



# Comparative Study of In-serviced and Non-in-serviced Teachers on the Effectiveness of Teaching Performance in Public Secondary Schools: A Study of Arusha City, Tanzania

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**Abstract:** This study examined the relationship between in-serviced and non-in-serviced teachers on the effectiveness of teaching performance in public secondary schools in Arusha City Council, Tanzania. Correlation survey and Sequential Explanatory Designs were adopted. A sample size of 116 involving 8 school heads, purposively sampled while 54 in-serviced teachers (IST) and 54 non-in-serviced teachers (NIT) were sampled using both stratified and simple random sampling. Questionnaire and interview guide were drawn to collect quantitative and qualitative data respectively. Split Half method was used to determine the reliability of the questionnaires and the correlation coefficient value of 0.88 for IST's questionnaire and 0.90 for NIT's questionnaire was reported. The hypothesis was tested using Chi-square ( $\chi^2$ ) at 0.05 significance level. For first hypothesis, there was significant relationship between performance of in-serviced teachers and non-in-serviced teachers  $\{\chi^2 (2) = 23.286, p = 0.000\}$ . For hypothesis two, there was significant relationship between subject competency of in-serviced teachers and non-in-serviced teachers  $\{\chi^2 (2) = 7.836, p = 0.020\}$ . Since the p-value was less than the significance level (0.05) in both tests, the null hypothesis was rejected and alternative hypothesis was accepted. In conclusion, IST acquires knowledge and skills in management of human, material, time and financial resources. Therefore, the study recommends a need for in-service teacher training because it brings attention towards constantly modernizing and updating the professional skills and knowledge of teachers.

**Keywords:** In-serviced, Training, non-in-serviced, Teachers, Performance, Tanzania

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## 1. Introduction

Teacher training is a programme that is related to the development of teacher proficiency and competence that would enable and empower the teacher to meet the requirements of the profession and face the challenges

therein (Chandi, 2018). The teacher is the most important element in any educational programme (Himmat, 2017). Since the teacher is mainly responsible for implementation of the educational process at any stage, it is imperative to invest in the preparation of teachers, so that the future of a nation is secure (Prasad, 2017). There is a well-known

saying that a teacher is the nation builder and no nation develops beyond the quality of its education system, which is highly dependent on the quality of its teachers (Otieno, 2022).

The major concern of the society and the government was to ensure that education is improved and that quality is maintained to enable learners acquire the intended learning outcomes through improvement of teaching and learning (Sattar, 2019). It is important to note that no course however long it may take is enough to enable one deliver successfully at work. Consequently, in-service training is necessary (Chandi, 2018).

In-service training is a training given to teachers who are already working (Mbuva, 2018). This training is supposed to be provided constantly and consistently and differ in approaches. The aim of in-service teacher training is to improve the quality of teaching among teachers as well as acclimatizing new teachers so that they can carry out effective teaching and learning (HakiElimu, 2017). Most of the time, in-service training is offered through short courses, seminars, workshops, meetings and other special training (Himmat, 2017). This training is offered by the government and other education stakeholders within or outside the country. After the training, most teachers report back in their station to offer services through bonding for some years before they're allowed to exit to other profession while others leave the profession altogether (TSC, 2017).

The research conducted in Malaysia by Norwani et al., (2017) found out that, generally, in-service teacher training needs are at a high level. Goreti and Vera (2020) established that each dimension of in-service teacher training needs is required by the respondents in their duty as dedicated and professional educators. The findings are consistent with the findings of studies conducted by Sukirno and Siengthai (2016) which shows that the challenge of technology has led to many changes in education either to the students or the teachers. According to Aris et al., (2019), people currently find it difficult to live without the technology. Due to development in technology, especially information and communication technology (ICT) which is growing rapidly, familiarity in this aspect has become necessary (Alkaabi, 2018). Therefore, teachers need to attend relevant in-service teacher training to perform related tasks better.

Igbo et al., (2022) describes in-service training as an on-the-job training used by organizations to bring about development and improved competency in work performance. The study conducted in Nigeria by Maclean (2018) reported a positive impact and significant relationships between in-service training on teachers' job performance. Ilomaki and Lakkala, (2019) also found a

relatively strong, positive and significant relationships between teacher training, teacher growth, teacher needs, teacher collaboration and job performance in public senior secondary schools.

In Tanzania, the objectives of teacher training are derived from the national vision and education philosophy. They are well stipulated in Tanzania's Education and Training Policy (URT, 2018). According to the policy, the aims and objectives of teacher training include: to impart to teacher trainees the theories and principles of education, psychology, guidance, and counseling; to impart to teacher trainees the principles, skills of pedagogy, creativity, and innovation; to promote an understanding of the foundations of the school curriculum; to sharpen the teacher trainees', teachers', and tutors' knowledge and mastery of selected subjects, skills, and methodologies. Sahlberg, 2020 affirmed that teacher trainees impart the skills and techniques of research, assessment, and evaluation in education. Finally, Shema (2019) noted that training enable in-serviced teachers and tutors to acquire organizational, leadership, and management skills in education. Following the training, the performance of teachers in curriculum implementation is expected to improve (Jidamva, 2017).

Teacher training has been a subject of discussion at all levels, from the government, ministries, regulatory bodies, schools, to teachers themselves (Haberman, 2015). Equally, it could be argued that the duration of undergraduate teaching course may not determine one's successful delivery of services at workstation (Alkaabi, 2018). However, the performance of school heads and teachers with knowledge in ICT and contemporary pedagogical skills courtesy of in-service training has shown positive progress in their respective schools (Jidamva, 2017). The dangers associated with the absence of quality teacher training are evident in our society. For example, the effects of poor training among our teachers include professional misconduct as seen in reporting time on duty, departure time, relationship with colleagues, inadequate syllabus coverage, poor mastery of subject content and poor management of students' indiscipline (HakiElimu, 2017). A related study by Reinders and Mongkut (2021) espoused that most teachers do not have the requisite motivation and an academic background for a well-deserved entry in the teaching profession. They take admission in teacher education programme because they could not take admission in their desirable course due to low performance in such field. So, after taking admission in teacher education programme they show poor performance. While Otieno (2022) noted that at the point of graduation, some still have personal conflict whether they made the right decision. This indecisiveness negatively affects their performance once employed. In this regard, Rusnati, et al. (2021) pointed out that in-service

training is a remedial measure. It is against this background that the current study sought to investigate the relationship between effectiveness of teaching performance of in-serviced and non in-serviced teachers in secondary schools in Arusha City Council.

## 1.1 Research Questions

The following research questions guided the study:

- (i) What is the relationship between performance of in-serviced teachers and non-in-serviced teachers?
- (ii) What is the relationship between subject competency in teaching of in-serviced teachers and non-in-serviced teachers?

## 2. Literature Review

Bacon's Theory of Performance of Teachers by Wallace Bacon was adopted to guide this research. The theory postulates that teachers who are well trained and are privileged with opportunities for continuous training exhibit better performance during evaluation stage. Teaching performance of teachers depends on the instructional competence as reflected by the performance rating after training (Bacon, 2001). The theory is applicable to this study since it emphasizes that in-service teacher training aims to improve the quality of teaching among teachers as well as acclimatizing new teachers so that they can carry out effective teaching and management.

### 2.1 Application of the Theory to the Current Study

The theory is applicable to this study since it emphasizes that in-service teacher training aims to improve the quality of teaching among teachers as well as acclimatizing new teachers so that they can carry out effective teaching and learning. Without this training, teachers will be outdated, will not manage to cope with changes, and will thus lose their ability to work effectively and efficiently. It provides self-monitoring which is a step-by-step process of evaluation during the learning (Sanchez, 2023). Lack of quality means basic educational needs go unsatisfied. This would create inability in learners' lives and compromise their overall experience of living socially, culturally and economically. Consequently, to have a motivated workforce, administrators in the school organization should determine which needs teachers are trying to satisfy and make sure that such teachers receive outcomes that satisfy their needs especially when they perform at a high level and contribute to the organizational effectiveness.

## 2.2 Empirical Literature Review

The study conducted by Jacob and Lofgren (2018) in USA on the impact of teacher training on students' achievement: Quasi-experimental evidence from school reform efforts in Chicago found that school districts and states often rely on in-service teacher training as a part of school reform efforts. Indeed, as Angrist and Lavy (2017) pointed out strong evidence regarding the potential effectiveness of teacher training programmes and several features of the intervention limiting the generalization of the results. In addition to funding teacher training, the intervention consisted of several other components that might have increased student achievement, including the establishment of a learning centre to assist failing students after school and a project to support immigrant students and their families (Brown et al., 2017). Finally, the training component of the program was highly structured and directed specifically towards teaching a common curriculum performance.

In-service teacher training programmes are meant to promote quality education, as Zhang et al., (2022) argues in China that promoting the competencies of teachers is a key to improve not only the primary, secondary and higher secondary education but also the technical vocational education. Nevertheless, Bano et al., (2022) reported that Pakistan experienced considerable updates in technical education. Furthermore, under the domain "Human Resources Development/Teacher Training" of Technical and Vocational Education and Training (TVET), Sindh Technical Education and Vocational Training Authority (STEVTA) is struggling to provide vocational course that is particularly demand driven. It also incorporates pre-service and in-service training programmes for TVET teachers. In this regard, Stevta (2017) noted that promoting the competencies of teachers is a necessary step towards improving the quality of education.

Research by Bremner et al. (2023) was conducted to describe some aspects of the in-service training of teachers in UK and recent work to evaluate the provision of programmes in the country with a view to informing developments in future in-service programmes. The programme aimed to introduce new models of teaching proven to have positive effects on the learning environment in general and in daily teaching situations in particular. Rauch et al. (2023) in London observed that in-service for all teachers is supported by changes in curriculum, new media, new technologies and a changing social content. It is important that syllabus and the training techniques be adequate and relevant to keep the teachers address their job challenges more confidently and competently (Hove, 2019). According to Knox et al., (2020), in Sydney,

Australia, secondary school teachers play a vital role in improving student's characters and academic achievement. That's why these teachers should be trained to attain competency in teaching methods. While in India, Hammou and Kesbi (2023) stated that an effective teacher should possess the abilities and qualities of good planning in an institution. Effectiveness of teaching - learning is the outcome of effective classroom management. Shema (2019) concurs but added that teachers should play a vital and crucial role in enhancing the classroom atmosphere, their teaching learning process, interaction, control and human relations.

A study conducted in Rwanda by Chulu (2023) found a positive attitude towards teacher training and its effectiveness in classroom situation including actual instruction/academic work, classroom management, evaluation procedures, assignments, and developing human relationships with students, principal, and society in general. It was concluded that teacher training was positively related to effective teaching. Joel et al. (2019) while reporting on the benefits of in-service training in Kenya acknowledged that the duration for the courses should be adequate to enable the trainers to cover all relevant areas necessary for competency in performance. The contents should cover all the task areas and incorporate comments from participants. The need for head teachers' training on management has been accelerated by the fact that head teachers have had to deal with change on an unprecedented scale Menon (2023). A study by Nyakito et al. (2021) on challenges of integrating ICT in Teaching among National Teachers' Colleges in Uganda revealed lack of experience and skills in using ICT, lack of ICT curriculum for the teachers' colleges and lack of clear government policy on the teaching of ICT in the teachers' college curriculum. The researchers recommended the government intervention with a clear policy on ICT inclusion in the curriculum, equipping the colleges with adequate and up-to-date equipment and regular training opportunities. According to Education Sector development Plan (URT, 2018), in-service training would empower teachers to perform their roles and responsibilities confidently and with competence.

### 3. Methodology

In this study, correlation survey design was adopted. According to Okendo et al., (2020), correlation survey design can be adopted in quantitative research which aims at collecting data in terms of numbers for the purpose of testing hypothesis and verifying theories. Correlation studies involve the collection of data on two or more variables on the same group of subjects and followed by computing a correlation coefficient (Creswell and Creswell, 2018). In the present study, the researcher found

the relationship between the performance of in-serviced teachers and non-in-serviced teachers. The hypothesis was tested using Chi-Square ( $\chi^2$ ) statistics at 0.05 confidence level. The study also adopted Sequential Explanatory Design to collect data in a sequential manner in which both quantitative and qualitative methods with different weights were collected in phases (Wium and Louw, 2018). Quantitative phase was carried out first where data was obtained from teachers using questionnaires, while the second phase, involved qualitative data collection where the school heads were interviewed. The quantitative and qualitative results were later integrated.

The current study targeted 29 public secondary schools, 406 in-serviced teachers and 679 non-in-serviced teachers (MoEST, 2023). Gay & Airasian (2013) observed that a sample of between 10% and 30% of the target population is representative enough. The research study employed this method to randomly select 30% of 29 public secondary schools, which translates to 8 schools selected by simple random sampling technique and 8 school heads from 8 public secondary schools were purposively selected (Chetty and Jain 2020). In view of 1085 teachers, stratified sampling procedure was used to select 10% of 1085 teachers (108 teachers) from public and private secondary schools. The teachers were stratified into in-serviced and non in-serviced teachers (that is, half of 108 giving 54 in-serviced and 54 non in-serviced teachers respectively). Therefore, according to Creswell and Creswell (2018), simple random sampling technique was used to obtain 54 teachers from each stratum. Consequently, 6 teachers each were selected from 6 schools while 2 teachers each from 2 schools. These respondents are normally given chance to seek in-service training either through government scholarship or personal initiative (MoEST, 2023). Therefore, they understand the importance of in-service training for teachers.

The study employed questionnaire to gather quantitative data. Relationship between performance of in-serviced teachers and non-in-serviced teachers was measured by 11-item questionnaire on a 5-point Likert scale while relationship between subject competency of in-serviced teachers and non-in-serviced teachers was measured by a 6-item questionnaire on a 5-point Likert scale. Content validity of questionnaires was ensured by expert judgement by two specialists in In-service Training Education in Tanzania. Split Half method was used to determine the reliability of the questionnaires and the correlation coefficient value of 0.88 for in-serviced teacher's questionnaire & 0.90 for non-in-serviced teacher's questionnaire was reported and according to George & Malley (2003), the instruments were found to be fairly reliable for the study. Questionnaires were then issued to

the respondents and collected after one day while personal interview was conducted the same day of visit (Braun and Clarke, 2006). The researcher audio recorded the conversation for later transcription with the consent of the interviewee.

## 4. Results and Discussion

The null hypotheses tested were stated as follows:

H<sub>01</sub>: There is no statistically significant relationship between performance of in-serviced teachers and non in-serviced teachers.

H<sub>02</sub>: There is no statistically significant relationship between subject competency of in-serviced teachers and non in-serviced teachers.

The inferential statistics was used to test the research hypothesis. Specifically, hypothesis was testes using Chi-Square ( $\chi^2$ ) statistics on the 5% significance level. The p-value was found to be less than the significant level (0.05), hence the null hypothesis was rejected and alternative hypotheses was accepted in order to establish the relationship between dependent and independent variables in the study (Gay and Airasian, 2013). Qualitative data was analyzed thematically, and this involved transcription, searching for codes, themes and generating the report (Braun and Clarke, 2006).

### 4.1 Biographical Information of In-serviced Teachers

The information on the gender for in-serviced teachers was obtained and the results of descriptive statistics are presented in Table 1:

**Table 1: In-serviced Teachers Respondents' Bio-Data (n=54)**

Gender Item	f	(%)	Cumulative %
Male	37	69	69
Female	17	31	31
<b>Total</b>	<b>54</b>	<b>100.0</b>	<b>100.0</b>

f=Frequency, %= Percentage, n=number of respondents.

**Source: Field Data (2023)**

The results of descriptive statistics on the bases of gender indicate that there were 54 in-serviced teacher respondents including 37 (69%) males and 17 females (31%). On the bases of the descriptive results, it is clear that both genders were represented in the study, an indication that there was no bias in capturing the views of the teachers about their gender. Thus, this implies that these results can easily be generalized information from in-serviced teachers on their knowledge and experience on the importance of in-service training for teachers.

### 4.2 Biographical Information of Non In-serviced Teachers

Similarly, the information on the gender for non in-serviced teachers was obtained and the results of descriptive statistics are presented in Table 2:

**Table 2: Non In-serviced Teachers Respondents' Bio-Data (n=54)**

Gender Item	f	(%)	Cumulative %
Male	25	46	46
Female	29	54	54
<b>Total</b>	<b>54</b>	<b>100.0</b>	<b>100.0</b>

f=Frequency, %= Percentage, n=number of respondents.

**Source: Field Data (2023)**

The results of descriptive statistics on the bases of gender indicate that there were 54 non-in-serviced teacher participants including 29 females (54%) and 25 (46%)

males. On the bases of the descriptive results, it is clear that both genders were represented in the study, an indication that there was no bias in capturing the views of non in-

serviced teachers about their gender. Consequently, this implies that the information obtained from these results can easily be generalized from non in-serviced teachers on their knowledge and experience on the importance of in-service training for teachers.

### 4.3 Performance of In-Serviced Teachers and Non-In-Serviced Teachers

To determine the relationship between performance of in-serviced teachers and non-in-serviced teachers, the following null hypothesis was tested:

### 4.4 Hypothesis testing

**H<sub>01</sub>:** *There is no statistically significant relationship between performance of in-serviced teachers and non in-serviced teachers in public secondary schools in Arusha City Council.*

The null hypothesis was tested using Chi-square ( $\chi^2$ ) statistics at 0.05 confidence level, with scores on performance of in-serviced teachers as independent variables and non-in-serviced teachers as dependent variables. The p-value was set at .05, therefore the null hypothesis was rejected when the p-value was less than .05 but it was accepted when the p-value obtained was greater than .05. Table 3 shows the correlation analysis results in SPSS output.

**Table 3: Summary of Chi-Square ( $\chi^2$ ) Tests on Performance of In-service and Non-in-serviced Teachers**

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.286 <sup>a</sup>	2	.000
Likelihood Ratio	31.302	2	.000
Linear-by-Linear Association	2.354	1	.125
N of Valid Cases	54		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 1.85.

**Source: field data (2023)**

Table 3 indicates that  $\chi^2 (2) = 23.286, p = 0.000$ . Since the p-value (0.000) is less than the significance level (0.05), the null hypothesis was rejected and alternative hypothesis was accepted (Okendo et al., 2020). Therefore, there is significant relationship between performance of in-serviced teachers and non in-serviced teachers in Public Secondary Schools in Arusha City Council. This implies that in-service training improves teacher’s performance in curriculum implementation and school management.

This study reported that some teachers were trained before ICT was included in university curriculum. They were later employed as teachers in public secondary schools; however, they have limited knowledge in ICT. Similarly, those promoted into leadership position have little skills and acquaintance in leadership and financial management and therefore, they need in-service training to enhance their knowledge in computer and information system. According to Haberman (2015), Tanzania considers ICT a critical component for the education-improvement goal, and has established several policies and programs for teacher training. Consequently, in-service training in financial management, technological advancement, leadership skills and contemporary issues in the society are

areas that require special attention from education stakeholders in order to enhance teacher’s professional development.

During the interviews on positive effects of in-service teachers’ training on performance, the head of school A noted that:

*“The knowledge, idea, skills and attitude of the educator should be developed through integrated and systematic training. Teachers need to attend professional development workshops and seminars so that they can acquire skills that will help them fulfil their responsibilities in line with their professional requirement. We’re living in a dynamic society having emerging issues such as COVID-19, e-governance and disasters every passing day. Consequently, teachers require in-service training to enhance their knowledge on managing pandemics, disasters and finances” (School Head, 2).*

The observation by the school head evidently emphasizes the importance of in-service training through workshops

and seminars basically for professional development of teachers. For instance, the respondent view those without in-service training in Information and Communication Technology (ICT) as unable to implement Management Information Systems (MIS) that emphasizes on-line registration of students during their admission, tracking students' movement from one school to the other in order to establish completion rate and registration for national examinations. While supporting this finding, HakiElimu (2017) noted that the curriculum for teacher education is outdated and its review is long overdue. There are no incentives or motivation for teachers. In order to address these issues, in-service training of teachers is necessary particularly if we want to make education relevant to the market demand.

While responding to whether lack of in-service teachers' training negatively affects teachers' performance, the head of school B remarked that:

*"In-service teachers' training produces a competent and well-performing teacher as one of the most important resources in any educational institution. The teacher is considered the professional agent and the most directly responsible person in the process of learning; he/she is the one in charge of making/helping students learn and benefit or suffer directly or otherwise from the quality of his/her teaching. In this regard, the teacher and the quality of his/her teaching are always under discussion and receive widespread importance in education"* (School Head, 4)

The response from school head clearly indicates that education has always been a powerful agency in any society and it is considered as an indispensable instrument for bringing positive change in the social, political, economic and cultural life of people. As a huge outfit, education has great importance in building strong and developed societies, and the teacher is one of the primary agents for achieving that. For such reasons, the study revealed that it is always critical that teachers should receive adequate educational and professional training to possess adequate knowledge and teaching skills and to be able to exhibit professionalism all the time besides dedicating themselves to the teaching profession

During the interviews on the question that sought to find out if the school head had participated in in-service training on financial management skills. One school head pointed out that:

*"Well, I have participated in workshops a while ago on financial management. Similarly, I have consulted colleagues and my seniors in the profession on school financial management issues. The knowledge acquired has enabled me to successfully discharge sound financial management in my school. Therefore, I acknowledge that in-service training will help newly appointed school heads to discharge their duty"* (School Head, 3).

From the interview excerpt, the school head gave an explanation on the advantages or benefits of short in-service courses. Knowledge in resource management acquired through in-service training will enable the school administrators to mobilize various resources and allocate them effectively to accomplish the general goals of the institution. It is worth noting that most teachers with knowledge in Human Resource Management (HRM), ICT and Integrated Financial Management Information System (IFMIS) through in-service training have impressive record in management skills. The study confirms that through in-service training, teachers can improve in their management skills. In a related study by Wilson and Harris (2019), in-service training produces positive results on the part of the teachers in technical and vocational disciplines in Malaysia. Similarly, investment in education training is a necessary condition for promotion of economic growth and national development (Hanusheket et al., 2018).

**H<sub>02</sub>:** *There is no statistically significant relationship between subject competency of in-serviced teachers and non-in-serviced teachers in public secondary schools in Arusha City Council.*

The null hypothesis was tested using Chi-square ( $\chi^2$ ) statistics at 0.05 confidence level, with aspects of subject competency of in-serviced teachers as independent variables and non-in-serviced teachers as dependent variables. The p-value was set at .05, therefore the null hypothesis was rejected when the p-value was less than .05 but it was accepted when the p-value obtained was greater than .05. Table 4 shows the correlation analysis results in SPSS output.

**Table 4: Summary of Chi-square ( $\chi^2$ ) Tests on Subject Competency of In-serviced Teachers and Non in-serviced Teachers**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.836 <sup>a</sup>	2	.020
Likelihood Ratio	10.126	2	.006
Linear-by-Linear Association	.386	1	.534
N of Valid Cases	54		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 2.78.df= degree of freedom

**Source: field data (2023)**

From table 4,  $\chi^2(2) = 7.836$ ,  $p = 0.020$ . Since the p-value (0.020) is less than the significance level (0.05), the null hypothesis was rejected and alternative hypothesis was accepted. Consequently, there is significant relationship between subject competency in teaching of in-serviced teachers and non-in-serviced teachers in public secondary schools in Arusha City Council. The interpretation is that most in-serviced teachers are competent in lesson preparations, class delivery and follow up in curriculum implementation. This is contrary to non-in-service teachers who may not have the opportunity to refresh their minds on the emerging issues in the teaching profession. Similarly, the hypothesis testing established that most in-serviced teachers have better mastery of subject content as opposed to non-in-serviced teachers and the contribution of most in-serviced teachers is slightly better in mentoring junior teachers on pedagogy than non in-service teachers. In another research by Krishnaprabu (2019), in-service training would subsequently enhance their competency.

During the interviews on relationship between subject competency in teaching of in-serviced teachers and non-in-serviced teachers, another respondent reported that:

*“We need to hire teachers based on their qualification. Unqualified teachers normally have problems when it comes to subject matter knowledge and new approaches in education. At times teachers mislead students due to limited qualification in a particular subject area. In this regard, in-service training may improve their pedagogical skills”* (School Head, 1).

The response from the respondent demonstrates that the pedagogical skills of teachers are enhanced because of in-service training. The study reported that quality teacher

training in the country is now unpredictable due to reasons such as inadequate finances and cultural practices and varying time for a teacher to receive training in colleges. The curriculum for teacher education is outdated, and there are no incentives or motivation for teachers. In order to address these issues, in-service training of teachers is necessary particularly if we want to improve the education of our youths. The findings show that there is a relationship between performance of in-serviced teachers and non in-serviced teachers. In-serviced teachers perform slightly better than none in-serviced. The interpretation is that most in-serviced teachers are competent in Management of Information System, class delivery in ICT and follow up in curriculum implementation. This is similar to the report by Ling’hwa and Mhagama (2022) that Facility Financial Accounting and Reporting System (FFARS), Annual School Census (ASC), School Information System (SIS), Selection Management Information System (SMIS) and Primary Management Information System for Secondary Schools (PREMS) are highly applied in public secondary school management and requires in-service training for its application. The findings are supported by previous studies, such as Gatome-Munyua et al. (2022), who emphasized the role of the Facility Financial Accounting and Reporting System (FFARS) in improving monitoring and budget execution.

Lack of in-service teachers’ training negatively affects the teachers’ performance. The theme received support and disapproval almost on equal measure. In this respect, a school head remarked that:

*“Alright, in-serviced teachers could be conversant with the latest in the field of education while non-in-serviced teachers are experienced in the subject matter. Actually, we’re living in a dynamic world that requires one to be conversant*



*with emerging issues particularly in technology. For instance, some teachers have gone for in-service training either through individual initiative or sponsored by stakeholders. The tragedy is that their performance is below the performance of non-in-serviced teachers in the same field” (School Head, 5).*

Another respondent opined that:

*“The subject competency in teaching among in-serviced teachers and non-in-serviced teachers is noted when the national examination results are released. It is amazing to notice high level of subject competency among non-in-serviced teachers in the Certificate of Secondary Education Examinations (CSEE) where the number of candidates with division one and two surpasses those subjects taught by in-serviced teachers. Before moving on let me mention that some in-serviced teachers are also competent in their subjects as seen in students’ performance in national examinations” (School Head, 1).*

The results of the two interview excerpts indicated that although some non-in-serviced teachers post good results as seen in their students’ performance, most school heads have noticed the importance training hence they have encouraged teachers to go for in-service training either through individual initiative or sponsored by other stakeholders. The non-in-serviced teachers’ good performance was attributed to experience and teamwork. The study concludes that students taught by in-serviced teachers who are committed to their work will certainly post good academic performance. The findings also agree with Alkaria and Alhassan (2017) who profess that there was a strong significant correlation between the in-service training of computer teachers at a T-test value of 2.537 and a significance of 0.823, with the teacher's practical knowledge of the programming skills. According to Marsha and Naftaly (2019), one of the important components to improve the quality of education is through in-service training for teachers. With respect to this, even though there are many in-service training programmes organized by the Ministry of Education, State Education Department and District Education Office, but the effectiveness of in-service training in schools should not be taken lightly by school management and also teachers (Borup and Evmenova, 2019). In a related study, Chulu (2023) found out that the effectiveness of teachers with a positive attitude towards teacher training is seen in classroom situation including actual instruction/academic work, classroom management, evaluation procedures, assignments, and developing human relationships with students, principal, and society in general. In a related

study by Eloranta et al. (2021), a positive attitude is necessary for both in-serviced teachers and non-in-serviced teachers. Syarwani and Syahrani (2022) highlighted that the attitude will shape to a larger extend their effectiveness in performance.

## 5. Conclusion and Recommendations

### 5.1 Conclusion

Based on the findings of the study and to sum up this discussion, the following conclusion was drawn from the three research hypotheses formulated namely:

**H<sub>01</sub>:** There is no statistically significant relationship between performance of in-serviced teachers and non-in-serviced teachers.

The finding in the table 3 indicates that  $\chi^2(2) = 23.286, p = 0.000$ . Since the p-value (0.000) is less than the significance level (0.05), the null hypothesis is rejected and alternative hypothesis is accepted. Therefore, there is significant relationship between performance of in-serviced teachers and non-in-serviced teachers in Public Secondary Schools in Arusha City Council.

**H<sub>02</sub>:** There is no statistically significant relationship between subject competency of in-serviced teachers and non-in-serviced teachers.

The finding in the table 4 indicates that  $\chi^2(2) = 7.836, p = 0.020$ . Since the p-value (0.020) is less than the significance level (0.05), the null hypothesis is rejected and alternative hypothesis is accepted. Consequently, there is significant relationship between subject competency in teaching of in-serviced teachers and non-in-serviced teachers in public secondary schools in Arusha City Council.

The study concludes that, no doubt education plays a significant role in nation's development, but the quality of education is greatly determined by the quality of teachers, therefore, great efforts should still be made to improve the quality of pre-service and in-service training. Thus, there is need to expose teachers to knowledge in ICT, FFARS, ASC, SMIS, PREMS and IFMIS that has been adopted in most government institution for efficient and effective curriculum implementation and school management. Therefore, the destiny of Tanzania is being shaped in its classrooms.

### 5.2 Recommendations

Based on the study findings the following recommendations were made:

1. There is a need for in-service teacher training because it brings attention towards constantly modernizing and updating the professional skills and knowledge of teachers. Taking into consideration the undergraduate training of teachers where little emphasis is given to management skills as opposed to curriculum implementation, teachers become managers of institutions at a later stage in their profession when the management skills and knowledge acquired at undergraduate training is almost obsolete. Consequently, in-service training will enable them to acquire knowledge and skills in management of human, material, time and financial resources.
2. For professional growth of teachers and newly appointed school heads, there should be seminars, workshops and postgraduate programmes at more frequent intervals. This will improve subject competency in teaching of in-serviced teachers as seen in mastery of subject content, lesson preparation and classroom/school management. Similarly, Teachers should be able to think critically, make right decisions, maintain harmonious relations with students for effective learning to take place.

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