EFFECTS OF AN IN-SERVICE TEACHER EDUCATION COURSE ON LANGUAGE TEACHERS' RESEARCH KNOWLEDGE AND PRACTICE

(HİZMETİÇİ ÖĞRETMEN EĞİTİMİ DERSİNİN DİL ÖĞRETMENLERİNİN ARAŞTIRMA BİLGİSİ VE UYGULAMASI ÜZERİNDEKİ ETKİLERİ)

Görsev SÖNMEZ [1]
Ayşe Semra AKYEL[2]

ABSTRACT

The purpose of this study is to investigate whether Current Issues in In-service Teacher education (INSET) course, one of the components of a Masters of Art (MA) program in Teaching English as a Foreign Language (TEFL), helps participating teachers develop as teacher-researchers. Seventeen non-native English as a Foreign Language (EFL) teachers participated in the study. The differences in participants' research knowledge and practice were investigated through Teachers' Research Knowledge Questionnaire, and other sources. The findings indicated that the participants' research knowledge was broadened as a result of the instruction and the hands-on experience they gained throughout the course.

Key words: teacher-research; research engagement; in-service teacher education

ÖZET

Bu araştırmanın amacı, Yabancı Dil (TEFL) Öğretimi Yüksek Lisans (MA) programının bir bileşeni olan Hizmet içi Öğretmen Eğitimi (INSET) dersinin katılımcı öğretmenlerin araştırmacı öğretmen olarak gelişmelerine yardımcı olup olmadığını araştırmaktır. Çalışmaya, İngilizceyi yabancı dil olarak öğreten 17 öğretmen katıldı Katılımcıların araştırma bilgi ve uygulamasındaki farklılıklar Öğretmen Araştırma Bilgi Anketi ve diğer kaynaklarla araştırılmıştır. Bulgular, katılımcıların araştırma bilgilerinin, ders boyunca ve kazandıkları deneyimlerin bir sonucu olarak genişlediğini ortaya koymuştur.

Anahtar Sözcükler: öğretmen-araştırması; araştırma yapmak; hizmetiçi öğretmen eğitimi

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[1]Yrd.Doç.Dr., Hasan Kalyoncu Üniversity, Faculty of Education, Email: gorsev.sonmez@hku.edu.tr
[2]Prof.Dr., Yeditepe University, Facuty of Education. Email:aakyel@yeditepe.edu.tr

Introduction

In the field of education, the concept of teacher has undergone several changes due to the impact of different schools of thought in educational psychology. While the teacher was labeled as technician by being under the effect of positivism for many years, s/he has been identified as thinker and the reflective practitioner by being highly affected by cognitive psychology. Most recently, the impact of social constructivism has reshaped the concept of teacher as a reflective practitioner by involving him/her within a dynamic nature of the interplay among teachers, learners and tasks where teachers have to share their classroom based problems and try to solve them either through the help of other colleagues or themselves by social inquiry. Thus, teaching became a process that involves continuous inquiry and renewal. This change in the concept of the teacher and teaching has caused teacher-research to be under study lately. With this movement, the teacher is labeled as the professional who is knowledgeable about 'not only content and pedagogy, but also how to learn from teaching in an ongoing way, and how to pose and address new problems and challenges that do not have existing answers' (Darling-Hammond & Bransford, 2007). Therefore, teacher research is of value to help teachers become life-long learners who can raise questions and continuously learn how to teach by researching and reflecting on practice across their professional career (Cochran-Smith, Barnatt, Friedman and Pine, 2009).

Literature Review

In language teaching, the roots of teacher-research date back to 1980s. The concept of *teacher as researcher* started to be recognized as a result of the limitations of the large scale and longitudinal studies conducted with the aim of identifying the best methods and approaches in language teaching/learning which were open to doubt (Allwright and Bailey, 1991). This was probably because of their being essentially quantitative and having involved large groups of participants and being conducted by academicians with no or little concern about the practitioner. As a result, they also failed to meet the needs and to solve the problems of the language teachers (Borg, 2010). Thus, the approach that defines the teacher as the technician has become the focus of criticism.

Therefore, classroom-based research fore fronting the practitioner as the owner of the story of her own classroom practice appeared as an alternative research methodology and a logical step in the historical progress of teacher-research.

Teacher-research is assumed to be one essential component of in-service teacher education programs (e.g. MA in TEFL). Borg (2006) points out that teachers' awareness of the importance of teacher-research should be raised by involving them in the research process actively. However, it is also argued that these programs are not very helpful in encouraging teacher-research especially out of these formal contexts (Borg, 2006, 2009).

The possible effects of conducting teacher-research within structured programs such as BA/MA TESOL programs on teachers' perceptions were investigated (Atay, 2008; Borg, 2009; Dikilitaş, 2015; Edwards and Willis, 2005;

Kiely et al., 2004; Reis-Jorge, 2007; Wyatt, 2010; Wyatt and Dikilitaş, 2016; Yaylı, 2012).

Atay (2008) conducted a study along with the participation of 18 EFL teachers in a university preparatory program. Teachers attended a six-week teacher-research program every afternoon after their classes for four hours. They were first provided with theoretical information and then required to conduct a research study under the facilitation of the researcher. However, at the end of the sixth week, only six teachers submitted their reports. Borg (2013) explained this result by criticizing the lack of facilitating factors such as no reduction from teaching and the unrealistic time period (two weeks) to conduct the necessary research.

The second study reported the results of a collaboration between the University of Leeds and Ministry of Education in Oman challenged with a BA TESOL project (Borg, 2009). The project consisted of four phases each of which lasted for six months. To facilitate the process, teachers were released from work for one week after the first phase. In the following phases, they were given one day off to work on the projects. The results showed that, they learned how to do good quality research, evaluate research, help others do research and become enthusiastic about doing research.

Edwards and Willis (2005), in their book, compiled the research conducted by teachers with the aim of exploring different aspects of task-based learning. Eighteen English language teachers who were MA TESOL students contributed with their classroom-based investigations. The participants complained limited time. In fact, the benefits of research engagement they stated far outnumbered the obstacles that were necessary to cope with. An increased sense of professionalism, respect for other researchers, appreciating students' abilities, the enjoyment of learning, increased motivation , efficacy in doing something to solve problems, gaining insight into own instruction were the most commonly stated advantages.

Davis, Kiely and Askham (2004) conducted another project focusing on the implementation of a series of innovations in a research methods course in a Masters in TESOL program. The evaluation reports showed that all participating MA students had a positive outlook toward the course. The only challenge they faced was to access some of the reading materials and published studies in the libraries. Moreover, the preparation stage of the presentation and the feedback received after doing it were found to be more valuable than having done it.

In another study, Reis-Jorge (2007) reported a case study, shedding light on the effect of formal instruction and how hands-on experience can change teachers' beliefs of teacher-research and of themselves as future teacher-researchers. At the beginning of the course, teachers tended to define teacher-research only by referring to its aims (i.e., assessment and problem-solving). However, as the course progressed, the participants started to have a dual perspective of teacher-research. Nearly all of them defined it in terms of both aims and the process which leads to discovery and professional development. Results also showed that they would adopt a reflective and researcher stance in their future career. However, in their interviews it is easy to see that they were engaged in research since it is a requirement of the academic setting

in which they were enrolled rather than professional development. Heavy workload, class size, curricular and extracurricular demands and lack of resources, lack of collaboration from peers and administrators were stated as the challenges they faced.

A national study which was conducted in the 'Materials Development and Evaluation' course in a Master's in TESOL program in Turkey aimed to investigate both the research experience of four teachers and their collaboration with a university professor (Yaylı, 2012). The results showed that the participants mostly had difficulty during qualitative data analysis and interpretation of the data. After the research practice, they stated that they experienced difficulties in doing research and learned how to cope with them by making use of previous research and the assistance of the university professor.

More recent studies by Wyatt and Dikilitaş (2016) and Dikilitaş (2015) aimed at investigating the possible benefits teachers gained through research engagement. In the end of these studies, researchers concluded that engaging in such a continuous professional development process increased teachers' self-efficacy beliefs and helped them acquire deeper practical knowledge in their fields. Finally, it was claimed that, all participating teachers became more efficacious as a result of research engagement.

As it is clear in the literature, teacher-research is assumed as one essential component of MA in TESOL/TEFL programs that are usually designed for the professional development of teachers. Borg (2006) points out that teachers' awareness of the importance of teacher-research should be raised by involving them in the research process actively. However, MA in TEFL programs are criticized by not being very helpful in encouraging teacher-research especially out of these formal contexts (Borg, 2006, 2009). Therefore, in addition to the theoretical courses, a course, which aims to develop teachers as teacher-researchers should be integrated into these programs.

Hence, the purpose of this study is to investigate the possible effects of the INSET course as one of the components of an MA in TEFL program in order to help participating teachers develop as teacher-researchers who can explore their own teaching practice. In doing so, the study aimed to see whether the INSET course caused any changes in EFL teachers' research knowledge and practice.

Methodology

For the purposes of this study, convergent parallel design (Creswell, 2013) was adopted in which both quantitative and qualitative strands were applied concurrently by keeping the strands independent during analysis and then mixing the results during interpretation. As a result, triangulation of data, more comprehensive account of analysis, increasing credibility of the study and compensating weaknesses of either research types were aimed.

Participants and Setting

Seventeen (5 male, 12 female) English as a Foreign Language (EFL) teachers accepted to the MA in TEFL program in the fall 2012-2013 academic term participated in the study. They were all English language teachers in different schools

and levels. After taking some theoretical courses, they took INSET as a compulsory course in the spring semester. This course also served as a treatment for the study.

The INSET course is one of the courses that the MA students have to take for partial fulfillment as a requirement for the MA in TEFL program. It has been specifically redesigned to focus on raising MA students' awareness of what teacher-research is and how it is applied in their teaching practice so that they become independent researchers exploring their own teaching practice.

The course was offered 3 hours per week for 15 weeks. Every week two hours were dedicated to theoretical instruction about what teacher-research is and how to conduct it. During the remaining one hour, students' reflections on weekly assigned tasks and their experiences while they were conducting their research were discussed. The theoretical information was provided through reading assignments to be discussed in the class. During these discussions participating EFL teachers were encouraged to relate what they read to their research engagement.

Data Collection and Analysis

Data were collected through a number of sources both at the outset and end of the treatment. First, participants were administered Teachers' Research Knowledge Questionnaire (adapted from Borg, 2009). Then, they were provided with some guidelines and asked to keep a journal throughout their research engagement and accomplish weekly written tasks such as defining research, identifying research methods, doing literature review, to practice what was instructed and to identify the approximate time their knowledge started to broaden and to elicit the challenges they faced during their practice. A combination of qualitative and quantitative data analysis strategies was used to ensure internal validity. The analysis of data gathered from questionnaire was done through descriptive statistics. In addition, data gathered through essays, interviews (N=5) and written documents were analyzed through open-coding and content analysis. Analysis was done both manually and through N-Vivo 10 software.

Normality and Reliability of the Questionnaire Data

Within the questionnaire there are three different likert-type subscales. Normality was checked for each subscale. As can be seen in the following table, this assumption was met by all subscales both before and after the instruction. Additionally, the alpha scores were found to be satisfying (see table 1).

Table 1. Normality test for teachers' research knowledge questionnaire

	Before the Instruction			After the Instruction		
	Alpha	Kolmogorov-Smirnov			Alpha	Kolmogorov-Smirnov		
		Statistics	Df	Sig.		Statistics	df	Sig.
Subscale 1	.81	.202	17	.064	.73	.185	17	.124
Subscale 2	.82	.150	17	.200	.84	.166	17	.200
Subscale 3	.76	.198	17	.076	.94	.092	17	.200

Reliability of Other Data Collection Tools

In order to ensure the reliability and validity of the data gathered from various data collection techniques, trustworthiness criteria (Guba and Lincoln, 1985) were used. This evaluation was done according to four criteria they suggested; credibility, transferability, dependability and confirmability. Member checks, thick description and prolonged engagement were the strategies applied to ensure trustworthiness.

Results
Research knowledge

In order to investigate the effect of instruction on participating teachers' research knowledge, first, they were asked to evaluate ten scenarios (subscale 1), by indicating to what extent they felt each scenario represents a research case and second, to state the importance level of some research characteristics on a five point likert scale (subscale 2) both at the outset and at the end of the instruction (5= very important, 1= unimportant).

Findings of the scenario evaluation section were presented in two categories for every scenario – not research (including definitely not research and probably not research) and research (including probably research and definitely research).
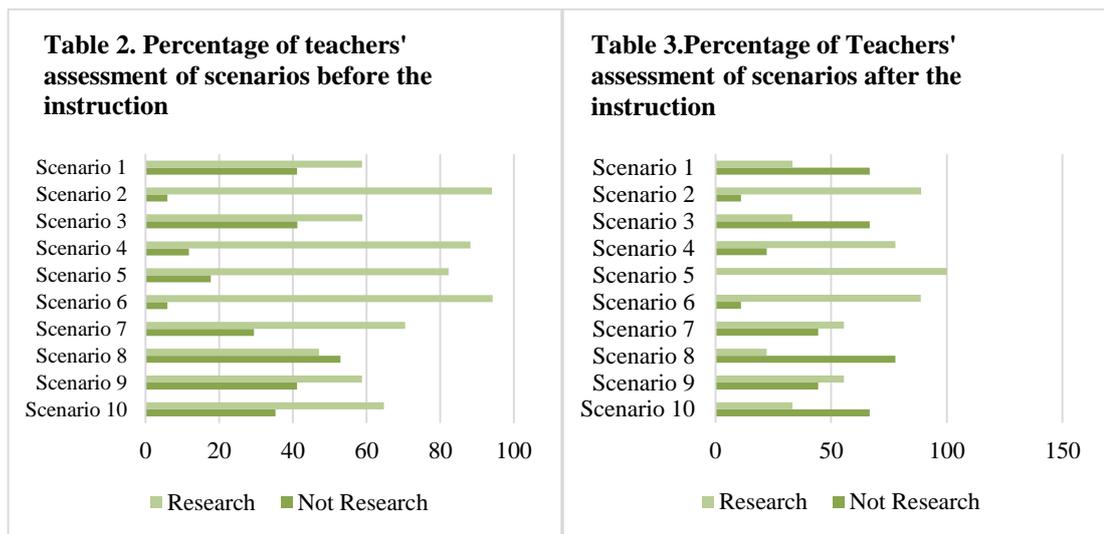

Table 2. Percentage of teachers' assessment of scenarios before the instruction

Table 3. Percentage of Teachers' assessment of scenarios after the instruction

Table 4. Descriptive statistics of teachers' conceptions on the characteristics of research before and after the instruction

Characteristics	Before the Instruction		After the Instruction	
	Mean	SD	Mean	SD
1. Number of participants depends on the type of research.	3.76	1.43	4.33	1.24
2. A large volume of information is collected.	4.00	0.93	4.22	1.27
3. Experiments are used.	3.94	0.89	4.00	1.09
4. Hypotheses are tested.	4.35	0.99	4.11	0.49
5. Numerical information is analyzed statistically.	4.05	0.89	4.22	1.22
6. Questionnaires are used.	3.35	1.36	3.00	1.20
7. The researcher is objective.	4.64	0.60	4.00	0.77
8. The results apply to many ELT contexts.	3.17	1.23	3.55	1.27
9. The results are made public.	3.05	1.43	4.33	1.11
10. The results give teachers ideas they can use.	4.41	0.61	4.55	0.51
11. Variables are controlled.	3.94	0.89	4.11	0.95
12. Verbal data is analyzed with content analysis.	4.00	0.70	4.22	0.71
13. For qualitative research data can be collected through interviews.	3.76	0.97	4.11	1.34
14. For quantitative research data can be collected through questionnaires.	3.47	1.00	3.77	1.16

Before the instruction, the most highly rated scenarios were 2 (% 94.1), 4 (% 88.2) and 6 (% 94.2) (see table 2). Among these scenarios, the researcher in number 4 was a university professor and the report was written in the form of an academic article on the contrary to numbers 2 and 6 in which teachers were the researchers. As can be seen in table 3, after the instruction, scenarios 5 (100%), 2 (88.9%), and 6 (88.8%) were the most highly rated scenarios as research. On the contrary to their evaluations before the instruction, they rated scenarios which only include teachers as researchers highest after the instruction. All the participants evaluated the fifth scenario as either 'probably research' or 'definitely research'. In this research case, teachers experience improving classroom management in their own classes after observing each other's classes. They also publish their results in a teachers' association newsletter. Scenarios 2 and 6 were rated highly although they were not rated as high as before the instruction. Both scenarios include teachers' experimental use of particular teaching methods. Therefore, participants might have looked for a structured teacher-research circle in which some steps are followed and included.

On the other hand, the three least highly rated scenarios after the instruction were numbers 1 (66.6%), 3 (66.6%), 8 (77.8%) and 10 (66.6%) as it was the case before the instruction (see table 3). Responses in the follow-up interview revealed a number of common influences on their assessments. Lacking the necessary steps of teacher-research, insufficiency of the amount of data collected are the common factors stated.

Another important finding is that 66% of the participants felt that library-based inquiry was not a research case in scenario 3. So, there appeared no difference in their evaluations before and after the instruction. In addition to scenario evaluation, the participants were asked to decide to what extent the provided characteristics of research were important (see table 4). It can be concluded that, both before and after the instruction, the participants agreed that research results should give them ideas to apply in their own contexts. Moreover, by not indicating items such as 'hypotheses are tested' as important after the instruction, it can be stated that their awareness regarding teacher-research and its characteristics raised.

The participants' research knowledge before and after the instruction was also tapped through other sources. Data gathered before the instruction revealed that their knowledge of research includes its description as; (1) a way to solve problems (N=7) and (2) it is systematic (N=3). Data also indicates their knowledge of (1) steps (N=13), (2) data collection tools (N=10) and (3) data analysis (N=3).

To begin with, before the instruction, participants defined research as a problem solving process as can be seen in the following quotations.

When you have a problem, you ask people some questions with surveys and try to find a solution. (Pre-instruction, Research Knowledge and Practice Interview).

They also stated research as a systematic and data collection process involving some instruments. This finding supports the results of participants' assessments of scenarios which were rated most highly. Following quotations illustrate these aspects.

Collecting data in a systematic way can be labelled as research. (Pre-instruction, Research Knowledge and Practice Essay)

The participants also mentioned some of the data collection tools among the characteristics of research. Among the tools they mostly talked about are; (a) questionnaires (N=4), (b) surveys (N=6), (c) interview (N=4) and (d) observation (N=4).

Data collection methods can be asking questions, doing surveys either in the written or verbal form (Pre-instruction, Research Knowledge and Practice Interview).

Participants also identified some steps of research (N=13) as a part of their research knowledge. The five common steps are; (1) data collection (N=11); (2) posing a problem (N=7); (3) conclusion (N=7); (4) data analysis (N=7); (5) doing literature review (N=5). Following excerpts explain their statements.

Research consists of some steps. These steps are; defining the problem, looking for what has been done before about similar situations, getting data with suitable instruments, analyzing the data gathered and getting a conclusion from these results. (Pre-instruction, Research Knowledge and Practice Essay)

As a final aspect, they stated statistical analysis (N=3) as the only way of data analysis in their statements. This supports their rating of 'hypothesis are tested' item highly which can be done through statistics. Following excerpts illustrate this finding:

Data can be analyzed through statistical packages like SPSS (Pre-instruction, Research Knowledge and Practice Essay).

Findings show that the participants' construct of research appeared as *a general abstract term*. All these findings are parallel to their research knowledge elicited through scenario evaluation and their ratings of research characteristics before the instruction. Therefore, it can be concluded that the participants had the construct of research as a general term without having the details and sub-constructs related to it. Data gathered through other sources after the instruction indicated that participants elaborated on the following as part of their research knowledge: (1) data collection methods (N=16); (2) steps of research; (3) data analysis (N=12); (4) characteristics of research (N=8).

Data Collection Methods

To begin with, data showed that participants' knowledge of the data collection instruments became more elaborated after the instruction. In other words, even though *questionnaire, survey, interview* and *observation* were the instruments stated before the instruction, after the instruction they mentioned; (a) interview (N=13), (b) observation (N=13), (c) questionnaires (N=10) and (d) journals (N=8); (e) post facto notes (N=4); (f) tests (N=3), (g) diaries (N=3) and (h) recordings (N=2). Following excerpts show this expansion:

Data can be gathered through many ways such as written documents which are field-notes, journals and reflections (Post-instruction, Research Knowledge and Practice Essay).

Being engaged in such a research, trying to understand the students and finding solutions could only be done through interviews (Post-instruction, Reflective Journal, 6th Entry).

Following table shows the individual analysis of participants' knowledge expansion about data collection methods with a sample statement.

Table 5. Sample knowledge expansion about data collection instruments

	Before the Instruction	After the Instruction
Knowledge Expansion	Teachers' own experience, articles surveys and consultation with colleagues	Diaries, journals, essays, logs, observation interview, recording, questionnaire

Steps of Research
Additionally, participants stated some steps of research namely; (a) statement of problem (N=12); (b) data collection (N=12); (c) literature review (N=10); (d) data analysis (N=9); (e) sharing the results (N=8); (f) interpretation of data (N=7). Other than these steps, planning the action (N=6), observing (N=3) and reflecting on the process (N=3) were also counted among the steps of research after the instruction. Despite mentioning some steps of research before the instruction, it is for sure that participants expanded their knowledge of research steps.

These findings also support those found in scenario evaluation section. In the most highly rated scenarios (see table 3), the common characteristic of the scenarios was including some steps of research. Following quotation illustrates this result:

The steps are in a cycle. So it doesn't mean that when we follow all steps we will reach the solution. We may need to restart the cycle. Cycle starts with a problem and ends with sharing results (Post-instruction, Research Knowledge and Practice Interview).

After taking this class, I learned to solve the potential problems by doing literature review, gathering data and conducting an action (Post-instruction, Reflective Journal, 6th Entry).

As a final step of research, participants mentioned data interpretation after the instruction. This is the only category that was mentioned by the minority (12%) of the participants before the instruction. After the instruction 5 (31%) more participants mentioned the necessity of data interpretation as a step in research cycle. The reason of adding 'data interpretation' into their research knowledge may be the hands-on experience they were required to do through weekly tasks. As a result, they stated that interpretation can be done through (1) inferring meaning from results (N=3) and

(2) comparing results with that of previous research (N=2). In the following excerpts, it can be inferred that these strategies are the ones they applied in their own research practice. They also mentioned that data interpretation requires strong background knowledge.

> One should have enough background knowledge because she should infer meaning from the results based on theories (Post-instruction, Research Knowledge and Practice Essay).

From these results it is understood that participants were all referring to verbal data interpretation, not numerical data interpretation. This also shows the direction of their knowledge expansion after the instruction.

Table 6. Sample knowledge expansion in steps of research

	Before the Instruction	After the Instruction
Knowledge Expansion	Observe and collect data	Research question, collecting data, interpretation, sharing results

Data Analysis

Although statistical analysis was the only analysis technique they could think of before the instruction, participants stated (1) coding and categorizing (N=10); (2) content analysis (N=3) and (3) statistical analysis (N=3) methods after the instruction. It is important to note that participants focused on the type of research as the criterion to decide on the analysis. Their knowledge of data analysis is demonstrated in the following excerpts.

> There are ready computer programs like SPSS, Excel to analyze numeric data, which can be used for both qualitative and quantitative. On the other hand, content analysis is very common for qualitative research (Post-instruction, Research knowledge and practice essay).

Individual participants' statements show the expansion of knowledge in this specific construct.

Table 7. Sample knowledge expansion in data analysis methods

	Before the Instruction	After the Instruction
Knowledge Expansion	Statistics and formulas through programs such as SPSS or Excel	Analysis with some basic statistics as well as coding and categorization.

Characteristics of Research

Moreover, participants' knowledge of the characteristics of research after the instruction included (a) a systematic process, (b) a problem solving process (N=7), (c) being a way of professional development (N=6) despite having included only its

being a problem solving process and systematic before the instruction. The following excerpts illustrate these findings:

> Research is the process of collecting data by following some systematic stages in order to find a solution to a problem in the classroom (Post-instruction, Research Knowledge and Practice Interview).

In addition, as illustrated in the following excerpts, the relation between research and professional development was especially mentioned by the participants as another characteristic after the instruction.

> It is a process in which researchers or teachers try to find out solutions while improving professionally (Post-instruction, Research Knowledge and Practice Essay).

Analysis of each participant's responses in relation to characteristics of research illustrate the elaboration of this knowledge base.

Table 8. Sample knowledge expansion about characteristics of research

	Before the Instruction	**After the Instruction**
Knowledge Expansion	To learn about something more or to find solutions to problems	Systematic inquiry to solve a solution to the problem, to gain awareness about what is going on inside the classroom or just to have better insight

In addition to above analysis, data gathered throughout the period of instruction helped to understand the time the participants started to use some specific terms and elaborate on constructs they had before the instruction. To illustrate, data from reflective tasks revealed that participants started using the terms 'teacher-research' and 'teacher-researcher' (N=8) and the benefits of teachers' research engagement (N=12) starting from the second reflective task in week 3 as can be seen in the following excerpts.

> Being involved in research is of utmost importance for a language teacher if he/she wants to improve him/herself and keep up with the change (Reflective Task 2, Week 3).

So, it can be concluded that participants' knowledge of research expanded and they elaborated on the sub-constructs such as data collection methods, steps of research, characteristics of research and data analysis starting from the second week of the instruction. That is to say, there appeared no difference between the research knowledge of participants before and after the instruction; however, the existing knowledge elaborated and expanded at the end of the instruction.

In addition, when the academic background of the participants such as their BA education and the courses they took before the INSET course and while taking the INSET course are considered, it is not easy to claim that they learned everything

related to research in the INSET course. Therefore, the readings and requirements of all these courses in the program must have contributed to their research knowledge. However, although they had some knowledge of research before the instruction, it is obvious that they elaborated more on the construct of research, expanded their knowledge by including sub-constructs and creating a more detailed structure of research as a construct with the INSET course.

Research practice

As Borg (2003, 2006, 2009) suggests, practicing research involves reading published research and conducting research by engaging in the research process actively. Therefore, besides participants' research knowledge, their engagement with research (through reading) together with the reasons of being engaged and not being engaged with research was investigated both at the beginning and at the end of the INSET course. Moreover, as the second component of research practice, the participants' engagement in research (by doing) was explored through questionnaire items and other sources. Additionally, participating teachers' ideas about EFL teachers' engagement in research and the research conducted by academicians and teachers were tapped through only other sources before and after the INSET course.

Engagement with research

The questionnaire item tapping participating teachers' engagement with research required them to state how often they read published research through a questionnaire item. Figures 1 and 2 summarize their responses.

Figure 1.
Percentages of reading research before the instruction
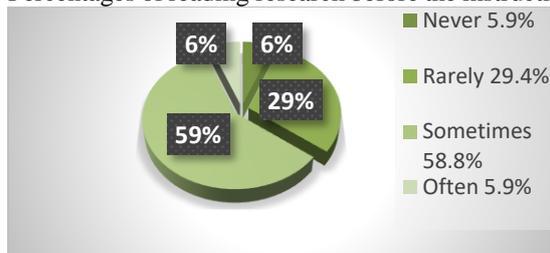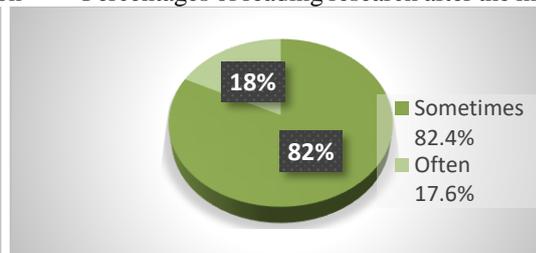

Figure 2.
Percentages of reading research after the instruction

As can be seen in figure 1, 35.3 % of the participants indicated *rarely or never* reading research before the instruction. These participants were provided with a set of reasons in the questionnaire and asked to choose their reasons. In the following table, the frequency of reasons are given.

Table 9. Frequency of reasons for not reading research before the instruction

Reasons	F
1. I am not interested in research	0
2. I do not have time	1
3. I do not have access to books or journals	1
4. I find published research hard to understand	3
5. Published research does not give me practical advice for the classroom	5

Data coming from other sources also revealed similar results with the findings given in table 9. Essay and interview data showed that participants *never or rarely* read research mostly because of; (1) not offering practical suggestions and solutions (N=3) and (2) being difficult to understand (N=3). The following excerpts illustrate these findings:

When the topics are related to real teaching problems, I like them. However, if it is just about numbers, hypothesis, I don't like them and generally think they are not useful for me and skip them (Pre-instruction, Research Knowledge and Practice).

It is also clear that the participants have concerns about the applicability of findings in those articles to their specific classroom realities.

Teachers are more practical by being in the teaching atmosphere than linguists and their products (Pre-instruction, Research knowledge and practice interview).

Other reasons mentioned by the participants are; not enjoying (N=2) and not having enough time (N=2).

Reading, searching for information are all requiring time and energy. That's why, I cannot. If I have time I prefer doing extracurricular things (Pre-instruction, Research knowledge and practice interview).

On the other hand, 64.7 % appeared to be reading published research *sometimes* or *often* before the instruction. The reasons of reading research were tapped through other sources. Data revealed that (1) professional development (N=2), (2) learning different ideas (N=3); and (3) comparing own context with others (N=2) are the reasons of reading published research as can be seen in the following quotations:

I prefer reading ELT Journal. It helps me see different points of views, which help me find out new ways to develop my way of teaching and enlarges my horizon (Pre-instruction, Research Knowledge and Practice Essay).

In addition, data coming from other sources revealed findings about (1) access to published research (N=11) and (2) types of journals preferred (N=7). Although accessing published research is a common problem that teachers complain, since the majority of the participating teachers in this study are university instructors, they stated having access to research by the help of their institute's online libraries.

Moreover, those who said that they were reading research were asked to identify what kind of research they read about. Among the journals, participants (N=7) preferred reading *ELT Journal* and *TESOL Quarterly*. However, online *teaching forums* where teachers discuss their problems and solutions were also favored by 3 participants. When the individual participant's statements were analyzed, 3 participants out of 11 who stated *sometimes* and *often* reading research,

mentioned reading forums because of the practical ideas suggested by other teachers. This finding showed that some of the participants were actually talking about reading online discussion forums as research articles. In other words, as the following quotation shows, teachers preferred reading articles or discussions which provide some suggestions and solutions to their problems instead of academic ones which are full of theoretical information.

> I read TESOL Quarterly and ELT Journal but the information in these journals is far from reality. Checking teacher forums and sharing other teachers' problems and solutions is more beneficial due to practical ideas discussed there (Pre-instruction, Research Knowledge and Practice Essay).

Data about the participants' research practice *before* the instruction indicated their previous research experiences. However, after attending the INSET classes, starting from the very beginning of the term, they were required to practice research individually by the help of some tasks. Therefore, their knowledge about research practice after the instruction involves not only previous experiences but also class discussions and hands-on experience in the INSET course.

After the instruction, they were again asked to state how frequently they read published research through an item in the questionnaire. As can be seen in Figure 2 each participant stated reading research after the instruction.

The participants' reasons for reading research after the instruction were tapped through other sources. Findings are as follows; (a) reading for professional development (N=7), (b) reading to learn practical ideas (N=4), (c) reading to understand theories better (N=3), (d) reading for the research project in the INSET course (N=9), (e) to find solutions in their teaching (N=5), (f) to see what other practitioners experience (N=3), (g) to reflect on their teaching (N=2). Following excerpts explain these reasons:

> I read published research. I get different ideas and reach as many different ways as possible from each of them. What I read helps me to think practically and to see the problems. Moreover, it helps me to find solutions as well (Post-instruction, Research Knowledge and Practice Essay).

Some reasons were also elicited from the reflective journal data gathered during the instruction.

> Reading others' experiences, learning new ways for your teaching and making relations with your own teaching setting all started to inspire me for my research (Reflective Journal, Entry 2, Week 5).

In addition, data revealed findings about (1) accessing to published research (N=17) and (2) reasons of journal choices (N=10). Before the instruction, they all stated having access to research. However, six (35%) of them mentioned reading forums and counted access to these forums as access to published research. This result

did not show the real extent of having access to published research. After the instruction, all participants stated having access by the help of their MA student IDs for remote access to online libraries to search for articles for their assignment. This situation is also clear in the following excerpts.

> I have learnt the way to Boğaziçi Library, how to search a book there, where to apply for information and help as I have already got that library's membership (Reflective Journal, Entry 6).

Additionally, the participants mentioned the reasons of reading particular journals such as Teacher Education, TESOL quarterly. Among these reasons are; (a) gaining insight into theories and teaching (N=7), (b) their benefits to increase reflectivity (N=4), (c) getting practical ideas (N=5). These reasons are given in the following excerpts:

> I occasionally read journals such as Teacher Education and ELT Journal to deepen my knowledge and to keep pace with the latest ideas and approaches in my field. I find what I have read so far helpful since they have given me insight and helped me reflect on my teaching in the eye of a teacher-researcher (Post-instruction, Research Knowledge and Practice Essay).

The findings also indicate that participants do not consider academic articles as practical. The following excerpts illustrate the participants' ideas about academic research and their preference for forums (N=6).

> I sometimes read ELT Journal but they are generally far from what I am looking for and they generally do not provide ideas and then I look at the forums. Forums have more practical information. So, I find them useful, I can see what other practitioners experience (Post-instruction, Research Knowledge and Practice Essay).

> Some online forums like IATEFL, I like reading those forums because I see my problems are everywhere (Post-instruction, Research Knowledge and Practice Interview).

Engagement in Research

Participants were also asked how frequently they conducted research on a scale of 'often' to 'never' before and after the instruction. As table 12 shows out of 17 participants, five participants stated *sometimes* or *often* doing research. 12 participants stated *rarely* or *never* doing research.

Table 10. Frequency of doing research before and after the instruction

	Before the Instruction		After the Instruction	
	F	%	F	%
Never	1	5	0	0
Rarely	11	64	9	52
Sometimes	4	23	8	47
Often	1	5	0	0

Comparison of the findings indicate that the number of participants who stated *rarely* doing research decreased to 9 from 11, and the number of participants who stated *sometimes* doing research increased from 4 to 8 after the instruction as indicated in table 10.

Participants who indicated doing research before and after the instruction were asked to choose their reasons of doing research among a set of reasons provided in the questionnaire. The results are given in table 11.

Table 11. Frequency of reported reasons for doing research before and after the instruction

	Before the Instruction	After the Instruction
Reasons	F	F
As a part of a course I am studying on.	5	8
Because I enjoy it.	2	3
Because it is good for my professional development.	5	7
Because it will help me get a promotion.	0	1
Because my employer expects me to.	0	0
Because other teachers can learn from the findings of my work.	0	2
To contribute to the improvement of the school generally.	0	0
To find better ways of teaching.	5	7
To solve problems in my teaching.	5	8

Findings in table 11 were also supported with data from other sources. When they were asked to state their reasons for doing research before the instruction, they mentioned (1) helping students learn better (N=2), (2) finding new techniques (N=2) and (3) finding solutions to problems (N=2) as the reasons. Following excerpts show these reasons:

> I try to do research to improve my teaching and learn new things in my field. Doing research also gives me a deeper understanding of my field. (Pre-instruction, Research Knowledge and Practice Essay).

Even though participants pointed out doing research in the questionnaire item, it does not mean that they were doing academic or teacher research. The analysis of each of these 5 participant's research practice showed that among the 5 participants who stated *sometimes* or *often* doing research, only one of them claimed engaging in research actively. The one who stated *often* doing research explained that he was reading a lot on the internet which shows that what he called doing research was reading discussion forums as illustrated in the following quotations:

> I practice doing research, as a teacher. Actually, research is everywhere in a teacher's life. For example, when you are reading an article, or a newspaper you realize or come across with some different information and that makes you curious, and you want to find out more information about that word or topic, information you are reading. Curiosity lets you do research (Pre-instruction, Research Knowledge and Practice Essay).

On the other hand, other 4 participants who pointed out that they were *sometimes* doing research explained that they had done research as a requirement of a course during BA education or started doing but not completed. These participants stated that:

I started a research project but I couldn't finish it because of external factors such as loaded schedules (Pre-instruction, Research Knowledge and Practice Essay).

When the research knowledge of each of these five participants was analyzed, it was found that their knowledge of research focused mainly on data collection process to find solutions. These reasons were supported with the statements of participants in the other sources. The same reasons were also mentioned in those sources; (1) doing research as a requirement (N=7), (2) for professional development (N=9) and (3) to solve problems (N=4).

Research helps to have better understanding on teaching and it also makes more certain to be able to see the problems in my classrooms and analyze and find out solutions for the problems (Post-instruction, Research Knowledge and Practice Essay).

This systematic process by including problem statement, reviewing literature, collecting data and drawing conclusion, sheds light on our problems and areas that should be developed and leads us into better teaching (Post-instruction, Research Knowledge and Practice Essay).

I can say that it was a challenging, demanding and quite beneficial process since I was able to overcome one of the major problems of my teaching (Reflective Journal, Entry 6).

Four participants who stated that they *rarely* did research before the instruction, pointed out that they were *sometimes* doing research after the instruction. On the other hand, three participants who claimed doing research sometimes or often before the instruction, stated rarely doing research after the instruction. These three people thought of research as a time consuming process that they did not have time. The requirement of INSET course which made them follow each step of research process to conduct a systematic and structured research might have demotivated them. Moreover, 5 participants who stated that they *rarely* did research and 2 participants who stated that they sometimes did research before the instruction, did not change their ideas after the instruction. In addition to these findings, data gathered from other sources after the instruction revealed results about (1) benefits of doing research (N=10), (2) difficulties encountered during research (N=15), (3) reasons of doing research in future (N=14), (4) reasons of not doing research in future (N=8).

Benefits of doing research
Despite doing research as a requirement of an MA course, participants stated that they benefitted from the research process that they had been engaged in during the semester. These can be listed as follows; (a) finding solutions to own problems (N=7), (b) gaining better understanding of the context (N=4), (c) developing teaching skills (N=4), (d) enhancing motivation and enthusiasm to teach (N=3), (e) preventing burn-out resulting from problems (N=3). The participants mentioned these benefits as professional development in general. Following excerpts taken from different sources can be representative of these findings.

Research will contribute to professional development and keep us updated with the fashion in the field. Moreover, it will enhance our motivation and enthusiasm (Post-instruction, Research Knowledge and Practice essay).

I can say that it was a challenging, demanding and quite beneficial process since I was able to overcome one of the major problems of my teaching. Moreover, I realized that if I think on the problem in detail and I approach it without fear, there are no problems that I cannot solve (Reflective journal, Entry 6).

Having practiced research in my classroom, I really got excited to see that I can do more than teaching (Post-instruction, Motivation for research interview).

Difficulties encountered during research

Data showed that during the research process the participants had also faced some difficulties while trying to accomplish steps such as; (a) literature review (N=9), (b) data collection (N=7), (c) data analysis (N=7), (d) deciding on which problem to focus (N=5). Reflection (N=2) and interpretation (N=2) were the other two difficulties stated by the participants. First of all, the main difficulties about doing literature review were stated to be *synthesizing ideas* and *selecting the most appropriate sources.* Following quotations are clear demonstrations of this issue:

I had some difficulties in choosing the suitable parts to put into my literature review because there were many suggestions, theories and claims and synthesizing important ones just in two pages was a bit painful for me (Reflective Journal, Entry, 2).

Another difficulty pointed out by the participants was data collection. The difficulties they encountered were mostly related to *data collection process* and the use of *data collection instruments.*

When I started to collect data especially through interviews, I found this process more complicated than I thought. Persuading students for interviewing, encouraging them to be sincere and taking notes while they were talking were a bit challenging for me (Reflective Journal, Entry 3).

After being engaged in the process of data analysis, the participants stated that they had difficulty mostly during the application of the techniques for data analysis such as *transcription of the interviews*, *coding the data*. These challenges can be clearly understood in the following quotations.

Transcribing was painful. Playing and pausing the player for hours was deterrent (Reflective Journals, Entry 4).

Organizing the information in the interviews, categorizing them and deducting codes seemed to be problematic for me in the beginning. Especially determining the codes was problematic for me (Reflective Journals, Entry 4).

In the 7th written task which required to do an interview with a colleague, transcribe and do the analysis, they identified the same difficulties.

Analyzing is also a difficult process, because defining categories and relating them to the codes really requires knowledge and insight about research. To put the words into categories is not as easy as it is in the quantitative research (Reflective Task 7, Week 10)

Final difficulty faced by the participants during the research process was identifying which problem to focus. The excerpt below illustrates this difficulty:

As you can already guess, my biggest problem is that I do not sincerely enjoy mentioning my weaknesses as all the other teachers. I hate it!!! (Reflective Journal, Entry 1).

All these difficulties reported by the participants may be related to their lack of experience. In this study, in order to assist participants to overcome these problems and provide further practice, some instructional tasks were assigned. After completing each task, the difficulties they encountered were discussed in the class and strategies to overcome were suggested. However, it is obvious that participants need more practice. As mentioned earlier, 12 teachers out of 17 stated *rarely* or *never* doing research before the instruction. Table 9 indicates reasons of these participants.

Table 12. Frequency of reported reasons for not doing research before the instruction

Reasons	F
I do not know enough about research.	9
My job is to teach, not to do research.	0
I do not have time to do research.	5
My employer discourages it.	0
I am not interested in doing research.	3
I need someone to advise me but no one is available.	5
Most of my colleagues do not do research.	3
I do not have access to the books and journals that I need.	1
The learners would not cooperate if I did research in the class.	2
Other teachers would not cooperate if I asked for their help.	1

The most frequently identified reasons in the essays and interviews were: (1) not having enough time (N=6), (2) not knowing much about research (N=5) and (3) loaded schedules (N=4). In addition to these reasons, difficulty of doing literature review (N=2) and data analysis (N=2) were elicited as other reasons. Commonly stated reasons can be seen in the following excerpts:

I really do not want to do research because I am loaded with 30 full hours of teaching (Pre-instruction, Research Knowledge and Practice Interview).

I don't practice research because it takes time and effort (Pre-instruction, Research Knowledge and Practice Essay).

Reasons of desire and reluctance to do research in future
Finally, data revealed some reasons for the participants' desire and reluctance

to do research in their future career. Reasons given by the participants for why they would do research can be listed as follows; (a) to solve problems (N=5), (b) for better teaching (N=5), (c) to understand students and their needs (N=3), (d) increasing self-confidence (N=3). Below are a few extracts demonstrating these reasons in detail:

This process sheds light on our problems and areas that should be developed and lead us into a better teaching (Post-instruction, Research knowledge and practice essay).

It also contributes to their professional development because you learn while you are in the circle of teacher research (Post instruction, Research Knowledge and Practice Interview).

On the other hand, some participants' (N=7) reasons for reluctance to do research were (a) lack of time in teaching (N=6), (b) overloaded schedules (N=5), (c) disinterest of the school administration (N=3), (d) not being practical (N=3). These can be demonstrated with the following quotations.

I need time to read, analyze effectively what I read and I need time to collect the data and analyze the data in an Effective way (Post-instruction, Research Knowledge and Practice Essay).

Practicality is more important. I mean, using my effort for preparing extra materials and activities for my students make more sense to me (Post instruction, research knowledge and practice interview).

In Turkey, teachers have overloaded schedules and get low salaries in return. The lack of administrative support is also a well-known factor preventing teachers from attending conferences or doing research. Hence, teachers are not perceived to have a researcher identity especially in primary and secondary education. Furthermore, teachers who participated in this study found the processes in research to be cumbersome. Therefore, as Allwright (2003) also pointed out engaging teachers in such a requirement of the INSET course process full of deadlines as a requirement of a formal course created a kind of extra burden for them.

Discussion and Conclusion

The purpose of this study was to investigate the possible contribution of the *INSET* course to help participating EFL teachers develop further as teacher-researchers who can explore their own practice. Results showed that participants had some research knowledge at the outset of the INSET course. Additionally, from the beginning of instruction, the importance of research results to give ideas for teachers was fore fronted, which showed teachers' ideas about pragmatic perspective of research (Borg, 2013). It is also noteworthy that although they thought research can be done by both academicians and teachers, participants' understandings of research was incomplete in the sense that they did not know specific characteristics of academic and teacher research. Therefore, it can be concluded that the participants had the construct of research as a general term without knowing the details related to it.

These results are in accord with previous research which investigated teachers' conceptions of research (Borg, 2009, 2013; Rainey, 2000; Ratcliffee et al. 2004). All of these studies provided evidence for research knowledge of teachers without being exposed to any formal instruction. The findings related to the participants' engagement *in* research before the instruction demonstrated that although most of the participants agreed with the teachers' engagement in research in order to solve problems and teach better, some of them stated that they did not do research because of time limitations, loaded programs, and not knowing much about conducting research. These barriers stated to prevent participants from being research engaged were parallel with many previous studies (Allwright, 1991; Allison and Carey, 2007; Allwright and Bailey, 1991; Atay, 2006; Borg, 2003; Borg, 2006; Borg, 2009; Burns, 2009; Edwards, 2005; Henson, 2001; Maharaj-Sharma, 2011). All these studies shed light to the factors that deter teachers from practicing research actively.

On the other hand, with specific relation to engagement *with* research, the majority of the participants stated reading published research by accessing relevant readings through their institutions' libraries. Most of the participants also believed that academicians and teachers should conduct different types of research because of the distinctions in their purposes. This result is in line with the findings of some studies (Borg, 2003, 2007, 2009, 2013) which investigated how teachers were engaged in research. Additionally, as mentioned earlier, some of them preferred reading discussion forums. This preference to read forums, which are online platforms to discuss and share ideas, supports the results of previous studies in which the participants claimed the difficulty in understanding published research full of inapplicable results (Borg, 2003, 2007, 2009, 2013).

Additionally, findings showed no difference in teachers' research knowledge; however, it is clear that the existing knowledge they had before the instruction was elaborated and expanded by creating a more detailed structure of research as a construct within the INSET course. These findings concur with the findings of the studies which were conducted in formal settings such as in an MA program (Atay, 2008; Borg, 2009; Dikilitaş, 2015; Edwards and Willis, 2005; Kiely et al., 2004; Reis-Jorge, 2007; Wyatt, 2010; Yaylı, 2012; Wyatt and Dikilitaş, 2016). Despite not stating that there appeared to be no change but broadening in the participants' research knowledge clearly, it is probable that in all these studies, participants who are BA graduates started with some pre-existing research knowledge and then expanded it with the formal instruction to which they were exposed to.

Moreover, the participants emphasized the close relationship of the research process with professional development as was commonly stated in previous studies (Author, 2000; Benton and Wasko, 2000; Macaro and Mutton, 2002; Stremmel, 2002; Atay, 2006; Atay, 2008; Roberts, Crawford and Hickman, 2010; Korucu, 2011; Gao and Kwan Chow, 2012) showing evidence for the positive effect of research engagement on professional development.

Findings also fore fronted participating teachers' beliefs regarding the gap between theory and practice. As indicated previously, they had deep anxiety about not finding anything relevant to their problems and practical ideas with which to

apply to their teaching found in the academic research due to different aims and methods. They also believed that academics are far removed from the reality of teaching contexts. As Freeman (1998) suggested this understanding may also be due to the fact that some researchers do not place *the knower of the story* at the center. Additionally, the strictly controlled research methodology of the academic articles might have hindered teachers from reading academic research itself.

Even though the percentage of the participants who agreed on the teachers' engagement in/with research increased after the instruction, they still felt that following the steps of academic research was too time consuming and burdensome. Participants also complained about the challenges with which they had to cope, such as reviewing the literature, collecting, and analyzing data.

At present, there is a common agreement that it is not possible for language teachers to apply what they were instructed in the INSET course into their daily life due to the demanding and strict cycle which were all for research purposes in a formal setting. However, since the setting of the research was an MA in TEFL program, it was necessary to accomplish all the requirements for academic purposes. Hence, as Allwright (2003) suggested, instead of creating such a burden for EFL teachers who do not have adequate time and support and who would do amateur research unwillingly by suffering, they should be encouraged to understand the problems in their contexts and find practical solutions within a more flexible research cycle.

Implications

The present study has implications for both the INSET course and the field of language teacher education. To begin, the results of the present study provided insights into the design of undergraduate and graduate teacher education programs. Language teachers should be introduced to research during their undergraduate years and they should be provided with necessary information to explore their own teaching practices during their teaching career. Additionally, MA in TEFL programs, which serve as professional development settings for language teachers should integrate hands-on experience through research engagement and activities aiming at improving the research skills of the MA students into their course syllabuses with the purpose of narrowing the gap between theory and practice.

Finally, results showed that EFL teachers have difficulty in understanding and finding applicable ideas in academic research. Therefore, the collaboration and cooperation between teachers and researchers should be enhanced and teachers should be provided with valid and reliable findings applicable in their teaching contexts.

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