An analysis of graduate studies on in-service training programs for teachers in Turkey

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Abstract
The present study aims to examine the graduate studies related to in-service training programs for teachers conducted between the years 2000 and 2018 in Turkey. In this context, the content analysis of 88 graduate studies, including 71 master thesis and 17 dissertations, was conducted for the in-service teacher training accessible to the Council of Higher Education thesis center. In this study, research methods of the graduate thesis, university and institute, research methods, validity and reliability reports, sampling methods, study group characteristics, study area, research area, data analysis methods, and research tendencies of studies were investigated. When the research methods used in the studies examined, it was observed that the majority of the studies are carried out using the quantitative studies conducted through the survey method. When the reliability reports were reviewed, it was found that validity reports (22 of 88) and reliability reports (36 of 88) were not reported. Similarly, it was seen that the sampling techniques were not reported in 35 studies. The majority of the studies used the scale and questionnaire as data collecting tools. When the tendencies of studies are examined, it was seen that most studies focused on program evaluation. Most studies highlighted some problems caused by the place, time, and trainers of the in-service training. Concerning the findings of the present study, it can be suggested that further studies on in-service teacher training should be conducted in the visual art branch as well.

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1. Introduction

Education is a life-long process through which individuals gain knowledge of their profession, which in turn, leads to changes and developments in cultural, social, and economic fields in the society. Besides, the advances in science and technology, as well as their impact on education, forced policy makers, make necessary changes in education as well. To fulfill the requirements of these changes and follow up-to-date developments, it is

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inevitable that every individual in the field of education, especially the teachers and administrators, should do some endeavors to improve themselves as well as the schooling systems. Improving the quality of education has been one of the most critical issues addressed throughout the history of education (Huber, 2011). There are various ways of following cutting-edge developments in any field, such as in-service training or in job training. As for in-service training, which enables the individual to gain the knowledge, skills and attitudes necessary for his/her job (Taymaz, 1981), it is one of the essential elements of development and change in national educational institutions as well as in all social fields. The policymakers in education all over the world generally define the frames of such training. For instance, to support the development of the education system, the Turkish Ministry of National Education (MoNE, 1995) aims at in-service training as follows:

- to ensure the adaptation of the staff coming from pre-service training to the institution,
- to provide the staff with a common opinion in understanding and interpreting the aims and principles of Turkish National Education in a whole and to gain unity in practice,
- to complete the deficiencies of pre-service training in terms of professional competence,
- to gain the knowledge, skills and behaviors required by the innovations and developments in the field of education,
- to improve the professional expertise and understanding of the staff,
- to enable the willing and talented staff to move to the higher levels of their professions,
- to conduct completion training for the different trainings,
- to gain integrity in the interpretation of Turkish National Education policy,
- to provide unity in the application of basic principles and techniques of education.

The Turkish MoNE offers in-service training for the teachers and administrators working in institutions affiliated to MoNE at specific periods of the year for refreshment and raises the awareness of its staff on the changes and developments in the field. As Taymaz (1981) stated, in-service training is necessary to reveal the talents that individuals cannot develop at school, to ensure their adaptation to work and to allow them to follow the changes and developments in social, cultural, and economic spheres and developments in science and technology. Similarly, the Turkish MoNE (1988) defined in-service training as training given to increase the professional productivity, knowledge, and skills of individuals working in institutions affiliated with MoNE, to update their information and to facilitate their adaption to new situations from the beginning of the profession until
retirement. Concerningly, MoNE regularly provides in-service training to the staff working at different levels of educational institutions towards the purposes mentioned above. In light of the facts mentioned above, it can be claimed that in-service training is also a must for teachers working in MoNE to endure the training programs that enable them to follow both professional and individual development as well as to keep in touch with the recent developments in science and technology.

When the related and available literature is reviewed, it is seen that plenty of studies dealt with the various dimensions of in-service training at varying degrees and fields. The review of the literature revealed that while some of these studies examined the efficiency of in-service training programs, some others examined the program development aspects of in-service training, and some of them dealt with the in-service training needs of staff. Additionally, while some of those studies (Çakır-Sürmelı, 2004; Gümüşlüoğlu, 2016; Kaplan, 2018; Şahin, 2006; Şahin, 2012; Yılmaz, 2018; Yurttas, 2014) focused on the in-service training activities designed for teachers of English others concentrate on different fields such as; Biology teaching (Asilsoy, 2007); Physical Education (Avşar, 2006); Social Studies (Bulut, 2011); Religious Culture and Ethics (Öz, 2012); Vocational Education (Çelikbilek, 2012), German (Kızılarıslan, 2012); Chemistry (Baykan, 2015); Mathematics (Karakaya, 2016); preschool education (Özsırkıntı, 2018); and on the scope of in-service training (Güney, 2018).

As it is seen, numerous researchers have conducted studies about in-service training that were given to teachers in different fields. The review of related literature additionally revealed that while some of these studies were articles in journals that somehow reached their readers, most of them were unpublished graduate studies that were supposed not to reach expected readers yet. Therefore, the present study intends to examine the graduate thesis conducted on in-service training in line with the predetermined criteria and report their significant findings to shed light on new studies and contribute to a gap in the field.

1.1. Purpose of the Study

When the related literature is reviewed in detail, it can be claimed that there is not a comprehensive study that focused on the content analysis of the studies on in-service training for teachers. Thus the present study aims to analyze the contents of graduate thesis related to in-service training for teachers that were conducted between 2000 and 2018 and to reach conclusions based on systematic synthesis. Bearing this primary purpose in mind, the graduate theses were scrutinized concerning some variables such as; their levels of the graduate studies, the universities, and institutes where the studies were conducted, year of study, fields of in-service training, the research methods including the design, sampling techniques and characteristics of the study group, data collection tools, data analysis methods, the validity and reliability estimations of the studies, the research
tendencies of studies, as well as the problems they figured out and solutions for these problems.

For this purpose, the following questions were posed in the present study. In terms of graduate studies conducted between 2000 and 2018 related to in-service training programs for teachers;

- What are the academic levels of the graduate studies, and in which institutes and universities were they conducted?
- What is the distribution of the graduate studies concerning their publication years?
- What are the method characteristics (research method, pattern, data collection tool, validity and reliability studies, sampling technique, sample/study group characteristics, sample/study group branch, and data analysis methods) that were frequently used in the graduate studies?
- What are their research tendencies?
- What are the problems raised in the graduate studies?
- What are the solutions offered for the problems in the graduate studies?

2. Method

The present study is a qualitative study in which content analysis of graduate thesis related to in-service training organized for teachers. Buyukozturk et al. (2015) defined qualitative research as a research process in which qualitative data collection tools are used to present facts and events realistically and holistically. The primary aim of qualitative research includes identifying, explaining, and describing the situations in detail. In qualitative research, where the research process is from a part-to-whole the study is carried out with a holistic approach. In the present study, it is aimed to figure out the findings obtained from various dimensions of the graduate studies descriptively with a holistic approach. Thus, in this study, the content analysis method was adopted to analyze the gathered data. According to Cohen, Manion, and Marrison (2007), content analysis is defined as the process of summarizing and specifying the main contents of the written information and the messages they contain. Similarly, Yıldırım and Şimşek (2008) claim that content analysis is the interpretation of data by bringing together the concepts and themes in a way that the reader can understand. In other words, the primary purpose of content analysis is to reach the concepts and relationships that can explain the collected data (Yıldırım & Şimşek; 2008).

In the first phase of the study, keywords were defined in line with the pre-determined criteria and field surveys were conducted. The graduate thesis reached after this phase were grouped concerning their levels and their numbers were reported as tables. Additionally, the findings gathered through content analysis are presented in Figures.
Finally, the findings were interpreted by the researchers in line with the results of previous studies in the field.

2.1. Data set and Sample

All graduate studies (master's theses and doctorate dissertations) related to in-service training conducted in Turkey constitute the universe of the research. Since it is not possible to reach the whole universe, a purposeful sampling method, which is one of the sampling methods appropriate for the research purpose, has been used. Thus, purposeful sampling is preferred as the type of sampling in the present study since one or more special cases with specific criteria and characteristics are desired to be researched depending on the purpose of the study (Metin, 2015). Consequently, a total of 110 graduate studies conducted between 2000 and 2018 that were reached through the Council of Higher Education (CHE) Thesis Center were included in the data set of the study. The criteria in reaching the graduate studies are as follows; the graduate studies should be related to

- the in-service training held for teachers in Turkey,
- conducted between 2000 and 2018, and
- be accessible from the Council of Higher Education thesis center, and
- cover “in-service training” and “teacher training” as the keywords.

In the light of the defined criteria, sample or the study group formed as 88 graduate thesis; 71 of which were master's thesis and 17 were doctorate dissertations.

2.2. Data Collecting Instrument

The data set of the present study is examined through content analysis by using Article Review Form, developed by Sözbilir and Kutu (2008), which consisted of the method and design of the research, data collection tools, and data analysis method. The form was adopted by the researchers in accordance with expert opinions. Thus, in addition to its original form, new dimensions such as the sampling technique, validity, and reliability estimations of the studies, as well as the research tendencies of the studies, were added to the form as new criteria.

2.3. Data Collection Process

As the first phase in the data collection process, all of the graduate studies conducted between 2000 and 2018 and deposited in the Council of Higher Education thesis center were reviewed by using the previously defined keywords. As a result of the initial stage, a total of 110 graduate studies were reached. All accessible studies conducted for the in-service training program in Turkey were classified in chronological order concerning their publication years. After determining the appropriateness of the studies with the
determined criteria by the researchers, the expert opinion was consulted. Based on the expert opinions, 22 of the studies were excluded from the data set of the research, and 88 studies were considered valid for further analysis. Categories and sub-categories were formed according to the subject of each graduate study. In this process, each study was examined in accordance with the research data, method, data collection tool, validity and reliability studies, sampling and sampling technique, data analysis method and research tendencies included in the titles of article classification form. To ensure the reliability of the data analysis, 88 studies were analyzed independently by the researchers. The frequency values of the obtained findings are presented in figures.

2.4. Data Analysis

The graduate studies which formed the data set of the present study were examined in agreement with the research questions of the present study. "The Article Classification Form" was used under the headings identified by researchers, and the content analysis of the studies was conducted. Based on the findings of the content analysis, the distribution of the studies concerning their levels, years, the method characteristics, the sample characteristics, and the tendencies of the research are presented in figures. Additionally, the information in the accessible studies obtained from the literature review was interpreted systematically in line with the general purpose of the research in a descriptive way.

3. Results

Findings obtained as a result of content analysis are presented as sub-headings in line with the research questions of the present study.

3.1. Academic levels of studies, institutes and universities

The first research question inquired about the academic levels of graduate studies and the institutions and universities where the studies carried out. The findings concerning the answer to the first research question are presented in Figure 1, Figure 2, and Figure 3.
As is seen in Figure 1, 71 of the graduate studies conducted between 2000 and 2018 related to in-service training programs for teachers are at the master's level and 17 of them are at the doctorate level. The results depicted in Figure 2 revealed that most of the studies were conducted in the field of social sciences and educational sciences and related institutes.
The findings presented in Figure 3 show the ratios of the universities where the studies were conducted. It is found that Yeditepe University, with 13 graduate studies, is the leading university where the studies conducted. Gazi University with 7 studies; Karadeniz Technical University with 6 studies; and Ataturk University with 4 studies; and the universities which have 3 or fewer studies follow the list. The distribution of the studies concerning their total numbers of the universities in Turkey revealed that there are not a sufficient number of studies dealing with the in-service training for teachers. According to data achieved from Higher Education Information Management System, there are 129 state universities, 72 private universities and five private higher vocational schools that run education and research by the year 2019 in Turkey (YOK, 2019). When the total number of the universities and related research institutions in Turkey are taken into consideration, it can be seen that only 41 of 206 higher education institutions encouraged their researchers to conduct graduate studies related to in-service training programs for teachers.

3.2. Distribution of studies by years

The findings concerning the second research question, which inquire about the distribution of the graduate studies concerning their publication years, are given in Figure 4.
As seen in Figure 4, 13 of the studies were conducted in 2012, 10 were in 2013, 9 were in 2015 and 2018, 8 were in 2010, 6 were in 2006, 2014 and 2016, 5 were in 2008 and 2017 and 3 and less than 3 studies were conducted in different years. Additionally, assuming being able to reach all of the studies conducted between 2000 and 2018, it is found that there was not any study that was held in the years 2000, 2002, and 2003.

3.3. The research methods used in the studies

As for the research method characteristics of graduate studies, the method characteristics; research method types, research design, data collection tools, validity and reliability studies, sampling technique, sample/study group characteristics, sample/study group branches, and data analysis method were examined in detail, and the findings were presented in figures respectively.

3.3.1. Types of research methods used in studies

The research methods used in the graduate studies in the data set are presented in Figure 5.
As seen in Figure 5, the quantitative method (n = 60) was a highly used research method in graduate studies. In contrast, mixed-method research was in the second rank (n = 18), and it is found that the least used research method was qualitative (n = 10). It is found that the quantitative research method was mostly preferred in the studies concerning in-service training programs for teachers. The possibility of reaching more participants by adopting a quantitative research method might be the core reason for such a preference among the graduate studies.

3.3.2. Research design of studies

Figure 6 shows the distribution of the research designs used in the studies.

As can be seen in Figure 6, quantitative studies mostly use survey design (n = 61) and experimental design (n = 4), whereas case study design (n = 10) was mostly preferred research design in qualitative studies. Additionally, it should be noted that the research design or model was explicitly expressed only in 9 of the studies; however, the research design was not mentioned in the rest of the studies in the data set.

3.3.3. Data collection tool used in studies

The data collection tool used in the studies is given in Figure 7.
As seen in Figure 7, the questionnaire (n=62) was the most frequently used data gathering instrument in the studies. This may be due to the fact that the surveys can be conducted with large groups in a short time besides its economic advantages. Besides, it is observed that the majority of the studies aimed to evaluate the in-service training program conducted by MoNE by asking teachers’ and administrators’ opinions. Thus such a tendency may also lead to such a preference in data-gathering instruments in the graduate studies. Nonetheless, it should be noted that the content analysis of the studies in the data set revealed that most of the studies used the terms “scale” and “questionnaire” interchangeably when referring to their data collection tools. Another data gathering instrument that was mostly used in the studies is the semi-structured interview forms (n=28). Additionally, although it is rare, the diary (n=4) is also used as a data collection tool in the studies. It should be noted here that in some studies, “literature review” is claimed as the data collection tool that were labeled as “others” in Figure 7; however, it can be a data collection process rather than any data collection tool.

3.3.4. Validity reports of studies

The validity reports of the data collection tools are presented in Figure 8 and the reliability reports are shown in Figure 9, respectively.
Based on the validity report findings presented in Figure 8, it is seen that “expert opinion” (n = 47) was a widely used validity estimation method. It can be said that the reason for asking expert opinion in estimating the validity of the data gathering instruments grounds in the practicality of using this method. On the other hand, the least used validity method was found as the “table of specifications” (n=2). It should be noted here that some studies estimated the validity of their instruments however, they did not give any detail on their validity estimations; therefore, those studies were labeled under the “other” classification (n=5). Besides, it is found that some studies did not estimate the validity of their instruments thus, they have categorized as “not reported” classification (n=22) since no information was provided about the validity estimations of the studies.

3.3.5. Reliability reports of the studies

As seen in Figure 9, the most widely used reliability determination method in the studies is Cronbach’s Alpha (43), whereas the least used process is KR20 (n = 2). Since, in most of the studies, the terms “scales” and “questionnaires” are commonly used interchangeably as data collection tools, they may have caused to reach such a conclusion that the use of Cronbach’s Alpha is the most preferred way of reliability determination. Similarly, it can
be regarded that the less use of “achievement test” in the studies might lead to conclude that the least used reliability determination method is the KR 20 in the studies. Another point that should be emphasized about the reliability studies is that some studies categorized under “others” (n = 8) did not explicitly report their reliability determination method. Moreover, it is also found that a significant number of the studies (n = 36) did not report any reliability determination method in their methodology sections.

3.3.6. Sampling technique of studies

The sampling technique used in the studies is presented in Figure 10.

Figure 10. Distribution of the studies studied according to the sample technique characteristics.

As can be seen in Figure 10, it was found that most of the studies (n = 35) did not mention any sampling technique. When the other studies were taken into consideration, it can be seen that random sampling (n = 23) technique was frequently preferred among the sampling techniques. It was also found that “appropriate” (n=8), “stratified” (n= ), and “cluster” (n=7) sampling techniques were also used in the studies, respectively.

3.3.7. Study group characteristics of the studies

The study group characteristics of the studies were summarized in Figure 11.
When Figure 11 is examined, it is seen that the studies were mostly conducted in high school (n = 34) and primary education (n = 30) levels. It was found that the studies in primary school (n = 19), middle school (n = 16), primary/secondary and high school levels (n = 12) follow these studies. It can be said that the characteristics of the study group may change under different classifications as a result of curricula. In addition to this, it was found that there were also studies conducted in MoNE Provincial Organization (n = 1), human resource management (n = 1), and special education (n = 1). It is also found that there are some studies (n = 5) that did not report their study group or participants of their research.

3.3.8. Distribution of studies according to the branches

The distribution of the studies concerning their areas of research is presented in Figure 12.
In light of the data presented in Figure 12, it is seen that most of the studies (n = 15) were conducted with “different branch teachers”. These studies are followed by primary school teachers (n = 14) and studies conducted with administrators and primary school teachers (n = 14). When the studies conducted concerning the branch teachers were examined in detail, it is found that the studies generally conducted with the participation of English language teachers (n = 10).

3.3.9. Data analysis methods used in studies

The data analysis methods used in graduate studies are presented in Figure 13.

In academic studies, it is necessary to specify methodological features of the study clearly to guide future researchers in terms of reproducibility and to interpret their findings correctly. As seen in Figure 13, the most commonly used data analysis method in
the studies is frequency-percentage-average (n = 62). Additionally, it is found that statistical methods were also used in the majority of studies. The fact that surveys and scales were mostly used as data collection tools in the studies may be the reason for this finding. It is found that the least used data analysis methods were regression, scheffe test, factor analysis, exchange grid, and focused analysis (n = 1). Besides, it is found that the data in qualitative studies were mostly analyzed by the content analysis method (n=18).

3.3.10. Research tendencies of studies

The findings regarding the research tendencies of the studies are presented in Figure 14.

![Research tendencies of studies](image)

Figure 14. Research tendencies of the studies

As Figure 14 showed, it has been found that while more than half of the studies (n=56) were carried out to evaluate in-service training curriculum, some of them (n=28) were carried out to determine the need for in-service training and only a small part of the studies (n=4) were conducted to develop curriculum. It is considered that more than half of the studies were conducted to evaluate the curriculum to assess in-service training carried out by the MoNE. Another important finding from the in-depth analysis of this finding is that almost any of the studies used a curriculum evaluation model in evaluating the in-service programs.

3.3.11. Stated problem in the studies

The fifth research question of the study was inquiring about the issues raised in the graduate studies. Thus the problems questioned in the studies within the scope are themed and presented in Figure 15.
Figure 15. Problems raised in the studies.

As seen in Figure 15, the most highlighted problems in the studies are that the in-service training was not planned to meet the expectations of participants, and the person providing the training was not an expert or academician. Additionally, it is found that the least mentioned problems in the studies are; insufficiency of the fees paid to the trainees, wages and course fees, constantly changing programs, in-service training guide book, no feedback at the end of in-service training, limited quota, communication disorder, lack of willingness of trainers, insufficient in-service training policy, follow-up of in-service training and in-service application.

3.3.12. Solutions offered to the problems in studies

The sixth research question of the study was inquired about the solutions to the problems raised in graduate studies. Within the scope of this research question, solutions for the problems put forward in the studies are themed and presented in Figure 16.
Figure 16. Solutions to the problems raised in the studies

As seen in Figure 16, the solutions mentioned in the studies are themed in different labels. It is found that the most frequently mentioned solutions or suggestions have been expressed as identifying the need analysis for in-service training. On the other hand, paying daily fees to the trainees, making ready-made activities available in the guide book concerning the needs of teachers, determining the participants according to objective criteria, ensuring the willingness of the trainers, grouping the teachers correctly, providing teachers’ cooperation and renewing in-service training policy are expressed as the least suggested solutions in the studies.
4. Discussion & Conclusion

In the present study, the graduate studies that were accessible from the Higher Education thesis center that were conducted between 2000 and 2018 on in-service training for teachers were examined through content analysis.

As for the academic levels of the studies, it was found that most of them were masters level studies. It can be said that the majority of the studies are at the master’s degree since the number of master’s researchers is partly higher than the ones doing doctorate dissertations. When the studies have been examined in terms of the universities, it can be said that only 41 universities in Turkey have conducted studies on in-service training for teachers, which shows that only a certain number of universities are focused on in-service training for teachers. When the amount of the state and private universities of Turkey is taken into consideration, it can be claimed that the number of universities researching in-service training for teachers is quite insufficient.

When the findings were analyzed concerning the years of the studies, it was found that in-service training activities for teachers have shown a distribution by years. Still, most of the studies were conducted in 2012, while no studies were undertaken/reached in 2000, 2002, and 2003. It can be claimed that the reason for many studies carried out in 2012 was the increase in the number of in-service training organized by the MoNE within the scope of Fatih Project, which was put into practice in 2012.

When the findings are scrutinized in terms of the method characteristics of the studies, it is seen that the quantitative research method and survey design were preferred in most of the studies about in-service training programs for teachers. It is also found that questionnaires or scales were used as a data collecting tool in most of these studies. It can be said that the reason why the questionnaire and scale were used in the majority of studies might be grounded to the aim of reaching more participants and more generalizable conclusions. Besides, the findings of the present study revealed that quantitative/descriptive data analysis methods are used more frequently due to the majority of the studies conducted with quantitative survey design. Besides, it was seen that the majority of the content analysis studies were conducted at different levels and in various branches in line with the changing needs of the time. It is also considered that the studies are valuable in terms of evaluating the problems encountered in in-service training since the participants whose opinions were obtained in the studies reached were mostly from different branch teachers. Taking various participants’ views increased the effectiveness of the findings. It can be claimed that the variety contributed to the more comprehensive identification of the needs, problems, and solution suggestions regarding the in-service training organized for the teachers.

In light of the findings of the present study, one of the outstanding results is the methodological characteristics (research design, data collection tool, validity, reliability
calculations, sampling technique, and study group characteristics), which are not visibly reported in some of the studies. It is a necessity in academic studies that the methodological aspects should be indicated clearly and detailed for the studies to be based on a scientific basis to guide researchers in terms of reproducibility and to interpret their findings correctly.

Additionally, studies were examined in terms of research tendencies, and it was found that more than half of the studies aimed to evaluate the curriculum of in-service training that was held for teachers. In contrast, some of the studies were conducted to determine the in-service training needs of teachers, and very few studies aimed to develop a curriculum for in-service training. It can be thought that the reason why most studies were conducted in the field of curriculum evaluation was to evaluate the in-service training carried out by the MoNE.

Another important finding from the in-depth analysis of the data set is that almost all of the studies evaluating the in-service training program did not use a curriculum evaluation model. In curriculum evaluation studies, it is vital that using a curriculum evaluation model that is proper for the subject to be evaluated and the aim of evaluation. Solely taking the participant's opinion may not be considered sufficient in curriculum evaluation as a comprehensive process.

Another finding obtained within the scope of the research tendencies of the studies is that the curriculum development studies related to in-service training for teachers did not take into consideration the constantly renewed and updated training programs and the curriculum development studies regarding in-service training programs for teachers were not at the desired level.

Another question that this study seeks to answers is about the problems raised in the studies. The findings showed that the in-service training activities for teachers were not given by the experts or academicians. Additionally, they are taught more like courses, in other words, they do not include practice, but the transmission of theoretical knowledge is in the majority. There are also problems that do not overlap with the gains of education. The fact that such in-service trainings are not given by experts or academicians, and that the courses are far from practicality and based on the transmission of the theory can be considered as the reasons for the insufficient contribution to the professional development of the teachers.

5. Suggestions

In this section, suggestions raised in light of the results obtained by analyzing the content of the studies on in-service training in education held for teachers. According to the findings obtained as a result of content analysis of studies, it was observed that no studies were made on the field of visual arts. When this absence is taken into consideration,
it is recommended to research in-service training in all levels and branches within the scope of the research subject. Among the studies analyzed in line with the data obtained, it was seen that most studies were conducted with primary and secondary education, and the studies related to the ‘special education’ area were very few. It may be recommended to organize in-service training activities for those who provide instruction to the students in the field of special education.

In addition, when the research tendencies of the studies were examined, it was found that the curriculum evaluation studies were quite high. Still, no curriculum evaluation model was used in these studies. Thus, it may be suggested to use an evaluation model that enables the systematic and in-depth evaluation of the curriculum. Besides, it is strongly recommended that all stakeholders, as well as teachers who are the primary practitioners of the program, should be consulted before in-service training is provided.

In light of the findings, it has been figured out that those who provide training in activities in in-service training for teachers generally use the traditional methods-transmitting the information- more frequently. In this context, it may be suggested to plan practice-oriented in-service training that enables the trainers to practice appropriate techniques and methods.

To carry out the activities included in the program within the scope of the problems encountered in in-service training, technological equipment, infrastructure, appropriate tools and equipment should be provided and the grouping of teachers should be made properly. Moreover, concerning the demands of the participants of most of the studies, regular feedback should be offered for the trainees after the in-service training activities.

In the light of the findings obtained from the content analysis of the studies, the significant problems determined in the studies in the data set is that the in-service training was programmed appropriately and the teachers were reluctant to participate in in-service training due to lack of space, lack of implementation in activities. In this context, it may be suggested that both program developers, school administrators, and the ministries and directorates of national education should take necessary measures to solve the problems and make arrangements in the forthcoming in-service training programs.

**Disclosure statement**

No potential conflict of interest was reported by the authors.

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teachers and testing its efficiency]. (Unpublished master’s thesis). Karadeniz Teknik University, Trabzon.


Appendix: The Analyzed Studies (n=88)


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Çam, E. (2017). İlköğretim öğretmenlerinin teknolojik pedagojik alan bilgisi (TBAP) düzeylerinin yaşam boyu öğrenme, özwerterlik düzeyleri ve hizmet içi eğitim gereksinimleri açısından incelenmesi: Muş/Bulankırı örneği. [Examination of primary school teachers' levels of technological pedagogical knowledge (TPACK) in terms of lifelong learning, self-efficacy levels and in-service training needs: Muş/Bulankırı example]. (Unpublished master's thesis). Amasya University, Amasya.


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