

Effectiveness of University Teachers Training Modules

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Abstract

National Academy of Higher Education (NAHE) is an organ of Higher Education Commission (HEC) of Pakistan. It is responsible for university teachers' training. It is continuously imparting training to university teachers in different phases. Evaluation of such trainings is perceptible and the present study is expected to add to the literature on evaluation of teacher training modules in higher education context in Pakistan. This study was aimed at the evaluation of the training NAHE Phase II which was started in 2008. Present study was delimited to evaluate training modules' effectiveness prepared and used for continuous professional development (CPD) programme of university teachers in NAHE Phase II. Evaluation of modules was further delimited to the perception of trainees. The sample of this study was consisted of 487 (out of 769) trainees from the 19 (out of 38) training centres in the Pakistan. Data were collected through a questionnaire consisted of 7 indicators and 49 items. This questionnaire had been developed on the basis of objectives of the modules. Analysis of data revealed that all the modules were effective. The objectives of modules were also clear, achievable, relevant, addressing the need of university faculty, and aligned to the content of modules. The content of the modules was also found interesting. The module I 'teaching as a profession' was found to be the most effective. The module VII 'research methods and skills' was the least effective as compared to the rest of the modules. This study may help policy makers, teacher trainers, resource persons and the teachers concerned with such trainings.

Keywords: Higher Education, Faculty Development, Training Modules, Evaluation.

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Introduction

Role of teacher is the most important component in education system; and higher education has no exception in this regard. A well-motivated and well-trained teacher is an essential feature for the development of a nation in its entirety. It is a matter of fact that the expertise of a teacher like academic qualifications, mastery of the subject, competence in teaching, and devotion (to profession) has significant impact on teaching learning process. Higher education, in general, aims at improving teachers' qualities i.e. enhancing understanding and knowledge, and helping to shape a civilized and democratic society. It is a great source of cultural and socio-economic development of a country (Khan, 2005). By attaining excellence in the field of higher education any nation can be grown up to a developed nation within the life span of a single generation.

Kasule, Wesselink, and Mulder (2016) stressed on the need to make participation in formal and informal professional development activities mandatory for university teachers. Higher education teachers are subjected through a very stringent selection process. They indeed possess required qualification which is signatory of their possessed specific competence in their field of academic specialization. Besides, they are closely evaluated in their suitability to the demanding and competitive higher education milieu in which they are expected to perform in. But the required pedagogical training for their active participation into future professional work remains, nevertheless, absent. It is a common global phenomenon prevailing at higher education in general. In order to bridge this gap in-service trainings are continuously arranged.

These in-service trainings are termed as *continuous professional development* (CPD). In recent years, CPDs are getting more importance in order to meet continuously increasing standards of quality higher education. Teaching at higher education level, especially in developed countries has brought a sizable literature as a result of heightened interest in research in this area (Couper, 2000; Knight, Tait, & Yorke, 2006; Lueddeke, 2003).

Considering of having an impeccable focus on CPD for higher education personnel in Pakistan the establishment of *National Academy of Higher Education* (NAHE) was brought into being in 1983 under the auspices of the *University Grants Commission* (UGC, 1989). After the establishment of *Higher Education Commission* (HEC) in 2002 NAHE continued its functioning under the umbrella of HEC. Its major objectives include: arranging in service teachers training programmes for both college and university teachers; to carry out and improve research; to develop curricula at higher education level; to arrange workshops, conferences, symposia, seminars, etc.; to work as a hub to retrieve and to spread information on administration, curriculum and evaluation of higher education; and to launch centres for faculty development and research.

Faculty development is an inclusive and continuous process of professional development, and self-recognition within the framework of organizational development and growth (Shroyer, 1990) Quality of education heavily depends on the quality of faculty. Sole purpose of faculty development is to enhance the expertise, skills and knowledge of the employees so that they can perform more efficiently in their particular jobs. Hence, faculty development can be defined as the activities planned to improve skills, understanding and knowledge of teachers that lead to transform teacher's thinking and classroom behavior.

To this end NAHE has been organizing *faculty development programmers* (FDP) for the professional development of university teachers under the patronages of HEC. The objectives of teachers training program, as documented in *Eighth Five Year Plan* (1993-1998) were: to attain the practical skills that can be useful in actual classrooms situation to enhance the excellence of teacher competence at higher education level to update teacher's subject knowledge as well as their teaching techniques so that they can do justice with their jobs

In order to add to competence of university teachers through professional development courses NAHE started providing this facility of CPD at their door step. As part of the faculty development program, Phase I (*Professional Competency Enhancement Program for University Teachers* (PCEPT)) was launched in 2004 under *Learning Innovation Division* (LID) which is a subdivision of HEC and actively playing its role (Chaudary & Imran, 2012).

Keeping in view the dire needs and demand of university community NAHE launched its sequel i.e. the Phase II in July 2008. In Phase II 38 Human Resource Development Centres were established at public sector universities. It was funded by USAID Pre-Service Teacher Education Program in Pakistan. The objective of NAHE Phase II was to equip the faculty of higher education with seven basic principles of professional teaching skills making them certified Professionals. It also aimed at to impart professional development training to 2500 faculty members of higher education institutions. It targeted 2100 faculty members under PCEPT (Professional Competency Enhancement Program for Teachers) component and 400 under ITE (Incorporating Technology in Education) component. The main emphasis was on the enrichment of basic teaching competences of the faculty members of different disciplines. Its aim was to convey technology based and research oriented training to add to actual practicality in teaching learning situation. Another aim of NAHE was to enhance computer literacy of the faculty members of higher education institutions. It also aimed at to organize trainings in the form of workshops, seminars, conferences, and/or lectures for the teachers of higher education institutions in order to expose them to the modern trends in teaching and education. It also aimed at to boost professional and managerial skills of the personnel involved in conducting these trainings, through national and international

forums. It also aimed at developing androgogical and research skills among higher education faculty through conducting professional development programmers at their door step.

Background of NAHE Phase II

NAHE took upon the responsibility of developing seven modules for Professional Competency Enhancement Program for University Teachers (PCEPT). These seven modules were developed by competent specialists from seven universities.

The modules developed were purposefully kept generic in nature as the target groups of trainees were supposed to be a heterogeneous mix from various fields of academic specialization. Another, assumption herein was that that the trainees, nevertheless, were competent enough in their respective fields of academic specialization as they had previously been subjected to stringent scrutiny during the selection process as a faculty member. Making a critical analysis of their specific competence in this article goes, straightforwardly, beyond the scope of this article.

A 4-day workshop was conducted from 5th to 8th October, 2009 in collaboration with Pre-Service Teachers Education Program (Pre-STEP), a project of the United States Agency for International Development (USAID). In this workshop the contents and language of the modules were reviewed and the final modifications were made under the direction of the team of reviewers from Michigan State University, USA and experts from Pre-Step, USAID Project. Pilot testing was conducted to examine the value of the content (from 12th February to 13th March, 2009), therefore, establishing modules' potency to meet the need of the hour. The name of the modules and universities are given below:

1. Teaching as a Profession (The Islamia University of Bahawalpur)
2. Academic Planning and Management Skills (Aga Khan University, Karachi)
3. Curriculum Development, Assessment and Evaluation (Iqra University, Quetta)
4. Learners' Psychology (University of Education, Lahore)
5. Androgogical Skills (Allama Iqbal Open University, Islamabad)
6. Communication Skills (Army Public College of Management Sciences, Rawalpindi)
7. Research Methods and Skills (Fatima Jinnah Women University, Rawalpindi)

In order to avoid prolixity, the researchers briefly discussed the major focus of each of the training modules in the ensuing paragraphs.

The major objectives of Module – I are to realize the importance of teaching profession in the 21st century, comprehend the teachers' anticipated role in educational organizations, notice professional principles and enable teachers to improve personalities, appreciate and exercise the role of teachers as an intellectual of society, improve the aptitude to live with and among alterations with a positive attitude, prepare

themselves about their role as a mediator of social change, discuss research results and best practices with colleagues in conferences and to enable them to develop an academic network(Adeeb, Rahmani, Hussain, & Nadeem, 2009).

The main objectives of Module – II are to complete sample practical activities that will give teachers confidence to handle more difficult tasks in terms of planning and managing their academic and organization tasks, cultivate a more original and expert approach towards their work with the provision of their co-workers in their role set for advanced methods to their academic planning and management and to exhibit leadership qualities by becoming promoters of change in their settings, through knowledge and skills gained during the course in order to foster a spirit of learning community(Khaki, Halai, & Cane, 2009).

Module – III expects to train university teachers with the basic knowledge and skills required. Its main objectives are to play an effective role in designing curriculum for their teaching areas and to develop and grade various kinds of tests in accordance with the learning outcomes intended for their courses (Khawaja, Akhter, & Mirza, 2009).

The main objectives of Module – IV are to understand learner’s psychology and its philosophies, and relate it to make the teaching-learning process operative, Identify features of adult learners, involve pupils in active learning by using learner-centred skills, and know requirements and welfare of the learner, use action and thinking in teaching procedure, assist learners to learn new roles in learning procedure, hold learners accountable for their learning ,try to demonstrate application of knowledge and to boost the professional capability of participants by making them understand learners’ stressors and find ways to manage those stressors (Naseem, 2009).

The objective of Module – V is to improve the androgogical skills of the learners through continuous practice (Mahmood & Siddiqui, 2009).

Module – VI offers ample prospects for self-probe and self-education to make learners “aware” about themselves and more particularly of their communication style. The emphasis is inward rather than outward. It shall help discovering their own personality types and related communication styles so that they can become accustomed them effectively to their own communication state individually as well as skillfully both in educational and non-educational locations (Khattak, Yaqoob, & Basri, 2003).

The objective of Module – VII is to enable the learners to exhibit knowledge of the concept of research, the reasons for leading research, where it is conducted, how it is done, and by whom; why research; the characteristics of quality research; qualitative and quantitative research; and ethics of research (Sheikh & Bibi, 2009).

Research Statement

This article is focused on the trainees' perception about the effectiveness of the training modules used during faculty development programme termed as NAHE Phase II.

Objective of the Study

The objective of the study was to evaluate the perception of trainees about effectiveness of training modules used for teacher training in NAHE Phase II

Methodology

The study, designed to be descriptive one, included quantitative analysis of trainees' perception on the training they had been subjected though recently. Question may be raised on the validity of effectiveness measured through the trainees' perception. There are various grounds to defend this apparently debate able situation. Firstly, trainees are mentally as well psychologically mature enough. Secondly, they appear to be responsible professionals. Thirdly, they are neither supposed to be in a fearfulness/anxiety nor with an expectation of advantage/favoritism. And, lastly, they are the most direct source of information on the topic the researchers are interested to highlight in this article. Therefore, no other source may be as direct and reliable as the trainees themselves do.

All the trainees of NAHE Phase II from 38 centres established at public sector universities of Pakistan were the population of the study. The sample of this study consisted of 487 (out of 769) trainees from 19 centres all over Pakistan. Multilevel sampling frame included proportionate and cluster sampling techniques.

Table 1
Indicators in the Study

Indicators	No of Items
Effectiveness of Teaching as Profession module	06
Effectiveness of Academic Planning and Management Module	06
Effectiveness of Curriculum Development, Assessment and Evaluation Module	12
Effectiveness of Learner's Psychology Module	04
Effectiveness of Andragogical Skills and Abilities Module	08
Effectiveness of Communication Skills Module	05
Effectiveness of Research Module	08
Total	49

Results

A 49-items-questionnaire based on intended learning outcomes given in seven modules was developed by the researchers; and was, henceforth, used as the research instrument in order to collect quantitative data on 5-point rating scale (see the table below). Pilot testing of the research instruments had been carried out at one of the NAHE training centres. Value of Cronbach Alpha (0.983) indicated very high reliability of the instrument. Following table describes 7 indicators included in this study.

Modules Review

Modules were reviewed by the researchers in order to ensure the relevance with its objectives. All the modules were relevant to their objectives, objectives of faculty development programme (FDP) and in turn they were aligned with the objective of National Academy of Higher Education (NAHE). The results were discussed and finally got approved from the relevant experts.

Table 2
Training Modules Relevance to Objectives

Statements	SA (%)	A (%)	SA+A (%)	Neutral (%)	DA (%)	SDA (%)	SDA+DA (%)
1. The objectives of Modules were clear	21.9	60.6	82.5	13.8	3.3	0.4	3.7
2. The objectives of Modules were achievable	18.3	61.4	79.7	13.2	6.5	0.6	7.1
3. Modules' objectives addressed faculty needs	23.0	56.5	79.5	12.8	7.5	0.2	7.7
4. The contents in the Modules were interesting	21.5	54.5	76.0	19.3	4.5	0.2	4.7
5. The Modules were useful and effective	31.3	53.1	84.4	12.6	2.8	0.2	3.0
Total (Module Effectiveness)	23.2	57.22	80.42	14.34	4.92	0.32	5.24

Table 2 reflected that according to the trainees the objectives of the modules were clear, achievable, address the need of university faculty. Content of the modules was interesting and the modules were useful and effective. Overall percentage of modules effectiveness revealed, 80.42% trainees responded that the modules of the training were effective, only 05.24% trainees were not in the favor of modules

effectiveness, whereas 14.34% respondents did not comment on the effectiveness of modules.

Table 3
Training Modules Effectiveness

Name of Modules	SA (%)	A (%)	SA+A (%)	Neutral (%)	DA (%)	SDA (%)	SDA+DA (%)
1. Teaching as a Profession	26.3	56.81	83.11	13.81	2.95	0.16	3.12
2. Academic Planning and Management	27.92	55.63	83.55	12.96	2.97	0.57	3.54
3. Curriculum Development, Assessment and Evaluation	22.23	53.97	76.20	17.84	5.17	0.82	5.99
4. Learner's Psychology	24.45	51.52	75.97	17.9	5.6	0.5	6.1
5. Androgogical Skills	27.1	55.17	82.27	13.86	3.6	0.27	3.87
6. Communication Skills	20.92	57.38	78.3	16.58	4.54	0.6	5.14
7. Research Methods and Skills	22.56	37.52	60.08	25.1	12.9	1.95	14.85
Training as a whole	24.50	52.57	77.07	16.86	5.39	0.70	6.09

In Table 3, the respondents described that the modules of training were very effective. Majority of the respondents were agreed that all the modules like 'teaching as a profession', 'academic planning and management', 'curriculum development, assessment and evaluation', 'learner's psychology', 'androgogical skills', 'communication skills' and 'research methods and skills' were very effective to improve the skills among the trainees.

Table 4
Effectiveness of “Teaching as a Profession” - Module 1

Statements	SA (%)	A (%)	SA+A (%)	Neutral (%)	DA (%)	SDA (%)	SDA+DA (%)
1. The training has improved my understanding of role of teaching profession in higher education	21.7	61.0	82.7	14.8	2.0	0.6	2.6
2. The training helped me having good professional relationships with my colleagues and students	34.3	53	79.4	10.4	2.2	0	2.2
3. The training improved my professional approach to become an academic leader in higher Education	29.1	52.0	81.1	12.8	5.7	0.4	6.1
4. After the training my awareness to deal with academic issues through discussions has improved	26.4	58.5	84.9	12.6	2.6	0	2.6
5. The training polished my personality as an academic leader	24.8	58.5	83.3	14	2.8	0	2.8
6. The training made me realized the ideological and philosophical notion in teaching profession	21.5	57.9	79.4	18.3	2.4	0.00	2.4
Total (Teaching as a Profession)	26.3	56.81	83.11	13.81	2.95	0.16	3.12

Table 4 illustrated that the respondents were of the view, that training improve their understanding about the role of teacher in higher education, to develop good relationship with colleagues and students, improvement in professional approach, dealing with academic issues and clarity about ideological and philosophical notion in

teaching as profession. As whole 83.11% trainees responded that training groomed their teaching as profession, only 03.11% trainees differed with them; however, 13.81% respondents held their opinion unexpressed.

Table 5
Effectiveness of “Academic Planning and Management” - Module 2

Statements	SA (%)	A (%)	SA+A (%)	Neutral (%)	DA (%)	SDA (%)	SDA+DA (%)
1. The training improved my ability to maintain good relations with my students	25.0	62.6	87.6	10.0	2.2	0.2	2.4
2. The training improved my ability to maintain good relations with my colleagues	27.4	59.3	86.7	10.6	2.4	.4	2.8
3. The training has improved my understating of responsibilities of a university teacher	25.6	59.3	84.9	13.4	1.6	.2	1.8
4. The training improved my ability to maintain good relations with my head of department	29.5	51.2	80.7	15.2	3.0	1.2	4.2
5. The training improved my leadership abilities as an academic leader	29.5	50.8	80.3	14.4	4.3	1.0	5.3
6. The training improved my understanding of barriers in interpersonal relationships	30.5	50.6	81.1	14.2	4.3	.4	4.7
Total (Academic Planning and Management)	27.92	55.63	83.55	12.96	2.97	0.57	3.54

Table 5 indicated that the respondents were of the view, that training improved the ability to maintain good relation with students, colleagues, university teachers, and

head of the department. It also improved leadership abilities as an academic leader and understanding barriers in interpersonal relationship. Collectively 83.55% trainees answered that training was helpful in their academic planning and management, only 03.54% trainees indicated that training was not helpful in their academic planning and management, whereas 12.96% respondents did not comment on academic planning and management.

Table 6
Effectiveness of “Curriculum Development, Assessment and evaluation” - Module 3

Statements	SA (%)	A (%)	SA+A (%)	Neutral (%)	DA (%)	SDA (%)	SDA+DA (%)
1. The training helped me using curriculum as a tool to achieve the learning outcomes of a course	21.5	59.6	81.1	14.2	4.1	0.6	4.7
2. The training helped me understand the process of curriculum development	18.9	53.3	72.2	20.9	6.3	0.6	6.9
3. The training helped me to select appropriate content for my lectures	30.1	48.4	78.5	15.6	4.9	1	5.9
4. The training helped me to evaluate curriculum for its improvement	21.1	51	72.1	18.9	8.3	.8	9.1
5. The training helped me to deliver lecture aligned with the objectives of the course	26.4	50	76.4	18.5	4.3	0.8	5.1
6. The training helped me to develop ability to sequence the selected content of a particular course	23	49.4	72.4	20.5	6.3	0.8	7.1
7. The training helped me to align	14.6	59.1	73.7	21.9	3.7	0.8	4.5

assessment procedure with the learning outcomes of a course								
8. The training improved my ability to develop objective type of test in line with learning outcomes	19.7	58.7	78.4	16.3	4.3	1	5.3	
9. The training improved my ability to develop subjective type of test in line with learning outcomes	21.9	56.5	78.4	15	5.9	0.8	6.7	
10. The training improved my ability to develop oral type of test in line with the learning outcomes	23.2	54.7	77.9	15.7	5.3	1	6.3	
11. The training improved my ability to award sessional marks as per performance of students in class	24.8	51.4	76.2	19.5	3.7	0.6	4.3	
12. The training improved my ability to develop proper marking scheme for subjective test	21.5	55.5	77	17.1	4.9	1	5.9	
Total (Curriculum development, Assessment and Evaluation)	22.23	53.97	76.19	17.84	5.17	0.82	5.98	

Table 6 confirmed that the respondents explained, that training was helpful in order to use curriculum as a tool to achieve learning outcomes, to understand the process of curriculum development, selection of appropriate content for lecture but training was not helpful in the evaluation of curriculum for improvements, to align the lecture with objectives and selection of content for particular course. As whole 76.19% trainees replied that training was helpful in the process of curriculum development,

assessment and evaluation, only 5.5% trainees disagreed with; whereas 17.58% did not comment on assessment and evaluation.

Table 7
Effectiveness of “Learner’s Psychology” - Module 4

Statements	SA (%)	A (%)	SA+A (%)	Neutral (%)	DA (%)	SDA (%)	SDA+DA (%)
1. The training improved my capacity to keep students of different ability engaged in active learning	25.4	51.8	77.2	16.7	5.7	0.4	6.1
2. The training improved my understanding of learner’s psychology to make teaching more effective	22.4	54.7	77.1	17.9	4.5	0.4	4.9
3. The training helped me identify learning difficulties of my students in classroom	22	53.5	75.5	18.3	5.9	0.2	6.1
4. The training increased my ability to motivate students towards their studies	28	46.1	74.1	18.7	6.3	1	7.3
Total (Learner’s Psychology)	24.45	51.52	75.97	17.9	5.6	0.5	6.1

Table 7 displayed that the trainees said, that the training improve their capacity to keep students engaged in different activities, to make the teaching effective, understanding student difficulties in classroom, ability to motivate students towards studies. Over all 75.97% trainees noted that training was helpful in order to understand learner’s psychology, only 6.1% trainees responded that training was not helpful in order to understand learner’s psychology, whereas 17.9% respondents remained neutral about learner’s psychology.

Table 8
Effectiveness of “Andragogical Skills” - Module 5

Statements	SA (%)	A (%)	SA+A (%)	Neutral (%)	DA (%)	SDA (%)	SDA+DA (%)
1. The training has improved my skill to deal with problem students	30.3	52.4	82.7	11.8	5.3	0.2	5.5
2. The training has improved my quality of teaching	31.3	54.1	85.4	11.4	3	0.2	3.2
3. The training has enabled me to understand well the role of teaching profession in higher education.	21.7	60.0	81.7	13.8	4.5	0	4.5
4. The training helped me understand nature of communication barriers in classroom	25.4	56.5	81.9	15	3	0.2	3.2
5. The training has improved my classroom management skills	27	54.5	81.5	14.2	3	1.4	4.4
6. The training has improved my skill of understanding individual difference of students	26.2	54.3	80.5	15.6	3.9	0	3.9
7. The training has improved my confidence in teaching	24.2	56.1	80.3	16.1	3.5	0	3.5
8. The training has improved my planning skills for teaching	30.7	53.5	84.2	13	2.6	0.2	2.8
Total (Androgical Skills)	27.1	55.17	82.27	13.86	3.6	0.27	3.87

Table 8 returned that the respondents described, that training improved their skills to deal with students’ problems, quality of teaching, classroom management,

confidence in teaching and planning skills for teachers, to understand the nature of communication barriers and to understand individual differences. Collectively 82.27% trainees responded that training was helpful in order to improve androgogical skills and abilities in classroom setting, only 3.87% trainees contradicted with their counterparts and 13.86% respondents remained impartial on androgogical skills and abilities.

Table 9
Effectiveness of "Communication Skills" - Module 6

Statements	SA (%)	A (%)	SA+A (%)	Neutral (%)	DA (%)	SDA (%)	SDA+DA (%)
1. The training has improved my understanding of communication process	16.9	63.2	80.1	15	4.3	0.6	4.9
2. After the training I can understand communication barriers inside and outside classroom	19.7	58.7	78.4	16.9	4.1	0.6	4.7
3. The training helped to better understand the importance of feedback in communication process	20.3	56.5	76.8	18.5	4.3	0.4	4.7
4. I can use in an observable manner the hand and eye gestures for effective communication	21.5	55.9	77.4	18.1	3.5	1	4.5
5. The training helped to better understand the body language of students	26.2	52.6	78.8	14.4	6.5	0.4	6.9
Total (Communication Skills)	20.92	57.38	78.3	16.58	4.54	0.6	5.14

Table 9 showed that the respondents were of the view, that training improved their understanding in communication process, communication barriers inside and out

the classroom, to use eye gestures for effective communication and to understand the body language of the students. Collectively 78.3% trainees responded that training was helpful in order to improve communication skills in classroom setting, 5.14% trainees described that training was not helpful in order to improve communication skills in classroom setting, whereas 16.58% respondents were neutral on the improvement of communication skills.

Table 10
Effectiveness of “Research Methods and Skills” - Module 7

Statements	SA (%)	A (%)	SA+A (%)	Neutral (%)	DA (%)	SDA (%)	SDA+DA (%)
1. The training has improved my confidence in research supervision	19.3	43.7	63	28.3	6.7	2	8.7
2. The training has improved my confidence in article writing	19.7	42.3	62	26.6	10	1.4	11.4
3. After faculty development program my understanding of research has improved	19.1	43.7	62.8	26.4	9.4	1.4	10.8
4. The training improved my capacity to write better research questions.	25.8	35.4	61.2	21.5	15.2	2.2	17.4
5. My ability to write better research hypotheses has improved after training	25.4	34.1	59.5	24.2	14.6	1.8	16.4
6. The training improved my capacity to help students to write better research proposal for their thesis	22.8	34.3	57.1	24.4	16.3	2.2	18.5
7. The training has improved my chances of publishing research work	23.8	31.5	55.3	26.4	15.4	3	18.4
8. The training helped me better to understand the ethics involved in conducting research.	24.6	35.2	59.8	23	15.6	1.6	17.2
Total (Research Methods and Skills)	22.56	37.52	60.08	25.1	12.9	1.95	14.85

Table 10 recorded that the trainees narrated, that training was not helpful in supervision, article writing, understanding of research, development of better research questions and hypothesis, to write better research proposal, chance of publishing research work and to understand ethics involve in conducting research. Collectively 60.08% trainees agreed to that that the training was helpful in order to improve the

process of research, whereas 14.85% trainees responded that training was not helpful in order to improve the process of research, and 25.1% stayed neutral about improvement of research process.

Gender does not appear to play a significant part (Lueddeke, 2003) on teaching scholarship. The independent-samples t-test was conducted to compare the responses of male and female trainees regarding modules of training. The difference was not found between the responses of male and female regarding all modules except for the module on 'research skills', where there was found a significant difference between male ($M = 28.83$, $SD = 7.04$) and female ($M = 28.36$, $SD = 6.70$) trainees, with $t(487) = 2.310$, $p = 0.021$. It may be concluded that male expressed of having better understanding on the module related to the research skills as compared to their female counterparts.

Discussion

It was found that all the training modules used in NAHE Phase II were effective. There are three perceptible reasons for apparently such a strong finding on the effectiveness of these modules. Firstly, the modules were written by highly seasoned professionals. Secondly, these modules took additional advantage of previously experimented modules during NAHE Phase I. Thirdly, the resource persons and the course coordinators involved in Phase II were more experienced than that of their colleagues in NAHE training Phase I. First two reasons are referring to intrinsic strength of the modules whereas the last one refers to extrinsic dimension of it. And above all, there is encouraging reflection of increasing improvement in NAHE phases of training. Present study confirmed that the sequence of training programmes were helpful in increasing professional competence among teachers in higher education.

The respondents said that the modules were effective. It seemed if they would have been realizing need of training in their professional development. Previous studies did support our findings. A study on faculty development program was conducted by Hussain, Sarwar, and Anwar (2010) It was the most similar study to that of what we carried out. All the modules being evaluated in our study (except two namely *research methods and skills*, and *curriculum development*) were present there; and interestingly, they were noted to be effective in both of the studies.

Another study by Kayani, Morris, Azhar, and Kayani (2011) did support our results. Here it may be remarkable to mention that the *teaching as profession* was distinguished to be the most effective module in both of the studies. It seemed if they would have been realizing need of training in their professional development. It was comprehensible as university teachers did not get any formal training; they usually had never availed an opportunity to learn *teaching as a profession*.

Modules related to the classroom management skills were found effective by Postareff, Lindblom-Ylänne, and Nevgi (2007) as our study revealed as well. It was further observed that positive changes took place in teachers who had attended more in-service pedagogical trainings. Similar results were noted in another study conducted by (Fakhra, 2012) which was mainly focused on instructional, professional and organizational development. Aziz and Akhtar (2014), studying pedagogical assessment and management and research, give an account of results similar to that of ours.

Module VII (research methods and skills) was found to be the least in its effectiveness as considerable majority (i.e. 60.08%) of the respondents reported it; whereas 25% of the respondents remained neutral. In fact, this module is concerned with the classroom research which is usually conducted by the professionals in teacher education. As the trainees in NAHE Phase II belonged to the other disciplines as well especially from pure sciences, therefore, it's reportedly least effectiveness is intelligible. Teachers having their field of interest other than teacher education may not be aware of the mechanics involved in classroom research. So, they did not realize the need of this module. That's why they feel that this module was not addressing their needs and consequently reported to be less effective. The researchers noted that their finding on gender's insignificant is in accordance with other researchers e.g. (Lueddeke, 2003)-

Conclusions

All the seven modules were found to be effective. Only 6.09% respondents perceived that these were not effective. Objectives of the modules were found to be clear, achievable, and relevant. Modules were reported to be addressing the need of university faculty and were perceived aligned with the content of these modules. Further, the content of modules was also reported to be interesting.

The respondents perceived that the module I (teaching as a profession) was the most effective and module VII (research methods and skills) was the least effective among the modules.

Very small proportion (i.e. 3.12%) of the respondents disagreeing with the majority of their counterparts believed that the module I (teaching as a profession) was not effective. Similarly, 3.54% respondents perceived that the module II (academic planning and management) was ineffective. Whereas, 5.98% respondents perceived that the module III (development, assessment and evaluation of curriculum) was not effective. The effectiveness of module IV (learner's psychology) was ranked 6th by the respondents; and 6.1% respondents perceived that the module IV was ineffective. The 3rd most effective module was the module V (androgical skills); and only 3.87% respondents perceived that it was not effective. The module VI (communication skills) was ranked at 4th position regarding its effectiveness; and a small portion of the

respondents (i.e. 5.14%) perceived that it was ineffective. The least effective module was found to be the module VII (research methods and skills); for which relatively larger proportion of respondents (i.e. 14.85%) as compared to their counterparts perceived that it was ineffective.

It was finally concluded that the training modules used for teacher training in NAHE Phase II were perceived by the respondents as the effective training modules. However, the respondents highlighted the need for discipline specific training for higher education teachers which the researchers found in accordance with the *discipline-based approach* in 'developing the scholarship of teaching in higher education' proposed by (Couper, 2000).

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References

- Adeeb, P. D. M. A., Rahmani, S. H., Hussain, D. I., & Nadeem, M. A. (2009). *Teaching Profession module*. Islamabad: Higher Education Commission Pakistan.
- Aziz, F., & Akhtar, M. M. S. (2014). Impact of training on teachers competencies at higher education level in Pakistan. *Researchers World*, 5(1), 121.
- Chaudary, I. A., & Imran, S. (2012). *Designing professional development for better pedagogy: A higher education experience in Pakistan*. Islamabad: Higher Education Commission Pakistan.
- Couper, M. P. (2000). Review: Web surveys: A review of issues and approaches. *The Public Opinion Quarterly*, 64(4), 464-494.
- Fakhra, A. (2012). *Impact of Faculty Professional Development Program of Higher Education Commission on Teachers Competencies and Motivation at Higher Education Level in Pakistan*. University of the Punjab, Lahore.

- Hussain, S., Sarwar, M., & Anwar, H. N. (2010). Sustained Impact of Professional Enhancement Program of National Academy of Higher Education in Pakistan. *Asian Social Science*, 6(12), 73.
- Kasule, G. W., Wesselink, R., & Mulder, M. (2016). Professional development status of teaching staff in a Ugandan public university. *Journal of Higher Education Policy and Management*, 38(4), 434-447.
- Kayani, M. M., Morris, D., Azhar, M., & Kayani, A. (2011). Analysis of Professional Competency Enhancement Program of Nahe on the Performance of College Teachers. *International Journal of Business and Social Science*, 2(18), 169-175.
- Khaki, D. J.-e.-A., Halai, D. A., & Cane, D. G. (2009). *Module on Academic Planning and Management*. Islamabad: Higher Education Commission Pakistan.
- Khan, M. (2005). Designing a model for staff development in higher education in Pakistan. *Unpublished doctoral thesis, University Institute of Education and Research, University of Arid Agriculture, Rawalpindi, Pakistan*.
- Khattak, H. R., Yaqoob, S., & Basri, R. (2003). Communication Skills Module. *Learning Innovation Division National, 11*.
- Khawaja, D. I., Akhter, M. S., & Mirza, M. A. (2009). *Curriculum Development and Student Assessment Module*. Islamabad: Higher Education Commission Pakistan.
- Knight, P., Tait, J., & Yorke, M. (2006). The professional learning of teachers in higher education. *Studies in Higher Education*, 31(03), 319-339.
- Lueddeke, G. R. (2003). Professionalising teaching practice in higher education: A study of disciplinary variation and 'teaching-scholarship'. *Studies in Higher Education*, 28(2), 213-228.
- Mahmood, D. K., & Siddiqui, D. G. K. (2009). *Andragogical Skills, Assessment and Microteaching Module*. Islamabad: Higher Education Commission Pakistan.
- Naseem, Z. (2009). *Learner's Psychology Module*. Islamabad: Higher Education Commission Pakistan.
- Postareff, L., Lindblom-Ylänne, S., & Nevgi, A. (2007). The effect of pedagogical training on teaching in higher education. *Teaching and Teacher Education*, 23(5), 557-571.
- Sheikh, D. M. A., & Bibi, S. (2009). *Research Methods and Skills Module*. Islamabad: Higher Education Commission Pakistan.
- Shroyer, M. G. (1990). Effective Staff Development for Effective Organization Development. *Journal of Staff Development*, 11(1), 2-6.