



**DETERMINING HOW TEACHERS OF MATHEMATICS ARE
UPDATED WITH RECENT TRENDS IN TEACHING AND LEARNING
OF THE SUBJECT: A NEED OF IN-SERVICE TEACHER TRAINING.**

© GSJ

Year: 2022

ABSTRACT:

This paper attempted to explore the role of In-service teacher training in the promotion of teacher's self-professional development in teaching of mathematics. It also examined the role institutions play in supporting In-service training and inquire on the forms of In-service training undertaken. The study further aimed at analysing the already established literature on In-service teacher training programs in relation to the prevailing situation in selected schools in Mitete District in Western Province. A questionnaire was prepared and piloted before conducting the actual data collection. This was to test the validity and reliability of the questions set. In-service training enhances teachers' efficiency in understanding their work and in serving learners better so that they are equipped with necessary skills and knowledge that enable both teachers and learners overcome pressure exerted on them by changes that occur in education.

It is known fact that for teachers to be kept abreast with new development that occur in their profession they must remain lifelong learners through on-going school based continuous development workshops, Teacher Learning Communities (like subject associations meeting) and adult distance education programs. The findings indicated that in-service training are taking place in schools, though with difficulties. It was also noted that teachers understand the importance of In-service trainings within their institutions.

KEY WORDS: In-service Teacher Training; Professional Development; Pre-service Teacher Training; Continuing Professional development.

INTRODUCTION

It has been noted that the quality of teacher training and its corresponding outcomes are questionable (Sharar, 2012; Wilke, Peyton & Hungerford, 1987) [1] [2]. Ministry of Education (1992) [3] stated that what was acquired during pre-school level is not sufficient to last teachers throughout their teaching life. Sagir (2014) [4] referred to pre-service training as not being sufficient to effectively undertake the services teachers provide. For this reason, it is very vital that on-going professional development is enhanced as observed that things are not static; the ever-changing scenario of teaching practice. To keep teachers updated with recent trends that exist in education, initiated In-service training activities are introduced in institutions in order to successfully undertake tasks and obtain maximum productivity and efficiency. Dana and Yendol- Hoppey (2009) [5] indicated that professional development programs made a difference in the working of teachers who participated in such programs. On the other hand, student - teachers taught had their lives changed. If teachers are to understand their work they must first be students themselves (lifelong-learners) before they can impart that change into their learners (Van de Walle, Karp & Bay-Williams, 2010) [6]. In-service training programs equip teachers with necessary skills and knowledge that allow them master their subject matters. This put teachers in the position to address the varying learning needs of their diverse learners.

Professional development growth can only be attained through support of fellow teachers, administrators and together with involvement of government through Ministry of Education. Government established number of educational policy reforms that enhanced development of In-service training in the institutions. In Zambia, certain institutions like National In-Service Training College, NISTCOL where made to serve already serving teachers

in In-service training programs in order to abreast them with the most current documents in the profession. The Korean government embarked on a project in which software was developed; in this a Cyber Teacher Training Centre (CTTC) was created in order to contribute to the quality education. This program was to assist teachers in accessing education irrespective of their location (Jung, 2001) [7].

RESEARCH METHODS

The study analysed the already established literature on In-service teacher training programs in relation to the prevailing situation in selected schools in Mitete District in Western Province. The study satisfied the descriptive type of research in which questionnaire survey were administered to 14 mathematics teachers from 11 schools (**5 basic and 6 Secondary schools**) in Mitete District. A simple random sampling procedure was used to select the respondents to this study. In analysing the collected data, both quantitative and qualitative were used. Under qualitative data was grouped according to the related and emerging themes, while in quantitative excel spreadsheets were involved. The respondents were chosen on the basis that they teach mathematics, whether trained or not trained in teaching the subject.

IN-SERVICE TEACHER TRAINING

“In-Service Training” is defined as a type of training that provides service to ensure teachers professional development sustain and improve oneself. The only answer to people’s concerns is the In-service training as teachers’ personal and professional expertise is enhanced by being assisted by other people.

There have been a raised concern national and international levels by parents, communities and stakeholders on the decreasing quality of education (Frick, Carl & Beets,

2010; Ahmad, Zeb, ur Rehman, Ahad & Khan, 2013) [8] [9]. It was further suggested that the quality of education entirely depends on quality of teachers, as they are regarded as having low capacity in teaching pedagogies due to inadequacy training attained during pre-service programs (Sharar, 2012; Wilke, Peyton & Hungerford, 1987)[1] [2]. Changes experienced in education systems that led to renewal of instructional programs, advances in educational technologies, different expectations of the environment and impact of economic and political systems have necessitated teachers to develop and renew themselves (Sagir, 2014; de Lima Ferreira & Bertotti, 2006)[4] [10].

The changes in education have been caused by a number of factors. Some of these are as an increase in the number of students with learning diversities, the increased demand on the use of educational technologies, curriculum changes and, the emphasis on efficiency and effectiveness. In order to serve students better, there is need for teachers to seek qualification, knowledge and methodologies for teaching and learning. It is suggested that through practical application in an actual classroom teachers' practical experience is developed. The teacher place themselves in learners' position for them to serve and satisfy their learners' various learning needs, as noted by Nieto (2003) [11] that "If you don't know a student, there's no way to influence him. If you don't know his background, there's no way you are going to get in touch with him. There's no way you're going to influence him if you don't know where he's been".

In-service trainings encourage collaboration (working together of members of different institutions) and cooperation (working together of members of the same institution). As teachers work together, their professional knowledge is established and is collectively shared and others' perceptions are respected. Team members are kept updated of new professional practices and this influence the established instructional decisions that will lead to promotion

of conducive learning environment in which learners will have a sense of being cared for and loved.

BENEFITS OF IN-SERVICE TEACHER TRAINING

The insufficient knowledge and skills of teachers (Abdoll, Carter & Barberton, 2013) [12], which make them ill- prepared and unable to deal with the uncertainties, realities and challenges that await them in their profession. A good number of teachers are seconded to teach grades or subjects they are not competent to teach and this can only be addressed through implementing School Based Continuing Professional Development (SBCPD) for teachers (Banda, 2015) [13]. If teachers are not taken care of, they decide to leave the teaching profession (Frick, Carl & Beets, 2010) [8]. The main aim of In-service training programs is to encourage teachers to continue learning so that they develop sound academic achievements that will make learners enjoy their learning (Craig, Kraft & du Plessis, 1998) [16].

Attaining in-service trainings influences teachers take the responsibility to change their teaching pedagogies and their traditional belief on professional development. Emphasis is put on involving reflective practices that encourages teachers to focus on real classroom issues and this turn provide on-going support to teachers so that they come in terms with what is involved in their profession. Having time to reflect on professional practice characterises qualities of a good teacher and such a teacher's proficiency is improved through development of essential values, knowledge and skills that support reflection (Rajabi, Kiany and Maftoon,2014) [17]. Sharar (2012) [1] noted one weakness of teachers on practicing reflection, as they only focus on students' attitude and behaviour instead examining their own instructional strategies. Reflection on teaching assists teachers engage themselves in a continuous cycle of self-observation and self-evaluation in order to realize themselves and understand learning needs of their students (Ahmad, Zeb, Ur Rehman, Ahmad & Khan, 2013) [9].

FORMS OF INSERVICE TRAINING

In-service teacher training can take various forms. There are programs that can be organized within the institution and those that are carried out in identified training institutions (colleges and Universities). In-Service training is systematic laid programs that intended to develop professional knowledge, skills (Jahangir, Saheen and Kazmi, 2012) [18] and behaviours to prepare the personnel for further careers (Sagir, 2014; de Lima Ferreira & Bertotti, 2006) [1] [10] and are as a way of seeking solutions to challenges influenced by social demands. The programs offered by training institutions are either full-time or distance courses. In-Service Training of Teachers (INSET) programs are structured in such a way that they satisfy specific topics or study areas with emphasis in equipping them for effective performance of their duties (Ogunsanmi, 2011) [15].

The school based professional development programs undertaken in schools are as follows; workshops, staff meeting, symposium, seminars and conferences. These mentioned programs can be carried out at school level, they too can be conducted at Teacher Resource Centres at Zonal, District, Provincial and National levels. It is at such forum that teachers receive individualised and group assistance based on individual area of need and at his pace of learning (Wilke, Peyton & Hungerford, 1987) [2].

CHALLENGES FACED IN IN-SERVICE TRAINING

There are a number of challenges encountered in the promotion of in-service in many institutions and these limit professional development opportunities for teachers. Some of them are listed below:-

1. Lack of resources and geographical location of some place, especially the remotest areas.
2. Unavailability of human resources (such as professional experts) hinder professional development opportunities.

3. Unwillingness to participate on professional development of teachers and some school managers.
4. Viewing workshops as a source of income rather than avenues to professional development.
5. Shortage of time.
6. Most head teachers do not allow teachers to go for their distance education programs especially if they collide with students' learning.

CONCLUSION

The identified teachers' lack of competencies and knowledge gap is observed in a number of areas like in subject mastery, curriculum and pedagogical content knowledge. This resulted in decreased standards of education. To improve the outcomes of quality education, there is need to promote initiatives for improving the knowledge and competence of teachers, mainly through in-service training programs. Some in-service training events for primary and secondary school teachers are organized during teaching days, while others are planned during holidays in order to avoid disturbing teaching and learning activities.

A number of needs and importance of in-service trainings have influenced the demands of individual teacher's professional development and some of them are:-

1. **Education as not static:-** To remain in contact with new trends in education, it is advisable that teachers keep on updating themselves with new knowledge, as what was covered few years ago will not be applicable today.
2. **Life- long Learner:-** To stay abreast with changes that take place in education, every individual must be in a position to keep learning throughout his life, as every teacher is a student.

3. **Need of Professional Development:-** Most in-service training programs attempt to improve the quality of classroom instructions by equipping teachers with new ways of teaching, new materials to be used (Flanders, 1963) [16] to assist them achieve their own professional development and develop the ideas of ownership over the established knowledge.

The result of this study as shown that it is not health for teachers to entirely depend on the training attained during their pre-service but it is mandatory to undertake in-service training to improve their knowledge, skills and competences. This is with the emphasis to foster teacher education and development as is regarded as pivotal to the improvement of education.

References

- [1] Sharar T. (2012). Introducing Reflective practice to teachers in an English medium Lower Secondary private schools in Chitral. *Academic Research International*.
- [2] Wilke, R.J., Peyton, R.B. & Hungerford, H.R. (1987). Strategies for the Training of Teachers in Environmental Education. Unesco- UNEP. *International Environmental Education Programme*.
- [3] Ministry of Education (1992). Focus on Learning. Strategies for the Development of School Education in Zambia: Report of the Team Appointed to Review Investment Strategies in Education.
- [4] Sagir, M. (2014). Teachers' Professional Development Needs and the System That Meet Them. *Creative Education*, 5, 1497-1511. <http://dx.doi.org/10.4236/ce.2014.516167>.
- [5] Dana, N.F., Yendol-Hoppey, D. (2009). *The reflective educator's guide to classroom research: Learning to teach and teaching to learn through practitioner inquiry* (Laureate Education, Inc., custom ed.). Thousand Oaks, CA: Corwin Press.
- [6] Van de Walle, J. A., Karp, K. S., Bay-Williams, J.M. (2010). Elementary and middle school mathematics: Teaching developmentally (7 th ed.) Beston, MA: Allyn & Becon.
- [7] Jung, I. (2001). Issues and Challenges of Providing Online In-Service Teacher Training: Korean's Experience. *International Review of Research in Open and Distance Learning*.
- [8] Frick, L., Carl, A. & Beets, P.(2010). Reflection as learning about the self in context: mentoring as catalyst for reflective development in pre-service teachers. *South African Journal of Education*, 30, 421- 437.
- [9] Ahmad, I., Said H. B., Zeb A, ur Rehman, S., Ahmad, S & Khan, W. (2013). How Reflective Improves Teachers' Classroom Teaching Skill? Case of Community Based Schools in District Chiral, Khyber Pakhtunkhwa. *Social Sciences and Humanities*.
- [10] de Lima Ferreira, J., Bertotti, G. R. (2016) Continuing Education for Professional Development in Higher Education Teaching: *Creative Education*, 7, 1425-1435. <http://dx.doi.org/10.4236/ce.2016.710148>.
- [11] Nieto, S. (2003). What keeps teachers going? New York: Teachers College Press.

- [12] Abdoll, C., Carter, J., & Barberton, C. (2013). Expenditure and Performance Review: In-Service Training of Teachers (INSET). *Cornerstone Economic Research*.
- [13] Banda, B. (2015). Current Status and Challenges of In-Service Training of Teachers in Zambia: Based on the Experience of Introducing Lesson study to the Schools.
- [14] Craig, H.J., Kraft, R. J. & du Plessis, J. (1998). Teacher Development: Making an Impact.
- [15] Ogunsanmi, J. O. (2011). Awareness of Teachers on the effectiveness of Guidance and Counselling Service in Primary schools in Nigeria. *International Journal of Academic Research in Business and Social Sciences*.
- [16] Flanders, N. A. (1963). Teacher Behaviour and In-Service Programs: Can Teachers grow through In-service Work?
- [17] Rajabi, P., Kiany, G.R. & Maftoon, p (2012). ESP in-service teacher training programs: Do that change Iranian teachers' beliefs, classroom practices and students' achievements?
- [18] Jahangir S.F, Saheen N. & Kazmi S.F. (2012). In-Service Training: A Contributing Factor Influencing Teachers' Performance. *International Journal of Academic Research in Progressive Education and Development*, 1 (1).

