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# 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 promotetheir capabilities, to makesustain 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 teachersthat 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 varioustechniques 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 | |

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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# Impact of Desalination Discharges on the Benthic Macrofauna Case Study: ALGERIA

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## ABSTRACT

Seawater desalination plants produce large volumes of brine, probable affecting the receiving environment**.** So as to know the influence of this activity on benthic fauna, a qualitative and quantitative study, of the population benthic macrofaune is performed; this study will make it possible to know the state bioecologic of a site affected by Fouka desalination discharges. The population of the study area is rich; it counts it counts 41 species distributed into 233 individuals. The analysis of the index of diversity (H ') as well as the index of equitability (E), at the study area shows high values (H ' > 3, E>0,7) this reflects the biodiversity in the area is very good, this is a species-rich environment and a (stable) balanced and diversified population.
**KEYWORDS:** Desalination, Benthic fauna, Qualitative, Quantitative, biodiversity.

## INTRODUCTION

Desalination has become a very affordable solution to cope with fresh water shortage especially in the southern countries of the northern hemisphere, to coat the needs of their society, and the agricultural and industrial sector [1, 2].
Desalination plants produce large volumes of brine, whether the method used reverse osmosis or distillation, which are then unload into the sea and can, consequently, assign beneficiary biological communities [3].
Reverse osmosis is the most technique favored by desalination plant, principally by reason of its reduced inversion costs and its lower energy and space use [4, 5, 6].
A strati-field system is formed when the brine disposed into the water due to the divergence of density, this difference can be influence benthic communities existing in environments [7].
A variety of chemicals products (e.g. antiscalant, antifouling, hydrochloric acid, ferric chloride, sodium hexametaphosphate, ect) are used all through desalination process[8,9].
The degree of the effect above those biological communities existing around any point of brine discharge depends together the amount of the brine disposed, which is reliant on the size of the desalination plant, as well as on the sensitivity of those communities receiving the effluent [10,8].Accessible study of these brine over faunal assemblages are, though ,really limited [11,12,13].
These possible effects can be reduced by selecting a suitable effluent position, and/or prior dilution of the effluent. In addition, it is also essential to create a carefully intended monitoring plan to evaluate the diffusion over time of any brine plume, in order to obtain apt action capacity essential [4,14,15].The purpose of this study was to evaluate the impact of Algeria desalination discharges on abundance, assemblage structure, and the diversity of macrobenthic faunal assemblages.

## 2. MATERIALS AND METHODS

This work was taken about Fouka desalination plant, situated on the coast of the Bay of BouIsmaïl (from West to East Chenoua in Sidi Fredj) north of Algeria (Fig. 1).which started to work in 2011.
The plant uses reverse osmosis technology to turn saline sea water into fresh water. The feed water for the process is taken through an open intake system located about 1,800 m offshore. The intake system is connected to the plant via a pipeline measuring 1,60 mm in diameter. Length of the brine outfall pipeline is 380 m and measures 1,200 mm in diameter.
The pre-treatment facility comprises sand and cadridge filtration, as well as chemical dosing.

### Sample collection

The sampling of the benthic macrofauna was collected form 5 stations from desalination plant using a Van Veen grab sampler, samples took place at a depth of 10,20,30,35 and 43 m. Four replicates were collected for faunistic determination at each depth.

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The physic-chemical characteristic used in this work concerned the in situ measurement analysis of temperature, pH,salinity,dissolved oxygen (these parameters were measured by multi-parameter, and nutrient salts (nitrites,nitrates,ammonia nitrogen, and phosphorus) as previously described elsewhere [16,17].The water samples were collected at 50 cm below the surface using plastic bottles, previously rinsed with water.
Samples were fixed in a 10 % formaldehyde solution, and then the sieving was carried out using sieve of 1mm mesh. The sorting of macrofauna is carried out by separating the species into distinct zoological groups (Polychaetes, Molluscs, crustaceans, Echinoderms) under a binocular microscope, and stored in 70 % ethanol to be identified later.

**Table 1:** Mean abundance of macrofaunal group situated at diverse depth (10, 20, 30, 35 and 42 m) from the brine discharge point.

| group | taxa | Total abundance | Abundance in each depth | | | | |
|---|---|---|---|---|---|---|---|
| | | | 10 m | 20 m | 30 m | 35 m | 42 m |
| **Mollusca** | *Acanthocardia paucicostata* | 2 | 0 | 0 | 2 | 0 | 0 |
| **Mollusca** | *Aclis supranitida* | 1 | 0 | 0 | 0 | 1 | 0 |
| **Crustacean** | *Ampelisca multispinosa* | 6 | 0 | 0 | 0 | 1 | 5 |
| **Echinoderms** | *Amphipholis squamata* | 5 | 0 | 0 | 0 | 3 | 2 |
| **Crustacean** | *Bathyporeia guilliamsoniana* | 9 | 4 | 5 | 0 | 0 | 0 |
| **Mollusca** | *Bornia sebetia* | 79 | 24 | 26 | 25 | 4 | 0 |
| **Mollusca** | *Calliostoma zizyphinum* | 1 | 0 | 0 | 0 | 0 | 1 |
| **Mollusca** | *Cancellaria cancellata* | 3 | 3 | 0 | 0 | 0 | 0 |
| **Mollusca** | *Cerithiopsis tubercularis* | 1 | 0 | 0 | 0 | 0 | 1 |
| **Polychaeta** | *Cirratulus cirratulus* | 3 | 0 | 0 | 0 | 0 | 1 |
| **Crustacean** | *crevette juvénile* | 3 | 0 | 0 | 0 | 0 | 3 |
| **Mollusca** | *Cythara costata* | 1 | 1 | 0 | 0 | 0 | 0 |
| **Mollusca** | *Cythara laevigata* | 16 | 0 | 0 | 0 | 8 | 8 |
| **Mollusca** | *Diplodonta rotundata* | 1 | 0 | 0 | 0 | 1 | 0 |
| **Mollusca** | *Epitonium commune* | 2 | 0 | 0 | 0 | 2 | 0 |
| **Polychaeta** | *Eteone sp* | 7 | 2 | 4 | 0 | 0 | 1 |
| **Mollusca** | *Fusinus rostratus* | 2 | 0 | 0 | 0 | 0 | 2 |
| **Mollusca** | *Gari fervensis* | 3 | 2 | 0 | 0 | 1 | 0 |
| **Mollusca** | *Hinia incrassata* | 1 | 0 | 0 | 0 | 1 | 0 |
| **Mollusca** | *Hydrobia ulvae* | 4 | 3 | 1 | 0 | 0 | 0 |
| **Crustacean** | Isopode | 2 | 0 | 0 | 1 | 0 | 1 |
| **Crustacean** | *Jassa marmorata* | 1 | 0 | 0 | 0 | 0 | 1 |
| **Crustacean** | *Lembos spiniventris* | 1 | 1 | 0 | 0 | 0 | 0 |
| **Crustacean** | *Leucothoe lilljeborgi* | 1 | 0 | 0 | 1 | 0 | 0 |
| **Crustacean** | *Megamphopus brevidactylus* | 5 | 0 | 0 | 0 | 0 | 5 |
| **Crustacean** | *Microdeutopus statiois* | 3 | 0 | 0 | 0 | 0 | 3 |
| **Mollusca** | *Nassa mutabilis* | 2 | 0 | 2 | 0 | 0 | 0 |
| **Mollusca** | *Neverita josephina* | 10 | 2 | 2 | 2 | 2 | 2 |
| **Polychaeta** | *Notomstus latericeus* | 1 | 0 | 0 | 1 | 0 | 0 |
| **Mollusca** | *Nucula nucleus* | 3 | 0 | 0 | 0 | 1 | 2 |
| **Mollusca** | *Nuculana pella* | 5 | 0 | 3 | 2 | 0 | 0 |
| **Mollusca** | *Pirenella conica* | 1 | 0 | 0 | 0 | 1 | 0 |
| **Mollusca** | *Ringicula auriculata* | 10 | 1 | 1 | 0 | 6 | 2 |
| **Polychaeta** | *Sabella fabricii* | 1 | 0 | 0 | 1 | 0 | 0 |
| **Polychaeta** | *Sabella pavonina* | 10 | 0 | 2 | 0 | 8 | 0 |
| **Crustacean** | *Siphonoecetes sabatieri* | 6 | 6 | 0 | 0 | 0 | 0 |
| **Polychaeta** | *Syllis krohnii* | 2 | 0 | 0 | 0 | 0 | 2 |
| **Mollusca** | *Turbona cimex* | 3 | 3 | 0 | 0 | 0 | 0 |
| **Mollusca** | *Turritella communis* | 6 | 0 | 0 | 0 | 6 | 0 |
| **Mollusca** | *Venus gallina* | 6 | 2 | 0 | 0 | 0 | 4 |
| **Mollusca** | *Venus ovata* | 1 | 0 | 0 | 0 | 1 | 0 |
| **others** | | 3 | 0 | 0 | 0 | 0 | 3 |


**Figure 1:** Map of the study area, showing the location of desalination plant.

## RESULTS

The sampling of the benthic macrofauna carried out represents a species richness of 41 species distributed into 233 individuals. The crustaceans, Molluscs, Polycheates, and Echinoderms are the main identified zoological groups.

Molluscs are the most represented with (32.2 ind, 71% of the overall abundance) in succession Crustaceans with (7.4 ind, 16%) followed by Polychaete with (4.8 ind, 10% echinoderms are poorly represented (1 ind, 2%). In terms of species, the two main species are Molluscs, *Bornia sebetia* and Cythara lavigata, respectively, with percentages of 33, 91% and 6,87%, followed by the gastropod Mollusc *Neverita josephina* and the Polychaete *Sabella pavonina* with a proportion of 4.29% and finally the Crustacean Amphipode *Bathyporeia Guilliamsoniana* with 3,86%.

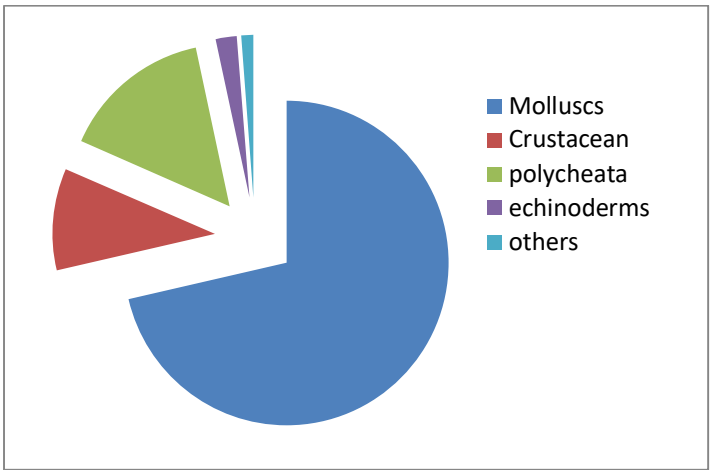


**Figure 2:** Presentation of the dominance of zoological groups at the study area

Station S3 has a total of 36 individuals, with a clear dominance of the Molluscs group whose proportions exceed 89%. Polychaetes and Crustaceans are equitably represented with a percentage not exceeding 6%.

For station S 4, which is characterized by a total of 46 individuals, a clear dominance of the Molluscs is also observed with proportions exceeding 74%. In second place the Polychaetes dominate with a percentage of 17% followed by echinoderms with a percentage of 7% while Crustaceans are represented only by a small percentage which does not exceed 2%.

At the S5 station, a total of 49 individuals was recorded, the Molluscs are observed with a 48% ,followed by Crustacean with 39%, the Polychaete are represented by 9% while the Echinoderms are represented only by 4%.

The other two stations are located at a shallow depth, namely 20m for station 2 and 10m for station S1.

At station S 2, the total number of individuals is 49, Molluscs predominate with more than 78% and polychaetes with 12%, followed by Crustaceans with a percentage of 10%.

On the other hand, at the level of station S 1, a total of 53 individuals is recorded, the group of Molluscs is best represented by a percentage of 72%, followed by Crustaceans with a percentage of 21%, and polychaetes who contribute less with a Percentage of 7%.

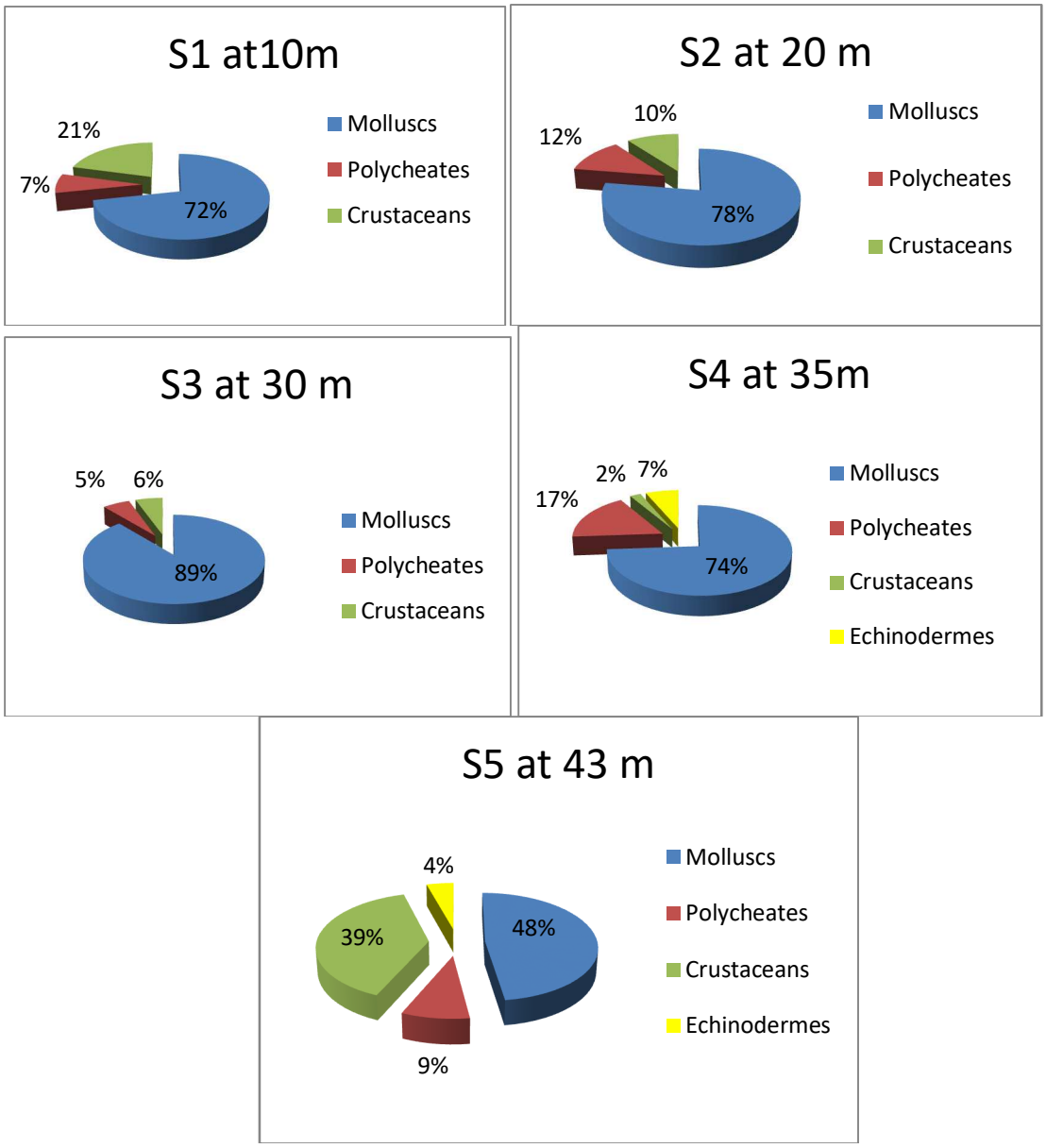


**Figure 3 :** Proportions of major zoological groups

The ecological classifications of the species allowed to identify eleven ecological groups where are always the **Species no ecological significance specified** (Sness) which dominate with 53%, followed by **Muddy sand** group (Sv) with a percentage of 12% in third position come the group of species of Sand Finely Calibrated by A proportion of 5%, the five (05) groups represent a dominance of 5% that is the group, posidonia herbarium,

photophilic algae, Mixticole,. The other groups are represented by low percentages which do not exceed 4%, indicating instability, large reparations, sabulicoles, fine sand, a strict vase, miniature.

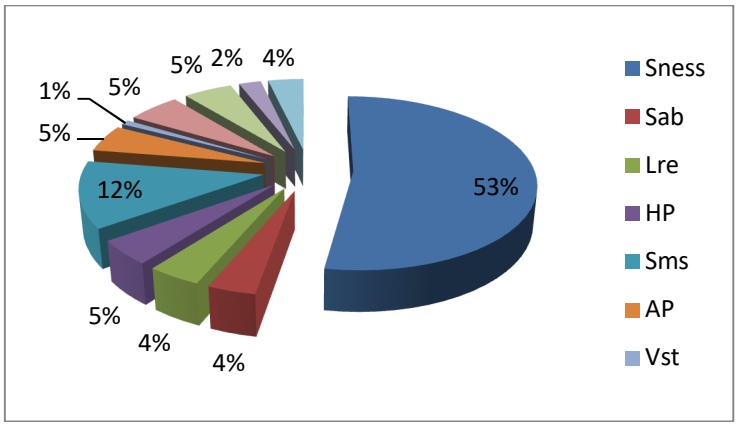


**Figure 4:** Main ecological groups.

The stand structure was assessed on the basis of the specific diversity indices, namely the Shannon -Weaver index (H ') and the equitability index (E'). Interpretation of the Shannon -Weaver index is often tricky, values are greater than "3" when the stand is normal and less than "1" when the stand is subjected to a disturbance **[18].**
For our station the Shannon index (H '), has a high value (4.15) which implies a healthy and well diversified environment. The equitability index (E ') has a value close to 1 (0.78) which indicates that each of the identified species is represented by the same number.
The combination of the values of the Shannon-Weaver index obtained and the calculated equitability index values shows that the stand of our station is balanced, well diversified and reflects a rich and diversified environment with a good distribution of workforce of the species present.

## DISCUSSION

Benthic macrofauna have become well recognized as practical bio-indicators of habitas conditions and for finding of human activities impacts in marine environments [19].
The omnipresence of macrofauna in ecosystems attached with the large range of sensitivities exposed by diverse taxa to environmental stresses returning an attractive choice [20].
Desalination of seawater is an activity that has caused a new effect, the release of brine, in the position where salinity values were beforehand stable. This sudden modification can affect benthic community. It is practical to suppose that the plans in the vicinity of effect of the discharge from the desalination plant present communities that are more like hypersaline zones than less salty coastal areas. Important change of salinity can presumably produce exchange of some species and/or communities for others. Below usual conditions the increases of salinity in the Mediterranean marine environment are uncommon and they habitually occur inactive rise estuaries or shut systems. These hypersaline systems are typified by little diversity, and frequently elevated yield. These communities simplified and they are totally unlike to the next coastal zones characterized through a lot additional stable environmental conditions [7, 13] depicts, in an environmental effect evaluation of desalination plant in key west (florida),the extinction of the unique communities and their exchange for some organisms representative of stress situations.
The results assemble in this work advice that the communities considered are focus to elevate temporal and spatial variability, which is characteristic of communities that stay on soft bottoms where there is high hydrodynamic action [21, 22, 23]. No important changes attributable to the brine discharges from the desalination plant established. The breakdown to note any effect may be described through the elevate natural changeability that is characteristic aspect of bottoms of this kind and in addition by the fast dilution undertake by the hypersaline brine over beginning the discharge conduit, inasmuch as the brine does not ordinarily go through more 10 m as of the diffuser conduit. This speed of dilution was much faster than the charges that have been signaled for discharges conduits having single opening diffusers, where the impacts of the hypersaline brine discharges have been observed out to distance of up to 20 m from the opening [9]. Not many works have evaluated the potential impacts of brine discharges on the adjacent zone, and those that commonly do not contrast communities before and after the perturbation.Perez-Talavera and Quesada –Ruiz (2001) studied the impacts of a reserve osmosis desalination plant on *Cymodocea nodosa* and *Caulerpa prolifera* prairies of the Canary Islands and did not monitor any pronounced dangerous effects. Then again, a complete study of a site in

the Western Mediterranean established lower development and higher mortality rates for *Posidonia oceanica* at salinity levels over 39.1 psu [10].

Hypersaline brine discharges be apt to influence juvenile fish more than adult fish [24] and thus to use an influence on the distribution of the nursery. The resolution ground of sure fish species, e.g., *Xyrichtis noyacula*, Bothus *podas* and *Trachinus araneus*, did not show any important differences among the region in which the brine was discharged and the control sites, and recruits of these species were observed in the area of the discharge conduit. Potential impacts as those that have been mentioned for other species, for example, derogated osmoregulatory aptitude ,did not appear to affect the above-reported species, mainly probable on account of fast dilution of the hypersaline brine in the water. The small effect of the effluent on the benthic macrofauna community contrasts with the impacts of other discharges [25, 26,27], with have been mentioned to result in significant variations in the number and abundance of species in the zone of the perturbation like compared to other, on-impacted areas.

## CONCLUSION

The results found in this work shows that hypersaline brine discharges have not necessarily had significant impact on the populations, but it is only possible that these effects can be detected in a statically significant way on a short –term basis.

The absence of any observed effect might be the results of species mobility, or of the surface area impacted. Still, no apparent impacts were observed for some other, sessile species. So if the number of desalination plants in the Mediterranean raise in the future, it would be suitable equip their discharge pipes with many punching and to locate the diffusers in hydrodynamically active area .fast dilution of the hypersaline brine discharges ought certainly help reduce several impact on benthic communities in the adjacent areas.

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# The Impact of Independent Monitoring Unit (IMU) on Teachers Performances in Public Sector Secondary Schools in Khyber Pakhtunkhwa, Pakistan

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**ABSTRACT**

The core purpose of this study was "the Impact of an Independent Monitoring Unit (IMU) on teachers' performance in public sector secondary schools in Khyber Pakhtunkhwa (KP) Pakistan. This study was delimited to the male public secondary schools district Peshawar. There are 85 male secondary schools in district Peshawar. By simple random sampling seven (7) male secondary schools were selected for the study. One hundred and twelve (112) respondents, of whom seven (7) principal, thirty five (35) teachers, and seventy (70) students were selected. From each school five (5) teachers, ten students, and one (1) principal has been selected. The nature of the study was quantitative, So tool for the study was closed type questionnaire. The data regarding each, item collected through questionnaire included 5 point likert scale, and analyzed the data by percentages (%) of chi-square test and using statistical package for social sciences(SPSS). At last finding of the study revealed that 86% respondents were of the views that teachers' absenteeism was a problem in a school. It is found that 61.5% of the respondents argue that teachers become regular after the commencement of IMU. 80% of the respondents strongly agreed that due to monitoring unit teachers absenteeism has been reduced to a great extent. 52% of the opinion that non-teaching staff become regular due to monitoring unit. Round 57% respondents of the opinions that they were satisfied with the monitoring system. Majority of the finding were statistically significant.

**KEYWORD**: Khyber Pakhtunkhwa, District Peshawar, Independent monitoring unit, Teachers performance secondary schools

## 1.1- INTRODUCTION

Monitoring is a continuing function that uses systematic collection of data on a specific indicator to provide the management and the main stakeholders of an ongoing intervention with indication of the extent of achievement of objectives and progress in the use of allocated funds [1]. According to Oxford English dictionary monitoring is the continuity of regular surveillance over a specific situation [2]. Monitoring is a system of action with three different condemnatory portions. It needs the consistent collection of information and requires evaluation of that information, applied the evaluation result in the institutions [3]. Monitoring involves the collection of data and in accordance with provisions of a multilateral environmental agreement can be used to assess compliance with agreement identity compliance and indicate solved[4]. Monitoring could provide a measure of success or failure and generate information on why things went or wrong [5]. Independent monitoring is a system promotes the functions and performance of the institutions for gaining successful results. The basic aims of IMU are to develop the current status and plan for the future. It evaluates the function of the educational institution and programed proposed by the governmental organization. It connects the present with the past and future [6]. Monitoring is a process of watching periodically the progress of the project or program in order to identify shortfalls if any for the purpose of taking timely corrective measures with a view to missing the effectiveness and efficiency of a project or programed [7]. This monitoring system has been adopted by developing countries and international organizations such as united, the American state organization and the World Bank. The developed as well as the developing countries using this procedure of monitoring to evaluate their national organization of resource management, co-operation agencies and development projects of the country [8].

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In developed and advance countries, monitoring & evaluation system is usable from a century. In history first of all UK government introduced independent monitoring Board (IMB) in 1952. It is a statutory body structure through the prison act 1952 is to assess the welfare in the united kingdom to confirm that they take care of the prisoner and those who are in the custody in the Immigration centers, that until, April 2003 volunteers were appointed for monitoring of the prisoners to evaluate the justice situation and other serious matters regarding the facilities, food, health and other matters. Education performance monitoring is synonymous with outcome accountability[9]. Developing performance monitoring systems required the selection of outcome measures of indicators that represent program objectives and the setting of performance standards for school[10]. After that on the basis of IBM it's given the global polio eradication (GPE) initial steps in the reflection and management of polio transformation throughout the world. According to IBM the year 2012 was an excellent year in the previous history of polio eradication. The ratio of polio was limited to only five countries. Developing of appropriate performance monitoring is a difficult job. For the stimulation and promotions of secondary school, individual and district performance of the school most of the countries have developed performance monitoring systems. South Carolina monitors school performance indicator as teacher attendance and student dropout, student achievement in reading, writing and mathematics (Dickinson, 1988).To monitors teaching, learning or any other particular aspect of a course we need to gather evidence or data[11].

In Pakistan, 2013 election Pakistan Tehrik -Insaf (PTI) established a coalition government with Jamat Islami (JI) and Qawmi Watan Party (QWP) in Khyber Pakhtunkhwa (KP). After 18$^{th}$ constitutional amendment and devolution of power to the province this is the responsibility of the provinces that they take necessary steps for the development of education, health and several other sectors. P.T.I and its coalition government now taking several steps to enhance different sectors, especially their emphasis quality education. First time in the history of KP the PTI Government wants to introduce a new monitoring system in KP that was independent monitoring unit (P.P.I, 2013). Independent monitoring units to start from 1$^{st}$ March 2014 by Pakistan Tehreek- Insaf (PTI) government to monitor the teachers more than fourteen indicate, such as teacher absenteeism, enrollment, attendance gab, non-teaching staff absenteeism and PTC detail etc. for this purpose PTI government recruited 550 monitors (PPI, 2017). All the monitoring staff specifically the monitors are equipped with transportations facilities and data processing equipment in orders to transfer all the information converting to the school to the IMU center within the stipulated time. Teachers ratio missing facilities, enrolment, dropout rate of the student, physical environment of school building, distribution of free text books, stipends, to girls student, utilization of fund for minor repairs etc. Each monitor to visit 2-3 school every day, monitors will not have any fixed school to avoid "good" contact with teacher minister and additional secretary E& SE Department told that the project of IMU was basically developed by the united kingdom agency which is called the department for the international development (DFID) education. The IMU will minimize the absenteeism of the teachers in the institution to a great extent. He further added that the GPRS system would enable the IMU to detect whether the concerned schools or inspected and assessed by the concerned monitors in the stated time or not. He was of the view that through the GPRS system the IMU would be able to detect whether the monitors had inspected the respective schools or not. Secretary E&SE, further said, the monitor put the data in the smart phone while in the school premises, so the main center of IMU will detect the information. Additional secretary was of the view that throughout the province the heads of the monitoring system will be recruited from the provincial management officer, and those officers and those officer may be called district monitoring officers (DMO) The government will provide transport facilities i.e motorcycle plus Rs 10000/ as fuel allowance per month for male and female monitors. That the educational institution had been divided in various groups and each groups consist of maximum 60 schools. For each group one month monitors will be responsible to visit and evaluate each school in month, [13].

The official of IMU also claimed that the duties of monitors would be exchange in each month in order to prevent the relationship of the teachers with monitors who may diversely effect the performance of the monitors. The exchange of monitor within the groups will be ensure the collection of the correct information. Both the Minister and Director of Education said in a meeting after three year of the project commencement a third party will be appointed for the assessment of the project, and if the project performance was fruitful then the concerned authority will step forward for the legal and constituted implementation of the system. They were further of the view if the project proved successful the department will take it over for its continuation in future[14].

### 1.2-Statement of the problem

Although government of kpk is focused in improving the qualities of education in the provinces much still need to be done. Impact of Independent Monitoring Unit (I.M.U) on teachers Performance in the Public Sector Secondary Schools of Khyber Pakhtunkhwa Pakistan was a new study in our area, because it has been observed that till date, Teaching and non-teaching staff absenteeism and regularity is a major problems in schools.

### 1.3-Objective of the Study
To identify the Impact of Independent Monitoring Unit (IMU) on teaching and non-teaching staff absenteeism and regularity.

### 1.4-Hybothesis of the Study
There is no significant Impact of IMU on teaching and non -teaching staff absenteeism and regularity.

### 1.5-Delimitation of the study
This study was delimited to the male public secondary school in district Peshawar.

### 1.6-Research Methodology
The research was quantitative in nature. The researcher constructed a self-explanatory questionnaire were developed to collect the data for the study. A questionnaire was distributed to the participant personally. The form of the questionnaire was closed type.

### 1.6-Population
According to elementary Management Information system (EMIS, 2015-2016) there are eighty five (85) male secondary schools in Peshawar district of Khyber Pakhtunkhwa province, of Pakistan. All the male secondary schools in district Peshawar were the population of the study.

### 1.7- Sample
For the data collection purpose simple random sampling technique was used. Seven (7) male secondary schools were the sample of the study. One hundred and twelve (112) respondents were selected as sample, of which seven (7) principal, thirty five (35) teachers and seventy (70) students were selected. From each secondary school one (1) principal, Five (5) teachers and ten (10) students were selected.

### 1.8- Research Tool
According to Creswell (2011) questionnaires are writing tools planned to assemble data from respondents about their understanding [15]. A questionnaire was used as a tool to get responses of the respondents. The questions were in close ended form. It consist of five points scale, i.e. agree, strongly agree, disagree, strongly Disagree and undecided, so Likert scales were used.

### 1.8- Analysis of Data
The data regarding each item or statement collected through questionnaires and analyzed by means of chi square and statistical package for social sciences (SPSS).

## RESULTS AND DISCUSSIONS

**Table 1: Showing Teaching and Non-teaching Staff Absenteeism and Regularity**

| Item No | Statements | SDA (N,%) | DA (N,%) | UN (N,%) | AG (N,%) | SA (N,%) | Chi-square | P-Value |
|---|---|---|---|---|---|---|---|---|
| 1 | Teacher was Regular | 9 (9.4%) | 21 (21.9%) | 11 (11.5%) | 30 (31.3%) | 25 (26.0%) | 16.917 | 0.02 |
| 2 | Teacher became regular | 4 (4.2%) | 23 (24.0%) | 10 (10.4%) | 30 (31.3%) | 29 (30.2%) | 28.271 | .000 |
| 3 | Teacher absenteeism is reduced | 4 (4.2%) | 6 (6.3%) | 9 (9.4%) | 45 (46.9%) | 32 (33.3%) | 69.729 | .000 |
| 4 | Teacher absenteeism's are Still problem | 15 (15.6%) | 35 (36.5%) | 11 (11.5%) | 25 (26.0%) | 10 (10.4%) | 23.583 | .000 |
| 5 | Principal become regular | 2 (2.1%) | 18 (18.8%) | 12 (12.5%) | 35 (36.5%) | 29 (30.2%) | 36.188 | .000 |
| 6 | None teaching staff were regular | 13 (13.5%) | 22 (22.9%) | 11 (11.5%) | 36 (37.5%) | 14 (14.6%) | 22.021 | .000 |

The above table item 1 indicates that 31.4% of the respondents were disagreed upon the statement that the teachers were regular before independent monitoring unit and 57.3% of the respondents were agreed upon the statement whereas 11.5% of the respondents were undecided. The chi-square value is 16.917 with df-4 and P-value is

.002.which is on the application of the chi-square test, the findings were statistically significant. Item 2 identify that 28.2% of the respondent were disagreed upon the statement that the teacher became regular after the commencement of independent monitoring unit and 61.5% of the respondents were agreed upon the statement whereas 10.4% of the respondent were undecided. The chi-square value is 28.271 with df-4 and P-value is .000. On the application of the chi-square test, the findings were statistically significant. Item 3 demonstrates that 10.5% of the respondents were disagreed upon the statement that due to monitoring system teachers absenteeism's are reduced and 80.2% of the respondents were agreed upon the statement whereas 9.4% of the respondent were undecided. The chi-square value 69.729 is with df-4 and P-value is .000. On the application of the chi-square test, the findings were statistically significant. Item 4 indicates that 52.1% of the respondents were disagreed upon the statement that the teacher absenteeism is still problem in school and 36.4%of the respondents were agreed upon the statement whereas 11.5% of the respondents were undecided. The chi-square value is 23.583 with df-4 and P-value is .000. On the application of the chi-square test, the findings were statistically significant. Item 5 shows that 20.9% of the respondents were disagree that due to monitoring system head of the institution become regular and 66.7% of the respondents were agreed upon the statement whereas 12.5% of the respondents were undecided. The chi-square value is 36.188 with df-4 and P-value is .000. On the application of the chi-square test, the findings were statistically significant. Item 6 indicates that 36.4% of the respondent were disagree that the none teaching staff was regular before the monitoring system and 52.1% of the respondents were agreed upon the statement whereas 11.5% of the respondent were undecided. The chi-square value is 8.167 with df-4 and P-value is .o86. On the application of the chi-square test, the findings were statistically significant.

## 1.9 - **FINDINGS**

- It was revealed that 52% of the respondent were strongly dis-agreed that teacher absenteeism is still a problem in a school.
- It was found that 86% of the respondents were of the opinion that teacher absenteeism was a problem in a school.
- It was revealed that 57% are of the opinions that teaching and non-teaching staff were regular before IMU
- It was found that 80% respondents were of the opinions that teachers become regulars after commencement of IMU. .
- It was found that 80% of the respondents strongly agree that due to monitor system teacher absenteeism's are reduced.

## 1.10- **CONCLUSIONS**

The following conclusions were made in the light of statistical analysis and the findings of the study.

- The majority of the respondents agreed that teacher absenteeism's are problems in schools, when teachers do absentee, students study consequently suffered. It was found that the respondents were of the opinions teachers absenteeism was a problem in school. After commencement of independent monitoring units teachers become regular. According to the head of the institution they cooperate with the monitoring staff during data collection. It was concluded from the principals and the students' responses that due to monitoring unit teacher absenteeism has been reduced to a great extent and the majority of the respondents says that they are satisfied with the monitoring system and should continuous the project in future.

  The hypothesis of the study was, that there is no significant impact of IMU on the teaching and non-teaching staff absenteeism and regularity. But according to the conclusions of the study shows that there is significant impact of IMU on teaching and non-teaching staff absenteeism and regularity. Hence on the basis of hypothesis and conclusion researcher rejected the hypothesis.

## **1.11-Recommendation**

In the light of findings & conclusion the following recommendations had been drawn.

- Staff of IMU must be high qualified and a scale of minimum B.P.S 19 be awarded to the data collection and monitoring assistant. Because without any hesitation they (Monitor) checked the highly qualified and well experiences principal of B.PS 18 or 19 and evaluate the overall management and teaching learning process of schools properly for the betterment of the institutions. It is strongly recommended that the project should continue in future.

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# In-Service Teacher Training Institutions: Issues and Problems

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## ABSTRACT

**Purpose:** Professional development enhances the capabilities of teachers for delivery education to the future generation. So teachers are equipped with advanced knowledge of subject matter and advanced strategies to modernize the society. This study was designed to highlight the issues and problems of in-service training institutes facing in conduction of training of in-service teachers. **Method:** The study was quantitative in nature, descriptive type and survey approach was used. The target population of the study comprised of all Principals and Master Trainers of government elementary colleges of education. Sample consisted of twenty Principals and three hundred Master Trainers selected on random basis. Two similar questionnaires were self developed, validated and administered for both research subjects. The reliability of research instruments for Principals and Master Trainers was found0.849 and 0.856 respectively. **Findings:** Many problems were faced by teacher training institutions for proper conduct of in-service teacher training programs. It includes short duration of training programs, shortage of teacher training institutions, non-availability of standardized textbooks, lack of coordination, lack of professional interest of trainees, lack of monitoring and evaluation, lack of transport, security and residential facilities, shortage of competent teaching staff, shortage of physical and instructional facilities. **Implications for Research and Practice:** It is recommended that proper funds may be allocated to training institutions to overcome the shortage of infrastructure and other allied problems. A new cadre of educational trainers or experts should be inducted and established in the School Education Department for enhancing the professional development of educators.
**KEYWORDS:** Professional Development, Problems, In-service Training, Reliability, Strategies.

## INTRODUCTION

Professional development is defined by Shukla (2014) as; educational opportunities for school teachers and administrative personnel with goals of personal, professional growth and school improvement. Iqbal (2005) and Bansal (2007) described that teacher education needs to be strengthen and stress upon the main characteristics of a profession which flourish and produce professionalism in the educator. Teachers have to keep abreast of the latest developments not only in their field of specialization but also in areas of educational developments, social and cultural issues through continuous in-service training (Hussain, 2004).

*Problems of In-service Teacher Training*

Over the years, Government of Pakistan has taken numerous initiatives to improve professional development of the teachers by launching various types of in-service teacher training programs in all parts of the country, including Sindh province. However, the required objectives of these programs were not achieved so for due to many reasons. The problems identified by the National Education Policy (1998-2010) about the poor performance of the teachers were as follows:

- The profession of teaching is usually the last choice for the young men.
- All the existing in-service teacher training programs run at teacher training institutions have short duration showing imbalance among the courses pertaining to academic knowledge of the subject, content of school curriculum, teaching methods, teaching practices and curricular activities.
- The training institutions are faced budgetary and financial problems and are not adequately equipped to meet the requirements of producing advanced system of quality teacher education.
- No policy framework and implementation procedure regarding training programs of teachers.

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- The teacher training institutions face acute shortage of buildings, equipment, furniture, teaching aids, library books and other reading materials. The teacher trainers are not provided with necessary support services. These institutions are also not supervised in effective manners (AEPAM, 2015).

The present National Education Policy-2009 stressed on Continuous Professional Development (CDP) of teachers and proposed various actions for improving professional development of teachers (Govt. of Pakistan, 2009). Similarly, Iqbal (2005) pointed out major alarming problems of professional development of teachers such as short duration of teacher education programs and teaching practice, curriculum, criteria for the selection of teacher educators and lack of research in the field of teacher education.

Furthermore, Jumani (2006) pointed out following main problems of in-service teacher training in the country due to these problems, teachers were not producing expected students' performance:

- No organized attempt to improve in-service teacher training at national level.
- Aims and objectives of in-service teacher training are not clear and well explained.
- Not properly execution of useful schemes and curriculum reforms.
- Undue importance and emphasis on the quantitative expansion of in-service teacher training programs.
- Lack of clear cut policy of recruitment and selection of teachers on merit.
- The training period of all in-service teacher training programs is very short.
- The curriculum of in-service teacher training programs is narrow.
- No close coordination between education departments and teacher training institutions.
- Poorly equipped teacher training institutions from the point of physical facilities like building, staff and instructional material.

UNESCO (2006) report pointed out following main problems for improving professional development of teachers:

- In- service teacher training programs are not designed according to the requirements of trainee teachers.
- No effort is made to modify and tailor the syllabus as per the requirements of the teachers.
- Subject knowledge is not integrated with teaching skills.
- In-service teacher training programs of various levels are not properly assessed and lack adequate materials and delivery aids.
- Teacher trainers are not qualified, competent or motivated enough to transfer knowledge according to capabilities of the trainees.
- Lack of classroom-based support both for trainers and the trainees.
- Poor quality of textbooks and learning materials, and
- Lack of systems to assess students' learning outcomes.

The document of National Professional Standards for Teachers in Pakistan (2009) has also pointed out the following key issues and problems of teacher training in the country:-

- Teachers' certification programs do not provide effective communication skills, critical thinking and creative leadership to promote depth content knowledge of language arts, mathematical reasoning, social and natural sciences and cultural context to the teachers.
- The pedagogical skills taught by the teachers are designed to foster rote learning, unquestioning acceptance of textual materials and passive preparation for the tests.
- The recruited teachers do not know the accepted norms, benchmarks and professional standards for teachers in the country, and
- A system of standardized testing for knowledge, skills and performance at various levels of education with different multidisciplinary expertise is needed to be instituted before licensing teachers to enter the profession.

Malik (2014) pointed out the following main problems creating hindrances for proper conduct of in- service teacher training programs in the country.

- **Capacity Building:** Capacity building of human resource in the provinces as the revised curriculum is focused on higher order thinking skills and professional development.
- **Assessment System**: Uniform assessment system based on curriculum is initiated for quality instructions and effective delivery mechanism.
- **Constitutional Amendment:** After 18th Constitutional amendment some new responsibilities are assigned to Directorate of Curriculum and Teacher Education, for which capacity building of the relevant staff is required.
- **Policy and Standard**: No policy framework operated in teacher training programs.

- **Professional Standards**: Professional standards have to be set up as these standards integrate critical knowledge, skills and behaviours needed to perform a particular role in efficient way.
- **Accreditation:** The process of accreditation and certification should be started to maintain the quality in evaluation process to achieve the predetermined standards.
- **Core Competencies**: The teachers have invariably lagged behind in developing core competencies basis of their profession. These core competencies are the main components on which subsequent knowledge and skills are built upon.
- **Recruitment:** Not selecting the teachers on merit, lack of proper screening and relaxing of qualification requirements have jeopardized the end objective of providing quality education.
- **Curriculum:** The current curricula do not focus on nurturing a creative and learning environment involving questioning and problem solving. Subject matter is not regularly updated to keep pace with recent subject advances.
- **Teacher Educators:** Teacher educators have poor teacher quality and delivery. They administer their classes in the traditional teaching style of lecture giving, dictation and notes. Trainers fail to cultivate any creative thinking, inquiry and problem solving among their trainees.
- **Low Content Knowledge**: Content knowledge of in-service trained teachers in the country is low and very little resources are earmarked for follow-up.
- **In-Service Programs**: In-service teacher training programs were not designed according to the requirements of trainees. No effort is made to modify and tailor the syllabus as per the requirements of the trainees.
- **Support System and School Management**: Teachers require a strong support structure within their schools to improve their professional development. A healthy and facilitative teaching environment, encouragement from peers and senior faculty prove helpful for the teachers to grow and focus on the job.
- **Incentives and Career Path**: Promotion is currently based on seniority rather than performance. Low salaries characterize the profession.
- **Low investment on education**: Since independence, in Pakistan, a small portion of GDP is being allocated at national levels and due to this reason, provincial governments are unable to meet the demands for uplifting education standard of the country.
- **Lack of Political Will**: No government policy/plan can be implemented in true spirit for improving education standard of the people without the support of political authorities, but we are still lacking this power. and
- **Weak Educational Organizational Structure:** It is a common practice that education managers and even teachers were transferred on political basis. Often they do not have competency to perform their duties as it is expected. This affects the whole system of education in the schools (Bolan, 1998).

*Objective of the Study*

The objective of the study was to highlight problems of training institutes for organizing in-service training of teachers.

*Research Question of the Study*

What are the problems of training institutes organizing in-service training of teachers?

*Significance of the Study*

This study is helpful to the policy makers, academicians, decision makers and educational experts which engage in conduction of in-service teacher training programs for enhancing 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 the principals and master trainers of Govt. Elementary Colleges of Education.

## METHOD

*Research Design*

The design of this study was descriptive type; survey approach was used and quantitative method in nature.

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*Research Sample*

According to Gay (2008), population is a "target group of people having definite set of characteristics for drawing required information". It comprises all the possible cases (persons, objects, events) that constitute a known whole population. The population of this study comprised of all 25 Govt. Elementary Colleges of Education of Sindh province of ten selected districts (Dadu, Hyderabad, Karachi, Khairpur, Larkana, Mirpur khas, Naushero Feroze, Sanghar, Sukkur and Thatta) out of 23 districts of the Sindh province. These districts were selected through stratified random sampling technique due the reason that all these districts had at least both Govt. Elementary Colleges of Education (M/W). All the principals and master trainers of these colleges were selected as population of the study.

**Table 1** *Distribution of Population and Sample*

| Sr. No | Respondents | Population distribution | | | Sample distribution | | |
|---|---|---|---|---|---|---|---|
| | | Male | Female | Total | Male | Female | Total |
| 1. | Principals | 14 | 11 | 25 | 10 | 10 | 20 |
| 2. | Mater Trainers | 395 | 403 | 798 | 150 | 150 | 300 |

Table 1 indicates that there are two categories of the respondents i.e. 20 (80%) Principals (10M +10W) out of 25 (14M +11W) Principals of Govt. Elementary Colleges of Education and 300 (38%) Master Trainers (150M +150W) out of 798 master trainers (395M +403W) of Govt. Elementary Colleges of Education, Sindh. The total sample size of the study was consisted of 320 respondents 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. The Principals and Master Trainers are the most appropriate individuals of the study. The Cronbach's Alpha reliability of research instrument of Principal and Master Trainer was found 0.849 and 0.856 respectively. 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 survey data were read, checked, arranged and then coded to shape the meaningful themes. The descriptive statistics data were analyzed with the help of statistical package for social sciences (SPSS) version 21.0. The results obtained from statistical analysis are presented in tabulation which leads to the answering the stated research question.

## RESULTS

In order to search out the problems of in-service teacher training programs, frequency and percentages was applied to analyze the collected data. The results of the present research are presented and interpreted as given below;

**Table: 2** *Short Duration of In-Service Teacher Training Programs*

| Statement | Level | Principals | | Master Trainers | |
|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage |
| **Short duration of in-service teacher training programs.** | SA | 10 | 50 | 130 | 43 |
| | A | 6 | 30 | 158 | 53 |
| | UN | 2 | 10 | 2 | 1 |
| | DA | 1 | 5 | 4 | 1 |
| | SDA | 1 | 5 | 6 | 2 |

Table 2 describes that 80% principals and 96% master trainers agreed that in-service training had short duration programs.

**Table: 3** *Non Availability of Appropriate Standardized Textbooks*

| Statement | Level | Principals | | Master Trainers | |
|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage |
| **Non-availability of appropriate standardized textbooks and training modules.** | SA | 9 | 45 | 140 | 47 |
| | A | 5 | 20 | 130 | 43 |
| | UN | 5 | 25 | 8 | 3 |
| | DA | 1 | 5 | 14 | 4 |
| | SDA | 0 | 0 | 8 | 3 |

Table 3 indicates that 65% principals and 90% master trainers agreed that non-availability of appropriate standardized textbooks and training modules formed a big problem for in-service training of the teachers.

**Table: 4** *Lack of Co-ordination among Education Departments*

| Statement | Level | Principals | | Master Trainers | |
|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage |
| **Lack of co-ordination among education administrative departments and teacher training institutions.** | SA | 10 | 30 | 148 | 49 |
| | A | 5 | 25 | 121 | 40 |
| | UN | 3 | 15 | 14 | 5 |
| | DA | 1 | 5 | 11 | 4 |
| | SDA | 1 | 5 | 6 | 2 |

Table 4shows that 55% principal and 89% master trainers agreed that there was lack of coordination among education administrative departments and teacher training institutions.

**Table: 5** *Outmoded Methods of Teaching and Evaluation*

| Statement | Level | Principals | | Master Trainers | |
|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage |
| **Outmoded methods of teaching and evaluation.** | SA | 10 | 50 | 171 | 57 |
| | A | 5 | 25 | 108 | 36 |
| | UN | 3 | 15 | 10 | 3 |
| | DA | 1 | 5 | 8 | 3 |
| | SDA | 1 | 5 | 3 | 1 |

Table 5 indicates that 75% principals and 93% master trainers agreed that there was an outmoded method of teaching and evaluation in the in-service training programs.

**Table: 6** *Lack of Professional Interest and Enthusiasm of Teachers*

| Statement | Level | Principals | | Master Trainers | |
|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage |
| **Lack of professional interest and enthusiasm of teachers.** | SA | 10 | 50 | 177 | 59 |
| | A | 6 | 30 | 106 | 35 |
| | UN | 1 | 5 | 8 | 3 |
| | DA | 3 | 15 | 6 | 2 |
| | SDA | 0 | 0 | 3 | 1 |

Table 6 shows that 80% principal and 94% master trainers agreed that there was a lack of professional interest and enthusiasm of teachers.

**Table: 7** *Master Trainers are Lacking Required Skills*

| Statement | Level | Principals | | Master Trainers | |
|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage |
| **Master trainers are lacking required skills to bring change in trainees.** | SA | 10 | 50 | 160 | 53 |
| | A | 6 | 30 | 126 | 42 |
| | UN | 2 | 10 | 9 | 3 |
| | DA | 1 | 5 | 2 | 1 |
| | SDA | 1 | 5 | 3 | 1 |

Table 7 indicates that 80% principals and 95% master trainers agreed that master trainers lacked required skills to bring change in trainees.

**Table: 8** *Lack of Monitoring of In-service Training Programs*

| Statement | Level | Principals | | Master Trainers | |
|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage |
| **Lack of monitoring of in-service training programs.** | SA | 10 | 50 | 118 | 39 |
| | A | 8 | 40 | 139 | 46 |
| | UN | 1 | 5 | 24 | 8 |
| | DA | 1 | 5 | 9 | 3 |
| | SDA | 0 | 0 | 10 | 4 |

Table 8 describes that majority 90% principals and 85% master trainers agreed that there was lack of monitoring of in-service training programs.

**Table: 9** *Irregularities of Trainee Teachers in Teacher Training Programs*

| Statement | Level | Principals | | Master Trainers | |
|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage |
| **Irregularity of trainee teachers in teacher training programs.** | SA | 9 | 45 | 154 | 51 |
| | A | 5 | 25 | 108 | 36 |
| | UN | 2 | 10 | 19 | 6 |
| | DA | 3 | 15 | 9 | 3 |
| | SDA | 1 | 5 | 10 | 4 |

Table 9 indicates that 70% principals and 87% master trainers agreed that irregularity of trainee teachers in teacher training programs was a problem.

**Table: 10** *Lack of Transport, Security and Residential Problems*

| Statement | Level | Principals | | Master Trainers | |
|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage |
| **Lack of transport, security and residential problems of trainees and trainers.** | SA | 10 | 50 | 186 | 62 |
| | A | 6 | 30 | 77 | 26 |
| | UN | 1 | 5 | 18 | 6 |
| | DA | 2 | 10 | 9 | 3 |
| | SDA | 1 | 5 | 10 | 3 |

Table 10 indicates that majority 80% principals and 88% master trainers agreed that there was a lack of transport, security and residential problems both for trainees and trainers.

**Table: 11** *Appointment Procedures for Teachers Disregards Merit*

| Statement | Level | Principals | | Master Trainers | |
|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage |
| **Appointment procedure for teachers disregards merit due to political interferences and other malpractices.** | SA | 10 | 50 | 162 | 54 |
| | A | 7 | 35 | 98 | 33 |
| | UN | 1 | 5 | 15 | 5 |
| | DA | 1 | 5 | 12 | 4 |
| | SDA | 1 | 5 | 13 | 4 |

Table 11 describes that majority 85% principals and 87% master trainers agreed that appointment procedure of teachers disregarded merit due to political interferences and other malpractices was problem.

**Table: 12** *Shortages of Competent Teaching Staff*

| Statement | Level | Principals | | Master Trainers | |
|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage |
| **Shortage of competent teaching staff.** | SA | 10 | 50 | 198 | 66 |
| | A | 6 | 30 | 56 | 19 |
| | UN | 2 | 10 | 21 | 8 |
| | DA | 1 | 5 | 12 | 4 |
| | SDA | 1 | 5 | 13 | 4 |

Table 12 illustrates that majority 80% principals and 84% master trainers agreed that there was shortage of competent teaching staff.

**Table: 13** *Shortages of Physical and Instructional Facilities*

| Statement | Level | Principals | | Master Trainers | |
|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage |
| **Shortage of physical and instructional facilities in teacher training institutions.** | SA | 10 | 50 | 184 | 61 |
| | A | 5 | 25 | 67 | 22 |
| | UN | 2 | 10 | 26 | 9 |
| | DA | 2 | 10 | 11 | 4 |
| | SDA | 1 | 5 | 12 | 4 |

Table 13 indicates that 75% principals and 83% master trainers agreed that there was shortage of physical and instructional facilities in teacher training institutions.

**Table: 14** *No Standardized Procedure for Teachers' Appointments*

| Statement | Level | Principals | | Master Trainers | |
|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage |
| **There is no standardized procedure for appointment of teachers in teacher training institutions.** | SA | 10 | 50 | 162 | 54 |
| | A | 5 | 25 | 98 | 33 |
| | UN | 1 | 5 | 29 | 10 |
| | DA | 2 | 10 | 6 | 2 |
| | SDA | 2 | 10 | 5 | 2 |

Table 14 describes that 75% principals and 87% master trainers agreed that there was no standardized procedure for appointment of teachers in teacher training institutions.

**Table: 15** *Institutionalized Arrangements for Regular Training to Teachers*

| Statement | Level | Principals | | Master Trainers | |
|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage |
| **There is no institutionalized arrangement for providing regular training to teachers and teacher educators.** | SA | 10 | 50 | 177 | 59 |
| | A | 6 | 30 | 97 | 32 |
| | UN | 2 | 10 | 15 | 5 |
| | DA | 1 | 5 | 6 | 2 |
| | SDA | 1 | 5 | 5 | 2 |

Table 15 illustrates that majority 80% principals and 91% master trainers agreed that there was no institutionalized arrangements for providing regular training to teachers and teacher educators.

**Table: 16** *Lack of Proper Incentives/ Remunerations for Teachers*

| Statement | Level | Principals | | Master Trainers | |
|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage |
| **Lack of proper incentives/ remunerations for teachers.** | SA | 10 | 50 | 198 | 66 |
| | A | 5 | 25 | 86 | 29 |
| | UN | 2 | 10 | 9 | 3 |
| | DA | 2 | 10 | 6 | 2 |
| | SDA | 1 | 5 | 1 | 0 |

Table 16 indicates that 75% principals and 95% master trainers agreed that there was lack of proper incentives/remunerations for teachers.

## DISCUSSION, CONCLUSION AND RECOMMENDATIONS

It was concluded that there were many problems faced by teacher training institutions for proper conduct of in-service teacher training programs. It included short duration of training programs, shortage of teacher training institutions, non-availability of standardized textbooks, lack of coordination, lack of professional interest of trainees, lack of monitoring and evolution, lack of transport, security and residential facilities, political interferences in teachers' recruitment, shortage of competent teaching staff, shortage of physical and instructional facilities. The following recommendation was drawn on the basis of results and conclusions;

- **Provision of Infrastructure and Teaching Staff:** Proper funds may be allocated to institutions to overcome the shortage of infrastructure and other allied problems. More permanent competent teachers may also be hired on priority basis to fill the vacant posts to control the problem.
- **Running of Special Cadres for Teacher Trainers:** It is recommended that special cadres to train the teacher trainers may be run to train the teachers according to the requirements of modern era.
- **Updating of In-Service Teacher Training Programs:** It is recommended that syllabus of training programs may be updated to fulfils the need of trainee teachers and the requirements of national standards for improving professional development of teachers in Sindh province and duration of all programs may be increased for implementing contents of curricula in true spirit.
- **Co-ordination between Teacher Training and Educational Institutions**: It is recommended that before launching all the in-service training programs, teacher training institutions will get consent in advance from

educational administrative authorities for availability of teachers to participate in the training programs, so that wastage of resources can be controlled.

- **Monitoring and Evaluation of Training Programs**: It is recommended that a proper systematic follow up procedure be adopted to overview the performance of the teachers in the classrooms, so that the quality of training programs be improved for further improving professional competency of the teachers.
- **Establishment of District Institutes of Teacher Education (DITEs):**It is recommended that in each district of the Sindh province, at least a District Institute of Teacher Education (DITE)/Govt. Elementary College of Education may be established to provide in-service training facilities to the maximum teachers of rural areas at their door steps to improve their professional competency.

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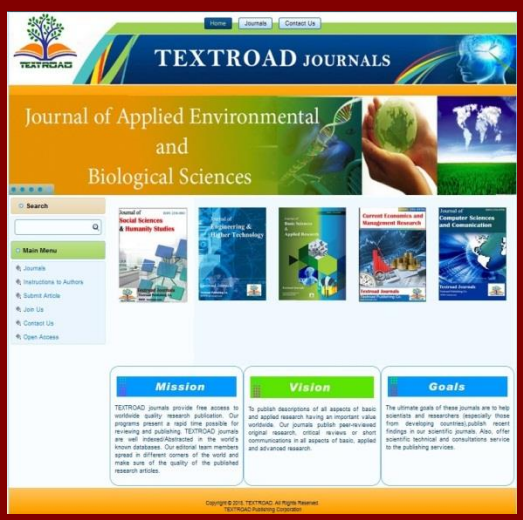

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