

Teachers Perceptions Regarding In-Service Trainings and National Professional Standards for Teachers in Pakistan

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ABSTRACT

Purpose: Professional development is “the educational opportunities for school teachers and administrative personnel with goals of personal, professional growth and school improvement” (Shukla, 2014). The objective of this paper was to analyze the effect of in-service training on professional development of teachers in relation with the current national professional standards for teachers. **Method:** The design of this study was descriptive type survey in nature and quantitative method was used. All the teachers of both male and female public elementary schools were selected as population of the study. The Sample of the study was comprised of 1000 (14%) teachers (500 male and 500 female) out of 6939 (3433 male and 3506 female) teachers of public elementary schools of the selected through random sampling. The study was delimited to Sindh province. A questionnaire was developed, validated through try out test and administered for getting required information from the respective respondents. The Cronbach’s Alpha reliability of research instrument was found 0.854. **Findings:** In-service teacher training has positive effect on professional development of teachers. It helped teachers to improve pedagogical skills. It was concluded that maximum efforts were made to implement these standards in true spirit for developing, designing and implementing in-service training programs at the teacher training institutions in Sindh province. **Implications for Research and Practice:** The results implied the necessity for change in teacher training programs and highlighted the role of the Ministry of Education in facilitating teachers’ professional development.

KEYWORDS: Professional Development, National Professional Standards, In-service Training, Pedagogical Skills.

INTRODUCTION

It is universally acknowledged that education shaped the future society of any country. The value and worth of education depends upon competency and training of teachers, received through a process called teacher education. Iqbal (2005) described that all those attributes considered essential to polish the personality development of humans, to train in the most acceptable behaviour, to promote their capabilities, to make sustain with nature, rules and principles of learning.

Teachers are the national builders, responsible to train the future generation according to the demands of the society. Teachers should have vast knowledge and mastery over the school subject. Mateen (2000) described that efficiency in the field of education requires that the academician involved in teaching profession must possess knowledge of nature, laws of learning, awareness and understanding students’ psychology and have full command over subject matter. The teachers significantly contributed in overall national development of the country and are supposed to transfer the culture, values, beliefs, norms and traditions of the society to the future generation.

In-service education and training of teachers (INSET) is a training of in-service teachers that leads to the enhancement of professional competencies of their careers. It was defined by Niazi (2005) as: In-service training of teachers is designed to promote the professional development of the teachers after entering in the teaching profession. It includes all those activities required for improving teaching skills of the teachers to face the class room problems. It is directly related to the ability of the teachers to perform the teaching tasks effectively.

Professional development is the phenomena of improving and enhancing capabilities of teachers via approach to education and trainings opportunities in the workplace. It helps to build and maintain moral of teachers. Professional development is often called staff development. There have been a lot of developments in the field of teacher education in Pakistan including Sindh province, however this most important parameter of education system of the country faced a lot of problems in certain areas. Hussain (2004) pointed out problems of in-service teacher

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training in the country and emphasized that teacher training programs needed re-evaluation and re-organization to remove the drawbacks. The traditional selection criterion for admission in teacher training institutions must be changed. The aptitude test should be conducted for admission by the teacher training institutions to identify those students who were inclined towards teaching profession. The duration of teacher training may be strengthened and lengthened to develop a favourable attitude of individuals towards teaching profession.

Teacher Education: Teacher education includes the policies and procedures which are designed to equip teachers with the required knowledge, behaviors, attitudes and skills to perform their responsibilities in an educational institution. It is a lifelong process, starts first day by joining teacher training institution to become a teacher and ends at the retirement from service. The present structure of teacher education comprised on following three main stages:

Pre-service Teacher Education: It is the first stage, where students were taught to learn basic knowledge about teaching profession and teaching skills. It develops the basic competencies for instruction. It is a pre-requisite to become a teacher (AEPAM. 2013).

Induction Teacher Training: The second stage is generally known as induction teacher training. It is an internship or the probationary period, where newly inductee teachers are provided an opportunity in the institution to work under command some senior teachers to learn practically the basic pedagogical skills, management and subject assessment. It helps the teachers to be familiar with the school environment to perform future responsibilities in better ways (AEPAM. 2014).

In-service Education and Training of Teachers (INSET): There are many features to describe the concept of in-service education and training of teachers (INSET). Those commonly used are continuing professional development (CPD), professional growth, professional competency, staff development and continuing or lifelong education. During this stage, teachers can learn new techniques to meet the demands of time. It is the most important stage for the teachers to equip with the necessary updated knowledge and skills to improve his professional competency. Bolam (1998) pointed out that teacher education is that education and training activities arranged by school teachers and principals for the betterment of students.

National Education Policy (1998-2010)

The main objectives of National Education Policy (1998-2010) clearly focused for improving the professional development of teachers in the country as:

- To develop a theoretical frame work for policy planning and development of teacher education programs for pre-service and in-service training of teachers.
- To update the quality of in-service teacher training programs by introducing advanced technology.
- Make teaching profession attractive for the new young talented graduates by package of incentives.
- To established collaboration in demand and supply of teachers and a new cadre of teachers shall be created.
- The curriculum and methods of instruction in teacher training institutions shall be renewed and revised to bring them in line with the requirements of prevailing trends in this field.
- To increase the defectiveness of system by incorporating in-service training of teachers, teacher trainers and educational administrators. and
- To provide management training to educational administrators.

National Accreditation Council for Teacher Education (2009): To upgrade the quality of teacher education in Pakistan, Higher Education Commission (HEC) established a council. National accreditation Council for Teacher Education (NACTE) is an autonomous body for accreditation of all teacher education programs offered in public and private sector teacher training institutions in the country. To achieve required objectives in due course of time, NACTE has developed National Standards for Accreditation of Teacher Education Programs to define the requirements for specific and essential components of teacher education programs (Sin, Tavares, & Amaral, 2017). These standards provide guiding principles to all concerned authorities made responsible for uplifting teacher education and training in the country (Govt. of Pakistan. 2009).

National Professional Standards for Teachers (2009): To enhance the professional competencies of teachers, Govt. of Pakistan (2009), ministry of education develops national professional standards for teachers. There are ten national professional standards for teachers. Out of the these national professional standards, subject matter knowledge, human growth and understanding, instructional planning and strategies, assessment, learning environment, effective communication and continuous professional development of the teachers were included in the present study as they have direct relations for improving professional competency of teachers. Detailed description of these national standards was given below:

Subject Matter Knowledge: It is pre-requisite that teachers must have knowledge about subject matter which is supposed to teach in classroom. The teachers know everything related to subjects of teachings.

Human Growth and Understanding: Teachers must have knowledge about child human growth process, as it is a natural process of physical, cognitive, emotional and behavioral changes. In the early stages of life from childhood to adolescence and even adulthood various changes are taken place in individual life. Through the process, each person develops attitudes and values relationships and understanding with society. In this context, teachers must understand how children and adolescents develop and learn in a variety of school, family and community contexts and provide opportunities that support their intellectual, social, emotional and physical development.

Instructional Planning and Strategies: It is another standard required for the teachers must have knowledge about instructional planning and strategies. In this regard, teachers must understand instructional planning and design, long term and short term plans based upon knowledge of subject matter, students, community, curriculum goals and employ a variety of appropriate strategies in order to promote critical thinking, problem solving and performance skills of all learners (Soodmand & Farahani, 2018).

Assessment: It is the next standard stresses teachers should have knowledge regarding assessment of an educational activity. Teachers assess students' learning using multiple assessment strategies and interpret results to evaluate and promote students' achievement and to modify instruction in order to foster the continuous development of students.

Learning Environment: Learning environment is another national standard stress upon the teachers must have further knowledge. In this context, teachers create a supportive, safe and respectful learning environment that encourages positive social interaction, active engagement in learning and self-motivation.

Information Communication Technologies (ICT): The next standard that teachers must have knowledge is effective communication and proficient use of information communication technologies (ICT). In this connection, Govt. of Pakistan (2009) described that teachers use knowledge of effective verbal, nonverbal and written communication techniques and tools of information processing to foster the use of inquiry, collaboration and supportive interactions with students and parents. Teachers are able to use instructional and information communication technologies for curriculum enrichment, instruction, assessment and evaluation of learning outcomes.

Continuous Professional Development and Code of Conduct: The next standard required for the teachers that they should have knowledge is continuous professional development and code of conduct. In this connection, teachers participate as active and responsible members of the professional community engage in reflective practices, pursuing opportunities to grow professionally and establish collegial relationships to enhance the teaching and learning process. It subscribe to a professional code of conduct.

It can be said that teacher education is a part of learning provided for improving knowledge, skills, and attitude of the teachers. This process can be carried out through provision of pre-service and in-service teacher training to the teachers. At the pre-service stage, perspective teachers are provided basic knowledge and skills to become a teacher and it is pre-requisite before joining teaching profession. During in-service training stage, teachers are provided with specific training to enhance their professional knowledge and teaching skills to become a competent teacher. Malik (2014) stated that in Pakistan, every year during summer vacation, 2-4 weeks in-service training is provided to teachers for improving their professional competency.

AEPAM. (2015) quality strives for productivity. It is the most powerful dimension of an education system. It is creation of an environment where educators, parents, managers, community representatives' work together to provide students with the resources they need to meet current and future academic changes. Strengthening the quality of education has become a global agenda at all educational levels including teacher education. The quality of teacher education is important not only for preparing individuals for the subsequent educational levels to teach but also to equip them with the requisite teaching skills to be developed to educate the children as per well established standards to meet the needs of the society.

In Pakistan, since inception, several efforts have been made to improve professional competency of teachers by launching every year different types of in-service training programs. Many questions were raised at various levels why these INSETs programs were not enriching professional growth of the teachers. Furthermore, many official documents and research studies have pointed out low performance of the teachers needs to be improved on priority basis. Keeping in view the vital role played by in-service teacher training for improving professional development of teachers, the researcher decided to conduct a research study to find out impact of in-service teacher training at elementary level in Sindh province.

Objective of the Study

The objective of the study was to analyze the effect of in-service training on professional development of teachers in relation with the current National Professional Standards for Teachers.

Research Question of the Study

What is the effect of in-service training on professional development of teachers in relation with the current National Professional Standards for Teachers?

Significance of the Study

This study is significant to the policy makers, planners, educational authorities, decision makers and various agencies involved in the education to suggest measures and for taking necessary steps to conduct in-service teacher training programs for improving professional development of the teachers.

Delimitations of the Study

- The study was delimited to Sindh province of Pakistan.
- The study was delimited to 10 districts (Dadu, Hyderabad, Karachi, Khairpur, Larkana, Mirpurkhas, Naushero Feroze, Sanghar, Sukkur and Thatta).
- The study was further delimited to public elementary school teachers.

METHOD

Research Design

The design of this study was descriptive type survey in nature and quantitative method was used. According to Gay (2008), descriptive research involves making careful descriptions of educational phenomena.

Research Sample

The population of this study comprised of all 1442 Elementary Schools of the ten selected districts (Dadu, Hyderabad, Karachi, Khairpur, Larkana, Mirpurkhas, Naushero Feroze, Sanghar, Sukkur and Thatta) out of 23 districts of the Sindh province, selected through stratified random sampling technique.

Table 1 *Distribution of Population and Sample*

Respondents	Population distribution			Sample distribution		
	Male	Female	Total	Male	Female	Total
Teachers	3433	3506	6939	500	500	1000

All the teachers of both male and female public elementary schools were selected as population of the study. The Sample of the study was comprised of 1000 (14%) teachers (500 male and 500 female) out of 6939 (3433 male and 3506 female) teachers of public elementary schools of the selected through random sampling.

Research Instrument and Procedure

Keeping in view the objectives of the study, a questionnaire research instrument was developed, validated through try out test and administered for getting required information from the respective respondents. This is because they were found to be the most appropriate and suitable to answer the research questions posed. The Cronbach's Alpha reliability of research instrument was found 0.854. According to Field (2009), if the value of reliability is more than 0.70%, the questionnaire is considered as the most reliable. There was a high reliability in the research instrument and the questionnaires were valid and reliable for the study procedure.

Data Analysis

The responses were checked, re-checked, arranged and then coded attending to repeated meanings and themes. Descriptive statistics were applied on survey data to analyze the collected data with the help of statistical package for social sciences (SPSS) version 21.0. The findings derived from statistical analysis are presented in tabulation which facilitates in finding the answer of research question.

RESULTS

In order to get the perception of teachers, descriptive statistics was employed to analyze the survey data. The results of the descriptive statistics are presented and interpreted as given below;

Table: 2 *Areas of Competency Level*

Sr. No.	Areas of Competency Level	Yes	(%)	No	(%)	Total (%)
1	Pedagogical Skills	690	69	310	31	100
2	Subject Matter Knowledge	713	71	287	29	100
3	Human Growth and Understanding	653	65	347	35	100
4	Instructional planning and strategies	815	82	185	18	100
5	Assessment	692	69	308	31	100
6	Learning Environment	779	78	221	22	100
7	Information communication technology	782	78	218	22	100
8	Professional Development	811	81	189	19	100

N=1000

Table 2 shows that 82% and 81% respondents has opinion that in-service training enhanced competency of teachers regarding instructional planning, strategies and professional development respectively. Similarly, 78% and

71% respondents held of the view that training provided learning environment and increased subject knowledge. 65% and 69% respondents had opinion that training assisted teachers in human growth and pedagogical skills of the teachers.

Table: 3 Improve Teachers' Pedagogical Skills

Statement	Level	SA	A	UN	DA	SDA	Mean Score
In-service teacher training helped to improve teachers' pedagogical skills.	Frequency	530	350	105	10	5	4.3
	Percentage	53	35	10	1	1	

Table 3 describes that 88% teachers agreed that in-service teacher training helped to improve teachers' pedagogical skills. 10% remained undecided, whereas 2% disagreed to the statement. The mean score was 4.3, which means that majority of the teachers accepted the statement.

Table: 4 Knowledge of Subject Matter

Statement	Level	SA	A	UN	DA	SDA	Mean Score
Teachers have sound knowledge of the subject matter they are going to teach to students.	Frequency	680	160	40	50	70	4.1
	Percentage	68	16	4	5	7	

Table 4 indicates that 84% teachers agreed that in-service training provided the teachers to have sound knowledge of the subject matter they are going to teach to students. 4% remained undecided, while 12% disagreed to the statement. The mean score was 4.1, which means that majority of the teachers accepted the statement.

Table: 5 Multiple Ways of Acquiring Knowledge

Statement	Level	SA	A	UN	DA	SDA	Mean Score
They facilitate students by multiple ways in acquiring knowledge.	Frequency	612	180	70	50	88	4.1
	Percentage	61	18	7	5	9	

Table 5 describes that 79% teachers agreed that in-service training facilitated students by multiple ways in acquiring knowledge. 7% remained undecided, while 14% disagreed to the statement. The mean score was 4.1, which means that majority of the teachers accepted the statement.

Table: 6 Demonstrate Knowledge by using Appropriate Tools

Statement	Level	SA	A	UN	DA	SDA	Mean Score
They demonstrate their knowledge by using appropriate tools according to the nature of the subject.	Frequency	630	155	60	70	85	4.1
	Percentage	63	16	6	7	9	

Table 6 illustrates that 79% teachers agreed that in-service training provided skills to teachers to demonstrate their knowledge by using appropriate tools according to the nature of the subject. 6% remained undecided, while 16% disagreed to the statement. The mean score was 4.1, which means that majority of the teachers accepted the statement.

Table: 7 Examples of Application of the Subject from Practical Life

Statement	Level	SA	A	UN	DA	SDA	Mean Score
Teachers give examples from practical life.	Frequency	670	155	60	65	50	4.3
	Percentage	67	16	6	7	5	

Table 7 describes that 83% teachers agreed that in-service training provided skills to teachers to give examples of application of the subject from practical life. 6% remained undecided, while 12% disagreed to the statement. The mean score was 4.3, which means that majority of the teachers accepted the statement.

Table: 8 Teachers Know How Students Learn and Acquire Skills

Statement	Level	SA	A	UN	DA	SDA	Mean Score
Teachers know how students learn and acquire skills.	Frequency	685	155	48	62	50	4.3
	Percentage	69	16	5	6	5	

Table 8 shows that 85% teachers agreed that in-service training provided skills to teachers to know how students learn and acquire skills. 5% remained undecided, while 11% disagreed to the statement. The mean score was 4.3, which means that majority of the teachers accepted the statement.

Table: 9 Students' Learning by Teaching Experience

Statement	Level	SA	A	UN	DA	SDA	Mean Score
They know how students' learning is influenced by their teaching experience.	Frequency	610	130	48	62	50	4.3
	Percentage	71	13	5	6	5	

Table 9 reveals that 84% teachers agreed that in-service training provided skills to teachers to know how students' learning is influenced by their teaching experience. 5% remained undecided, while 11% disagreed to the statement. The mean score was 4.3, which means that majority of the teachers accepted the statement.

Table: 10 Promoting Creative Thinking

Statement	Level	SA	A	UN	DA	SDA	Mean Score
They are engaged in promoting creative thinking of students.	Frequency	690	145	45	70	50	4.3
	Percentage	69	15	5	7	5	

Table 10 illustrates that 84% teachers agreed that in-service training provided skills to teachers engage students in promoting creative thinking in them. 5% remained undecided, while 12% disagreed to the statement. The mean score was 4.3, which means that majority of the teachers accepted the statement.

Table: 11 Demonstration of Instructional Technology

Statement	Level	SA	A	UN	DA	SDA	Mean Score
Teachers demonstrate skills by using instructional technology.	Frequency	680	160	45	55	60	4.3
	Percentage	68	16	4	6	6	

Table 11 indicates that 84% teachers agreed that in-service training provided skills to teachers to demonstrate skills by using instructional technology. 4% remained undecided, while 12% disagreed to the statement. The mean score was 4.3, which means that majority of the teachers accepted the statement.

Table: 12 Importance of Specific Subject while Instructional Planning

Statement	Level	SA	A	UN	DA	SDA	Mean Score
Teachers know how to give due importance to specific subject while instructional planning.	Frequency	620	160	60	70	90	4.1
	Percentage	62	16	6	7	9	

Table 12 describes that 78% teachers agreed that in-service training provided skills to teachers to know how to give due importance to specific subject while instructional planning. 6% remained undecided, while 13% disagreed to the statement. The mean score was 4.1, which means that majority of the teachers accepted the statement.

Table: 13 Use of Appropriate Material for Instructional Planning

Statement	Level	SA	A	UN	DA	SDA	Mean Score
They use appropriate material for instructional planning to promote students' attention.	Frequency	640	180	55	65	60	4.2
	Percentage	64	18	5	7	6	

Table 13 shows that 84% teachers agreed that in-service training enabled teachers to use appropriate material for instructional planning to promote students' attention. 5% remained undecided, while 13% disagreed to the statement. The mean score was 4.2, which means that majority of the teachers accepted the statement.

Table: 14 Planning of Instructional Strategies Based on Students' Needs

Statement	Level	SA	A	UN	DA	SDA	Mean Score
Teachers plan instructional strategies based on students' needs.	Frequency	710	130	55	55	50	4.3
	Percentage	71	13	6	6	4	

Table 14 indicates that 84% teachers agreed that in-service training enabled teachers to plan instructional strategies based on students' needs. 6 % remained undecided, while 10% disagreed to the statement. The mean score was 4.3, which means that majority of the teachers accepted the statement.

Table: 15 Application of Teaching Strategies

Statement	Level	SA	A	UN	DA	SDA	Mean Score
Teachers apply various teaching strategies in the classroom for creating interest in students.	Frequency	640	190	55	55	60	4.2
	Percentage	64	19	5	6	6	

Table 15 indicates that 83% teachers agreed that in-service training enabled teachers to apply various teaching strategies in classroom for creating interest in students. 5% remained undecided, while 12% disagreed to the statement. The mean score was 4.2, which means that majority of the teachers accepted the statement.

Table: 16 Assessment of Students' Learning by Using Various Techniques

Statement	Level	SA	A	UN	DA	SDA	Mean Score
Teachers assess students' learning by using various techniques of assessment.	Frequency	680	175	45	50	50	4.3
	Percentage	68	18	4	5	5	

Table 16 shows that 86% teachers agreed that in-service training enabled teachers to assess students' learning by using various techniques of assessment. 4% remained undecided, while 10% disagreed to the statement. The mean score was 4.3, which means that majority of the teachers accepted the statement.

Table: 17 Students' Achievement Tests for Improving Learning Skills

Statement	Level	SA	A	UN	DA	SDA	Mean Score
They take help from students' achievement tests for improving their learning skills.	Frequency	695	145	45	55	60	4.3
	Percentage	70	15	3	6	6	

Table 17 depicts that 85% teachers agreed that in-service training enabled teachers to take help from student's achievement tests for improving their learning skills. 3% remained undecided, whereas 12% disagreed to the statement. The mean score was 4.3, which means that majority of the teachers accepted the statement.

Table: 18 Provide Feedback to Students for Improving Learning

Statement	Level	SA	A	UN	DA	SDA	Mean Score
They provide feedback to students for encouraging them to improve their learning.	Frequency	705	135	40	60	60	4.3
	Percentage	71	14	3	6	6	

Table 18 describes that 85% teachers agreed that in-service training enabled teachers to provide feedback to students for encouraging them to improve their learning. 3% remained undecided, while 12% disagreed to the statement. The mean score was 4.3, which means that majority of the teachers accepted the statement.

Table: 19 Use of Instructional Techniques to Achieve Good Results

Statement	Level	SA	A	UN	DA	SDA	Mean Score
Teachers help students by using various instructional techniques to achieve their good results.	Frequency	650	140	60	70	80	4.1
	Percentage	65	14	6	7	8	

Table 19 shows that 79% teachers agreed that in-service training enabled teachers to help students by using various instructional techniques to achieve their good results. 6% remained undecided, whereas 15% disagreed to the statement. The mean score was 4.1, which means that majority of teachers accepted the statement.

Table: 20 Conducive Environment for Improving Students' Learning

Statement	Level	SA	A	UN	DA	SDA	Mean Score
Teachers create classroom environment conducive for improving students' learning.	Frequency	710	110	50	60	70	4.4
	Percentage	71	11	5	6	7	

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Table 20 indicates that 82% teachers agreed that in-service training enabled teachers to create classroom environment conducive for improving students' learning. 5% remained undecided, while 13% disagreed to the statement. The mean score was 4.4, which means that majority of the teachers accepted the statement.

Table: 21 *Adoptions of Techniques for Effective Classroom Management*

Statement	Level	SA	A	UN	DA	SDA	Mean Score
They adopt various techniques for effective classroom management to promote learning activities of students.	Frequency	685	110	60	70	75	4.0
	Percentage	69	11	6	6	7	

Table 21 depicts that 80% teachers agreed that in-service training enabled teachers to adopt various techniques for effective classroom management to promote learning activities of students. 7% remained undecided, while 13% disagreed. The mean score was 4, which means that majority of the teachers accepted the statement.

Table: 22 *Classroom Discipline*

Statement	Level	SA	A	UN	DA	SDA	Mean Score
Teachers maintain classroom discipline for smooth functioning of teaching and learning process.	Frequency	680	145	35	65	75	4.2
	Percentage	68	15	2	7	8	

Table 22 describes that 83% teachers agreed that in-service training enabled teachers to maintain classroom discipline for smooth functioning of teaching and learning process. 2% remained undecided, while 15% disagreed. The mean score was 4.2, which means that majority of the teachers accepted the statement.

Table: 23 *Preparation of Students to Enhance Knowledge*

Statement	Level	SA	A	UN	DA	SDA	Mean Score
They prepare students to enhance their knowledge by collaboration and co-operation.	Frequency	665	155	40	55	85	4.2
	Percentage	67	16	4	5	8	

Table 23 indicates that 83% teachers agreed that in-service training enabled teachers to prepare students to enhance their knowledge by collaboration and cooperation. 4% remained undecided, while 13% disagreed to the statement. The mean score was 4.2, which means that majority of the teachers accepted the statement.

Table: 24 *Use of Instructional and Communication Technology*

Statement	Level	SA	A	UN	DA	SDA	Mean Score
Teachers use instructional and communication technologies to make effective teaching and learning process.	Frequency	710	142	30	55	63	4.3
	Percentage	71	14	3	6	6	

Table 24 indicates that 85% teachers agreed that in-service training enabled teachers to use instructional and communication technologies to make effective teaching and learning process. 3% remained undecided, while 12% disagreed to the statement. The mean score was 4.3, which means that majority of the teachers accepted the statement.

Table: 25 *Up to date Information for Preparing Lesson Plans*

Statement	Level	SA	A	UN	DA	SDA	Mean Score
They incorporate up-to date information in preparing their lesson plans by using computer.	Frequency	640	180	40	65	75	4.2
	Percentage	64	18	3	7	8	

Table 25 shows that 82% teachers agreed that in-service training enabled teachers to incorporate up to date information in preparing their lesson plans by using computer. 3% remained undecided, whereas 15% disagreed to the statement. The mean score was 4.2, which means that majority of the teachers accepted the statement.

Table: 26 *Development of Students' Portfolios*

Statement	Level	SA	A	UN	DA	SDA	Mean Score
Teachers develop students' portfolios, test items and assignments through computers.	Frequency	710	140	35	55	60	4.3
	Percentage	71	14	4	5	6	

Table 26 indicates that 85% teachers agreed that in-service training enabled teachers to develop students' portfolio, test items and assignments through computers. 4% remained undecided, while 11% disagreed to the statement. The mean score was 4.3, which means that majority of the teachers accepted the statement.

Table: 27 Teachers' Professional Competency

Statement	Level	SA	A	UN	DA	SDA	Mean Score
Teachers' professional competence is enhanced by the proper use of information technology.	Frequency	680	135	45	65	75	4.2
	Percentage	68	13	4	7	8	

Table 27 shows that 81% teachers agreed that in-service training enabled teachers to enhance professional competence by using information technology. 4% remained undecided, whereas 15% disagreed to the statement. The mean score was 4.2, which means that majority of the teachers accepted the statement.

Table: 28 Improvements of Professional Skills

Statement	Level	SA	A	UN	DA	SDA	Mean Score
Teachers improve their professional skills by having in-service training.	Frequency	660	138	42	75	85	4.2
	Percentage	66	14	4	8	8	

Table 28 indicates that 80% teachers agreed that in-service training enabled teachers to improve their professional skills. 4% remained undecided, while 16% disagreed to the statement. The mean score was 4.2, which means that majority of the teachers accepted the statement.

Table: 29 Teachers Participation as Active Professional Community

Statement	Level	SA	A	UN	DA	SDA	Mean Score
Teachers participate as active member of the professional community to enhance teaching and learning process.	Frequency	685	140	40	65	70	4.4
	Percentage	69	14	4	6	7	

Table 29 shows that 83% teachers agreed that in-service training enabled teachers to participate as active member of the professional community to enhance teaching and learning process. 4% remained undecided, while 13% disagreed to the statement. The mean score was 4.4, which means that majority of the teachers accepted the statement.

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

In a nutshell, teacher training procedures prepare and shaped the teachers to perform their work in efficient way in poor teaching learning environment which is necessary for the students in making good citizen of the future society. In operational terms, curriculum, textbooks, training of teachers and student assessment composite the components of quality education. Quality of education in Sindh is low and not fulfilling the demands and expectations of the society. The planners and managers have to put in powerful interventions with strong monitoring and evaluation system to regain the status of quality education in the country.

It was concluded that in-service teacher training has positive effect on professional development of teachers. It helped teachers to improve pedagogical skills. There are many national professional standards given by Ministry of Education in 2009 for improving professional development of teachers. It was concluded that maximum efforts were made to implement these standards in true spirit for developing, designing and implementing in-service training programs at the teacher training institutions in Sindh province. It included pedagogical skills, subject matter knowledge, human growth and understanding, instructional planning and strategies, assessment, learning environment, information communication technology and professional development. It is highly recommended that national professional standards for teachers must be introduced and practiced in pre-service and in-service teacher training programs for the enhancement of their professional development. It is hoped that this articulation has shed light on specific areas that should be prioritized in teacher training phenomena and act as positive step towards professional competencies of teachers, trainers and academicians. The results implied the necessity for change in teacher training programs and highlighted the role of the Ministry of Education in facilitating teachers' professional development.

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