



THE CONTRIBUTION OF IN-SERVICE TRAINING ON TEACHING AND LEARNING PERFORMANCES OF TEACHERS IN PUBLIC SECONDARY SCHOOLS IN TANZANIA

MGUDE NGWAYA

Author name is currently pursuing master degree program at University of Iringa, Tanzania. E-mail: mgudengwaya84@gmail.com

KeyWords: In-service training; Pedagogical skills; Subject matter mastery; Teaching and learning performance.

ABSTRACT

The study aimed assessed the contribution of in-service training on teaching and learning performances of teachers in public secondary schools in Tanzania by taking a case study of Njombe Town Council. Specifically, the researcher explored the contribution of in-service training on the pedagogical skills development and how it enhances the performance of teaching and learning, it examined the contribution of in-service training to mastery of subject contents and finally, It reviewed different models of teacher professional development that guide the operationalization of this study. The study was conducted in Njombe Town Council in Njombe region and involved 20 respondents. Interview and Documentary review methods were used in the data collection process. The researcher employed a thematic analysis with the observation of all trustworthiness aspects such as credibility, transferability, dependability and conformability of the study. The findings showed that teachers do attend various in-service training programmes that assisted them to be updated. Also, it was revealed that through attending different in-service training teachers have updated themselves in different working and teaching angles to most public secondary schools. Moreover, the findings revealed that through attending different in-service training teachers mastered the subject matter content through consolidating the relationship with another subject master from other schools, gaining new tactics and knowledge on the taught subject matter and improving the methodology of teaching the mastered subject matter content. Finally, the study concludes that despite the government's directives and policies sensitization on the importance of in-service training to public secondary schools, for the case of this study; it was found that the operation of in-service training had a positive contribution towards updating teachers on enhancing quality teaching delivery. It recommends that since the in-service training has shown to have a positive impact on teachers' professional development and efficiency, it is, therefore, the government and other educational stakeholders as well, as school administrators should join hands to strengthen the operation of in-service training in both public and private secondary schools. School administrators should set a calendar for conducting in-service training internally and advise the government on the importance accrued from the in-service training and provide a room for all members to participate in those activities.

INTRODUCTION

With the development of globalization, every country in the world is struggling to expand and update knowledge, skills and technological perspective to their human resources who operate in different organizations and institutions with intention of copying the global changes (Perkins, 2010). Together with the global changes, teachers are among the important career that needs professional development that reflects the transmission of knowledge and skills to various technological changes (Zuljan and Vogrinc, 2011). Teacher professional development aims at improving the quality of teaching among teachers, as well as adjusting to new pedagogical and technological use when it comes to the issues of teaching (Dadi, 2015). This has come to be known worldwide that teacher's professional development is important because it has a significant influence on teacher trust and practices (Mitkovska, 2010). Moreover, the effects on student learning, and the implementation of educational reform, have influenced the establishment of teachers' connections, strengthening teamwork and cooperation (Desimone, 2017).

Different studies have revealed that various countries have been enhancing teachers' professional development using different ways. For instance, a study conducted in the United State by Reimers, Wagner, Alvanides, Steinmayr and Schmidt (2014) on an introduction to the standards for professional development for teachers of engineering revealed that effective professional development for teachers of engineering is conscious of, and promotes deepening of, both subject content knowledge and pedagogical content knowledge. It further, revealed that teachers' professional development instils in its participants an understanding of engineering as a natural context for the reinforcement of standards of learning in other. Additionally, professional development empowers teachers to identify appropriate curriculum, instructional tools, and assessment methods; and it models effective teaching methodology for teachers.

In Malaysia, in-service training for teachers is effectively implemented in schools (Omar, 2014). The government of Malaysia shows that in-service training is important for teachers in school and it acts as a tool for professional development and to enhance their knowledge and quality of teaching and learning. Teachers are facing new challenges and changes in education based on the global changes and teachers need to equip themselves with new knowledge and skills by attending in-service training for them to play an important and effective role as an educator. Besides that, the effectiveness of in-service training is important to ensure that the training is suitable and brings positive effects to the teachers. The effectiveness of the in-service training is influenced by the role of the administrator, the teacher's attitude, needs analysis and strategies used in the training programme.

In China, teacher professional development is practised and has a strong sensitization by the government in terms of budget allocation. A study done by Loyalka, Popova, Liu, Shi, and Li G (2017) researched unpacking teacher professional development in China. The findings revealed that the government spends billions of dollars and billions of hours of teacher time on teacher professional development programmes each year. The practised programme enhances the subject-specific psychological factors furthermore they revealed teacher professional development also has an impact on teacher knowledge development, changes in attitudes, as well the teaching practices that might lead to impacts on students in the longer term.

In Zimbabwe, there is a different model that is practised the teacher's professional model. The study that was conducted by Mushayikwa and Lubben (2011) on self-directed professional development, revealed that teachers working in deprived environments and the study cemented that, teacher efficacy is practised and is divided into two parts known as professional efficacy (professional identity, career development and professional networking) and classroom efficacy (content knowledge and practical knowledge) were influenced by self-directed professional development.

In Tanzania, like in any other country, teachers have to be prepared to teach diverse students, acquired 21st-century skills, knowledge and attitudes, and take on leadership responsibilities. Teachers' professional development is a means by which teachers can participate in lifelong learning, enhance their teaching and develop into competent and effective practitioners in which this in turn help teachers to have a positive impact on student learning and prepare students for the challenges of the 21st century (URT, 2017).

Fortunatus (2014) studied teacher professional development on job performance in secondary education in Mwanza Region, Tanzania. The study revealed that if teachers' professional development is not well organized and implemented, most secondary school teachers in Mwanza and the whole country, in particular, will experience poor performance in teaching and learning processes. Likewise, it was noted that job performance, quality education and better performance of students have been well organized and implemented, which in turn leads to good teaching and learning process that leads to good academic performances for the majority of secondary school students.

Soko (2014) on the study concerning professional development: the experiences of primary school teachers in Tanzania revealed that teachers' actions taken for improving their work were influenced by professional development activities whereby the study further revealed three categories in which teachers' professional development contributes. The first category revealed was interaction expansion involving a change in teachers' attitude towards meeting learners' learning needs, a change in teachers' attitude towards managing the classroom and a change in teachers' attitude towards encouraging learners. The second contribution revealed was the use of the context expansion which includes appropriate use of the environment and appropriate use of teaching and learning materials.

The third and last contribution revealed was professional role expansion which includes improving content knowledge, pedagogical knowledge, planning and reflection. This was supported by Nihuka (2011) who conducted a study on collaborative communities of practice for teachers learning by reflecting on the implications for in-service arrangements in Tanzania's context.

In this study, it was revealed that the professional development programs that are organized around communities which are featured school-based training, blended with workshops or seminars, and allow virtual or physical communication among teachers are very effective in terms of technology integration, and improvement of pedagogy and instruction designing. With such importance of teachers' professional development still, it was revealed in the study by Mfaume (2020) that teachers' professional development

including in-service training has been faced with several challenges such as the closure of Teachers Resources Centers (TRC), limited in terms of time, rejection of the permission teachers seeks to the employers, stagnation of the government to allows teachers attend in different professional development and environmental challenges.

Despite the unveiled challenges, still, the government through the Education and Training Policy of 1995 and that of 2014 insist on the availability of different programmes that help the practice of in-service training as part of teacher professional development (URT, 1995 & 2014). With regards to the government directives through its policy, it is, therefore, this study assessed the implementation of in-service training on teaching and learning performances in most public secondary schools in Tanzania by taking a case study of Njombe Town Council.

The education policy of 1995 and that of 2014 insists on the conduction of in-service training that can be practised through training such as workshops and seminars (URT 1995 & 2014). Despite the sensitization of in-service training in schools by the government of Tanzania through education policies of 1995 and that of 2014, yet, other studies such as Mfaume (2020) and Anangisye (2014) supported that teacher professional development is of paramount importance. However, the same study indicates that there are constraints that affect the effective practice of in-service training as part of teacher professional development for the majority of public teachers in secondary schools.

Moreover, it has been revealed in different studies in Tanzania which show that there is limited literature that has been conducted on teacher professional development for teachers in public secondary schools. Thus, the current study assessed the implementation of in-service training on teaching and learning performance in public secondary schools in Tanzania by taking a case study of Njombe Town Council.

LITERATURE SURVEY

The Role of in-service Training on Pedagogical Skills in Schools

The study by Adoniou (2015) developed a more elaborative framework for the improvement of pedagogical skills acquisition. The framework combines six 'domains' which are based on Shulman's categorization; i.e. knowledge about: content; theory; teaching; learners; school context; and sociocultural context, with three 'ways of knowing' which are know-how, knowing why, and knowing what. For example, in the first domain of 'content knowledge, teachers need to have enough content knowledge (what) to know the importance of having it (why), and to know effective methods to deliver it (how). Effective professional development experiences enhance teachers' content knowledge and content pedagogy within the framework of a teacher's vision for his or her classroom (Dunne, 2011).

According to Frederick & Stephen (2010) during the teachers' professional development, teachers will use school management skills, and evaluation techniques and master wider content areas of their subjects. For this reason, teachers and educational experts should increase their effort in fostering and implementing teachers' professional development in schools to improve the effectiveness of development in schools.

Yoon (2016) revealed that successful implementation of teachers' professional development is the only key that changes teachers' attitudes and beliefs, by improving the teaching and learning pedagogical process where they believe it works because they have seen it work, and that experience shapes their attitudes and beliefs. Thus, a key element in a significant change in teachers' attitudes and beliefs is clear evidence of improvement in the learning outcomes of their students due to pedagogical applicability.

The Contribution of in-service Training on Subject Matter Mastery in Schools

Aglazor (2017) conducted a study in Nigeria concerning the role of teaching practice in teacher education programmes and observed teaching practice was necessary for aspiring teachers by paring them with competent knowledge due to subject matter mastery. Also, in the previous study Aglazor (2011) noted that field-based experiences such as study abroad and student teaching are intended to bridge theory and practice. Kazmi & Mumtaz (2011), teaching practice for teachers enables the teachers to be more systematic and logical in their teaching style.

Liang (2015) studied professional development and student achievement from TIMSS data in the United States and observed that teacher sustained engagement in high-quality professional development is a vital contributing factor in deepening teacher knowledge and skills, changing attitude and beliefs, improving instructional practice and bolstering student achievement and growth (Aki-ba & Liang 2013).

According to Rashid (2016), teachers' professional development comprises two main elements that are the fulfilment of pupils learning needs and ensuring the personal and career development of the academic staff. In consequence, local and international agencies require teachers to employ professional development to enhance the quality of teaching, in this regard, teachers' engagement in regular professional learning is an important aspect for keeping them knowledgeable to nurture competent students (Wong, 2010).

METHODOLOGY

The study was conducted in Njombe Town Council in Njombe region and involved 20 respondents. Interview and Documentary review methods were used in the data collection process. The researcher employed a thematic analysis with the observation of all trustworthiness aspects such as credibility, transferability, dependability and conformability of the study.

ANALYSIS

According to Yin (2009), qualitative data analysis includes processes such as examining, categorizing, tabulating, testing and synthesizing evidence, to draw empirically based conclusions. It involves breaking down collected data into manageable themes, trends and relationships (Mouton, 2002). As it is impractical to present all collected data, analysis brings order, structure and interpretation of the massive generated data (Denscombe, 2007). In qualitative case study research, normally data analysis goes simultaneously with data generation, presentation and narrative reporting (Yin, 2009). Simultaneous data collection and analysis provide the researcher with an opportunity to look into his/her data and think of ways to either refine or reform his/her research questions and collect new or better data if needs arise (Miles & Huberman, 1994). There is no single way of data analysis in qualitative research. The way to be used in analysing the data depends upon the research questions, the way data will be used and the resources available to facilitate the process (Taylor-Powell & Renner, 2003; Yin, 2009). In this study, data analysis processes are based on the adopted research methodology which relates to the qualitative interpretive approach. Thus, the collected data were analysed manually using thematic data analysis procedures. The thematic data analysis used in this study hinged on the theoretical perspectives of Braun & Clarke (2006). They define thematic data analysis as a method for identifying, analysing, and reporting patterns (themes) within the data (2006). The procedure that was employed for the analysis of data in this study involves six concurrent steps as proposed by Braun & Clarke (2006). The steps included data familiarization; generation of initial codes; searching for themes; reviewing themes; defining and naming themes and finally producing the reports (Braun & Clarke, 2006).

RESULTS

The Role of In-service Training on Pedagogical Skills that help in the Improvement of Teaching and Learning Performances in Schools

The first objective intended to examine the contribution of an in-service training programme on pedagogical skills improvement and how it enhances teaching and learning performances in public secondary schools in Njombe Town Council. Teachers were asked to indicate whether they have been attending different in-service training and what are the factors that influence the operationalization of in-service training which led to teacher performance. The results from the interview revealed that teachers have been attending different in-service training and several factors influenced the in-service training. The researcher quoted during the interview session when two teachers from different schools affirmed that:

...we have been attending different in-service training, especially those that are concerned with the supervision of examination, and pedagogical improvement like learning different methods of teaching in the class and how well the learning could virtually take place...

Source: Field Data (Interview session, January 2022)

The above quotation revealed that teachers have been attending different in-service training from the public secondary schools. This implies that in-service training for public secondary school teachers has been conducted.

To verify this, the researcher interviewed heads of schools and quality assurers on whether there are in-service training programmes that are offered to teachers. The responses revealed that several in-service pieces of training are offered to heads of school, and teachers that help them to strengthen their understanding of the different concepts in the

teaching field and in turn, it helps them to improve their capacity for teaching and learning. A researcher cited a saying when interviewed with one school head:

...Majority of teachers who work in public schools have been attending different in-service training that helps them to be knowledgeable in different teaching angles and in administering the school activities. For example, some teachers got training on supervising examinations, marking; pedagogical improvement and others attended training on administration matters. So, to me, I think there is an in-service training that helps to update the knowledge...

Source: Field Data (Interview, January 2022)

The above quotation reveals that teachers and school heads have been attending different in-service training that helps them to update their knowledge and skills in various sectors including pedagogy of teaching, marking of examination and supervision of the examination.

Moreover, the researcher of this study interviewed quality assurers on whether in-service training is offered to teachers in public secondary schools. The findings revealed that in the entire process of ensuring the quality provision of secondary education they have been sensitizing to conduct the in-service training programme to teachers through the Teacher's Resources Centers (TRC) or cluster where teachers discuss various concepts in their subjects under the supervision of QA. Also, it was noted that the quality assurers have been witnessing different reports to school heads on the attendance of teachers who have got in-service training. The findings are affirmed by the quality assurer who was quoted saying:

...in our normal routine of inspecting secondary schools, we have been encouraging school heads to emphasize teachers to use the teachers' resource centre for receiving different knowledge and skills just to be updated. Though it is normally we see the report which shows the attendance of teachers in various in-service training workshops like supervision of examination, marking, and training on a new aspect that the ministry plan to be practised in secondary schools...

Source: Field Data (Interview, January 2022)

The above quotation still reveals that in-service training is offered to teachers in various public secondary schools. This findings is also supported with the evidence from the quality assurance documents that revealed the implementation of such programme to some of teachers in schools.

Generally, on the status of the practice of in-service training programmes, it is found that teachers do attend various in-service training programmes that help them to be updated. The findings are in line with the findings found by Itegi (2012) who noted that in-service training in Kenya is being emphasized to be conducted to teachers and they intend to increase 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 teachers in Kenya. Moreover, the findings of this study are supported by Kabono (2011) who investigated the contribution of in-service training for head teachers towards teachers' performance in public primary schools. The results revealed that the majority of teachers who tend to attend various in-service training have been performing well in different aspects applying pedagogical skills that have learnt in one of the in-service training. It is therefore, the literature supports the current findings that there is a conduction of in-service training for teachers and it is supported by the theory that guides this study which stipulates that reinforcing the idea that individuals gain more knowledge and skills helps to interact in the everyday activities. So improvement of pedagogical skills helps teachers who got the training to effectively interact with students in everyday activities.

On the other hand, the researchers asked teachers through interviews to show the factors that influence the practice of in-service training programmes. The findings revealed that changes in the existing curricula, the introduction of new media and technology, pedagogical changes, changes in a social and political context and improvement of educational policy were among the important factors that led to the frequent practice of in-service training in the majority of public secondary schools' workers. In affirming this finding, a researcher of this study noticed the factors when interviewing one teacher from one public secondary school:

...in a normal situation in-service training has been conducted to master and familiarize with pedagogical changes occurring from the responsible ministry, the socio-political changes, the technological changes and educational policy changes. So, we teachers and school administrators are entitled to participate in different training with intention of familiarizing ourselves with the modern improvement and changes...

Source: Field Data (Interview, January 2022)

The above quotation indicates that teachers agreed that changes and innovation in the existing secondary schools' curricula have influenced the operation of different in-service training to equip teachers with updated requirements of the curriculum.

It was further noticed that the majority of interviewed respondents thought that with changes in curricula the government through the Ministry of Education, Tanzania Institute of Education, and National Examination Council have regularly conducted in-service training that updates the understanding of teachers and they have been doing that to customize the curriculum with the natural school environment. With such an argument, it is worthwhile that the changes and innovation of the new curriculum have influenced the presence of in-service training for teachers and enhanced teaching and learning job performances.

In the same context, the researcher of this study interviewed the Quality Assurers (QA) on what are the factors that influence the practice of in-service training. The findings revealed that the nature of the curriculum that may either be improved by adding new concepts or total changes has been influencing the conduction of in-service training to teachers. The intention is to customize the new changes to teachers who are the key implementer of secondary school's curriculum. In affirming this, the researcher of this study noted when interviewing QA:

...Normally different factors contribute to school administrators to ensure that there is in-service training for our teachers. However, the main reason is when we change the existing curriculum or if there are additional important

components or when we want to modify the pedagogy of teaching is when we encourage the in-service training to teachers...

Source: Field Data (Interview, January 2022)

The quotation supports the findings where by the interviewed respondent revealed that the nature of the existing curriculum enhances the operationalization of in-service training.

Additionally, the introduced media and technology have influenced the education stakeholders to arrange in-service training for teachers to customize the new skills and knowledge to copy with the required practice of the new technology. In the same aspect, the researcher interviewed the heads of schools and it was revealed that the occurrence of a new aspect in teaching that has resulted from the new media and technology contributes to the attendance of teachers as part of in-service training. This was witnessed in the interview with one school head:

...things are changing, teachers are changing, the media and technology are also changing so once things of such calibre come, we do normally sensitize our teachers to attend as part of in-service training. Sometimes, we as heads of schools and academic deans we have been invited to get the seminar after acquiring the knowledge we do normally provide the skills to other teachers in our schools...

Source: Field Data (Interview; January 2022)

This quote implies that the occurrence of new media and technology has a great contribution to the operationalization of in-service training for teachers.

Additionally, it was commented that different in-service training for teachers was conducted with intention of updating teachers with new methods of teaching that correspond to the syllabus and curriculum (pedagogical skills). Moreover, the researcher interviewed the quality assurance on what factors influenced the operationalization of in-service training. The findings revealed that updating teachers with modern methodology and approach to teaching influenced the conduction of in-service training for teachers. This finding was affirmed in the interview session that represents all interviewed QA:

...there is a tendency of updating teachers in the majority of public schools and these workshops have been conducted by the Tanzania Institute of Education and the Ministry of Education, Science and Technology they intend to update the knowledge and skill of teaching to teachers and heads of school. Also, we have sensitized the school to have a District Education Officer department that works with enhancing the quality delivery of teaching with updated skills...

Source: Field Data (Interview; January 2022)

The above quotation implies that one of the factors that influence the operationalization of in-service training is to update teachers with the current and applicable skills and knowledge on teaching methodology. Furthermore, the response from teachers revealed that various changes in social and political contexts have influenced the operationalization of in-service training. The government through the ministry of education and considering the nature of the Tanzanian curriculum that is centralized has influenced the in-service training. This is supported by the Educational Training Policy of 1995 and that of 2014 which all policies depict the necessity of conducting training when the new education programme changes in its implementation (URT, 1995 & URT, 2014).

The finding was also noted through a documentary review where it was viewed that the changes in educational policy such as education and self reliance of 1967, the Education and Training Policy of 1995 and that of 2014 have influenced the in-service training with intention of updating teachers and school administrators with guideline and directives of what to do in schools. Generally, the findings of this study are agreed with Osuji (2009) that observe in-service training for all teachers was supported by changes in curriculum, new media, new technologies and changes in pedagogical means of teaching and learning in schools. Syllabuses and training techniques must be adequate and relevant to keep teachers addressing their job challenges more confidently and competently. Moreover, the findings are supported by the modern teachers' training model of using technology-assisted professional development that some time has proved to be more practical with the intrusion of modern media and technology for improving the pedagogical skills of teachers in schools (USAID, 2014; Villegas-Reimers, 2014).

Examine the contribution of in-service training to mastering subject content in public secondary schools.

The data to respond to this objective were collected through interviews and documentary reviews that were administered to teach-

ers, heads of schools and Quality Assurers.

The findings revealed that through attending various in-service training teachers and school administrators have been benefiting and mastering the subject contents that help in the improvement of the teaching and learning performances. This was revealed in the interview session with one as follows

.....Through attending different in-service training, we teachers have been expanding the social network with other teachers in similar subjects, gaining experiences, exposure and confidence in the subject matter, gaining new skills and learning materials on the specific subject matter, improving the career, and upgrading new knowledge.....

Source (Field data, Interview, January 2022).

In the above quotation, mostly of interviewed teachers responded that through attending the in-service training, they have been expanding their social link with other teachers from other public schools. The expansion of social networks helps them to communicate well on different school matters that help them to provide quality education on a certain subject matter to the intended audience. The findings are in agreement with the findings found in the study by Adoniou (2015) that reveals a framework which helps teachers to improve content mastery. The framework combined six domains which are based on Shulman categorization that includes the content, theory, teaching, learners, school context and social-cultural context. All categorization dealt with knowing how knowing why and knowing what.

In the same aspect, the researcher interviewed school heads and one of them commented that through attending the in-service training teachers have been improving and expanding the social network that helps them to communicate easily in various school matters as supported by Dunne (2011). Through in-service training in a different subject association like mathematics, associations have been expanding the network that helps in solving various schools challenges, especially in mathematics subjects. In affirming this on behalf of other interviewed heads of school was noted saying:

...social networks now days is important, our teachers through attending the in-service training help them to communicate in various school subjects like mathematics association, English association and other subjects. These indeed help them to consolidate the school social network...

Source: Field Data (Interview: January 2022)

The above quotation implies that through in-service training teachers have been expanding their social network with other teachers from other schools.

Furthermore, quality assurance responded that through attending in-service training teachers benefited through gaining experience, confidence and exposure; teachers gained new skills and teaching techniques; teachers improve their careers; teachers improve social interactions and communication and teachers upgrade new knowledge on the subject matter. In the light of these findings, it is well implied that in this study through attending in-service training teachers have been updated in different working angles in public secondary schools and finally, the in-service training improves the masterly of subject matter in Public secondary schools like writing and speaking skills in Languages subjects that English and Swahili. The findings are in line with the study by Itegi (2012), who indicated that an institution that grows does not keep its staff forever; it also increases the stability of the institution by creating a pool of skilled staff replacing those who leave the institution.

Nzarirwehi and Atuhumize (2019) on the benefits of training pointed out that in-service courses 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. According to Education Sector Strategic Plan 2003, in-service training would empower teachers to perform their roles and responsibilities confidently and with competence.

Lwasaka, Sugiyama and Morita (2015) on the benefits of in-service training in Rwanda observe that the duration of the courses should be adequate to enable the trainers to cover all the task areas. She notes that the contents should cover all the task areas and incorporate comments from participants. According to Komba and Nkumbi (2008), schools should keep staff updated on in-service provision through staff development notice boards, keeping records of staff interests, featuring staff development features in school reports, and receiving feedback from those who have attended courses and issues of in-service should feature prominently during staff meetings. Also, Komba and Nkumbi come up with a staff development cycle which can be used by schools to determine their situation, and what they want to know when they achieve their goals.

CONCLUSION

Based on the findings the following conclusions were drawn:

Despite the government's directives and policies sensitization on the importance of in-service training to public secondary schools, for the case of this study, it was found that the operation of in-service training had a benefit and influence towards updating teachers on enhancing quality teaching delivery.

Regarding the attendance of teachers to different in-service training in the majority of public secondary schools, in this study, it is concluded that some teachers attended various in-service training though it was segregative. Most sciences and English language teachers were the most frequent group that attended mostly different in-service training.

Also, in the light of the findings of this study, it can be concluded that the majority of the public secondary school faced different challenges such as a shortage of budget allocated for in-service training, limited time, challenges of the internet, lack of motivation and commitment, poor adaptation of newly emerging curriculum changes and improvement. Therefore, these challenges affected the provision of quality teaching and learning.

REFERENCES

- [1] Abdul, R. (2016). Staff Development: Creating a Learning Culture, *Journal PendidikanGerak*, 8 (9)89-100
- [2] Adoniou, M. (2015). Teacher knowledge: a complex tapestry. *Asia-Pacific Journal of Teacher Education*, 5(4), 34-44
- [3] Aglazor, G. (2011). Global exposure: *Preserve teacher Perspective on the role of study abroad*, paper presented at Research seminar series by Career and technical education, Purdue University.
- [4] Akyeampong, K. (2017). Teacher educators' practices and vision of good teaching in teacher education reform context in Ghana. *Educational researcher*, 46(4), 194-203. <https://doi.org/10.3102/001318>
- [5] Anangisyee, W. A. (2011). *Developing Quality Teacher Professionals: A Reflective Inquiry on the Practices and Challenges in Tanzania*. Unpublished research Dissertation
- [6] Anney, V. (2013). *Supporting licensed science teachers' professional development in adopting learner-centred pedagogy*. Hamilton. New Zealand: The University of Waikato
- [7] Atieno, O. E. (2019). *Effectiveness of principles' instructional supervision in enhancing teacher professional development in public Secondary schools in Nairobi and Kajiado Countries*. Unpublished in Kenya
- [8] Bold, T., Filmer, D., Martin, G., Molina, E., Rockmore, C., Stacy, B., Svensson, J. & Wane, W. (2017). *What Do Teachers Know and Do? Does It Matter?* World Bank Policy Research Working Paper 7956.
- [9] Dadi, H. (2015). Teacher Professional Development: Experiences of Three Selected African Countries and the Lessons Based Chinese Practices. *International Journal of African and Asian Studies*, 6(4), 39-48
- [10] Darling-Hammond, L. (2017). Teacher education around the world. What can learn from practice? *European journal of teacher education*, 40 (3), 291-309. DOI:10.1080/02619768.2017.1315399.
- [11] Darling-Hammond, L. & McLaughlin, M. W. (2011). Policies that support professional development in an Era of Reform. *Journal of Delta Kappan*, 92(6), 81- 92.
- [12] Fortunatus, N. (2014). *Teacher Professional Development on Job Performance in Secondary Education: A Case of Mwanza Region, Tanzania*. University of Dodoma, Unpublished Research Dissertation.
- [13] Frederick, B. J. A. & Stephen, O.O. (2010). *Teachers' Perceptions of Staff Development Programmes as It Relates to Teachers' Effectiveness: A Study of Rural Primary Schools' in Kenya*, Educational Research & Review, published Research Dissertation
- [14] Ghosh, S., Nath, J. & Agarwal, S. (2012). Computer science. *Journal of Global Research in computer science*, 4(9), 67-79.
- [15] Ghosh, s., Nath, J., Agarwal, S., & Nath, A. (2012). Open and Distance Learning education system: Past, Present and Future: systematic study on alternatives education systems. *Journal of Global Research in computer science*. 3(4), 53-57
- [16] Gooper, D.R. & Schindler, P. S. (2003). *Business Research Methodology (8th ed.)*. Boston: Mc Graw Hill Irwin.
- [17] Grosemans, I., Boon, A., Verclairen, C., Dochy, F., & Kyndt, E. (2015). Informal learning of primary school teachers: Considering the role of teaching experience and school culture. *Teaching and Teacher Education*, published Research Dissertation
- [18] Hardman, F., Hardman, J., Dachi, H., Elliot, L., Ihebuzor, N., Ntekim, M. & Tibuhinda, A. (2015). Implementing school-based teacher development in Tanzania. *Journal of professional development in education*, 41(4), 602-623
- [19] Joyce, B. R. & Calhoun, E. (2010). *Models of Professional Development: A Celebration of Educators*. California: Thousand Oaks.
- [20] Juma, S., Lehtomäki, E. & Naukarinen, A. (2017). Scaffolding teachers to foster inclusive pedagogy and presence through collaborative action research. *Journal of Educational Action Research*, 2(3), 1-7.
- [21] Jung, I. (2011). ICT-Pedagogy Integration in Teacher Training: Application Cases Worldwide. *Journal of Educational Technology & Society*, 8 (2), 2005-ISSN1176-3647 e- ISSN1176-3647
- [22] Jurasaitė-Harbisson, E., & Rex, L. A. (2010). School cultures as contexts for informal teacher learning *Journal of Teaching and Teacher Education*, 26(2010) 267-277.
- [23] Kafyulilo, A. C., Fisser, P. & Voogt, J. (2016). Teacher design in teams as a professional development arrangement for developing technology integration knowledge and skills of science teachers in Tanzania. *Journal of Education and Information Technologies*, 21(2), 1360-2357.
- [24] Kitta, S. & Fussy D. (2013). Bottlenecks in preparation of quality teachers in Tanzania. *Time Journals of Arts and Educational Research* 1(5), 29-38.
- [25] Komba, W. L. & Nkumbi, E. (2010). Teacher Professional Development in Tanzania: Perceptions and Practices. *Journal of International Cooperation in Education*, 11(3), 90-99.
- [26] Korthagen, F., & Lagerwerf, B. (2010). Teachers' professional learning: how does it
- [27] Mapping informal learning activities, antecedents, and learning outcomes. Review of Educational Research
- [28] Kyndt, E., Govaerts, N., Verbeek, E., & Dochy, F. (2014). Development and validation of a questionnaire on informal workplace learning outcomes: A study among socio-educational care workers. *British Journal of Social Work*, 3(2), 3-10
- [29] Lancaster, H. (2014). Tanzania - Telecoms, Mobile and Broadband - Market Insights, Statistics and Forecasts. *Budde Reports*. Retrieved from: <https://www.budde.com.au/research/tanzania-telecom-mobile-and-broadcast-market-insight-statistics-and-forecast.html>.
- [30] Liakopoulou, M. (2011). Teachers' Pedagogical Competence as a Prerequisite for Entering the Profession. *European Journal of Education*.
- [31] Linder, R. A., Post, G., & Calabrese, K. (2012). *Professional learning communities: Practices for successful implementation*. Bulletin: Delta Kappa Gamma.
- [32] Loyalka, P., Popova, A., Liu C., Shi, H. & Li G. (2017). *Unpacking Teacher Professional Development*. Working Paper No.1009.
- [33] Mosha, M. A. (2015). The role of teachers' resource centres in teachers' professional development and enhancing primary education in Zanzibar. *Journal of Education and Practice*, 4(8), 89-102
- [34] Mushayikwa, E., & Lubben, F. (2011). Self-directed professional development—Hope for teachers working in deprived environments. *Journal of Teaching and*

Teacher Education, 6 (7), 90-99

- [35] Mwakabenga, R. J. (2018). *Developing Teacher-Led Professional Learning in Tanzanian Secondary Schools*. New Zealand: Massey University.
- [36] Namamba, A. & Rao, C. (2017). Preparation and Professional Development of Teacher Educators in Tanzania: Current Practices and Prospects. *Journal of Education and Practice*, 8(8), 288-297
- [37] Nawab, A. (2011). Workplace learning in Pakistani schools: A myth or reality? *Journal of Workplace Learning*, 3(2)123-143
- [38] Nihuka, K. A. (2011). *Collaborative communities of practice for teacher learning: implications for in-service arrangements in Tanzania's context*. Tanzania: The Open University of Tanzania.
- [39] Onguko, B. (2010). *Design implementation and institutionalization of mobile learning in higher education*. Kenya: Computer science published.
- [40] Ono, Y., & Ferreira, J. (2010). A case study of continuing teacher professional development through lesson study in South Africa. *South African Journal of Education*, 4(9), 90-10
- [41] Organisation for Economic Cooperation and Development, (2010). *Teacher professional development: Europe in international comparison*. Netherlands: University of Twente.
- [42] Organisation for Economic Cooperation and Development, (2018). *TALIS 2013 Results: An international perspective on teaching and learning* Paris: OECD Publishing.
- [43] Pow, J.&Wong, M. (2017), Effect of workplace factors in professional teacher development on the implementation of small class teaching. *Journal of Education and Training Studies*. *Journal of Education and training studies*, 4(3), 128-134
- [44] Richter, D., Kunter, M., Klusmann, U., Lüdtke, O., & Baumert, J. (2011). Professional development across the teaching career: Teachers' uptake of formal and informal learning opportunities. *Teaching and Teacher Education, An international journal of research and studies*, 27(1), 116-126.
- [45] Santoro, N., Reid, J.A., Mayer, D. & Singh, M. (2013). Teacher knowledge: continuing professional learning. *Asia-Pacific journal of teacher education*, 27(1), 11-16.
- [46] Schleicher, A. (2012). *Preparing Teachers and Developing School Leaders for the 21st Century: Lessons from Around the World*. ERIC.
- [47] Schunk, D. H. (2012). *Learning theories: An educational perspective* (6th ed). Boston: Pearson Education.
- [48] Sekaran, U. (2010). *Research methods for Business: A skill. Building Approach* (4th ed.).UK: John Wiley & Sons...
- [49] Selemani-Meke, E. (2013). *Teacher motivation and implementation of continuing professional development programmes in Malawi*. Anthropologist.
- [50] Soko, M. V. (2014). *Professional Development: The Experiences of Primary School Teachers in Tanzania*. Abo: Akademi University Press.
- [51] Sparks, D.&Loucks-Horsley, S. (2017). Five models of staff development. *Journal of Staff Development*, 6(6), 34-45
- [52] United States Agency for International Development, (2014). *Education through technology: bridge its evaluation report*. Retrieved from: http://pdf.usaid.gov/pdf_docs/PA00JSSH.pdf.
- [53] URT & UNESCO. (2014). *Enhancing Teacher Education for Bridging the Education Quality Gap in Africa: The Case of Tanzania*. Dar es Salaam, Tanzania, published Research Dissertation.
- [54] Villegas-Reimers, E. (2014). A801: *Education policy analysis and research in comparative perspectives - Class discussion*. Harvard: Harvard School of Education.
- [55] Wang, H., Yang, C., He, F., Shi, Y., Qu, Q., Rozelle, S., & Chu, J. (2015). Mental health and dropout behaviour: A cross-sectional study of junior high students in northwest rural China. *International Journal of Educational Development*, 2(9)67-78
- [56] Wang, T. (2016). School Leadership and Professional Learning Community: Case Study of Two Senior High Schools in Northeast China. *Asia Pacific Journal of Education*, 36(2), 202-216.
- [57] Watson, C. (2014). Effective professional learning communities? The possibilities for teachers as agents of change in schools. *British Educational Research Journal*, 6(2), 20-28.
- [58] Wong, J. L.N. (2010). Searching for Good Practice in Teaching: A Comparison of Two Subject Based Professional Learning Communities in a Secondary School in Shanghai. *Compare: A Journal of Comparative and International Education*, 40(5): 623-639.
- [59] Worsham, B. W. (2018). *Understanding the job-embedded learning experiences of middle school teachers*. In S. J. Zepeda (Ed.), *Making learning job-embedded: Cases from the field of instructional leadership*. Maryland, USA: Rowman & Littlefield.
- [60] Yoon, K. (2016). *Professional development and its impact on teacher and pupil learning: A community of practice case study in South Korea*. South Korea: University of Birmingham.
- [61] Zuljan, V. & Vogrinc, J. (2011). *European Dimension of teacher Education-similarities and differences*. Slovenia: University of Ljubljana.