Research Article

TEACHER TRAINING AND ACADEMIC PERFORMANCE OF SECONDARY SCHOOLS IN RWANDA: A CASE STUDY OF NYAGATARE DISTRICT

*Kahangwa Frank

Department of Business Administration, East African University Rwanda

Abstract

The topic of research is "Teacher training and academic performance of secondary schools in Rwanda" a case study of Nyagatare District. The purpose of this study was to establish the relationship between teacher training and academic performance of secondary schools in Nyagatare District. The problem at hand was that in order to improve performance of secondary schools, the Government of Rwanda (GoR) through Ministry of education and development partners adopted various initiatives to promote teacher professional development such as Rwanda English in Action Program (REAP), School Managers Training, Distance Learning and In-service Training Initiatives like Strengthening Mathematics and Science Education (SMASE), but there was little evidence to show that secondary teacher training had improved the performance of secondary schools in Nyagatare District, and thus this paper was written to investigate whether teacher training improved academic performance of secondary schools in Nyagatare District. The researcher used purposive sampling and simple random sampling to select respondents that conform to the realization of objectives of the study. The respondents were education leaders, teachers and students of schools in Nyagatare District. To collect primary data, well-structured questionnaires were employed on 134 respondents who included teachers and students whereas interviews were employed on 13 education leaders from Nyagatare district. The findings of the study show that teacher training improved the quality of teachers by helping teachers improve their qualification, skills in preparing pedagogical documents, improved teaching methods and teacher confidence in handling different situations and the relationship between teacher training and academic performance was established by improved students' grades every year, improved students' class attendance and participation and teachers' improved teaching methods. The researcher concluded that teacher training played a significant role on academic performance of secondary schools in Nyagatare district by improving teachers' competence and availing room good learning atmosphere and gave recommendation of training all un qualified teachers in all schools and to improve teacher remuneration and motivation so as to attract teachers to the teaching profession.

Keywords: Teacher training and Academic performance.

INTRODUCTION

Rwanda aspires to develop a knowledge based and technology led economy and it is acknowledged that the human resources owned by a country are vital and central to its development efforts. In many of Rwanda's development policies, human resource development is highlighted as one of the pillars of National development. The importance of education and training is thus understood as lynchpin in achieving sustainable national development. Ministry of education (MINEDUC) sets policy and standards for education sector, oversees the formal system at preprimary, primary, secondary and tertiary levels, provides non-formal education for adults, youth and out of school children and is responsible for vocational training. Teacher training refers to the policies and procedures designed to equip prospective teachers with the knowledge, attitudes, behavior and skills they require to perform their tasks effectively in the classroom, school and wider community. Teacher training is most effective when it is an ongoing process that creates change and new understanding within schools. Teacher professional development means increasing teaching technique, broadening subject knowledge, creating responsibility and commitment, and gathering latest information to prepare their students according to and based on needs of contemporary society (Carrington and Robinson, 2002). The ultimate aim of teacher training is to improve the quality of learning and teaching.

A school ensures opportunities for teachers to update their knowledge and skills. It also provides scope for reflection and learning from experiences as well as training and development for new roles and responsibilities to ensure effectiveness of the individual teacher in the development of the whole school. The aspect of teacher training increases teachers' knowledge about content or content standards, instructional skills and classroom management or / and assessment. It enables teachers to reflect critically on their practice and fashioning new knowledge and beliefs about content, pedagogy and learners (Carrington and Elkins, 2002). The vision 2020 document however noted that the quality of education in Rwanda has been declining largely due to low competence of teaching staff and shortage of qualified teachers in secondary schools which was caused by lack of attention to teacher training and professional development by the government before 1994. The supply of teachers was not adequate due the fact that there were no teacher training colleges, no focus on teacher training and teachers were generally obtained with diverse qualifications from sundry sources (GoR, 2003). The Government acknowledged in its education policy pronouncements that the teacher is the main instrument for bringing about desired improvements in learning and that adequate teacher management structures, policies and strategies were key factors that determine teacher performance. The Teacher Development and management Policy was developed to address the challenges and to promote a steady supply of teachers to all schools in the country. The establishment of Kigali Institute of education (KIE) to some extent eased the problem by availing qualified teachers but in small numbers.

*Corresponding Author: *Kahangwa Frank*
Department of Business Administration, East African University Rwanda.

The Government was therefore to arrange for intensive teacher training programs to be carried out in each province in order to cut down the cost of transport and boarding. The training was especially aimed at upgrading the skills of non-qualified teachers and giving new recruits quick learning (GoR 2003). The status of teachers therefore became the focus of Government development agenda as espoused in Education Sector Strategic Plan (ESSP, October 2003) which stated inter alia that ' the strategy was to provide teachers trained in participatory, learner-centred and gender sensitive methods for the needs of learners at various levels. Teacher training was put in place as an initiative to improve academic performance and this training was conceptualized in terms of initial teacher training, teacher development or continuous professional development

Problem statement

Performance of students in secondary depends on the quality of teachers and training because human resource capital of an organization plays an important role in the growth and the overall organizational performance. To improve the performance of secondary schools, the Government of Rwanda (GoR) through Ministry of Education and development partners adopted various initiatives to promote teacher professional development such as Rwanda English in Action Program (REAP), School Managers' Training, Distance learning, and Inservice Training initiatives like Strengthening Mathematics and Science Education (SMASE), but there was little evidence to show that secondary teacher training had improved performance of secondary schools in Nyagatare district, hence the study.

Objectives of the study

General Objective

The general objective of this study is to establish the relationship between teacher training and academic performance of secondary schools in Nyagatare district

Specific Objectives

1 To examine various teacher training programs used to improve teacher quality
2 To assess the challenges encountered during Teacher training
3 To analyze the relationship between teacher training and academic performance of secondary schools

Research questions

1. What are various teacher training programs used to improve teacher quality?
2. What are the challenges encountered during Teacher training?
3. What is the relationship between teacher training and academic performance of secondary schools?

LITERATURE REVIEW

Definition of key terms

Training: Training is defined as systematic approach to learning and development to improve individual, team and organizational effectiveness.

*Teacher training:*Refers to the policies and procedures designed to equip prospective teachers with the knowledge, attitudes, behavior and skills required to perform their tasks effectively in the classroom, school and wider community.

Performance: Campbell's (1999) defined performance as behavior or action relevant to the attainment of an organization's goals that that can be scaled and measured. According to Draft (1991), Performance is the organization's ability to attain its goals by using variable resources in efficient and effective manner. Performance also refers to those behaviors that have been evaluated or measured as to their contribution to organizational goal. Performance is also an abstract of concept and must be represented by concrete, measurable phenomena or events to be measured. It covers different types of activities (Bateman *et al.,* 1990)

Academic performance is the measurement of student achievement across various academic subjects. Teachers and education officials typically measure achievement using classroom performance, graduation rates and results from standardized tests

Secondary school performance

Refers to various aspects of education which were measured or evaluated in terms of school quality, teaching quality, teacher remuneration, class size and learners' characteristics.

Development: Refers to the activities leading to the acquisition of new knowledge or skills for purposes of personal growth. According to James, K. (1997), development means the process of general improvement in the level of living together with the decreasing income distribution and the capacity to sustain continuous improvement over time, the components of socio-economic wellbeing are substance of development. Development also involves any and all kinds of activities which increase the capacity of people to meet their needs and improve on their lives. Todaro (2000), summarizes development as a multi-dimensional process involving major changes in the structure, attitudes and institutions as well as the acceleration of economic growth, reduction of inequality and eradication of poverty.

Theoretical review

The theory of reinforcement: This theory emphasizes on the learning behavior of a person and suggests that the learner will repeat that behavior which is attached with a positive outcome or result. Skinner an economist of behaviorist school of thought proposed the theory of reinforcement and suggested that the training and development programs should be aligned with the organizational objectives and a positive outcome should be expected with such training and development programs. Further elaborating this concept suggested in reinforcement theory, it can be argued that there are several techniques available in human resource practices which can be associated with the training and development programs and the required suggestion by this theory can be fulfilled. Different types of rewards in the form of bonuses, salary raises, promotion and awarding of certificate after the training program can be associated with the training and development activities and these rewards will definitely generate a positive outcome. If this is done by an organization then according to

the Skinner's theory of reinforcement the trainer i.e. the employee will show more interest in the training and development programs held by the organization.

Theory of Learning Types: The theory presented by Gagne emphasized on learning of intellectual skills. These are such skills which are found rare among the persons. He suggested by different learning types in his theory and each learning type contains some external and internal conditions. The five categories of learning which Gagne defined in his theory include intellectual skills, verbal information, attitudes, cognitive strategies and motor skills.

Theory of Experiential Learning: Experiential and cognitive types of learning are differentiated by experiential theory of learning presented by C. Rogers. According to Rogers, the wants and needs of the learner are addressed by this type of learning. Experience gives the person a maturity and increases the learning power along with the knowledge. Due to the personal involvement, the learner is able to conduct a self-evaluation test, which allows him to understand the effect of learning on his/her attitude.

Theory of Social Learning: Social theory presents a new view of learning i.e. social. According to the presenter of this theory, Albert Bandura, direct reinforcement cannot address all types of learning. Here by direct enforcement means the training and development programs that is organized to enhance the skills. According to this theory such programs are not address all learning types as there are some social elements which cannot be taught. Those elements are learned by the leaner from his/her surroundings. Such type of learning is called observational learning and this learning is associated with the understanding of different human behaviors. The first type of learning defined in this theory is through observation. In an organization the environment and the surroundings plays a very important role. The environment should be very professional and the surroundings should be in such a way that the people (employees) learn from them. This theory also suggests that it is not necessary that the behavior is changed after learning something. It is expected that a person's behavior changes after learning something, but it is not in all cases. Furthermore the theory also explains about the mental states which play a vital role in learning process. If the mental status of the person is negative regarding any learning activity then he will not take part in that learning process and even if he is forced to do so, he will not gain any positivity from that process. In organizational training programs the mental state can be made positive regarding the training and development programs by associating the rewards and benefits with such programs which will motivate the employees and help to build a positive mental state. The case company also follow this theory as it allows the employees to learn from the surrounding and provides an environment where they can learn from their supervisors/managers and coworkers.

The concept Teacher training and academic performance of secondary schools

Teacher training/development and Management policy was developed in Rwanda after 1994 to address the challenges and promote a steady supply of teachers to all schools in the country. The ultimate aim of teacher training is to improve the quality of learning and teaching. A school ensures

opportunities for teachers to update their knowledge and skills. It also provided scope for reflection and learning from experiences as well as training and development for new roles and responsibilities to ensure effectiveness of the individual teacher in the development of the whole school. The aspect of teacher training increases teachers' knowledge about content or content standards, instructional skills and classroom management or / and assessment. It enables teachers to reflect critically on their practice and fashioning new knowledge and beliefs about content, pedagogy and learners (Carrington and Elkins, 2002). Borko, (2004) has shown that professional development affects student achievement by enhancing teacher knowledge, skills and motivation. Better knowledge, skills and motivation improve classroom teaching and improved teaching raises student achievement. If one link is weak or misses, better student learning cannot be expected. If a teacher for example fails to apply new ideas from professional development to classroom instruction, students will not benefit from the teacher's professional development. In other words, the effect of PD on student learning is possible through two mediating outcomes; teachers' learning and instruction in the classroom. For professional development to improve teachers' knowledge, skills and motivation, it must be of high quality in its theory of action, planning, design and implementation. More specifically it should be based a carefully constructed and empirically validated theory of teacher learning and change (Richardson and Placier, 2001). It should promote and extend effective curricula and instructional models or materials based on a well-defined and valid theory of action (Hiebert and Grouws, 2007). It should be intensive, sustained, content-focused, coherent, well-defined, and strongly implemented (Guskey, 2004). Teaching improved by training and professional development raises student achievement. The end goal of any form of training and professional development is increased student achievement. The American Educational Research Association (AERA) (2005) stated that the research drawing conclusion between professional development and student achievement took place in two distinct phases: generic teaching skills (1960s) and deeper understanding of student learning (1990s).

RESEARCH METHODOLOGY

The research design

According to Donald and Pamela (2011) research design is defined as the plan and structure that is conceived as to obtain answers to research questions. The plan is the overall scheme or program of the research. The research design used for the study was descriptive design which is suitable for analyzing events and relationship between variables. Both qualitative and quantitative paradigms / methods were used.

Population of the study

The target population used was 2611 comprising of 13 education leaders, 82 teachers and 2516 students. The sample size was 13 education leaders, 34 teachers and 100 students making a total of 147 respondents.

Sample size and sampling technique

Sampling is the process of using a small number of items or parts of a larger population to make conclusion about the

whole population (Zikmund, 2010). The sample size was comprised of 147 respondents. The sample size was determined using slovin's formula;

$$n = \frac{N}{(1+Ne^2)}$$

where by n = is the sample size, N= is the total population, e= is the margin of error. For this case N=2611, taking the confidence level of 92% that is with permissive error of 8%, e=0.08.Therefore,

$$n = \frac{2611}{1+ 2611\times (0.08)^2}$$

which gives 147.42 approximately **147** respondents

Data collection methods

Data was collected from both primary and secondary sources in Nyagatare District from reports and primary sources. Data was collected via questionnaires, interviews and document analysis, data was analyzed using tabulation, frequencies and percentages so as to determine correlation and relationship between teacher training and academic performance of secondary schools in Nyagatare District. Reliability and validity were also put into consideration

Questionnaires: A questionnaire is a list of carefully structured questions with a view to exploring a reliable response from a chosen sample (Hussey and Hussey 2010). A set of self-administered questionnaires were used to collect primary data from teachers and students from the schools in Nyagatare District secondary schools. Questionnaires consisted of mostly closed ended questions. Questions were constructed using rating scales, on a scale of five to one (with five being the highest and one being the lowest) seeking information about training and performance of secondary schools. Items were designed on a Likert scale, structured as strongly agree, agree, not sure, disagree and strongly disagree. The respondents were found at their work stations during the working hours and prior appointments were made to avoid disappointments and time wasting

Interview: Besides questionnaires, interviews were used to collect primary data where respondents were asked questions and then responses recorded by the researcher. The respondents were found at their work stations during the working hours and prior appointments were made to avoid disappointments and time wasting.

Documentation: Payne and Payne (2004) describe the documentary method as the techniques used to categorize, investigate, interpret and identify the limitations of physical sources, most commonly written documents whether in the private or public domain. The researcher supplemented the primary data with information from the relevant documents using content analysis to evaluate the information they contained, and analytically identified contents of each document that pertain to the research questions.

Data Analysis

The Self-Administered Questionnaires which had complete data were analysed using frequency tables cross tabulation.

Teacher training was correlated with performance of secondary schools by comparing students' grades obtained in Rwanda Education board examination results for the last five years.

Editing: Editing is the process of examining the data collected through various methods to detect errors and omissions and collect them for further analysis. Editing was done in two phases; the first phase was accomplished when the researcher is in the field collecting data and the second phase after the fieldwork.

Coding: To ensure that all answers are coherently and logically recorded to provide consistent information in order to facilitate the understanding of phenomenon and cross check the data collected, the process of editing and coding was considered. The responses to the questionnaire were analyzed descriptively and reported as frequency of responses and percentages and later was analyzed and interpreted using tables.

Tabulation: Tabulation refers to the orderly arrangement of the data in table or other summary format achieved by counting the frequency or responses to each question (Gilbert A. & Churchill 2010). After coding, the researcher summarized the data by constructing tables of answers provided to each theme. In addition, the data collected and tabulated in the research process were analyzed.

STUDY FINDINGS

This chapter presents and discusses study findings. It deals with analysis and interpretation of data from both primary and secondary sources. Data obtained was analyzed using tabulation, frequencies and percentages basing on the following study objectives: to examine various teacher training programs used to improve teacher quality in Nyagatare District, to assess the role of teacher training on teachers' performance improvement in Nyagatare District and to establish the relationship between teacher training and academic performance of secondary schools in Nyagatare District. The study revealed that various teacher training programs were availed to teachers such as: Initial training program, In-service training program and Workshops and seminars all of which improved the quality of teachers. Teacher training helped teachers to improve their qualification through in-service training, improved skills in preparing teaching pedagogical material, improved teaching methods, improved ability to teach using English, improved methods of assessment, improved confidence in handling different situations regarding students' discipline. The study found out that there were challenges encountered during teacher training that include: Lack of motivation to attend training especially during holidays when no training incentives are provided, there is also resistance to change where teachers take long to leave their old styles, there is also a challenge of large number of trainees due to increasing numbers of enrollment every year, there is also a challenge of time allocated to training and facilitation and supervision of CPD. Some take CPD as useless and give it little time whereas according to Sector Education Officers, supervision is also not easy due to geographical location of schools. The study also revealed that teacher training improved the level of cooperation between teachers and school management where tasks are accomplished as group not individuals, improved students' grades in national

exams every year, improved class attendance and participation that emanate from improvement on teaching methods all of which are results of training.

Conclusions and Recommendations

The study had the following conclusions regarding teacher training and academic performance of secondary schools in Rwanda**:**

First: It was clear that teacher training programs such as initial training, in-service training, workshops and seminars were availed to teachers so as to improve their quality

Second: Training programs availed to teachers improved the quality and competence of teachers and in secondary schools in various ways including improving teachers' qualifications, improved teaching methods, ability to interpret the school curriculum and teachers' confidence in handling cases of discipline for academic excellence

Third: The study found out that there are training challenges encountered during teacher training that include; lack of motivation to attend training, teachers' resistance to change, big numbers of teachers to be trained due to increasing students' enrollment every year and little time allocated for training and supervision.

Fourth: with regard the relationship between teacher training and academic performance, it was found out that teacher training led to improved students' classroom attendance and improvement in students' grades all of which resulted better performance in secondary schools. Training further helped teachers to improve their methods of assessment and improved cooperation between teachers and school administrators.

Recommendations

1. The study recommended that the Government of Rwanda through Ministry of education and Rwanda education board should avail training to some unqualified teachers in secondary schools in form of in-service training to help them acquire competence and performance skills. Other training programs such as refresher training, pedagogical workshops should also be provided continuously to keep teachers updated.

2. The study also recommended that the Government of Rwanda should devise means of providing attractive remuneration and motivation to teachers in order to stop qualified and competent teachers from joining other professions.

3. Incentives for training should also be improved to attract teachers to attend training especially during holidays. Time allocated for CPD and supervision should also be improved

4. The study further recommended that teacher training should be implemented at the beginning of work in order to help new unqualified teachers to get basic skills about teaching before starting work. If all these are done, the quality of teachers will improve and hence better performance in secondary schools in Rwanda.

REFERENCES

American Educational Research Association, 2005. Research Points. Teaching teachers: Profssional development to improve student achievement (Vol.3, Issue 1) (Brochure). Washington, DC: American Research Association.

Amin, E.M. 2005. Social Science Research Conception: Methodology and Analysis, Makerere University Printery, Kampala.

Benson, G.S., Finegold, D. and Mohrman, S.A. 2004. "You paid for the skills, now keep them: Tuition reimbursement and voluntary turnover", *Academy of Management Journal,* 47, 3, 315-331

Borko, H. 2004. "Professional development and teacher learning: mapping the terrain." *Educational Researcher*, 33(8), 3-15.

Boyle, B. While, D. and Boyle, T. 2004. A longitudinal study of teacher change: what makes professional development effective? *The curriculum journal.*

Carrington, S. and Elkins, J. 2002. bridging the gap between inclusive policy and inclusive culture in secondary schools, support for learning, 17(2) 51-70

Carrington, S. and Robinson, R. 2002. A journey of learning inclusive school development: A paper presented at the Australian Association for Research in Education. Fremantle: International Research Conference

Cecil H. Allen, 1940. In-service Training of Teachers in Review of Educational Research

Darling-Hammond, L. 2000. "Teacher Quality and Student Achievement: A Review of State Policy Evidence." *Educational Policy Analysis Archives.*

Desimone, L. *et al.* Effects of Professional Development on Teachers' Instruction: Results from a three year longitudinal study. *Educational Evaluation and Policy Analysis.*

Greenwald, R.H. and Laine, R. (1996). The effect of school resources on student achievement. *Review of Educational Research,* 66(3), 361-396. (EJ 596 389)

Guskey, R. 2000. Ecvaluating Professional Development, 16.Thousands Oaks, CA: Corwin Press

Guskey, T. and Sparks, D. 2004. Linking Professional Development to Improvements in student learning.

Hiebert, J. and Grouws, D.A 2007. The effects of Classroom Mathematics teaching on students' learning. In F.K. Lester (Ed.), The second handbook of research in mathematics education. Reston, VA: New Age and National Council of Teachers of Mathematics

Joireman, J. *et al.* "Good citizens to the end? It depends: Empathy and concern with future consequences moderate the impact of a short term horizon on organizational citizenship behaviors", *Journal of Applied Psychology,* 91,6, 1307-1320

Kendemir, D., Hult, G.T.M. 2005. "A conceptualization of an organistional learning culture in international joint ventures", *Industrial Marketing Management*, Vol.34, No.5, pp 430-439

Lieberman, A. 1999. Building a professional culture in schools, New York: Teachers' College Press.

Maurer, T.J, Pierce, H.R and Shore, L.M. 2002. "Perceived Beneficiary of Employee Development Activity; A three Dimensional Social Exchange Model," *Academy of Management Review.*

Murigande, C. 2010. Education Sector Strategic Plan, Kigali Rwanda

Payne, G and Payne, J. 2004. Key concepts in Social Research, London: Sage Publications.

Pfeffer, J and Sutton, R.I. 2006. "Evidence based management" , Harvard Business Review, 84, 1,62-75

Pfeffer, J. 1998. 'Seven practices of successful organizations', *California Management Review,* 40, 2, 96-124

Republic of Rwanda Ministry of Education, Education Sector Strategic Plan 2010-2015

Richardson, V. and Placier, P. 2001. Teacher change. In V. Richardson (Ed). Handbook of Research on Teaching (4th Ed., pp.905-947) Washington, DC: American Education Research Association.

Sanders W.L, 1999. Cumulative and residual effects of teachers on future student academic achievement. (R 11-0435-02-001-97). Knoxville, TN: University of Tennesse Value-Added Research and Assessment Center

Skerlavaj, M, Dimovski, V. 2006. "Influence of Organizational Learning on Organizational Performance from the employee perspective: The case of Slovenia", *Management,* Vol. 11, No.1, pp 75-90

Skerlavaj, M. *et al.* 2007. "Organizational Learning Culture – The Missing Link between Business Process change and Organizational Performance", *International Journal of Production Economics.*

Van Keer, H. and Verhaeghe, J.P. 2005. Comparing two teacher development programs for innovating reading comprehension instruction with regard to teachers' experiences and student out comes. *Teaching and Teacher Education.*

World Bank, 2003. Education in Rwanda: Rebalancing Resources to Accelerate Post-Conflict Development and Poverty Reduction. World Bank Washington D.C.

****