

PRE-SERVICE TEACHER EDUCATION IN PAKISTAN: APPLICATION OF INNOVATIVE APPROACHES

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ABSTRACT: Application of innovative approaches has been a focus of study for many educational researchers and it ultimately helps to find the aspects that can be intervened to enhance the teacher's continuous professional development toward teaching learning process. A relationship has been reported between teacher educators and prospective teachers regarding the application of innovative approaches in pre service prospective teacher training. The variation in result reported by researchers regarding the use of innovative approaches in pre service teacher education reflects that the demographic variables might have an influential effect on the application of innovative approaches in pre service teacher education. The purpose of this study was to explore the application of innovative approaches in pre service teacher education in Pakistan. The participants of the study were 86 teacher educators of 11 government colleges for elementary teachers (GCETs). A questionnaire was developed for teacher educators on a five point likert scale and reliability of the questionnaire was 0.870. The findings of the study show that there was no significant difference between male and female teacher educators regarding use of innovative approaches, i.e. computer assisted instruction, Multimedia, Micro teaching and other training aids at GCETs.

Key Words: Innovative approaches, Prospective teachers, Demographic variables, Reliability, Micro teaching, Computer assisted instruction and Multimedia

INTRODUCTION

The human being is a supreme creature in the universe due to education and education is essential for his survival in the world. It is a vital investment in human and economic development and is influenced by the environment within which it exists [1]. The most crucial factor is the quality of interaction between teachers and taught in the classroom. The quality of any education system entirely depends on the quality of teachers. Appropriate teacher preparation is the most effective means of improving education practice. Thus, teacher education and suitable pedagogy are very important [2]. Various innovations are proved to be true to use in teachers education for teachers' professional development and replace the traditional approaches in teachers' education. There is need to review the teacher education curriculum, instructional set up and the teaching methodologies for imparting training to teachers.

In view of Sultana [3], good teachers are a vital necessity to the progress as well as the safety of a nation. Similarly, Siddiqui [4], described that good teachers constantly learn and update their teaching skills and share successes and challenges with fellow educators. It shows that the best teachers are assets of a nation. In view of George and Valan [5], "without education and knowledge of modern teaching techniques, the teacher would remain incomplete." It shows that teachers are social engineers for the nations and without latest education, they are unable to mould the new generation according to the need of the society. Therefore, it is the need of the hour to re-engineer the teacher with the latest methods and techniques along with modern equipment. Educated and skilled teachers are required who will master new approaches and techniques.

Kosnik [6], stated that innovative approaches present key principles of teacher education. It is obvious that the modern teaching techniques can play a vital role in enhancing the professional skills of the teachers. In view of Chauhan [7], "in order to enhance teachers' competencies and effectiveness in implementing the teaching strategies, teacher should always be aware of new approaches and strategies

cropping in the educational system". Sultana [3] said that a number of traditional methods of teaching are in practice like lecture, recitation, discussion, demonstration, heuristic, project, activity, problem solving, deductive, inductive, drill, questioning techniques and group differentiated method. In the same way, there are innovative methods of teaching like micro-teaching, simulated method, programmed instruction, and computer assisted instruction, team teaching, peer teaching, individualized instruction, teleconferencing and role playing.

According to Asian Development Bank [8], improvement in the quality of teaching is essential for producing a more capable workforce. Education must meet the needs of a rapidly growing economy for competent problem solvers who are imaginative, adaptable, and creative. To accomplish this, the changing skills are required of school graduates that must be reflected in the teacher training. This requires new approaches, as most teachers continue to teach in traditional ways in which they themselves were taught.

The Asian Development Bank compasses over the new approaches for teacher education. According to National Educational Policy [9], the quality of teacher education relates to policy formulation and planning, development and management of teacher education programs, provision of adequate infrastructure to training institutions, pre-service and continuing in-service education to teacher educators, regular enrichment of curriculum content, methods, evaluation techniques, teaching aids and other teacher related resources. This necessitates the provision of adequate infrastructure for teacher training.

National Education Policy 2009 [1] emphasized the importance of innovative approaches for the development of the teachers. Innovation means the introduction of a new idea, a process or technique and its adaptation for widespread use to replace the existing practice or technique. According to Ahmad [10], "an approach is a set of beliefs which prescribes the use of certain methods". There are certain innovative methods which are being used in teacher training programmes like micro-teaching, computer assisted

instructions, team teaching, personalized system of instruction, modular approach, multi-media teaching and system approach etc..

Keeping in view the changes in curriculum and development in science and technology, the traditional teaching approaches cannot meet the requisite needs of the teachers. Teachers should be well versed with the modern teaching methods, so as to prepare the new generation, according to the future needs of the societies. Therefore, a need is felt to analyze the innovative approaches that may be applied in pre service teacher training programmes for prospective teachers in Pakistan.

Objectives

Following were the objectives of the study:

- i. To find out the extent of the innovative approaches that is employed in teacher education in Pakistan
- ii. To compare the attitude of male and female teacher educators towards the use of innovative approaches in Pakistan

Hypotheses

Following were the hypotheses of the study:

- i. There is no significant difference between the performance of teachers using innovative approaches and without using innovative approaches in teacher education in Pakistan
- ii. There is no significant difference in the attitudes of male and female teachers towards the use of innovative approaches

Methodology

The participants of the study were 86 teacher educators of formal education of 11 Government colleges for elementary teachers of Punjab.

A research instrument development and validation

A questionnaire was developed consisting of 56 items (55 close ended and 1 open ended) for teacher educators of GCETs. Before actual administration of the questionnaire, it was validated by ten experts. Sample for the pilot study was selected randomly from three B.Ed offering institutions (Government College for Elementary Teacher Sargodha, Iqra College of Education Sargodha and University of Sargodha), which were otherwise not part of the main sample. The reliability of questionnaire was 0.870. A questionnaire was administered to the selected respondents of both categories, by mail and in person. In an open ended questionnaire, 13 percent teacher educators suggested that alternative arrangements of electricity should be provided during load shedding. 5 percent teacher educators suggested that an internet facility should be provided to prospective teachers in their classes.

Descriptive statistics

Gender-wise detail of GCETs Teacher educators

The table 1 shows that out of 71 GCETs teacher educators, 46 were male and 25 were female. Among male teacher educators 8.6 percent were from GCET Jhelum, Gakkhar and Gujrat and Kamalia respectively, while 19.5 percent teacher educators were from GCET Faisalabad, 15.2 percent were from GCET Mianwali, 17.3 percent teacher educators were from GCET Rawalpindi, 6.5 percent Joharabad and 4.3 percent from Chiniot. Only 2.1 percent teacher educators were from GCET Lalamusa.

The female distribution was, 20 percent teacher educators were from GCETs Talagang and Lalamusa separately, while 24 percent female teacher educators were from GCET Kamalia. Whereas 8 percent female teacher educators each were from GCET Chiniot and Rawalpindi. Only 4 percent female teacher educators each were from the GCET Faisalabad and Mianwali.

Table 1: Gender-wise detail of GCETs Teacher Educators

Gender	GCETs Teacher Educators											
	Jhelum	Gakkhar	Gujrat	Talagang	Faisalabad	Mianwali	Joharabad	Lalamusa	Chiniot	Rawalpindi	Kamalia	Total
Male	4	4	4	0	9	7	3	1	2	8	4	46
Percentage	8.6	8.6	8.6	0	19.5	15.2	6.5	2.1	4.3	17.3	8.6	64.8
Female	0	0	0	5	1	1	3	5	2	2	6	25
Percentage	0	0	0	20	4	4	12	20	8	8	24	35.2

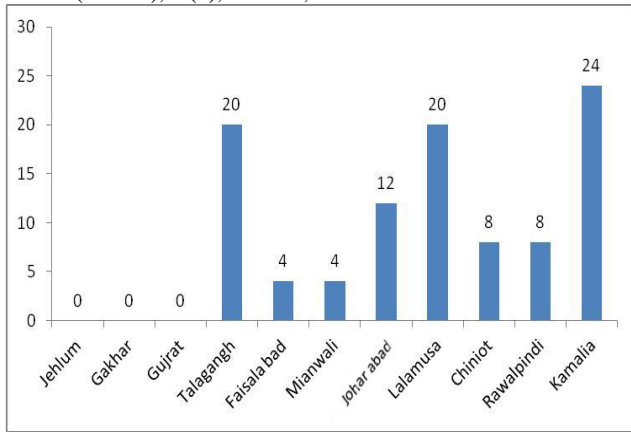


Figure Male GCETs (in percentages)

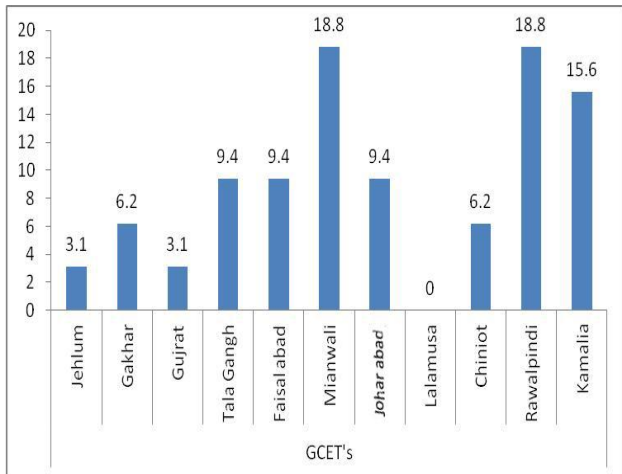


Figure : Female GCETs (in percentages)

Statistical Analysis

The difference between Male and Female Teacher educator’s attitude regarding the use of Innovative Approaches, the table 2 reflects the difference between male and female GCETs teacher educators attitude in the use of innovative approaches.

Awareness about of Innovative Approaches

The mean scores of male and female teacher educators were (M=8.46) and (M=8.3) respectively. The difference between two mean was not significant at .05 level, hence, Ho 2 is accepted. It indicates that GCETs male and female teacher educators were equally aware about the use of innovative

approaches.

Computer Assisted Instruction (CAI)

The mean scores of male and female teacher educators were (M=39.25) and (M=39.61) respectively. The difference between two mean was not significant at .05 level hence, Ho 2 is accepted. Thus, opinion of male and female teacher educators regarding the use of CAI in their classes was significantly similar.

Multimedia

While the mean scores of male and female teacher educators were (M=29.58) and (M=30.73) respectively. The difference between two mean was not significant at .05 level hence, Ho 2 is accepted. It shows that male and female teacher educators were using the multimedia in their classes equally.

Micro-teaching (MT)

The mean scores of male and female teacher educators were (M=52.41) and (M=54.52) respectively. The difference between two mean was not significant at .05 level hence, Ho 2 is accepted. It indicates that male and female teacher educators were using MT in their classes equally.

Training Aids Availability

The mean scores of male and female teacher educators were (M=25.66) and (M=24.26) respectively. The difference between two mean was not significant at .05 level hence, Ho 2 is accepted. This implies that the availability of training aids to male and female teacher educators was significantly similar.

Use of Training Aids

The mean scores of male and female teacher educators were (M=50.18) and (M=50.47) respectively. The difference between two mean scores was not significant at .05 level hence, Ho 2 is accepted. Hence, opinion of male and female teacher educators regarding use of training aids was significantly similar.

Problems in the use of Innovative Approaches

The mean scores of male and female teacher educators were (M=27.83) and (M=29.86) respectively. The difference between two mean scores was significant at .05 levels hence, Ho 2 is rejected. It implies that female teacher educators faced more problems in the use of innovative approaches as compared to male teacher educators at GCETs

Table 2: Difference between Male and Female GCETs Teacher educators’ attitude in the use of innovative approaches

Factors	Respondents						t
	Male			Female			
	N	Mean	SD	N	Mean	SD	
Awareness about the use of innovative approaches	46	8.46	1.01	25	8.3	1.14	0.606
CAI	46	39.25	6.96	25	39.61	3.31	-0.234
Multimedia	46	29.58	3.69	25	30.73	3.51	-1.252
MT	46	52.41	9.10	25	54.52	13.66	-0.771
Training aids availability	46	25.66	4.46	25	24.26	5.40	1.158
Use of training aids	46	50.18	8.58	25	50.47	12.68	-0.114
Problems in use of Innovative approaches	46	27.83	4.86	25	29.86	6.77	-1.447

df=69

p<.05

Table value of t=2.00

One Way ANOVA on GCETs Teacher educators' Performance with respect to Professional Qualifications in use of innovative approaches
The table 3 indicates the F value of GCETs teachers' performance with respect to professional qualification about various factors of innovative approaches used in teacher education.

Awareness about use of innovative approaches

F value (1.182) was not significant at $p < .05$ hence, Ho 1 was accepted. It shows that the teachers having different professional qualifications were familiar equally about the use of innovative approaches.

Computer assisted instruction (CAI)

The F value (4.373) was significant at $p < .05$ hence, Ho 1 was rejected. It shows that the teachers having different professional qualifications were using the computer assisted instruction differently in their classes at GCETs.

Multimedia

The F value (1.789) was not significant at $p < .05$ hence, Ho 1 was accepted. It shows that the teachers having different professional qualifications were using the multimedia equally in their classes at GCETs.

Micro-Teaching (MT)

The F value (2.200) was not significant at $p < .05$ hence, Ho 1 was accepted. It shows that the teachers having different professional qualifications were using the MT equally in their classes at GCETs.

Training Aids Availability

The F value (1.977) was not significant at $p < .05$ hence, Ho 1 was accepted. It shows that the teachers having different professional qualifications were having equally training aids availability in their classes at GCETs.

Use of Training Aids

The F value (0.916) was not significant at $p < .05$ hence, Ho 1 was accepted. It shows that the teachers having different professional qualifications were using equally training aids in their classes at GCETs.

Problems in use of Innovative Approaches

The F value (2.330) was not significant at $p < .05$ hence, Ho 1 was accepted. It shows that the teachers having different professional qualifications were facing equally problem in the use of innovative approaches at GCETs.

Table 3: One Way ANOVA on GCETs Teacher educators' Performance with respect to Professional Qualification in use of innovative approaches

Factors	Between Group			Within Group			Total	F
	Sum of Squares	Df	Mean Square	Sum of Squares	df	Mean Square	Sum of Squares	
Awareness about the use of innovative approaches	3.92	3	1.30	73.06	67	1.10	76.98	1.182
CAI	413.05	3	137.68	2109.42	67	31.48	2522.47	4.373
Multimedia	69.32	3	23.10	865.55	67	12.91	934.87	1.789
MT	723.61	3	241.20	7346.69	67	109.65	8070.31	2.200
Training aids availability	131.06	3	43.68	1480.76	67	22.10	1611.83	1.977
Use of training aids	275.88	3	91.96	6728.48	67	100.42	7004.36	.916
Problems in use of innovative approaches	206.90	3	68.96	1982.84	67	29.59	2189.74	2.330

df=70

$p < .05$

Table value of $F=2.00$

FINDINGS

Following findings were drawn from results.

Difference between Male and female teacher educators' attitude regarding use of innovative approaches

i. Awareness about the use of innovative approaches

Difference between male and female teacher educators in use of innovative approaches and different aspects of innovative approach. The mean scores of male ($M=8.46$) and female ($M=8.3$) were not significantly different having t values 0.606 at $P < 0.05$ on factor "Awareness about the use of innovative approaches hence Ho 2 was accepted". It means that both male and female teachers were equally awareness about the use of innovative approaches.

ii. CAI

Mean scores of male ($M=39.25$) and female ($M=39.61$) were not significantly different having t value -0.234 at $p < 0.05$ on

factor "CAI" hence Ho 2 was accepted. It indicates that male and female GCET teachers were using CAI equally.

iii. Multimedia

Mean scores of male ($M=29.58$) and female ($M=30.73$) were not significantly different having t value - 1.252 at $p < 0.05$ on factor "Multimedia" hence Ho 2 was accepted. It reflects that male and female teachers were using multimedia at GCET equally.

iv. MT

Mean scores of male ($M=52.41$) and female ($M=54.52$) were not significantly different having t value - 0.771 at $p < 0.05$ on factor MT hence Ho 2 was accepted. This implies that male and female GCET teachers were bonafide with MT equally at GCETs.

v. Training aids availability

Mean scores of male ($M=25.66$) and female ($M=24.26$) were not significantly different having t value 1.158 at $p < 0.05$ on

factor “Training aids availability” hence Ho 2 was accepted. It projects that availability of training aids at GCETs were equally available for male and female teachers.

vi. Use of training aids

Mean scores of male (M=50.18) and female (M=50.47) were not significantly different having t value - 0.114 at $p < 0.05$ on factor “use of training aids” hence Ho 2 was accepted. This shows that both male and female GCETs teachers were using training aids equally.

vii. Problems in use of innovative approaches

Mean scores of male (M=27.83) and female (M=29.86) were not significantly different having t value -0.447 at $p < 0.05$ on factor “problems in use of innovative approaches” hence Ho 2 was accepted. It reflects that there was no significant difference between male and female teachers regarding use of CAI, multimedia, MT, and other training aids at GCETs. Both male and female had equal awareness about innovative approaches and also had same problems in the use of these approaches.

CONCLUSIONS

The focus of this study was to analyse the application of innovative approaches in pre service in teacher education in Pakistan. Male 46 (65 percent) and female 25 (35 percent) GCETs teacher educators were found consistent in their opinion regarding the use of teaching aids and training aids as well as different aspects of innovative approaches including awareness about the use of innovative approaches, Computer assisted instructions, Micro-teaching, Multimedia, and problems in use of innovative approaches.

DISCUSSION

In this study, all male and female, teacher educators having different academic, professional qualification and varying teaching experience were familiar with the use of innovative approaches in their respective classrooms for the training of prospective teachers. All used the Multimedia, CAI, MT, different teaching and training aids during their teaching equally. It reflects that all the teacher educators of GCETs were well versed with the importance of innovative approaches applied to the teaching in training institutions in Pakistan. It also indicates that different demographic variables do not seem to affect the use of innovative approaches among GCETs teacher educators [11].

Teacher educators of GCETs suggested the availability of continuous supply of electricity through alternative sources be provided so that different teaching facilities can easily be used during their teachings. Similarly the use of internet and linkage of different classes and college campuses were also

suggested by the teacher educators. These suggestions reflected that teacher educators of GCETs had a clear vision about the importance of the use of innovative approaches in their classes [12].

SUGGESTIONS

There is need of in depth study of in the service application of innovative approaches in teacher education in Pakistan. The result of that study can be used for enhancing the professional development of in service teacher educators that will produce creativity among the teachers. It will help learners for conceptual learning instead of rote learning. The government should provide innovative teaching material to each teachers training college in Pakistan.

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