
**THE EFFECTS OF MICROTEACHING ON PROSPECTIVE TEACHERS'
ATTITUDE TOWARDS TEACHING**

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ABSTRACT

The study is an experimental study pertaining to the area of student teaching in teacher preparation program. It aims at studying the efficacy of skill based instructional materials synchronized with microteaching a technique on the acquisition of four teaching skills, namely: (i) skill of stimulus variation; (ii) skill of illustrating with examples; (iii) skill of silence and nonverbal cues; and (iv) skill of recognizing as attending behaviour. It also aims at studying the efficacy of microteaching synchronized with skill based instructional material in developing general teaching competence and favorable attitude towards teaching. The Phase I involves an experiment to find out the effectiveness of skill based instructional materials synchronized with microteaching upon the development of teaching skills and general teaching competence. The phase II is concerned with studying the effect of different training approaches upon the attitudes of prospective teachers towards teaching.

Keywords: Micro Teaching, Effectiveness, prospective Teacher, Attitude, Teaching, Skill Based Instruction, Teaching Competence.

INTRODUCTION

The study conducted by Akalin (2005) concluded with an alarming conclusion that “any adequate program of teacher preparation should provide for (i) training in teaching skills; (ii) teaching of pedagogical concepts, and principles; and (iii) developing relevant attitudes towards teaching. But it is observed that the present day teaching preparation program has not been effective enough to fulfill these expectations.” Many study group, seminars and conferences have pointed out the defects and have made suggestions for improvement of different aspects of teacher education, the most important of which is student teaching.

A number of research studies (Fernandez, 2010; Kubukcu, 2010; and Bell, 2007) were undertaken revealed that: (i) emphasis is on telling rather than on doing; (ii) supervision of practice teaching is haphazard and indiscriminating; (iii) feedback is global and not in specific

behavioural terms; (iv) there is no informality in lesson; (v) training in teaching skills is not provide; (vi) prospective teachers do not have favorable attitudes towards the student teaching programs; and (vii) there is need to try innovated alternatives in the teacher preparation program.

Putnam & Borko (2000) have made the following observation about the present day teacher preparation program. “Much dissatisfaction has been shown about the training provided to the teachers. The trainees are not satisfied, the consumers are not satisfied, and more than this, even the trainers are not satisfied with training program”

On the basis of these findings of the studies and observations by teacher educators, it is necessary to try innovative alternative, in order to restructure the teacher preparation program.

Microteaching is a promising technique or recent origin and rests on the psychological principles of analytical approach. It stands today as one of the few experimental technique which by its very structure encourages a combination of theory and practice, research and training, and innovative and implementation. Microteaching is defined as a system of controlled practice that makes it possible to concentrate on specific teaching behaviour and to practice teacher under controlled conditions (Karcay & Sanli, 2009). The microteaching technique could be called as a miniaturized classroom teaching as the complexity in teaching is reduced by having a small number of pupils, short duration of time, and the content being reduced to a single, simple concept. Each cycle of microteaching consist of teach-feedback-re-plan-reteach and re-feedback sections. The study of Fernandez and Robinson (2007) has justified the effectiveness of microteaching in training in specific teaching skills. Yet in order to develop teaching skills, there is a need for developing skill-based instructional materials in the context of Pakistan.

OBJECTIVES OF THE STUDY

(i) The major objective of the present study is to enquire into the effectiveness of instructional materials synchronized with microteaching approach in the acquisition of the four teaching skills, namely: (a) skill of stimulus variation; (b) skill of illustrating with examples; (c) skill of silence and nonverbal cues; and (d) skill of recognizing attending behaviours and the general teaching competence among prospective teacher. (ii) The other objective is to enquire into the effect of instructional material along with the microteaching up to attitudes of prospective teachers towards teachings.

An important outcome of this study will be the tried out instructional materials related to the four teaching skills, namely: (a) skill

of stimulus variation; (b) skill of illustrating with examples; (c) skill of silence and nonverbal cues; and (d) skill of recognized attending behaviour.

RESEARCH HYPOTHESES

The reviews of research literature are the basis for the bunch that skill based instructional materials coupled with microteaching approach might be effective in developing the teaching skill as compared with the traditional approach. The investigator, therefore, decided to examine a general research hypothesis, stated as:

Ho: prospective teachers exposed to the treatment of skill based instructional materials synchronized with microteaching and prospective teachers exposed to the treatment of traditional teacher preparation program do not differ significantly in their attitudes towards teaching.

RESEARCH METHODOLOGY

Sample: The sample for the experiment consists of thirty four prospective teachers of the College of Education, Federal B. Area Karachi, for the academic year 2012-2013 out of 100 prospective teachers are selected randomly. For administrative convenience, three groups are made. Two groups are experimental group- A and B. the third group C is the control group. Group A consists of sixteen prospective teachers, group B nine, and group C consists of nine prospective teachers.

Research Instruments: The apparatuses used in the present study are of two types. They are: (i) tools developed for the experiment; and (ii) tools selected for the experiment. Tools developed for the experiment are four, namely, (a) observation schedule for the skill of stimulus variation; (b) observation schedule for the skill of illustrating with examples; (c) observation schedule for the skill of silence and nonverbal cues; (d) observation schedule for the skill of recognizing attending behaviour. Tools selected for the study include; (a) Madhooker Intelligence Test (MIT); (b) Teacher Attitude Inventory (TAI) and (c) General Teaching Competence Scale (GTCS).

RESEARCH DESIGN

The experiment in the study is based on the parallel group covariance design. First of all, the intelligence test, namely, “Madhooker Intelligence Test (MIT)” and the “Teacher Attitude Inventory (TAI)” were administrated to the entire three groups, and the pre-experiment scores were obtained. These are used as covariates in the study.

The major experiment was conducted in two stages. In the first stage, the two groups, namely, experimental group A, and the control group C were taken. The group A was exposed to the treatment T_1 , and group C was exposed to the treatment T_2 . In the second stage the experimental group B was exposed to the treatment T_3 ; whereas the same control group C with the treatment T_2 was retained. These two stages are presented below:

Stage I	Experimental Group A (N = 16) Treatment T_1	Control Group C (N = 0) Treatment T_2
Stage II	Experimental Group B (N = 0) Treatment T_3	Control Group C (N = 0) Treatment T_2

The treatment T_1 included the use of instructional materials on the three teaching skills, namely, (i) skill of stimulus variation; (ii) skill of illustrating with examples; and (iii) skill of silence and nonverbal cues, synchronized with microteaching technique.

The treatment T_2 included acquaintance with the technical skills of teaching, coupled with the traditional student teaching program.

The treatment T_3 included the use of instructional materials for the one skill, namely, 'skill of recognizing attending behaviour', synchronized with microteaching technique.

Microteaching treatment consisted of: (i) a lecture on microteaching along with viewing the film on technical skills of teaching; (ii) study of the instructional materials on the relevant teaching skill, (iii) training in observation and feedback; (iv) a model lesson given by the investigator on the particular teaching skill, followed by the discussion on the prospective teacher's observation; and (v) the prospective teachers themselves giving a complete cycle on the selected teaching skills. The important component in the various steps in providing the experimental treatment is the use of instructional materials on the four teaching skills. These instructional materials were prepared by the investigator in two stages, namely: (a) preparation stage; and (b) tryout stage. After preparation of the first draft a tryout was conducted with a view to finding out content validity of the materials. The sample for the tryout was teacher educators, research workers and pre-service and in-service teachers. The suggestions were incorporated and the first draft was modified. This modified draft was used for the treatment.

The second stage of the study consisted of assigning prospective teachers to two schools in the Karachi city. These selected schools are located in two different corner of the city. The idea in selecting these schools was to prevent the prospective teachers in the experimental and the control groups, to diseases and interact about the treatment. This was to take care of the contamination affect in an experimental research.

The prospective teachers gave four lessons. While they were teaching, the investigator along with the trained observer observed their teaching. Such one of the four observers including the investigator used one of the four tools to assess the acquisition of different skills, and the general teaching competence by using the General Teaching Competence Scale (GTCS). Similarly, experimental group B was observed for four lessons on the observation schedule for one skill, namely, “skill of recognizing attending behaviour”; and the general teaching on GTC scale. Prospective teachers in the control group C were also observed on the four observation schedules for four teaching skills, and the GTC scale. A final score on each of the skill and the general teaching competence was arrived for each prospective teacher by taking the main score for the four lessons.

After the teaching in schools was over, “Teacher Attitude Inventory (ATI)” was administrated to the entire three groups in order to measure the effect of different treatment on the “attitude towards teaching”.

The data related to the size criterion variables of the study, namely, (i) skill of attitude variation; (ii) skill of illustrating with examples; (iii) skills of silence and nonverbal cues; (iv) skill of recognizing attending behaviour; (v) general teaching competence; and (vi) attitude towards teaching were analysed applying the statistical technique of analysis of covariance (ANCOVA). For ANCOVA the co-variations are total scores on intelligence test, and attitude towards teaching.

RESULTS OF THE STUDY

Table 1 presents the results for groups A and C, whereas Table 2 presents those for groups B and C.

TABLE-1

A. SUMMARY OF ANCOVA FOR THE CRITERION VARIABLE OF THE 'ATTITUDES TOWARDS TEACHING' (F) AND THE COVARIATES OF I.Q (X₁) AND SCORES ON TEACHER ATTITUDE INVENTORY (X₂) OF TWO GROUPS A AND C

	SST Total Sum of Squares	SSB Sum of Squares between Groups	SSE Sum of Squares Error	SSB ¹ Mean Sum of Squares between Groups	SSB ² Mean Sum of Squares Error
df	24	1	23		
X ²	25625.04	1069.29	2455.75	1059.23	1067.84
X ₁ ²	5477.84	983.97	4493.97	983.87	195.39
X ₂ ²	14920.16	1702.94	13817.31	1702.94	674.66
XX ₁	348.58	-1025.69	1871.25	-1025.89	81.36
XX ₂	8418.29	1349.42	7069.49	1349.42	307.37
X ₁ X ₂	720.89	-1294.40	2015.28	-1294.40	87.62

B. REGRESSION COEFFICIENT & SIGNIFICANCE OF REGRESSION COEFFICIENT OF COVARIATES

Covariates	Regression Coefficient	Standard Error of Regression Coefficient	t-Value of regression Coefficient
IQ	0.19	0.48	0.39
Attitude	0.51	0.28	1.79

(C) TESTING OF UNADJUSTED AND ADJUSTED MEANS BY F-TEST

Unadjusted F-Test	df (Factor Error)	Adjusted F-Test	df (Factor Error)
1.00 Not Significant	1/23	0.22 Not Significant	1/21

D. SIGNIFICANCE OF DIFFERENCES OF ADJUSTED MEANS FOR TTI FOR GROUPS A AND C

Groups	N	Unadjusted Mean	Adjusted Mean	t-Value (Adjusted) between Groups
A	16	264.53	251.07	0.468 Not Significant
C	9	262.38	254.98	

TABLE-2

A. SUMMARY OF ANCOVA FOR THE CRITERION VARIABLE OF THE 'ATTITUDES TOWARDS TEACHING' (F) AND THE COVARIATES OF I.Q (X₁) AND SCORES ON TEACHER ATTITUDE INVENTORY (X₂) OF TWO GROUPS B AND C

	SST Total Sum of Squares	SSB Sum of Squares between Groups	SSE Sum of Squares Error	SSB ¹ Mean Sum of Squares between Groups	SSB ² Mean Sum of Squares Error
df	17	1	16		
X ²	18138.44	838.88	17582.88	555.46	1099.93
X ₁ ²	2948.00	470.32	2477.78	470.22	184.86
X ₂ ²	6220.50	68.06	6152.44	68.06	334.53
XX ₁	1834.67	-531.11	2345.77	-511.11	146.61
XX ₂	6786.00	194.44	6570.68	194.44	410.56
X ₁ X ₂	1706.00	-178.89	1884.89	-178.89	177.81

B. REGRESSION COEFFICIENT & SIGNIFICANCE OF REGRESSION COEFFICIENT OF COVARIATES

Covariates	Regression Coefficient	Standard Error of Regression Coefficient	t-Value of regression Coefficient
IQ	0.18	0.63	0.28
Attitude	1.01	0.40	2.64

(C) TESTING OF UNADJUSTED AND ADJUSTED MEANS BY F-TEST

Unadjusted F-Test	df (Factor Error)	Adjusted F-Test	df (Factor Error)
0.51 Not Significant	1/16	0.36 Not Significant	1/14

(D) SIGNIFICANCE OF DIFFERENCES OF ADJUSTED MEANS FOR TTI FOR GROUPS A AND C

Groups	N	Unadjusted Mean	Adjusted Mean	t-Value (Adjusted) between Groups
B	9	262.11	259.25	0.604
C	9	251.11	253.86	Not Significant

For ANCOVA the two covariates are IQ scores (X₁) and scores on Teacher Attitude Inventory (TAI) (X₂) and the criterion variable is post-experiment scores on 'attitude towards teaching'. Tables 1 and 2 shows that the unadjusted values which are not significant in any case. When criterion variable scores were adjusted for initial differences between

groups for the covariates of IQ scores and scores on Teacher Attitude Inventory, the adjusted 'p' is not significant. Thus, the hypothesis is not rejected. This shows that the experimental conditions for the groups: A, B and C did not produce differential effects upon the criterion variable "attitude towards teaching" as measured by Teacher Attitude Inventory (TAI).

The results reveal that the attitudes of prospective teachers in groups A and C, did not change significantly given the treatment T_1 to experimental group A, and T_2 to control group C. similarly, the attitudes of prospective teachers in group B and C did not change significantly given the treatment T_3 to experimental group B, and T_2 to the control group C. This indicates that all the three treatments (T_1 , T_2 and T_3) did not produce significant effects upon the "attitude towards teaching". The mean scores of pre-treatment and post-treatment were studied, in order to find out the reasons for the non-significant results regarding "attitude towards teaching". From these mean scores, it appears that all the three treatments did not produce significant change in their "attitude towards teaching". Most of the prospective teachers from all the three groups were having no experience of actual teaching. Therefore, it is just possible that after coming into the contact with the reality of classroom teaching, they were not able to form attitude towards teaching in the given duration of teaching, even though the treatments were sufficient enough in forming relevant attitudes. In other words building an attitude not be achieved quickly. It is only through a prolonged process of teaching and education that attitudes are built up. As a result of this, their attitudes did not change significantly after undergoing the treatments.

On the basis of these results, it can be concluded that prospective teachers exposed to the treatments of skill-based instructional materials synchronized with microteaching and prospective teachers exposed to the traditional student teaching program do not differ significantly in their attitudes towards teaching.

Similar finding are reported by Amobi (2005). He found that treatment by microteaching technique was effective in developing teaching skills in the prospective teacher. But the attitudes of prospective teachers towards teaching did not change significantly. There are some studies which do not support the finding of the present study. Benton-Kupper (2001) conducted a study with a purpose to investigate the effect of microteaching upon the pre-service teacher attitudes and the acquisition of teaching skills. The results indicated that microteaching did help to improve pre-service teachers' attitudes towards learning. Higgins

and Nicholl (2003) finding is in connection with these findings. The study was conducted to examine the reactions of prospective teachers towards self-instructional microteaching program. The findings revealed that after undergoing the self-instructional materials and microteaching program significant change was observed in the attitudes of prospective teachers towards teaching profession.

Examining the research findings on “attitude towards teaching” after undergoing the teacher preparation program, using Teacher Attitude Inventory (TAI), it is found that study by Subramaniam (2006) explored that significant gains occurred for the total group, in the attitude towards teaching as a result of teacher preparation program. However, some studies (e.g. Wilkinson, 1996) report that prospective teachers attitude become more negative, after coming into contact with reality of the classroom during student teaching program. Ogeyik (2009) conducted a research to analyze the effects of student teaching program upon the attitude of prospective teachers with the TAI. The results revealed that prospective teachers did not form positive attitude towards teaching. Further the investigator recommends that formation of positive attitude towards teaching as profession is to be a major goal of teacher preparation program, then more attending needs to be given to this specific phases of professional education. Thus, it can be concluded that further research is needed regarding change in attitudes towards teaching.

EDUCATIONAL IMPLICATION

The study provides following guidelines for the educators:

- i) There are alternatives to the present day student teaching program
- ii) One such alternative is the use of skill-based instructional materials synchronized with microteaching.
- iii) With proper scheduling of time, providing laboratory training to all prospective teachers is possible.
- iv) Development of technical skills of teaching contributes to developing general teaching competence.
- v) Improving student teaching does not require additional financial input. It only requires mental efforts and an organizational acumen.
- vi) Changing of attitudes require further research.

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