development programme available both internally and externally.

- Each section should draw up a roster of in-service training programme for each year so that every staff would at least be sent training in a year. This will erode the situation whereby only some chosen few are sent on course.
- Staff qualified for in-service training should be encouraged by providing study leave with pay, and where scholarship is given a proper contract should be undertaken whereby employee would serve for a certain number of years after his/her course. Emphasis should be placed on – the – job training where employees already in the field impact knowledge on the newly employed staff.

Finally, periodic seminars and workshop which are not too expensive should be organized for all staff to acquaint them with current changes in management techniques and current development programme.

Suggestion for further research

A comparative study on the impact of the in-service training for teachers" managerial skills among public, private, and public school can reveal more about the extent to which the in-service training programmes may differently influence the management of schools depending upon its type.

- Earley, P., & Porritt, V. (2014). Evaluating the impact of professional development: The need for a student-focused approach. *Professional Development in Education, 40(1), 112– 129*
- Ekpoh, V.I., Oswald, A., & Victoria (2013). Staff Development Programme and Secondary School Teachers' Job Performance in Uyo Metropolis, Nigeria, *Journal of Education & Practice, Vol.14, No.12*
- European Union. (2013). *Improving the quality of in-service teacher training system: analysis of the existing ETTA INSETT system and assessment of the needs for in-service training of teachers* (No. EuropeAid/130730/D/SER/HR). European Union.
- Genivieve, W. (2010). *Educational Planning Lecture Series*. Nairobi: University of Nairobi Press
- Hill CH, Rowan B, Ball DL (2015). Effects of teachers' mathematical knowledge for teaching on student. *American Educational Research J.826416*
- Jones, A. J. (2013). *Integration of ICT in an Initial Teacher Training Course: Participants' Views*. (La Trobe University). Australia: Institute for Education
- Kabadayi, A. (2016). A suggested in-service training model based on Turkish preschool teachers' Conceptions for sustainable development. *Journal of Teacher Education for Sustainability, 18(1), 5–15*.
- King, D. (2011). The Changing Shape of Leadership. *Educational Leadership, Volume Number 59 (8), 61-63*.
- Kothari, C. R, (2011). *Research Methodology Methods and Techniques 2nd Ed*. India: New Age International (P) Ltd, Publishers.
- Lehiste, P. (2015). The impact of a professional development program on in-service teachers' TPACK: a study from Estonia. *Problems of Education in the 21st Century, 66(18)*.
- Ministry of Education Science and Technology (2019). *National policy on appointment, Deployment and training of head teachers of schools in Kenya*. Nairobi.
- Ministry of Education (2007). *Teacher Development and Management Policy in Rwanda*. Kigali: MINEDUC.
- Ministry of Education & the Flemish Organization for Development and Technical Assistance – VVOB- (2008a). *Administration of secondary schools: Training Manual for Secondary Schools Head Teachers*. Kigali: NCDC.
- Ministry of Education & the Flemish Organization for Development and Technical Assistance – VVOB- (2008b). *Roles, duties and responsibilities of school management team: Training Manual for Secondary School managers*. Kigali: NCDC.
- Ministry of Education & the Flemish Organization for Development and Technical Assistance- VVOB- (2008c). *Management of Finance and Property: Training Manual for Secondary School Head Teachers*. Kigali: NCDC.
- Ministry of Education & the Flemish Organization for Development and Technical Assistance- VVOB- (2009). *Pedagogic Management: Training Manual for secondary school Head teachers*. Kigali: NCDC.
- Morki, O. (2012). Secondary School Head teachers' Quality Assurance Strategies and Challenges in Gucha District, Kenya. *Education Research and Reviews, 5(7), 408-414*.
- Neumann, A., (2011). *Business Research Methods*. (3rd ed.). New York: Oxford University Press.
- Newman, A. (2018). *The Impact of Employee Perceptions of Training on Organizational Commitment and Turnover Intentions: A Study of Multinationals in the Chinese Service Sector*.

- Newton, M. (2013). Styles and strategies of evaluating INSET. In R. Burgess, J. Connor, S. Galloway, M. Morrison, & M. Newton (Eds.). *Implementing in-service education and training (2nd ed.)*. New York: Routledge.
- Okiror JJ, Winterbottom M (2017). Towards in-service training needs of secondary school agriculture teachers in a paradigm shift to outcome-based education in Uganda. *J. Agric. Educ. and Extension*, 23(5):415–426
- Paxton, W. (2012). *Institute of Policy Analysis Research (IPAR) Observatory Report: The Rwanda Education and Skills*, Kigali: IPAR.
- Republic of China (2010). *Societal views of education in China*. Beijing: Government Printers.
- Republic of Rwanda (2011). *Organic Law No. 02/2011/OL of 27/07/2011 Governing Organization of Education*. Official Gazette No. 34 of 22 /08/2011.
- Rwanda Education Board (2014). *Training documents: Head Teachers of Secondary Schools*.
- Schunk, D. H., Meece, J. R., & Pintrich, P. R. (2012). *Motivation in education: Theory, research, and applications*. Pearson Higher Ed.
- Shakoor, A., Ghumman, S. M., & Mahmood, T. (2013). Effect of in-service training on the working capacity and performance of science teachers at secondary level. *Journal of Educational and Social Research*, 3(3), 337–342.
- Sim, J. Y. (2011). *The impact of in-service teacher training: a case study of teachers' classroom practice and perception change (Doctoral dissertation, University of Warwick)*.
- Squire-Kelly, V, D. (2012). *The Relationship between Teacher Empowerment and Student Achievement*. Published PhD dissertation Georgia Southern University, Georgia, U.S.A.
- Stevta (2017). *Sindh Technical Education & Vocational Training Authority Government of Sindh*. [online] Stevta.gos.pk.
- Sukirno, D. S. & Siengthai, S. (2011). Does Participative Decision Making Affect Lecturer Performance in Higher Education? *International Journal of Educational Management*, 25 (5), 494 – 508.
- UNESCO IICBA. (2011). *The Role of Teacher Training in Technical and Vocational Education and Training (TVET) in Africa*. Unesdoc.unesco.org
- Viirpalu, P., & Mikser, E. K. R. (2014). Investigating Estonian teachers' expectations for the general education curriculum. *Journal of Teacher Education for Sustainability*, 16(2), 54–70.
- Vysal, H. (2012). Evaluation of An In-Service Training Program for Primary School Language Teachers in Turkey, *Australian Journal of Teacher Education*, Vol. 37. No.7
- Yadav, B., & Bhardwaj, P. (2013). Impact of in-service teacher education programs on class room transactions, *Educational Confab*, 2(6), 8–16.
- Zaslow, M. (2014). General features of effective professional development. In T. Woods, H. Ginsburg, & M. Hyson (Eds.). *Preparing early childhood educators to teach math (pp. 97–115)*. Baltimore: Brookes Publishing.
- Zelege, A. (2012). Continuous Professional Development Program for Higher Education Academics in Ethiopia: Views, Perceived needed Competencies and Organization in Focus, *Greener Journal of Educational Research*, 2 (3)