

Training of trainers: An action-based research for improving the pedagogical skills of academicians

Bayram Özer¹, Volkan Duran², Mustafa Tekke³

¹Department of Curriculum and Instruction, Ondokuz Mayıs University, Turkey

²Psychology Department, Iğdır University, Turkey

³Psychological Guidance and Counseling Department, Düzce University, Turkey

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ABSTRACT

Based on the philosophy of lifelong education, private/public institutions and organizations invest in continuous training of human resources. Universities also organize in-service trainings regarding the general principles of teaching and learning in the context lifelong learning activities for the development of the pedagogical skills of the academicians who have difficulty in using teaching skills and principles in the courses in their universities. Therefore, a Project entitled as Training of Trainers based on action research based on qualitative research design was carried out for aiming at providing pedagogical education for the academicians who work in different departments of Ondokuz Mayıs University who are experts in different disciplines but who do not have pedagogical background in order to gain experience in basic skills and principles in education area so as to improve the quality of education in this way. During the project, which lasted for a total of 2 years, 246 academicians were trained in 24 different subjects, the opinions of the participants were taken and the distribution of these views was reflected in the tables in text. Finally, the asymptotic Significance (2-sided) for Pearson Chi-Square indicates of the yes/no answer indicates that there is a dramatic change regarding the effectiveness of the program. It is seen that it meets the needs of academicians. Therefore, the program based on action research design shows that such in-service pedagogical programs could be useful for higher education in this respect.

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Corresponding Author:

Bayram Özer,
Department of Curriculum and Instruction,
Ondokuz Mayıs University,
Kurupelit Campus, Samsun, Turkey.
Email: ozer.bayram@gmail.com

1. INTRODUCTION

As a requirement of the philosophy of lifelong education, individuals and institutions must constantly strive for learning in order to stand out and make a difference. Continuous learning of natural capital is even more essential, given that professions are updated every four years on median. To achieve this, private/public institutions and organisations are investing in ongoing human resources formation. The rapidly evolving requirements of this decade make universities as the top of these institutions. Education and training operations are one of the major tasks of universities. Taking into account the features of the target audience, teaching in higher education has distinct features and dynamics than teaching in primary or secondary education. The target group in higher education is accepted as an adult and can not succeed unless it willingly

joins. Therefore, it is necessary to use different practices and methods than the rules and methods used for the education of children.

Teaching is also a profession distincting itself other disciplines by its own knowledge types. In this regard, there are three different kinds of knowledge in any teaching profession that can be used instructors. These are the content knowledge, general knowledge of instructional methods (pedagogical knowledge), pedagogical content knowledge. Especially pedagogical knowledge is a knowledge type that distinguishes teaching profession from the other disciplines. Knowledge of Pedagogical Content (PCK) reflects a comprehensive educational concept. It is based on the conviction that teaching involves significantly greater understanding than providing learners with topic-specific knowledge and that learning is far more so than acquiring data for subsequent regeneration [1]. The understanding of the pedagogical content knowledge is a kind of understanding distinctive to educators, depending on how educators connect their pedagogical knowledge (what they think about learning) to their understanding of the content (what they think about what they practice) [2]. According to Shulman [3] pedagogical content knowledge:

...embodies the aspects of content most germane to its teachability. Within the category of pedagogical content knowledge I include, for the most regularly taught topics in one's subject area, the most useful forms of representation of those ideas, the most powerful analogies, illustrations, examples, explanations, and demonstrations - in a word, the ways of representing and formulating the subject that make it comprehensible to others ... [It] also includes an understanding of what makes the learning of specific concepts easy or difficult: the conceptions and preconceptions that students of different ages and backgrounds bring with them to the learning.

A year later, Shulman extended the theoretical framework of the teacher knowledge base into seven categories: (a) content knowledge, (b) general pedagogical knowledge, (c) curriculum knowledge, (d) pedagogical content knowledge, (e) knowledge of learners and their characteristics, (f) knowledge of the educational contexts as environment and conditions; and (g) knowledge of educational ends, purposes, and values and their philosophical and historical grounds [4].

Content knowledge covers the teacher's knowledge about the structure of the field as well as the concepts and facts in the field. Content knowledge includes the methods used to determine the accuracy or inaccuracy, validity or invalidity of the concepts and facts in the field and the ways used in the production and structuring of information in the field. General pedagogical knowledge is about how the teacher can teach. Variables such as student recognition, learning theories, principles and strategies in classroom management, material development and use, measurement and assessment knowledge and skills are included in this category. Curriculum knowledge is the knowledge of when and how to use resources (textbooks, concrete materials, software, technological tools) related to the curriculum in a learning area. Pedagogical content knowledge is the category where content and pedagogical knowledge intersect and serve as a complementary bridge between these two. Knowledge about students and their characteristics includes the physical, mental, social, emotional, linguistic and psychological developmental stages, the functioning of their mental and social structures, their interests and needs, and how they can learn better can be regarded within the scope of this knowledge type. Knowledge of educational environment and conditions (context information) is related to the opportunities, expectations and limitations of the region where the teacher works, the school environment and the knowledge of the students' families, interests and backgrounds. Knowledge of educational ends, purposes includes the aims, objectives and values of education, the philosophical, historical foundations and general aims of education [5, 6].

Shulman's work [3, 4] has re-underlined the importance of field knowledge at a time when teaching was only examined from a general pedagogical point of view, and field knowledge was considered only a detail [7]. Therefore, pedagogical knowledge as well as other knowledge types for education has significance for any given field related with the education. Therefore it is a must for anyone in any profession to acquire those skills in order to teach more effectively. Therefore, the National Education Ministry (1946, 1982) stressed the significance of pedagogical formation of the faculty members and also the need for training them. This problem has been highlighted at the global stage, and universities are organizing their programmes accordingly. In particular, studies by medical faculties are especially prominent in this area [8, 9]. The duties of institutions for higher education are not restricted solely by research and instruction. The development of educational possibilities and the education of skilled learners make the universities more precious. Here, the teacher's standard of pedagogy is an significant element in creating a suitable learning atmosphere. MEB [10] also prepared the educational qualifications list for this as; personal and professional values - professional development, recognition of the student, learning and

teaching process, monitoring and evaluation of learning-development, school-family and community relations, program and content knowledge.

These skills considered the instruction to be a profession and thus enhanced its significance and efficiency. These criteria were also determinant factors in the exams for teacher training institutions and teacher appointment. Not only the teacher-training institutions, but all the other institutions took the path to enhance their trainers' equipment by taking into account this criteria. In this connection, universities are among the largest organizations. However, universities are seen to continue to be inadequate for pedagogical developments in terms of structural changes. For example, the findings implying that successful students in Turkey had less interest in becoming a faculty member or academicians have clearly shown that higher education lacks the required and the desired quality of education [10]. In this respect, YÖK has accredited universities in terms of academic organisations, number of students, programs and other procedures. The assessments produced by the students in particular stand out in the assessment of the staff representative although it is doubtful that these assessments are objective. In particular, requirements such as efficient teacher introduction, mastery, communication with the students and interaction with the community are included in the scope of the assessment. Such feedback is nevertheless essential for teachers to understand that someone else can see their ability [11]. It is also a plus for staff employees to retain and grow in view of their faults and abilities for a fresh instructional phase.

Development of academicians in Turkey in terms of their pedagogical skills

Academicians in Turkey have no sufficient pedagogical format to enhance their teaching skills. Therefore, the classes given to undergraduate learners in the university are insufficient with regard to pedagogy, with the exception of those working in education faculties. In 2000, YÖK (council of higher education in Turkey) made pedagogical formation compulsory in master's and doctorate programs. However, these courses were no longer compulsory and academics began to take courses as academicians without any training to improve their teaching skills during their graduate, doctoral education periods.

Although this is the case throughout the country in 1996, Dokuz Eylül University [12] and then Istanbul University in 1997 [13], Hacettepe University in 1998, Ankara University in 1999 [14], Marmara University [11] and Ege University [15] short-term programs called training of trainers have been carried out. However, an important problem observed in these programs, especially those related to medical education is that the trainers don't have pedagogical background. Although these trainings given to the academicians by academicians who are assigned from the same institution having academic studies in the field of medical education but do not have any training related to the educational formation they are important because they are pioneering studies on the subject.

Content of trainer's training program

Many roles and tasks are expected from teachers. These roles are important in the past as they are important in the past and it is thought that they will not lose their importance in the future. For example, although the roles of teachers has been understood in the past as people who convey information, in other words, to instruct directly students, it is no longer sufficient today to teach, instead it needs to be guided, to predict future results about decisions, engage in social processes and participate in efforts to protect nature. Trainer training programs must be drawn up having into consideration the learning abilities and pedagogical abilities of the experts conducting these educations. The contents should also be scheduled and carried out according to the teacher's skills. Teaching qualifications are determined and published by the Ministry of National Education and appear to be in six main titles. Each trainer should essentially have these skills. These abilities are demonstrated in the practice of trainers for this intent. This is recognized immediately as the primary criterion for determining the performance of the school's learners. Effective teachers will directly affect the success of the student [16-21].

Investigations suggest that teachers and academics are not sufficiently sensitive to the growth of their pedagogical backgrounds, particularly in educational faculties, and in universities. These studies [14, 22-25] address these problems; that faculty members do not give enough importance to this issue, they believe that their education abilities are immediately linked to the growth of their understanding of material and content knowledge; they live an isolated life style, over-specialization in a particular subject prevents academics from improving themselves in education, and that research on educational development is limited and national education and health policies have a negative impact. Therefore, the aim of this study is to evaluate the educator skills of university educators in our country by using qualitative research method in a wide scope. Therefore, content of the program was arranged aiming mostly at general pedagogical knowledge of the academicians. For example, in one activity, detailed prescription for frying eggs were given and they were expected to cook it based on this instruction. Similarly various topics like adult education, assesment and evaluation methods were given in the program.

2. RESEARCH METHOD

In order to improve expertise regarding the fundamental pedagogical abilities and to enhance pedagogical communication among academics, this study has been designed to take into account the views of academicians before and after the programme. In this sense the training program carried out by Ondokuz Mayıs University for the development of teaching skills and training for academics covering all academic units in the university could be regarded as the first and the most comprehensive training program in Turkey. When the content of the training is evaluated in terms of the qualifications of the trainers, the duration of the training and the participants, the development of instructional skills for academicians is different from the other projects. They are expected to meet multidisciplinary academic vision by meeting with faculty members from different fields.

This study is based on action research design. Action research is defined as a systematic intervention process that takes place on the basis of people doing research about their professional actions and taking action for change. Action Research includes identifying issues immediately linked with the method of implementation or collecting and analyzing systemic information for understanding and resolving these issues by the involvement of the participants such as classroom executives, educators and educational experts within the case or problematic situation. In addition, action researchers concentrate on obtaining information that enables them to change the circumstances of a particular situation, rather than looking for sound generalizations [26-29].

For this purpose, the advancement of the training of academician in terms of pedagogical development is regarded as a main concern for this research. Therefore, researchers developed a pedagogical formation program based on action research design where the participants are expected to reach the following objectives as given:

- a. Preparing a teaching plan, based on modern teaching techniques in accordance with their fields of expertise as well as learning the skills of teaching, learning methods and effective presentation skills,
- b. To be able to act in accordance with the learning principles adult education in educational activities,
- c. To be able to determine the training needs of the participants in a training program and to create an appropriate training program,
- d. Creating and maintaining a positive educational environment,
- e. Facilitate training by applying the rules of communication,
- f. Selecting and applying the method according to the purpose of the training,
- g. Properly prepare and use the tools and equipment that facilitate education,
- h. Prepare and make an effective presentation,
- i. Develop and implement tools to evaluate the educational process and outcome

In addition, faculty members participating in the training can learn

- a. To prepare an efficient training plan,
- b. To create a learning environment suitable for the subject and the student for an efficient course,
- c. To choose the appropriate learning method for the subject and the student for an efficient course,
- d. To conduct learning activities for an efficient course,
- e. To choose the most appropriate assessment method for the assessment of the course and skills,
- f. To learn educational instrument development, applications and scoring in accordance with the assessment method,
- g. To develop measures to accelerate education and learning,
- h. To comprehend the ways to increase productivity in education and to learn the learning processes,
- i. To have sufficient knowledge and skills to develop themselves as trainers

2.1. Population

Training was held at Samsun Ondokuz Mayıs University between 2014 and 2016 for the development of educational skills and formation for academicians covering all academic units within the university. Table 1 shows the distribution of 50 academicians among 246 academicians who participated in the training.

Table 1. Distribution of academics participating in the project

Order	Faculty	Date	Participant Number	Study Group
1	Faculty of Aeronautics and Astronautics	08 - 12 September 2014	14	4
2	Faculty of Civil Aviation	08 - 12 September 2014	6	1
3	Engineering Faculty	08 - 12 September 2014	10	3
4	Faculty of Education	01 - 05 January 2015	5	1
5	Faculty of Arts and Sciences	01 - 05 January 2015	5	1
6	Faculty of Economics and Administrative Sciences	01 - 05 January 2015	5	1
7	Faculty of Theology	01 - 05 January 2015	5	1
8	Faculty of Education	07 - 12 January 2015	5	1
9	Faculty of Arts and Sciences	07 - 12 January 2015	5	1
10	Faculty of Economics and Administrative Sciences	07 - 12 January 2015	5	1
11	Faculty of Theology	07 - 12 January 2015	5	1
12	Faculty of veterinary medicine	23 - 27 February 2015	25	5
13	faculty of Agriculture	01 - 05 June 2015	31	6
14	Faculty of Dentistry	08 - 12 June 2015	25	5
15	Vocational School of Health Services	14 - 18 September 2015	5	1
16	Samsun School of Health	14 - 18 September 2015	33	6
17	Yaşar Doğu Faculty of Sport Sciences	1 - 5 February 2016	6	1
18	Tourism Faculty	1 - 5 February 2016	5	1
19	Communication faculty	1 - 5 February 2016	11	2
20	Faculty of Dentistry	1 - 5 February 2016	10	2
21	Ali Fuat Başgil Faculty of Law	1 - 5 February 2016	15	3
22	Faculty of Aeronautics and Astronautics	11 - 15 April 2016	10	2
	Total		246	50

2.2. Data collection

All participants are academicians. A total of six open-ended questions were asked by asking four questions before the training and two after the training (see Table 2 to Table 6). The explanations obtained were recorded in writing on a regular basis. Participants volunteered in this study. The following is a list of questions asked before training.

- What do you expect from the training?
- As an academician, do you think you are inadequate in terms of pedagogical knowledge? If so, what are these?
- Did you come to the training as a volunteer? Why?
- Would you attend the training without the assignment?
- Do you think this kind of training is necessary for academicians?

Following is the list of questions asked after the training.

- What did you learn on the course?
- Did you volunteer for the course?
- Do you think the course is necessary?
- Do you think academics need a course with this content?
- Would you have attended the course if there was no assignment?

2.3. Data analysis

Because this study is a qualitative study, the content analysis method was used to evaluate the collected data. This analysis includes verbal or written data analysis [30]. Shulman (1987)'s seven categories [3, 4] for knowledge types were used in this regard. In doing this, the theme and frequency approach was used. An opinion of a participant was evaluated as a frequency and the frequencies were determined accordingly. Some of the participants gave more than one opinion and some of them did not give any opinion. Therefore, the total frequencies do not correspond to the total number of participants. The researchers agreed on the common theme by reading the collected data separately. It has been deemed appropriate to be in the form of main theme and sub theme.

3. RESULTS AND DISCUSSION

3.1. Results

The five questions asked in this section are the questions asked before the training. The content of the questions is to determine the expectations and thoughts of academicians from education. Expectations of academicians from education varied (Table 2). It is understood that most of them want to benefit from program through "teaching methods and techniques". The most important reason for this is that academicians

still do not feel comfortable in the classroom education. For example, as it can be understood that the higher frequency regarding “learning more efficient methods in lecturing and sharing information with students” implies their feeling of inadequacy in terms of “teaching methods and techniques”. The second higher frequency is about the item as “to determine the validity and reliability of our measurement and evaluation methods”. On the other hand, it is understood that a small number of academicians have negative perceptions on education.

In Table 2, “Teaching Methods and Techniques” are seen as the most inadequate skill among the academicians. This is followed by “assessment and evaluation” (7), communication (5), seeing the missing points (5), other (5), self-improvement (3), learning new things (3). As it can be seen most of the remarks of the academicians are related to general pedagogical knowledge (28). It is followed by “knowledge of learners and their characteristics” (3) and self-improvement (3). Negative remarks also exists hence a small number of academics consider themselves sufficient in terms of general pedagogical knowledge. Therefore it can be seen that expectations of the academicians from this program is related to general pedagogical knowledge and knowledge of learners and their characteristics.

Table 2. Expectation of the academicians from the program

Main Theme	Sub-theme	Code	f	Opinions
Positive	General pedagogical knowledge	Assesment and Evaluation	7	“to determine the validity and reliability of our measurement and evaluation methods”, “to learn the technique of exam preparation”, “to learn how to evaluate the learning outcomes after class”
				“learning more efficient methods in lecturing and sharing information with students”, “Gaining the ability to attract the attention of the while teaching the course and gaining the ability to explain the course in the most effective way” and “to learn presentation techniques”
	Knowledge of learners and their characteristics	Self-improvement	3	“Develop myself and become a better educator” ve “Both for my personal development and for my student education, I should attain new experiences that make my life easier”
				“Better communication with students” and “To learn how the relationship between the student and the instructor should be in the classroom”
	General pedagogical knowledge	Learning New Things	3	“Learning something new” ve “I want to hear and learn new things”
				“To reinforce what I know and complete what I don't know with this training”, “To see what we have been missing for many years as an educator” ve “I want to know the wrong practices that belongs to me”.
General pedagogical knowledge	Seeing the missing points	5	“To raise the bar of our quality of education and to add value to us”, “At the end of this one-week training, I believe that it is really beneficial for me.” and “Learning the beneficiary tricks to be considered in the education process”	
			Other	5
Negative	General pedagogical knowledge		8	

In Table 3, “Teaching Methods and Techniques” are seen as the most inadequate skill among the academicians. This is followed by “Communication”, “Classroom and Time Management”, “Unawareness” (5) are the second order inadequate skill among the academicians. “Professional Competency” is the fourth one (4) and the less felt inadequate skill is “Assesment and Evaluation” in this regard. Most of the remarks are related to general pedagogical knowledge (n=12), second one is related to knowledge of educational contexts (n=5) and the final one is related to content knowledge (n=4). Negative remarks also exists hence a small number of academics consider themselves sufficient in terms of their educational adequacy.

The questions asked in Table 4 shows the perceptions of academics regarding their willingness for participation in the program. As it can be seen that most of them have positive attitudes toward the program (n=20). Comparingly small number of them have negative attitude toward the program (N=8). Similarly most of them indicate that such a formation program is necessary for improving themselves (n=23) whereas small number of them disagree (n= 2).

Table 3. Areas where academicians think that they think that they are insufficient

Main Theme	Sub-theme	Code	f	Opinions
Inadequate	General Pedagogical Knowledge	Assesment and evaluation	1	"I want to have scientific knowledge about the evaluation of exams"
	General Pedagogical Knowledge	Teaching methods and techniques	6	"Yes, I want my presentations to be more effective", "Sound usage, slide preparation" ve "I think I'm inadequate about slide presantations and colloborative methods"
	General Pedagogical Knowledge	Communication	5	"I don't always lecture, but I'm overly excited and I don't want to give the impression of such an inadequacy" ve "Since I am new in my profession, I am inconsistent about how the relationship with the student should be. Should an educator be very distant to the student or like a friend? How to achieve this balance"
	Knowledge of educational contexts	Classroom and time management	5	"I have difficulty in assigning classes in lecture" ve "I'm having trouble in time management during the lecture. Unintentionally teaching two hours of uninterrupted courses can lead to lower student productivity"
	Content Knowledge	Professional competency	4	"As a teacher, I think I have some shortcomings in my field." ve "I find it difficult to decide how much information I need to give to the student while I am training a profession. Should I focus more on my own expertise or stay on a more basic level?"
Adequate	General	Unawareness	5	"There are necessarily areas where I am insufficient. But I'm not aware yet. I think I will be more objective after the training", "Even though I've been lecturing for three years, I think I'm inadequate." and
			6	"I don't see myself inadequate"

Table 4. Reasons and thoughts of academicians to participate in the program

Main Theme	Sub-theme	f	Opinion
Did you volunteer for training? Why?	Positive attitude	20	"I'm a volunteer because I've been waiting a long time. I think it will be useful in education", "I'm here to learn things I don't have educational background." and "I've taken this training before, but I'm coming there because I know I have to."
	Compulsory participation	6	"They wrote my name from the department and I did not appeal" ve "No, I didn't volunteer. I came by assignment"
	Other	2	"I was reluctant because of my administrative duties, excess work and distance, but I am no longer. I believe I can get something new."
Do you think this kind of training is necessary for academicians?	Absolutely necessary	6	"Absolutely necessary. I think there are a lot of interesting subjects even though we have a Ph.D." and "I think it is supremely necessary. Just as making a research is an aspect of being an academician to transfer knowledge as much as is also necessary part of being an academician. Such training can make this this more professional"
	Necessary	17	"Necessary. Because educating is al an area of expertise . After each of us has received our own expertise training, we become trainers. However, we do not receive any pedagogical training. Therefore, we cannot do it properly and "Such training is necessary to ensure an academic standard within a certain discipline or interdisciplinary ways "
	Maybe necessary	2	"It is important to see the differences in our style of instruction, it may be necessary if it reaches the size that will affect our behavior "
	Maybe not necessary	2	"Not Necessary"
	Other	3	"I can decide after the training. I think there will be things I can learn according to the program" and " Some of the topics included in the training can already make significant contributions to us in the professional sense."

When the achievements of academicians from the program is investigated as given Table 5, it is seen that positive remarks are outweighed. Most of the positive remarks are related to general pedagogical knowledge (Teaching Methods and Techniques = 10; Assesment and Evaluation = 9 summing up 19 remarks). The second category consists from good remarks that are neither comments on particular benefits nor some conceptual conclusions. The third category is related to other category (Awareness of Own Pedagogical Mistakes = 5; Self-Development = 3; Repetition: 3 summing up 11 remarks).

There are also negative comments regarding the program. The first one is related to the subject of the program indicating that content of the program which is very important that participants needs pedagogical content knowledge (n=11). The second one is related to the knowledge of educational contexts of the trainers which are mostly about time management and planning skills (n=8). The third one is related to tools and equipment which belongs to pedagogical knowledge of the trainers (n=2).

Table 5. Achievements of academicians from the program

Main Theme	Sub-Theme	Codes	f	Opinion
Positive Comments	Other	Awareness of Own Pedagogical Mistakes	5	"I had the opportunity to see my mistakes and shortcomings" and "At least I had a chance to see what I did and how I should do it."
	General pedagogical knowledge	Teaching Methods and Techniques	10	"I will change my course notes as well as my course presentations based on what I've learned in there", "The issue I had the most problems in the classroom was the attendance. I think that I will overcome this problem with what I have learned about the methods that can involve the student at any moment." and "We learned applied methods"
	General pedagogical knowledge	Assesment and Evaluation	9	"I have learned the mistakes in measurement and evaluation", "I have learned how to prepare exam questions" and "We learned how to ask open-ended questions, how to evaluate them, what are the mistakes in preparing tests"
	Other	Self-Development	3	"I made very valuable observations in terms of personal development. I was able to compare myself with others"
	Other	Repetition	3	"We have renewed what we know and I think it will contribute to my development "
Negative Comments	Good remarks	Other	14	"I must say that I have seen the benefits of this one-week course ", "I think I've learned topics to help us in the future" and "Provided awareness and it helped"
	Knowledge of educational contexts	Time Management and Planning	8	"Five days is too long for this course. It should be no more than three days", "Since there was a course all day long, our performance towards the evening was falling" and "The program was very busy and a more calm and lighter program can be done"
	Content knowledge of trainers	Tools and Equipment	2	"More appropriate media and materials could be provided for presentations " and "Short videos about the profession could have been more useful"
	Pedagogical content knowledge	Subject	11	"For such a course to be more productive, topics need to be more localized ", " More attention should be paid to common mistakes and good practices "and" Topics need to be updated according to the expertise of groups "; "Factors that could increase the motivation of trainers and participants could be adjusted well "and im I didn't find some practices too meaningful"

As it is seen in Table 6, the same questions were asked to the participants at the beginning and end of the course and significant differences occurred in the answers received. It was observed that the evaluation expected especially from education showed a high level of variation after the training. This also confirms the importance of the necessity of this kind of education by providing the common values and experiences with academicians in the same faculty through education. Therefore program have contributed positively to updating their knowledge. When the chi-square test was performed for the analysis of the data in Table 6 the first finding given as 10 cells (0,0%) have expected count less than 51 indicates that we can use the analysis for chi-square test for the findings regarding yes and no answers. Therefore our asymptotic Significance (2-sided) for Pearson Chi-Square indicates that there is a dramatic change regarding the effectiveness of the program as given in Table 7.

Table 6. Questions asked at the beginning and end of the course and the opinions of the participants

Question	Before f		After f	
	Yes	No	Yes	No
1 Did you volunteer for the course?	18	32	44	6
2 Do you think the course is necessary?	23	27	45	5
3 Do you think academics need a course with this content?	21	29	45	5
4 Would you have attended the course without the assignment?	9	41	34	16

Table 7. Chi-square tests for yes-no answers

Chi-Square Tests	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	16.331 ^a	3	.001
Likelihood Ratio	16.153	3	.001
Linear-by-Linear Association	7.219	1	.007
N of Valid Cases	400		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 40.25.

Some positive remarks of the academicians can be given as follows:

Participant 1 remarked that “I came here because it was an assignment. I was also angry with those who had appointed me because it coincided with a busy period. After arriving, it was like a therapy. We updated some of our information, some remembered After the first day I tried to continue to the maximum degree. Thank you for such training”. This comments indicate that such orientation programs not only have a educational effects but also therapeutic effects as well.

Participant 2 pointed out that “it would be better if there were direct useful applications for my field. However, it was quite helpful and useful. I came reluctantly about how a week will pass. But here I saw it was not. The time went well and we were not bored. The instructors were well prepared”. This comments emphasize the significance of pedagogical content knowledge for such programs.

Participant 3 remarked that “First of all, we are very pleased with all our teachers. Each of our professors, who are competent in their fields, sometimes refreshed our knowledge and sometimes expanded our horizons with a different perspective. I thank them all individually”. This comments emphasize the interdisciplinary contributions of such an in-service programs.

As it can be seen from the participant opinions reflected as an example, the trainings were very successful. Despite all positive opinions, there were also negative opinions and criticisms. These are briefly as follows. For example, participant 4 indicated that “As we had exams, I couldn't attend some practical classes. I'm sorry I missed those classes. Training is better if they are not put into exam times”. This is important remark regarding the planning of such educational formations.

Participant 5 said that “I am very angry that my work is very busy and you have to come here a thousand full-time for a week between the dates that I have made my plans to concentrate fully on individual work. This training didn't do me any good.” Therefore, this comments indicates the significance of voluntary participation for in-service trainings.

Participant 6 said that “Although some of the lessons worked for me, the majority were not related to my field. I have learned about general rules and communication with students, but I haven't been able to learn specifically about the methods I can apply in my field.” This comments also emphasize the significance of pedagogical content knowledge for such programs. Therefore both negative and positive comments focus on the the significance of pedagogical content knowledge for such programs.

Participant 7 said that “The timing can be adjusted better. Education can be done in faculties and evenings. It's hard to be here all day.” This is also an important remark regarding the planning of such educational formations.

3.2. Discussion

When the expectations of the academicians regarding the pedagogical skills was investigated it could be seen that most of them strongly emphasized they had expected to improve their general pedagogical knowledge (n=18), they also strongly indicated that they felt insufficient in that type of knowledge (n=12) and they expressed that they could improve their general pedagogical knowledge after they received the pedagogical formation (n= 19). Another dimension that was remarked is knowledge of educational contexts which is also expressed as insufficient (n= 5) and was pointed out as improved (n= 8) after taking the program. Although it is very small number, some participant also indicated that they were expected to improve themselves (n=3) and this can be achieved also by the program also (n=3). Another very significant finding of this program is that participants strongly emphasized that pedagogical content knowledge. Both negative and positive comments focus on the the significance of pedagogical content knowledge for such programs implying that in addition to focusing on general pedagogical knowledge, differentiated educational formation programs for different fields should be given based on the expertise of the academicians in order to improve their pedagogical content knowledge.

Final results of this program are about its effectiveness. The asymptotic Significance (2-sided) for Pearson Chi-Square given in Table 7 indicates of the yes/no answers indicate that there is a dramatic change regarding the effectiveness of the program. When the question as “Did you volunteer for the course?” was asked to academicians, it can be seen that there is a dramatic increase in “Yes” and dramatic decrease in “No” answer indicating that academicians were positively affected by the program. When the question as “Do you think the course is necessary?” was asked to academicians, it can be seen that there is a dramatic increase in “Yes” and dramatic decrease in “No” answer indicating that academicians were convinced the necessity of such a program. When the question as “Do you think academics need a course with this content?” was asked to academicians, it can be seen that there is a dramatic increase in “Yes” and dramatic decrease in “No” answer indicating that academicians were satisfied the general content of this program. When the question as “Would you have attended the course without the assignment?” was asked to academicians, it can be seen that there is a dramatic increase in “Yes” and dramatic decrease in “No” answer indicating that academicians' attitude was positively changed as given in Figure 1.

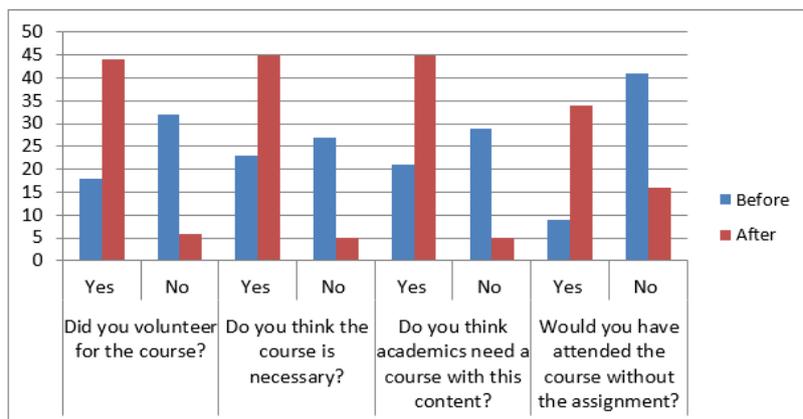


Figure 1. Opinions of the participants before and after the program

As shown in Figure 1, opinions of the participants before and after the program are supported by the findings of chi-square test given in Table 7. “The idea of Action Research is to identify and investigate educational problems and issues in the best way at the level of classroom and school where there is action. By including research, findings can be applied immediately and problems can be solved more quickly. Therefore, it is important to add what the comments of the participants such an educational program. After one week of intensive training, the same people were asked about their gains from the training. It is seen that it meets the needs of academicians. The most inadequate dimensions as” teaching methods and techniques were found to be mostly met by the academicians. For example, participant 8 remarked that “The issue I had the most problems with in the classroom was attendance. I think I will overcome this problem with the techniques I have learned about that will involve the students into the courses”. “Assessment and evaluation, awareness of own-mistakes, self-improvement, repetition and other contributions” can also be considered that the program positively affects their pedagogical knowledge. In general, it is understood that education has a positive effect on expectations. However, it should be noted that a small group is not satisfied with the “timing and planning of education”. For example, participant 9 remarked that “Since it was a course all day, our performance was falling towards the evening”. Participants also suggested that “frequent pedagogical mistakes and good practices should be emphasized more” and pedagogical content knowledge should be more focused than the general pedagogical knowledge. In the same way, this training has a positive effect on the expected performance.

4. CONCLUSION

The training of academicians is one of the neglected fields except the training given to other formal teacher candidates. There is no formal study on this. Only pedagogical training workshops are organized annually for some of the academicians through the initiatives of the universities themselves. For a university instructor, there is no clear separation between general pedagogical knowledge with pedagogical content knowledge. Therefore, pedagogical formation courses are important for academicians who have started to give lectures as academicians after receiving education in many different disciplines and have difficulty in applying some basic teaching skills and principles since there is no formation training related to be an instructor.

Today, inadequate pedagogical back-ground can be regarded as the main problem that arise in the teaching activities of the academic staff in Turkey. In particular, it is not expected that an education which ignores the psychological and sociological characteristics of student recognition will be successful. As a result of this, problems in the classroom and the institution are manifested. Classroom management establishing pedagogical relations with the students are among the common problems that academicians have faced. The most important reason for this is the absence of pedagogical formation before starting the profession. In this study, the academicians themselves showed this clearly in their answers to the questions before the training. In particular, this occurs in self-expression, assessment, and communication process.

This study and other studies clearly show that academics have problems in pedagogical backgrounds. Although one week of training seems to be effective, it is limited in terms of sustainability and access to other academicians. Therefore, it is very important to provide workshops, seminars and courses for pedagogical formation courses. On the basis of the experience of the lecturers participating in the course,

suggestions are given as follows: 1) In service programs such as training of trainers should be organized at regular intervals; 2) Educational environments, tools and equipment should be improved; 3) When creating or organizing new educational environments, educators and subject matter experts should be consulted about the educational subject; 4) Class sizes should be reduced for such in-service formation programs; 5) Such an in-service program should focus on pedagogical content knowledge rather than general pedagogical knowledge.

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