

Impact of microteaching training on prospective teachers' performance

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Abstract: This study observed the impact of microteaching training in comparison with traditional teaching on student teachers' performance while practicing teaching. Fifty student teachers of the Regional Institute for Teacher Education female Abbottabad comprised the sample of the study. Pre-test post-test equivalent group design was used for the experiment. For data collection valid and reliable observation sheet was adopted. Pre-test post-test data were analyzed. Pre-test findings showed the same level of performance of student teachers of both control and experimental groups. Post-test t test application indicated a significant difference between the performance of student teachers of the control and experimental group. Comparatively the performance of prospective teachers of the experimental group was better than the performance of student teachers of the control group in the use of set induction, presentation, questioning, and students' reinforcement skill. By the application of microteaching skills, the overall teaching performance of the student teachers gets better. Hence, it is suggested that inclusion of microteaching with its proper application may essentially be made. So, the student teachers may put into use microteaching skills in their professional careers for better teaching performance.

Key words: *Microteaching; Student teachers; Observation; Performance; Microteaching skills; Teaching practice*

1. Introduction

Various factors influence quality education. A teacher is also one important factor who influences quality of education. Teacher training by imparting teaching skills works for the enhancement of the quality of education. It raises student teachers' performance level and they exhibit better performance in the class (Onocha, 2013). Trained teachers' students comparatively show better performance than the students of those teachers who do not receive teacher training (Farooq and Shahzadi, 2006). Acquisition of teaching skills and knowledge is the demand of teaching profession and it is teacher training which fulfills these demands by imparting skills and knowledge to student teachers (Yusuf, 2002). Teacher training comprises theory and practicum. Microteaching a part of practicum, prepares student teachers to practice what they study in books (Koerner et al., 2002; Bell, 2007).

Microteaching gives teachers a chance to acquire various microteaching skills. Microteaching is a training technique which is carefully structured and then put into operation, so that, hands on experience regarding the targeted skill(s) could be imparted. Microteaching works in the form of a cycle which contains planning, teaching, observation and feedback (Benton, 2001; Pekker, 2009).

Student teachers get a chance to acquire different microteaching skills when they are exposed to microteaching training. They practice one microteaching skill for five to seven minutes with

reduced content, time, class size, and instructional objectives (Tangaet al., 2013). Microteaching has three phases. The first phase is knowledge acquisition, here student teachers get knowledge of the skills. In skill acquisition phase they practice the targeted skill(s). In transfer stage student teachers exhibit performance by putting into practice the theoretical knowledge in their classes (Saxena and Kajanchee, 2012). Acquisition of these skills takes place in behavioral form and makes teaching effective (Ajileye, 2012).

The impact of microteaching on teachers' performance, has remained an area of interest for Pakistani researchers. In order to find out the effectiveness of microteaching training different Pakistani researchers like (Hashmi, 1998; Satti, 1998; Khurshid, 1998; Mehmood, 1999) conducted their research studies. The results of these studies exhibited that those teachers who received microteaching training comparatively performed better in different microteaching skills than those who did not go through it.

In Pakistani context effectiveness of teaching has remained a topic posing some serious concerns. Five eight year plan (1993-98) identified pre-service teaching to be of low quality. Finding of the study by Sheikh (2000) also held low quality pre-service teacher training to be responsible for below average performance of the teachers. USAID (2006) also concluded that theory focused teacher training programs are not working for the improvement of teachers' teaching performance needed to meet the set objectives.

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Regarding this deteriorated teacher training situation in the country, education policies (1998, 2009) stated that some rudimentary changes are required for the betterment of teacher training, particularly, pre-service teacher training demands instant attention needed for its rectification.

The review of literature showed that the prevailing quality of pre-service teacher training is below standard. It also highlighted that teacher training gives too much stress on theory teaching than microteaching training. It was also found out through literature review that teachers trained through microteaching comparatively performed better than those teachers who did not get microteaching training. It was also revealed that microteaching being one of the main component of practicum, is included in pre-service teacher training programs yet performance of teachers is very low. This review casted doubt upon the effectiveness of microteaching and prompted the researcher to observe the impact of microteaching training on student teachers' performance.

2. Research methodology

Research design

It was an experimental research. Pre-test post-test equivalent design was used.

Objectives of the study

Objectives were, to observe the performance of the prospective teachers without the acquisition of selected microteaching skills during their teaching practice and to compare the performance of the prospective teachers before and after acquisition of selected microteaching skills during their teaching practice.

Hypotheses of the study

Hypotheses were that there is no significant difference between the performance of the prospective teachers of experimental and control group on pre-test during teaching practice and there is no significant difference between the performance of the prospective teachers of experimental and control group on post-test during teaching practice.

Population of the study

This study comprised fifty-three female trainee teachers of Associate Degree in Education program of RITE Female, Abbottabad, Hazara division, Khyber Pakhtunkhwa, Pakistan.

Study sample

This study contained fifty-three (53) female student teachers of Associate Degree in Education program of RITE (Female) Abbottabad. Groups were formed through matched random sampling technique. Student teachers' pre-test observation sheet scores were used for equating the groups. Every two prospective teachers having about identical pre-test scores, were made a pair then each student teacher

of the pair was randomly kept into control and experimental group. During matching three trainee teachers were eliminated. Twenty-five trainee teachers each, were placed into experimental (G1) and control (G2) group.

Instrument

For the observation of student teachers' performance in set induction, presentation, questioning and students' reinforcement skill, the researcher adopted observation sheet (Hussain, 2003). The reliability of the questionnaire was .82 at pre-test. Set induction has three, presentation has five, questioning has eight while students' reinforcement skill has six statements. Each statement has a five-point scale, i.e. strongly agree, agree, undecided, disagree and strongly disagree and has 5,4,3,2,1 as the respective score for these values.

Experiment procedure for microteaching training

Researcher got five-day formal training for running the sessions on four selected microteaching skills. During these five days, researcher spent two hours in training sessions every day. The subjects of Urdu, Islamiyat, English and Social Studies were selected for teaching the targeted microteaching skills. The researcher planned the demonstrations based on the lessons taken from these subjects. Observation sheet was used for observing and recording student teachers' performance on pre-test. Matched groups were formed by using pre-test scores obtained through observation sheet. After that the researcher started training experimental group (G1). Daily one hour training session was conducted. It went on for thirty-two days. During one hour training session everyday first half an hour was used for teaching the theory of microteaching skills while last thirty minutes were used for the presentation of six demonstrations. From already selected four subjects, the researcher randomly picked three lessons for theory teaching and delivered six demonstrations daily. For each subject researcher taught theory and delivered demonstrations in two days. Consequently, microteaching training session in one microteaching skill was completed in eight days. For the next two days, trainee teachers went through their teach and re-teach demonstrations on the respective skill. This pattern was followed for the rest of selected microteaching skills. Hence, trainer's demonstrations, theory teaching and trainee teachers' teach and re-teach demonstrations on four selected microteaching skills took forty days for completion. Finally, trainee teachers were post-tested in their teaching practice.

Student teachers' demonstrations

Student teachers' performance on each targeted skill was observed after the completion of its theory teaching and trainer's demonstrations. Each student teacher planned and then demonstrated on the targeted skill for five minutes. After that with the help of video recording of their performance they

were given feedback for seven minutes. Then again student teacher re-planned the performance in the light of the feedback and re-taught for five minutes and again received feedback for seven minutes.

Microteaching cycle of planning, teaching, feedback, then, re-planning, re-teaching, and re-feedback went on for two days for each skill. While for four microteaching skills it took eight days. Microteaching training took forty days for its completion.

Another teacher of about identical qualification and experience taught theory of both microteaching and four selected microteaching skills to control group (G2) through traditional method of teaching for thirty-two days. For the next eight days, trainee teachers under the supervision of their trainer teacher, prepared their lesson plans for teaching practice. Trainer teacher did not conduct trainer's demonstrations for control group. Trainee teachers did not perform in selected microteaching skills through teach and re-teach demonstrations.

2.1. Results

Table 1 indicated no significant difference ($p = .865$ $p > 0.05$) between the performance of prospective teachers of G1 and G2 before the acquisition of selected microteaching skills. The performance of the prospective teachers of both the groups at pre-test was same in set induction, presentation, questioning and students' reinforcement skills. Hence, the null hypothesis is accepted.

Table 1: Comparison of performance of G1 and G2 in selected micro teaching skills on pre-test

Group	N	Mean	S.D	t	df	p
G1	25	60.68	7.65	.171	48	.865
G2	25	61.04	7.23			

Table 2 showed significant difference ($p = .000$ $p < 0.05$) between the performance of the prospective teachers of G1 and G2 after the acquisition of selected microteaching skills. Prospective teachers of G1 exhibited comparatively better performance on post-test in set induction, presentation, questioning and students' reinforcement skills. Therefore, the null hypothesis is rejected.

Table 2: Comparison of performance of G1 and G2 in selected microteaching skills on post-test

Group	N	Mean	S.D	t	df	p
G1	25	100.28	5.91	-12.96	48	.000
G2	25	78.36	6.03			

Table 3 showed no significant difference ($p = .900$ $p > 0.05$, $p = .925$ $p > 0.05$) between the performance of the prospective teachers of both G1 and G2 before the acquisition of set induction and presentation skills. The performance of the prospective teachers of the two groups was same at pre-test in both the skills. Therefore, the null hypothesis is accepted.

Table 3: Comparison of performance of G1 and G2 in set induction and presentation skills on pre-test N = 25

Set Induction		Mean	S.D	t	df	p
	G1	10.56	2.12	.126	48	.900
	G2	10.64	2.36			
Presentation						
	G1	11.76	3.43	-	48	.925
	G2	11.68	2.49			

Table 4 showed significant difference ($p = .000$ $p < 0.05$, $p = .000$ $p < 0.05$) between the performance of the prospective teachers of both G1 and G2 after the acquisition of set induction and presentation skills. Prospective teachers of G1 exhibited comparatively better performance on post-test in set induction and presentation skills. Therefore, the null hypothesis is rejected.

Table 4: Comparison of performance of G1 and G2 in set induction and presentation skills on post-test N = 25

Set Induction		Mean	S.D	t	df	p
	G1	14.44	1.35	-8.262	48	.000
	G2	10.56	1.91			
Presentation						
	G1	23.48	4.04	-6.028	48	.000
	G2	17.44	2.95			

3. DISCUSSION

Table 1 showed same performance of the trainee teachers of both G1 and G2 in selected microteaching skills.

The results of this study (Table 2) are in congruence with the results of the research studies carried out by (Satti, 1998; Project, N-PTOC 1999; Mehmood, 1999; Hussain, 2003). Satti (1998) conducted experiment with a sample of 46 teachers. He selected 08 teaching skills. His sample size was less than that of the present study while in comparison with the present study he selected higher number of microteaching skills. Satti (1998) observed the classroom performance of the teachers by using checklist and found that teachers who had received training comparatively exhibited better performance in set induction, questioning, and students' reinforcement.

Project, N-PTOC (1999) by using a larger number of sample and higher number of microteaching skills than the sample size and number of microteaching skills of the present study, investigated the impact of microteaching on the performance of microteaching trained and untrained teachers and found that trained teachers outperformed untrained teachers while using targeted teaching skills.

Mehmood (1999) by using post-test only control group design, observed microteaching trained and untrained teachers' performance in set induction, presentation, questioning, motivation, teacher's liveliness and closure. The results revealed that post-test performance of microteaching trained teachers was comparatively better than that of untrained teachers.

Hussain (2003) used 210 sampled teachers. The number of this sample was quite higher than the sample size of the present study. The researcher observed the performance of the teachers of both control and experimental groups. The researcher presented the results in eight microteaching skills with respect to variables like microteaching training (trained, untrained), gender (male, female) and locality (rural, urban). The researcher found that comparatively trained teachers performed better than the teachers who did not receive training in eight microteaching skills.

Data analysis in respect with gender stated that trained male primary teachers gave comparatively better performance than trained female primary teachers in set induction and students' reinforcement skill. Trained female teachers exhibited better performance than the trained male teachers in questioning skill. Both the groups showed identical performance in presentation skill.

Data analysis was done with respect to locality variable. The performance of trained urban primary teachers in both set induction and questioning skills, was comparatively better than their rural male counterparts. Both the groups showed identical performance in presentation and questioning.

Research studies by Satti (1998), Project, N-PTOC (1999), Mehmood (1999), and Hussain (2003) were causal comparative in nature using data of microteaching training conducted by Project, N-PTOC (1993). Therefore, in these studies microteaching training being the independent variable had already been given. The researchers did not administer the treatment rather just divided their sample into teachers who either had received microteaching or those who did not get this training. Therefore, these researchers only observed the impact of microteaching training. In present study the researcher did proper planning and then execution of microteaching as an independent variable. These research studies were causal comparative while present study is experimental in nature. During experiment the researcher utilized video recording as a helping source for feedback. While none of the previous studies used this electronic gadget. One of the study interpreted data in terms with locality, gender and training variables while present study did not use these variables for the analysis of data. Like present study quantitative research methodology was used in these research studies. Unlike present study, these studies used post-test only control group design.

Table 3 showed same performance of the trainee teachers of both G1 and G2 in set induction skill.

The result of the present study (Table 4) conforms with the results of the research studies carried out by Kanno (1986), Francis (1989), and Khurshid (1998).

Kanno (1986) observed the performance of 68 sampled student teachers. This observation was made after experimental group had received microteaching training for forty-two days while present study utilized forty days for treatment. After

that, student teachers' performance was observed while they practiced teaching.

Present study observed trainee teachers' performance in set induction, presentation, motivation and questioning while Kanno observed student teachers' performance in set induction and questioning skills. Post-test results indicated that student teachers of experimental group comparatively performed better than the student teachers of control group in set induction skill.

Francis (1989) conducted an experiment. Like present study he used pre-test post-test control group design and administered microteaching training to student teachers of experimental group and observed its effect on their performance while they applied set induction skill in their teaching practice session. Post-test findings showed that student teachers of experimental group having received microteaching training in set induction skill exhibited comparatively better performance than the student teachers of control group.

Khurshid (1998) by using pre-test post-test experimental design observed the impact of microteaching training on female primary teachers' classroom performance. The researcher used the same group of teachers. Their performance before and after the administration of treatment was observed. Post-test findings showed that microteaching raised the performance of student teachers in set induction skill than their performance which they exhibited before getting microteaching training. Unlike Khurshid's study present study used pre-test post-test equivalent group design and presented the performance of experimental group in comparison with the performance of control group which was taught through traditional teaching method.

Table 3 showed same performance of the trainee teachers of G1 and G2 in presentation skill.

The result of this study (Table 4) is in congruity with the results of the studies carried out by Hashmi (1998), Killic (2010), and Ajileye (2012).

Hashmi (1998) used sample of female primary teachers and observed their performance in their classroom teaching in 08 selected microteaching skills. It was causal comparative research. Microteaching training had already been administered. Therefore, researcher just observed its effect on the performance of those teachers who had received this training and those who had not received it. Findings revealed that trained female primary teachers comparatively performed better in presentation skill than untrained female primary teachers.

Killic (2010) selected subject matter, planning, teaching process, classroom management, communication and evaluation and observed microteaching impact on student teachers' performance in these six areas. With the help of self-developed observation form which contained thirty-nine behaviors. The researcher used pre-test post-test design without control group. On the other hand, present study used pre-test post-test equivalent

group design because the purpose of the study was to observe the impact of microteaching training on the performance of experimental group in comparison with the performance of the student teachers of control group taught through traditional teaching. Killic pre-tested sampled trainee teachers before exposing them to microteaching training. Their performance during the conduct of microteaching was video recorded.

Every student teacher got written feedback and watched his video recorded performance. Re-planning and re-teaching to the peer group was done according to the feedback obtained. Like Killic's research present study used video recording as a means to provide help in feedback process. Kilic used written feedback while present study used verbal feedback. Like killic's research present study also contained one cycle of teach and re-teach exercise. During teach and re-teach sessions Killic used 10 to 15 minutes for the observation of the behaviors of each category while in present study the researcher followed (Ryan, & Allen, 1969) model and observed the performance of each student teacher in five to seven minutes in one teaching skill. Killic worked in six areas with 39 behaviors while the researcher selected four microteaching skills containing 22 behaviors. Killic analyzed the data of post-test. The result showed that the student teachers' performance was better on post-test as compare to their performance on pre-test. Student teachers exhibited better performance on post-test in the category of teaching process which contained presentation behaviors.

Ajileye (2012) out of 300 population took 150 student teachers and divided them equally into control and experimental groups. Ajileye with the help of adopted teacher assessment form observed their performance in four selected microteaching skills. Like present study, Ajileye's study also made selection of four microteaching skills. The researcher used pre-test post-test control group design similar to that of the present study. Like present study Ajileye also pre-tested both the groups. After that Ajileye administered two hours microteaching training for each skill. Per week four skills got eight hours of training. Microteaching training took three weeks for completion. On the other hand, present study consumed six weeks for microteaching training. During this period each skill was given eighteen hours for microteaching theory teaching, trainer's demonstrations on four selected skills, and student teachers' teach and re-teach exercise. Results of Ajileye's study revealed that student teachers of experimental group comparatively performed better than the student teachers of control group in the use of presentation skill.

4. Conclusion

Findings of the study helped in drawing the following conclusions;

1. Post-test data interpretation indicated comparatively better performance of the student teachers of experimental group than those of the control group in set induction, presentation, questioning and students' reinforcement skills. Hence, microteaching training turned out to be more useful than traditional teaching for the acquisition of selected microteaching skills.
2. Post-test findings showed that after getting microteaching training in set induction skill student teachers of experimental group comparatively performed better than the student teachers of control group in set induction skill. Therefore, microteaching training turned out to be comparatively more effective than traditional teaching for the acquisition of set induction skill.
3. Post-test findings showed that after receiving microteaching training in presentation skill student teachers of experimental group comparatively performed better than those of control group. As a result, microteaching training turned out to be more useful than traditional teaching for the acquisition of presentation skill.

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