Relationship between Training of Teachers and Effectiveness Teaching

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Abstract

This study examined the ways in which teacher training was related to effective teaching in terms of student achievement. The purpose of the study was to assess relationship between teacher training and effective teaching. Sample of teachers comprised of 80 female teachers with 180 girl students of grade X. The instrument of the study was questionnaire for both the target groups. Examination score of grade IX was taken as student achievement. It was found that teachers had a positive attitude towards teacher training and its effectiveness in classroom situation including actual instruction/academic work, classroom management, evaluation procedures, assignments, and developing human relationships with students, principal, and society in general. It was concluded that teacher training was positively related to effective teaching. The results of the study also indicated that there is a significant co-relation between teachers training and student test result. It was recommended that quality training programs for teachers may be introduced as it has significant co-relation with student performance.

Key words: Teacher training; trained teachers, students performance

Introduction

The quality of education depends on the ability, hard work and dedication of the teacher. If a teacher fails to keep himself in touch with the rapid scientific and educational developments then he would become inefficient and ineffective as indicated in the National Education Policy (1998-2010, p. 47), that "the teacher is considered the most crucial factor in implementing all instructional reforms at the grassroots level. It is a fact that the academic qualifications, knowledge of the subject matter, competence and skills of teaching and the commitment of the teacher have effective impact on the teaching learning process". The report of Commission on National Education (1959, p.265) has similar statement as "we say it with force and without reservation that none of the reforms we are proposing will succeed unless we are able to recruit to the teaching profession at all levels men and woman of the highest abilities, and can train them."Many factors are responsible for shaping the quality teaching. These include ideological and socio-economic needs, existing structure of education system, and well-defined theories and practices of teaching and learning. Teacher education program, being an integral part of the education system, has greatly expanded and will expand further for catering to the fast emerging needs of the country. Teachers are a nation's great assets. It is the quality of teachers on which the population of a country mainly depends for excellence. Teachers' credibility depends on how they take up the rights and responsibilities, which are associated with the position. Teachers are different with respect to their attitudes and in what they expect from students.

Some teachers, from the beginning of a course, trust students to be able and motivated about course content. On the other hand some teachers have little faith in most students' intellectual ability, commitment towards the school, and honesty. Teachers also show emotional reactions to the way students behave in and out of class. According to the Association of the Teachers of Social Studies of the City of New York (1967, p.353), " The teacher should be a guide not a dictator, an artist not a mechanic, a scholar and a philosopher not a collector and repeater of facts."The above discussion revealed that training of teacher is key critical. The responsibility lies on the shoulders of teacher educators. Teacher educators usually faced with five major tasks in preparing new teachers or helping experienced teachers become better: These tasks are determining the curriculum content to teach student teachers, methods to use in preparing student teachers, motivating teachers to learn, assessing teachers' learning, and dealing with individual differences among student `teachers.That is why teacher training and professional development often includes imparting knowledge about content and skills in instruction, classroom management, or assessment, and developing teacher knowledge and skill. It enables teachers to reflect critically on their practice and approach new knowledge and beliefs about content, pedagogy, and learners

Training and development can be thought of as processes designed to enhance the professional knowledge, skills, and attitudes of educators so that they might, in turn, improve the learning of students. Training is an important part of teacher preparation programs, especially for those aspects of teaching that are more skill-like in their conception, but there are many other important aspects of teaching that can only be nurtured through reflective strategies and experiences. Training teachers is more likely to lead to diversity in practice at all levels of instruction. According to Asu (2004, p.15) there are several outcome areas that are potentially affected by teacher training program. These include:

1. Teacher knowledge,
2. Teacher attitudes and beliefs,
3. Teaching practice,
4. School-level practice, and
5. Student achievement.

Purpose of training is to generate the conditions that enable the practice to be selected and used appropriately. There are many critical elements in teacher training that should be given due attention. Hoffman and Pearson (2004, p.3) have summarized from Cruickshank and Metcalf (1990), the findings from the literature on training in terms of the following critical elements of teacher training: Trained teachers should

1. Establish clear performance goals and communicate them to learners. They should determine learners' present skill level, and ensure that learners are aware of the requisite skill level of mastery
2. Introduce only a few basic rules during early learning stages.
3. Build upon learners' present skill level during early learning stages. Ensure a basic understanding of the skill to be learned, and when and why it is used.
4. Provide sufficient, spaced skill practice after understanding has been developed and that practice of the skill is followed by knowledge of the results.
5. Provide frequent knowledge of the results in the learning process and after incorrect performance.
6. Provide for transfer of training and provide full support and reinforcement for the use of skills in natural settings.

Training of teachers provides them the knowledge, skill, and ability that are relevant to the professional life of a teacher. Teacher training moulds the personality of a teacher such that their attitudes are reshaped, their habits are reformed and their personality is reconstituted through teachers training. Training is of two types.

i. Pre-service training

It is the training provided before employment of teachers and is generally a pre requisite for it. It is aimed at professional growth of the teacher and is planned and provided in such a way that it leads to the development in him a positive attitude towards education and towards improving his own performance in terms of better student learning. The description of various training programs as presented in National Education policy (1998-2010, p. 49) is given in table 1.Some other types of teacher training programs are also being conducted. These include diploma in education (10+3) model, B Ed elementary, while many universities are providing courses at M Phil and PhD level. Many institutions and universities are involved in providing these training to teachers. Pre-service training is an essential prerequisite for teaching in primary, middle, and secondary schools of the country.

ii.   In-service training

It is an ongoing process that goes on continuously throughout the educational life of a teacher. As one does not finish learning with graduation, likewise the teacher's training goes on improving with the passage of time by gaining experience and study through-out the life span of a teacher. It is a means to achieve educational change that will persist In-service education and training refers to all those activities that contribute to professional growth and qualifications of an employee e.g. reading educational generals, participating workshops, seminars, conferences and visits to educational institutions that give the employee a sense of security and a feeling of self confidence while discharging his routine duties in the school. It is a continuing education of teachers and other educational workers leading to the improvement of their professional competence. With the rapid increase in human knowledge new approaches, new methods of teaching, and new avenues for the teachers are being introduced. If a teacher fails to keep himself in touch with these developments he is proving himself as inefficient and ineffective. In order to achieve this end it is necessary that a great many opportunities of in-service education should be provided for teachers. Different techniques of In-service training as indicated in a report by Government of New Zealand (2000) included:

1. **Refresher courses:**   As is evident from the name refresher to give strength or vigor to the efficiency and output of the already employed teacher. These courses are of high value regarding the achievement of the following purposes.
    a. Familiarizing teachers with the tests and techniques of test and measurement.
    b. Familiarizing them with the educational plans and programs.
2. **Workshops:** Workshop is a period of discussion and practical work on a particular topic/subject, when groups of people share their knowledge and experiences. The members of the workshop discuss and exchange views on a certain issue. The duration of the workshop may be from three to ten days depending upon the gravity of the problem.
3. **Seminars:** In seminars small group of people meet to discuss a topic and each participant has the opportunity to gain knowledge and experience.
4. **Conference:** Conference is a meeting for discussion or exchange of views. Usually the conference of teachers, principals, supervisors, and administrators can broaden their professional horizons and cultivate in the participant members a professional team spirit.
5. **Lectures:** Lecture is an oral activity, the simplest of ways practiced for in-service education and teachers' re-orientation programs. Lecture is suitable particularly for transmission of knowledge.
6. **Study Circle:** It is one of the desirable techniques of the in-service education. In this method the teacher of a particular subject have a meeting and in this meeting they discuss the ways and means of teaching that particular subject.
7. **Correspondence courses:** This is very effective method for the in-service education. With these courses a teacher can improve their profession knowledge.
8. **Science club:** This is a technique of in-service education for the science teachers. The science teachers are given instructions in these science clubs to promote their understanding and the capacity of educating the young.
9. **Publications:** Teachers may write on certain topic of general interest for the teachers with this method they communicate their personal experiences. The school may publish the material or the abstract of certain useful research for the benefit of the teachers
10. **Vacation institutes:** These institutions are of high value for the teachers for many reasons firstly because they enrich teachers treasury of knowledge and the teachers return to the school with renewed spirit secondly they make full use of the vacation in a better way and thirdly because the teachers have the opportunity of enjoying the life of studentship.
11. **Demonstrations:** This is an activity pre-arranged for the observation of the group. The demonstrator is usually a skillful expert of the field being demonstrated. Efforts should be made to make the demonstration genuine and natural so that artificiality could be avoided. Demonstration may be used for workshop or any other course of study where knowledge and skill is being improved. After the demonstration a follow up should be made.
12. **Project group:** Project group is used in those occasions where the accomplishment of a specific project is to be carried out. The project group usually makes survey of the project assignment and develops a course of study.

13. **Field trip:** Field trips are used to provide an opportunity to the in-service teacher see the activities of his field. Field trips may be carried out inland and abroad.
14. **Panel's presentation:** A panel is a technique in which two persons speak on a single topic. Panel presentation can be of any of the following types
15. **Debate, symposium, informal panel:** Debate is an organized form of the panel in which stress is laid on the facts and ideas and the group observes the same may be large in number. Symposium is a series of brief presentations made by a series of persons to the group, while spontaneity is the conspicuous feature of informal panel. A number of speakers speak on the topic in informal panel.
16. **Film:** Presentation of film is also a very useful technique of in –service education and training. An ideal film presentation is when associated with discussion.
17. Other technique like the visits of teacher to another teacher in action, directed practice and activities and extension lecture, exhibition, action research and self reading by individual teacher can also be used.

   a. The quality of education system of a country depends upon the academic and professional qualification of teachers of that country. Main purpose of this training is to produce qualitative manpower, which becomes reliable source of effective teaching learning process. Teachers, therefore, need various tools to become successful in effective teaching. According to Mcber (2000, p.7) there are three main factors within teachers' control that significantly influence pupil progress. These are:

- **Teaching skills:** These are those behaviors that the effective teacher constantly exhibits when teaching a class. These include involving all pupils in the lesson, using a variety of activities or learning methods, applying appropriate teaching methods, and using a variety of questioning techniques to probe pupils' knowledge and understanding.
- **Professional characteristics**: These refer to teachers' personality, character, qualification, training, knowledge and skills etc. Teacher's personality is central to learning how to teach better. Qualifications and training alone do not make a good teacher. Personality, character and commitment are as important as the specific knowledge and skills that are used in the daily tasks of teaching.
- **Classroom climate:** It is a measure of the collective perceptions of pupils regarding those dimensions of the classroom environment that have a direct impact on their capacity and motivation to learn.

Previous Researches on Impact of Teacher Training

Jacob & Lefgren (2004) find that marginal increases in-service training have no statistically or academically significant effect on either reading or math achievement, suggesting that modest investments in staff development may not be sufficient to increase the achievement of elementary school children in high poverty schools.Harris & Sass (2006) studied the effects of various types of education and training on the ability of teachers to promote student achievement. They found that there is no evidence that either pre-service (undergraduate) training or the scholastic aptitude of teachers influences their ability to increase student achievement.In the last six years, eight studies of teacher productivity in the U.S. have been conducted. Results of one study on elementary mathematics are about evenly split between positive and insignificant effects of teacher experience on student achievement. In contrast, all but one of the eight recent studies that separately analyze elementary reading find that student achievement is positively correlated with teacher experience.

At the middle school level the findings are essentially reversed. Studies that include middle school consistently find positive effects of teacher experience on mathematics achievement whereas the findings for the effects of experience on middle school reading achievement are evenly split between positive and insignificant correlations. The three studies of high school teachers yield conflicting results. Aaronson, et al. (2007) and Betts, et al. (2003) find no significant correlation between teacher experience and student achievement while Clotfelter, et al (2007) find strong positive effects. One difference in these studies is that Clotfelter et al utilize course-specific end-of-course exams while the other studies rely on more general achievement exams. Except for positive correlations between possession of a masters degree and elementary mathematics achievement found by Betts et al. (2003), Dee (2004) and Nye, et al. (2004), recent research indicates either insignificant or in some cases even negative associations between possession of graduate degrees by a teacher and their students' achievement in either mathematics or reading. In contrast to experience and possession of advanced degrees, the pre-service undergraduate training of teachers has received much less attention in the recent literature.

Two studies, Aaronson, et al. (2007) and Betts et al. (2003) consider the effect of college major on later teacher productivity, but fail to find a significant relationship between undergraduate major and the impact of teachers on student achievement. Three studies by Kane et al. (2006) and Clotfelter et al. found that inclusion of teacher effects greatly reduces the potential bias associated with teacher attrition. Clotfelter et al (2006, 2007a) consider general measures of the quality of the undergraduate institution attended and find little or no relationship to teacher productivity in elementary or middle school. In another study, Clotfelter, et al. (2007b) does find a positive and significant relationship between the prestige of the undergraduate institution and productivity of high school teachers. Kane et al. (2006) also analyze the relationship between undergraduate grade point average (GPA) and teacher productivity in elementary and middle school. The study found no significant relationship between GPA and subsequent teacher performance. It may be summed up that there are certain teachers' characteristics that may affect the achievement of students; however, the impact of teacher training is still to be investigated.

Objectives of the Study

The objectives of the study were to assess the training skills of female teachers to examine the attitude of trained female teachers towards teaching and to determine effectiveness of teaching in terms of student achievement.

Method of the Study

It was a descriptive research. The sample of the study consisted of female teachers and students of girls secondary schools. Stratified sampling technique was used. In this each school was considered as a block. The sample was selected from these blocks at random. Approximately equal number of sample was drawn from each of these blocks. The process was aimed at making the aggregate sample a representative of different strata or groups. In this study 80 female teachers and 180 students of grade X participated. All sample of the teachers possessing pre-service and in-service training. Data was collected through questionnaires and tests results of grade IX. The questionnaire for teachers was developed keeping in view all the important aspects related to teacher training and effective teaching at secondary level. It consisted of 30 items on a five point rating scale. It included questions about effectiveness of teacher training with respect to teaching, students' needs and assessment, classroom management and human relationship. The questionnaire for students also consisted of 30 items having five point rating scale. The questionnaire included items on students' interest, presentation of lesson, teacher characteristics, students' outlook and student-teacher relationship. The test results of grade IX examination was used as a mean for students' achievement. The instruments were pilot tested before actual launch. Results of the pilot test identified items that were unclear to respondents. It resulted in removal and modification of a number of items.

Data Analysis

Frequency, Percentage, Aggregate weight, Standard deviation, and Mean score of the responses to each statement on the questionnaire were calculated. Students' tests scored were correlated with teachers' responses using Pearson product moment correlation co-efficient. A brief description of data analysis presented in tables 2-6.Table 2 revealed that the teachers termed the training effective in term of teaching. Teachers viewed that training helped them in lesson planning and instruction. It was further shown that majority of teachers were using discussion, team work and AV aids. Table 3 indicated that teachers termed training effective in terms of students needs. The data also revealed that teachers aroused students' interest by constructively engaging them in work. Teachers also helped students to organize their work. While the data in table 4 indicated that training was also effective in evaluating students' performance. Table 5 pointed out that teachers properly managed their classroom time, space, materials and classroom procedures. Table 6 indicated that training also helped the teachers to establish better relationship with students.

Analysis of Questionnaire foe Srudents

Analysis of students' questionnaire presented in tables 7-11. It is revealed in table 7 that majority of students were of the view that their teacher come in time and properly used resources. Students look confident to describe the qualities of their teachers. Data in table 8 shows that students were satisfied with the presentation of teachers. Table further indicated that the teachers effectively presented lessons. Table 9 indicated that the teachers stimulate interest by using effective teaching techniques. Table 10 shows that there was a good working relationship between students and teacher. Table 11 highlights that there was a significant co-relation between training effectiveness and students' examination score. Therefore hypothesis is accepted.

Findings of the Study

Teachers had a positive attitude towards teacher training and its effectiveness in classroom situation including actual instruction/academic work, classroom management, evaluation procedures, assignments, and developing human relationships with students, principal, and society in general.Students also had positive opinion about teachers general characteristics, clarity and effectiveness of presentation, developing student interest/involvement in learning, broadening student outlook, and developing good relationship with students,It was concluded that teacher training was positively related to effective teaching. This relationship was statistically significant and positive for overall student achievement.

Implications and Discussion

It is to be noted that student learning is a product of the interaction between students and teachers, and both parties contribute to this interaction. Similarly teachers who have a positive attitude about themselves and their profession are more effective to increase the quality of student learning. The more the teachers regard their opportunity to implement effective teaching practices the better their students will perform. However, it may be argued that one to one relationship between teacher training and students' achievement is somewhat difficult to measure as there are a number of variables that cannot be neglected as pointed out by different researchers. For example, Gay (1996, p. 15) says that from the fact that two variables are highly correlated, one cannot conclude that one is the cause of the other, there may be a third factor which 'causes' both of the related variables. Similarly, Broadfoot, Osborn, Gilly, & Bucher (1993, p.1) described that any teaching learning relationship will be defined by certain constant features that relate to the nature of the task itself, and these will also be influenced by a range of contextual influences such as the age of pupils, how many there are and their motivation for being there.

On the other hand, Dove (1986, p. 198) was of the view that teacher effectiveness cannot sensibly be separated from school effectiveness. One aspect of this which is beginning to receive the attention of researchers and policy makers in developing countries is the level of school resources. Common sense suggest that teachers, however well educated and trained, are rendered less effective if school lacks the basic facilities, equipment and materials necessary for teaching and learning. Also Bauer (2004, p.4) pointed out that student performance may be caused by any number of factors, including what's taught in schools, a student's native intelligence, and out-of-school learning opportunities that are heavily influenced by a students' home environment.The same is the case with the findings of this study. The results of the study concluded that there is significant co-relation between teacher training and students' performance. As the findings of this study are not in line with the results of previous studies, therefore one may be very careful to generalize the findings of the study.

Recommendations

a. Teachers may be provided opportunities for professional development. The quality of pre service education and training should be improved. In-service education may be provided to teachers for improving the effectiveness of teaching.
b. It was recommended that quality training programs for teachers may be introduced as it has significant co-relation with student performance.
c. Teacher training curriculum should be reviewed and improved and teachers should be given in-service training facilities.
d. Further studies may be conducted on school environment, student self-concept, teacher job satisfaction, and their effects on student learning outcomes.

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Table 1 Details of Pre-service training programs

Training program	Qualification for admission	Duration of training in academic years	Classes to teach
P.T.C.	Matriculation	1	I-V
C.T	Intermediate	1	I-VIII
B.S.Ed(12+3)	Intermediate	3	VI-X
B.Ed (14+1)	B.A/ B.Sc	1	VI-X
M.Ed	B.Ed	1	VI-XII+Student teachers of P.T.C, C.T and B.Ed+Supervision
M.A. Edu	B.A/B.Sc	2	VI-XII+Student teachers of P.T.C, C.T and B.Ed+Supervision

Source: Jumani (2007). Study on the competencies of teachers trained through distance education in Pakistan, Unpublished Post doctoral report, Australia: Deakin University.

Table 2 Training effectiveness in term of teaching

Statement	Frequency & Percentage							
	SA	A	UNC	DA	SDA	Average weight	SD	Mean
Teacher training was effective in term of								
ii. Selecting appropriate teaching method relevant to the course content	22 28%	40 50%	9 11%	5 6%	4 5%	62.2	15.22	3.89
iii. Planning effective lessons	29 36%	34 43%	10 13%	7 9%	-	65	14.71	4.06
iv. Preparing and use AV aids for teaching	30 38%	39 49%	7 9%	4 5%	-	67	17.36	4.19
v. Promoting discussion about subject matter	26 33%	36 45%	10 13%	7 9%	1 1%	63.8	14.51	3.99
vi. Promoting team work and sharing of ideas	33 41%	32 40%	8 10%	7 9%	-	66.2	15.38	4.14

Table 3   Training effectiveness in term of student needs

Statement	Frequency & Percentage							
	SA	A	UNC	DA	SDA	Average weight	SD	Mean
Teacher training was effective in term of								
Stimulating students to think in a critical way	35 44%	29 36%	9 11%	7 9%	-	66.4	15.13	4.15
Producing independent learners	28 35%	34 43%	12 15%	4 5%	2 3%	64.4	14.35	4.02
Helping students to understand important ideas	18 23%	45 56%	10 13%	7 9%	-	62.8	17.45	3.92
Helping students to organize their work	29 36%	35 44%	9 11%	6 8%	1 1%	65	15.03	4.06
Keeping students constructively engaged in their work	19 24%	42 53%	12 15%	7 9%	-	62.6	16.11	3.91
Adjusting class activities to learning needs of individual students	36 45%	29 36%	7 9%	6 8%	2 3%	66.2	15.38	4.14
Developing student observation techniques	27 34%	39 49%	6 8%	6 8%	2 3%	64.6	16.17	4.04
Arousing pupil interest in learning	23 29%	37 46%	11 14%	8 8%	1 1%	62.6	14.18	3.91

Table 4   Training effectiveness in term of students evaluation

Statement	Frequency & Percentage					Average weight	SD	Mean
	SA	A	UNC	DA	SDA			
Teacher training was effective in term of								
Properly using various evaluation techniques/tests	29 36%	33 41%	12 15%	5 6%	1 1%	64.8	14.32	4.05
Giving students proper class work assignments	35 44%	28 35%	9 11%	5 6%	3 4%	65.4	14.52	4.09
Giving students proper home work assignments	31 39%	30 38%	9 11%	6 8%	4 5%	63.6	13.36	3.97
Showing and indicating the rate of progress to each student	25 31%	37 46%	11 14%	5 6%	2 3%	63.6	14.7	3.97
Pointing out their weaknesses and strengths to students	25 31%	35 44%	11 14%	6 8%	3 4%	62.6	13.56	3.91

Table 5   Teacher training and classroom management

Statement	Frequency & Percentage					Average weight	SD	Mean
Teacher training was effective in term of	SA	A	UNC	DA	SDA			
Proper management of class time	32 40%	31 39%	10 13%	7 9%	-	65.6	14.61	4.1
Proper management of classroom space	25 31%	36 45%	10 13%	6 8%	3 4%	62.8	14.02	3.92
Management of materials and equipment	21 25%	40 50%	12 15%	7 9%	-	63	15.44	3.94
Proper record keeping	27 34%	35 44%	12 15%	5 6%	1 1%	64.4	14.52	4.02
Establishing classroom routines and procedures	30 38%	35 44%	9 11%	6 8%	-	65.8	15.50	4.11
Developing proper student behavior in the classroom	29 36%	31 39%	11 14%	9 11%	-	64	13.45	4
Effectively use rewards for increasing desirable behavior	31 39%	33 41%	9 11%	7 9%	-	65.6	15	4.1
The use of challenging, positive remarks	21 26%	40 50%	11 14%	6 8%	2 3%	62.4	15.18	3.9
Careful employment and use of anecdotes and stories	29 36%	35 44%	9 11%	6 8%	1 1%	65	15.03	4.06
Effectively use punishment for decreasing undesirable behavior	27 34%	35 44%	12 15%	5 6%	1 1%	64.4	14.52	4.02
Providing a climate for students to learn	18 23%	47 59%	8 10%	7 9%	-	63.2	18.48	3.95

Table 6   Teacher training and human relationship

Statement	Frequency & Percentage					Average weight	SD	Mean
	SA	A	UNC	DA	SDA			
Teacher training was effective in term of								
Establishing appropriate relationship with students	27 34%	39 49%	6 8%	6 8%	2 3%	64.6	16.17	4.04
Supporting and caring for students	23 29%	39 49%	11 14%	5 6%	2 3%	63.2	15.16	3.95
Help students develop better relationships with each other	28 35%	34 43%	12 15%	4 5%	2 3%	64.4	14.35	4.02
Providing situations where students can learn from each other	17 21%	44 55%	11 14%	6 8%	2 3%	61.6	16.63	3.85

Table 7 Teacher characteristics

Statement	Frequency & Percentage					Average weight	SD	Mean
	SA	A	UNC	DA	SDA			
Teachers come to classroom in time	43 / 24%	88 / 49%	28 / 16%	12 / 7%	9 / 5%	136.8	32.10	3.8
Teachers are self-confident during instruction	49 / 27%	85 / 47%	23 / 13%	15 / 8%	8 / 4%	138.4	31.48	3.84
Teachers show good manners in the classroom	54 / 30%	80 / 44%	20 / 11%	16 / 9%	10 / 6%	138.4	29.97	3.84
Teachers properly use classroom resources	47 / 26%	87 / 48%	21 / 12%	14 / 8%	11 / 6%	137	31.84	3.81
Teachers use good examples to explain concepts	53 / 29%	79 / 44%	27 / 15%	12 / 7%	9 / 5%	139	29.68	3.86
Teachers are actively helpful when you have problems.	48 / 27%	85 / 47%	24 / 13%	12 / 7%	11 / 6%	137.4	31.18	3.82
Teacher quickly provides test results	40 / 22%	89 / 49%	23 / 13%	15 / 8%	13 / 7%	133.6	31.48	3.71

Table 8 Clarity and Effectiveness of Presentation

Statement	Frequency & Percentage					Average weight	SD	Mean
	SA	A	UNC	DA	SDA			
You understand easily what teachers are saying.	50 / 28%	76 / 42%	25 / 14%	16 / 9%	13 / 7%	134.8	26.67	3.74
Teachers communicate effectively	57 / 32%	80 / 44%	23 / 13%	12 / 7%	8 / 4%	141.2	31.25	3.92
Teachers speak audibly and clearly.	51 / 28%	86 / 48%	20 / 11%	11 / 6%	12 / 7%	138.6	32.33	3.85
Teachers display a clear understanding of course topics.	48 / 27%	86 / 48%	24 / 13%	13 / 7%	9 / 5%	138.2	31.80	3.84
Teachers are able to simplify difficult materials.	61 / 34%	72 / 40%	22 / 12%	12 / 7%	13 / 7%	139.2	28.38	3.87
Teachers explain experiments and assignments clearly.	54 / 30%	76 / 42%	20 / 11%	15 / 8%	15 / 8%	135.8	27.67	3.77
Teachers talk at a pace suitable for maximum comprehension	48 / 27%	88 / 49%	23 / 13%	8 / 4%	13 / 7%	138	32.90	3.83
Teachers draw and explain diagrams effectively.	50 / 28%	80 / 44%	23 / 13%	19 / 11%	8 / 4%	137	29.04	3.81
Teachers write legibly on the blackboard.	42 / 23%	85 / 47%	22 / 12%	19 / 11%	12 / 7%	133.2	29.57	3.7
Teachers have no distracting peculiarities.	47 / 26%	83 / 46%	24 / 13%	15 / 8%	11 / 6%	136	29.75	3.78

Table 9 Student Interest/Involvement in Learning

Statement	Frequency & Percentage					Average weight	SD	Mean
	SA	A	UNC	DA	SDA			
Teachers sense when students are bored.	55 31%	78 43%	21 12%	14 8%	12 7%	138	29.20	3.83
Teachers stimulate interest in the course.	59 33%	79 44%	20 11%	13 7%	9 5%	141.2	31.19	3.92
Teachers display enthusiasm when teaching.	51 28%	80 44%	25 14%	15 8%	9 5%	137.8	29.38	3.83
Teachers use many methods to involve you in learning.	60 33%	73 41%	21 12%	18 10%	8 4%	139.8	28.63	3.88
Teachers motivates you to do further independent study.	59 33%	71 39%	19 11%	20 11%	11 6%	137.4	27.04	3.82
Teachers have stimulated my thinking.	67 37%	62 34%	24 13%	15 8%	12 7%	139.4	26.45	3.87
Teachers allow me to present my own views in class	51 28%	81 45%	22 12%	18 10%	8 4%	137.8	29.81	3.83

Table 10   Teacher-student relationship

Statement	Frequency & Percentage					Average weight	SD	Mean
	SA	A	UNC	DA	SDA			
Teachers accept good suggestions	40 22%	89 49%	23 13%	15 8%	13 7%	133.6	31.48	3.71
Teachers readily maintain rapport with the class.	58 32%	77 43%	19 11%	14 8%	12 7%	139	29.64	3.86
Teachers identify each student by name	50 28%	82 46%	20 11%	15 8%	13 7%	136.2	29.74	3.78
Teachers provide guidance in solution of various problems	49 27%	85 47%	23 13%	15 8%	8 4%	138.4	31.48	3.84
Teachers come to classroom with smiling and agreeable faces	47 26%	83 46%	24 13%	15 8%	11 6%	136	29.75	3.78
Teachers treat all the students equally	47 26%	83 46%	24 13%	15 8%	11 6%	136	29.75	3.78

Table 11 Correlation between training and student exam scores

Variable	Training effectiveness	Students exam score
Training effectiveness Pearson's correlation	1	0.53*
Student s exam score Pearson's correlation	0.53*	1

*p < .05.