TRAINING NEEDS ASSESSMENT OF UNIVERSITY TEACHERS REGARDING USE OF COMPUTER RESOURCES

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ABSTRACT

It is the era of computer and information technology. Our dependency on computerized information has been very much increased. The government of Pakistan has special focus on spreading the technology. Large numbers of computer projects have been funded and different IT programs have been introduced in the universities. But one thing that is lacking behind is skilled teachers to really implement these projects, programs and courses. So the main focus of this study is on the staff development regarding use of computer resources. The study is significant because it produces a bulk of skillful computer personnel's at the university level. The public and private universities were included in the study. The data was collected through research questionnaire and pre-test post-test design was used to check the effectiveness of the training. The t-statistics for the difference between the mean was used to distinguish the results of the participant before and after the training. The t-value of 235.1393 shows that there was significant difference on the pre-test and post-test before and after the training.

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INTRODUCTION

The researcher had keen interest to develop the teachers training model regarding use of computer resources. This model of teachers training was developed in the light of teacher's previous knowledge about computer resources and their use. Through diagnosing the needs of different departments, the researcher focused his attention on how to develop teachers in the light of the present requirements of the university students in the regular classes. The main focus of the researcher was on training the teachers that how they can meet the present needs of the students in their respective departments. The study also focuses on the development of the university teacher so that he/she may be able to complete his/her research work at M.Phil/Ph.D level without taking help of the external agency in data analysis, report writing and printing/scanning purposes. There is a growing body of research literature, which indicates that some techniques and practices of teachers not only promote the teachers but also affect the aptitude of students to learn. Especially the research studies indicating the effectiveness of various models of teaching can greatly help in development of teacher's education program (Ausubel, 1963, 1968; Jhonson and Jhonson, 1975).

Coaching as techniques as described by (Joyce, Weil and Showers, 1992) has a great potential for pre-service and in-service training of teachers. These techniques may be used for mastering

different methods, skills and models of teaching and learning, to meet the needs of the universities.

The main focus of this study was on the development of in-service teacher training program regarding the use of computer resources. In Pakistan in-service teacher education is considered in terms of individual teachers attending courses designed and provided by outside school agencies, which presumed that such courses would lead to teacher development, and it may help in improving classroom and environment for better education or student learning. The researcher focused to develop teachers in the light of needs of the different departments of the universities and needs and demands of the students.

Recent research has suggested that in-service program is more effective when institution is considered a basic unit for it (Baker, 1980; Henderson, 1975). In such a program all the teachers of the institution are targeted and teacher development was linked to overall improvement in teaching learning environment.

STATEMENT OF THE STUDY

The problem under study was the **"**Training need assessment of the university teachers regarding use of computer resources".

OBJECTIVES OF THE STUDY

Following were the main objectives of the study:

1. To analyze the previous knowledge of the university teachers regarding use of computer resources.
2. To assess the needs of university teachers regarding use of computer resources.
3. To develop a program of teachers training regarding use of computer resources keeping in views the Pakistan condition.
4. To develop teachers with latest skills, method of teaching with respect to Special Educational Needs of all the students, which fulfill the needs of the students.

SIGNIFICANCE OF THE STUDY

This study may be helpful due to following reasons:

1. Now a day's computers are being used in every walk of life and in every field of study. At the university level especially there are different computer courses which are taught in the various departments. When we exclude the computer department, all the teachers of other departments have either very limited knowledge about computer or they don't know the use at all. Therefore there is a great need of training of university teachers so that they may be able to teach the computer subject in their respective departments.

2. At the university level, teachers are engaged in the research work at M.Phil/Ph.D level, for this purpose they need to use different computer programs for data analysis and also need to use different computer resources such as printers, flash, scanners, hard disk, and

keyboard/mouse for data storage and report writing. Therefore they are in dire need of in-service computer training.

3. At the higher education level seminars, workshops and research projects are conducted by the different agencies in which university teachers participate. the in-service programs and projects demand a great use of computer resources and multimedia. So not only for becoming the active member of the higher stream of the country but also for the survival as a university teacher it become an urgent need to gain training of computer resources.

4. Teaching skills of the teachers may be improved in the light of findings of this study, as this study may focus on the teaching skills according to needs and demands of the students and teachers.

5. It may be helpful in improving the quality of in-service program as all the previous in-service programs are arranged and organized by some body else and not according to the participating teachers needs. The study may stress to organize in-service programs in the light of recommendations of this study.

6. It may be economical both in terms of time as well as resources. As in-service teacher education programmed requires a great deal of resources and time. University based programmed will reduces these expenditures.

DELIMITATIONS

Followings were the delimitations of the study:

1. The study was delimited to two Districts (Dera Ismail Khan and Bannu) only.

2. The study was delimited to Two Universities only.

3. The study was delimited to only 10 departments (Gomal University 5 Departments + Bannu University 5 Departments)

4. It was not be possible to include all the teachers of selected universities; therefore only 100 teachers were selected and focused for staff development

5. Only six days staff development workshop was organized.

INSTRUMENT

A questionnaire and tests (pre-test and post-test) were used for the research purpose.

Research Questionnaires

A questionnaire was used as instrument for data collection regarding previous knowledge and need assessment of the university teachers. Questionnaire was developed by the researcher himself. Initially questionnaire consists of 25 questions. The questionnaire was validated by the views of the experts of IER and ICIT department of the Gomal University Dera Ismail Khan. The experts discarded the 10 questions and the remaining 15 questions were used as the final version of the research questionnaire.

Pre-test

A comprehensive test was developed from the data of the questionnaire and the need assessments of the teachers. After completing the questionnaire session the participant of the worship were given pretest and the responses were recorded.

Post-test

After the completion of six days workshop the same test was given to participants and the performance of teachers on the pretest and posttest was compared.

PROCEDURE OF THE STUDY

First of all the questionnaires were distributed among the sample. These questionnaires diagnosed the previous knowledge of the teachers and assessed the needs of the teachers regarding use of computer resources. The teachers filled up the questionnaire according to the needs of their departments. The data of this questionnaire was used as input for the development of pre-test in the field of training contents.

Research Design

The most appropriate Pre-test, Post-test controlled group design was used for this study.

Research Hypothesis

Following null hypothesis was tested.
There is no significant difference between the mean pre-test and post-test score of the university teachers before and after the training regarding use of computer resources.

Population:

All the Public and Private universities of Pakistan comprised population for the study. All teachers of these universities were included in the study.

Sample:

A convenient sample was selected as under:

1.   The Two Universities of Pakistan i.e. Gomal University DIKhan and Bannu University Bannu only.
2. Only 10 departments of selected universities (Gomal University 5 Departments + Bannu University 5 Departments).
3.   Only 100 teachers were selected from the different departments as under for staff development.

University	Departments	No of teachers
Gomal University, DIK	IER	10
	CBA	8
	Pharmacy	12
	Physics	12
	Statistics	8
Bannu University, Bannu	IER	10
	Physics	10
	MBA	10
	Chemistry	10
	Computer	10
Total	10	100

Staff Development workshop:

1. Selection of teachers:

Researcher selected participant for the workshop with the consultation of heads of the departments.

2. Venue of the Workshop:

IER Gomal University D.I.Khan and IER Bannu university Bannu, were selected as venue of work shop for the convenience of the participants.

3. Selection of content for work shop

Researcher with the consultation of Professors of ICIT and IER Gomal university Dera Ismail Khan selected content for the work shop. The need assessment done with the help of the questionnaire was proved more helpful in this regard.

4. Conduct of Staff development workshop

Six days workshop was organized for 100 participants. In this respect two workshops were arranged. One workshop for the teachers of Gomal University and other for the teachers of the Bannu University. The duration of each workshop was 3 hours daily.

5. Resource persons

Researcher himself and supervisor acted as the principal resource person. The services of professors of ICIT Gomal University were also utilized when needed.

6. University Based In-service Training:

After the workshop the participant teacher were given the task to arrange the same training in their respective Universities to equip all the teachers with computer training. The researchers visited these Universities and assessed the performance of the teachers as well as their difficulties regarding computer skills. The researcher developed one day in-service program on monthly basis. In which the majority of problems were resolved on the spot through support services.

PRESENTATION AND ANALYSIS OF DATA

The training of 100 teachers was completed in the groups of 50 teachers each. The responses on the questionnaire regarding need of computer resources were tabulated in the form of table. The duration of each workshop was six days. Each group was given pre-test before training and posttest after training. The results of these were analyzed using the following statistics.

The Mean, SD and Variance of the data were calculated and pre test, post test were analyzed through paired t-test.

Questionnaire regarding the previous knowledge and the needs of the teachers were analyzed using the percentage statistics.

Table 1 Mean, Standard Deviation, variance and t-test value

test	No of teacher	mean	SD	Var	t-value	sign
Pre	100	11.02	2.22	4.96		α= 0.5
Post	100	15.49	0.50		235	

Table (2) Showing the %age need of Microsoft Office Resources

Resources	Need responses	Percentage %	No Need Responses	Percentage %
Microsoft Office				
Ms Excell	79	79%	21	21%
Ms Word	68	68%	32	32%
Ms Access	85	85%	15	15%
Ms Powerpoint	65	65%	35	45%

Table (3) Showing the %age need of Hardware Resources

Resources	Need responses	Percentage %	No Need Responses	Percentage %
Use Of Hardware				
Flash	30	30%	70	70%
CD	23	23%	77	77%
Mouse	20	20%	80	80%
Keyboard	20	20%	80	80%
Printer	74	74%	26	26%
Scanner	96	96%	4	4%
Modem	100	100%	0	0%
Multimedia	87	87%	13	13%

Table (4) Showing the %age need of Networking Resources

Resources	Need responses	Percentage %	No Need Responses	Percentage %
Networking				
Use of Internet	65	65%	35	35%
Downloading	68	68%	32	32%
Using e-mail	67	67%	33	33%

FINDINGS

The main findings of the study are as under:

1. The mean, standard deviation, and variance on pre-test were 11.02, 2.22 and 4.96 respectively.

2. The mean, standard deviation, and variance on post-test were 15.49, 0.502 and 0.252 respectively.

3. The t-value calculated was 235.13.

4. Values obtained on pre-test have the mean value as 11.02, a variation of about 2.22. It indicates that most of the data lies with in interval 13.24 and 8.80.

5. Values obtained on post-test have the mean value as 15.49, a variation of about 0.502. It indicates that most of the data lies with in interval 16 and 15.

CONCLUSIONS

Following main conclusions were drawn from the findings of the study.

The t-value of 235.1393 is greater than the t-value tabulated at 0.05 level of significance, so we reject the null hypothesis. Therefore there is significant difference between the mean pre-test and post-test score of the university teachers before and after the training regarding use of computer resources.

DISCUSSION

The present study was aimed at investigating the development of in-service teacher training program for staff development regarding use of computer.

One of the most difficult problems in educational research is that of recognizing the teacher effectiveness i.e. discriminating between more effective or less effective teachers, (Harley B.1973). In this respect in-service teacher training program for staff development may bring significant change in performance of teachers. On the basis of conclusion of the study researcher suggest following in-service teacher training program.

In service teacher training program must comprised on:

i)   Selection of teachers as training of trainer (TOT)

ii)   Orientation and assessment of the needs of the participants

  iii)   Accommodation of needs of the participants in the program.

iv)   Assessing the program for the fulfillment of the needs.

The second main components constitute the supports though in-service training. If we want to prepare teachers to teach to the wide range of diverse abilities present in today's classrooms we must prepare them through in-service training. In this model of teacher training program teachers must be prepared as trainers and they after completion of training arrange the same training in their respective departments. They must equip all the teachers of their respective departments with computer skills, techniques and strategies.

RECOMMENDATIONS

Having gone through an intensive research work on development of in-service teacher training program for inclusion the researcher is able to make following recommendations:

1.   All the teachers in the different departments of the universities should be trained in the use of computer resources. In this respect in service training program may be arranged in the universities so that the teacher may easily participate and get maximum benefit from these programs.

2.   Team for in-service training programs must be organized and trained with the innovative developments in the field of computer. These teams on completing training should organize in service training programs for teachers in different universities of Pakistan.

3.   In-service teachers training program for use of computer resources at least must include the introduction to hardware and software, use of hardware

specially the printer, scanner, flash, CD, multimedia, use of software specially the teaching programs. The contents of the training must be flexible; they may be easily changed according to the changing needs of the teachers.

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