HACETTEPE UNIVERSITY
INSTITUTE OF POPULATION OF STUDIES

SEQUENTIAL MIXED-MODE SURVEYS: AN APPLICATION ON EDUCATION FACULTIES IN TURKEY

Tolga Balcı

Department of Social Research Methodology

Master's Thesis

Ankara

September 2019

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This is to certify that we have read and examined this thesis, and, in our opinion, it fulfills the requirements in scope and quality of a thesis for the degree of Master of Arts in Social Research Methodology.

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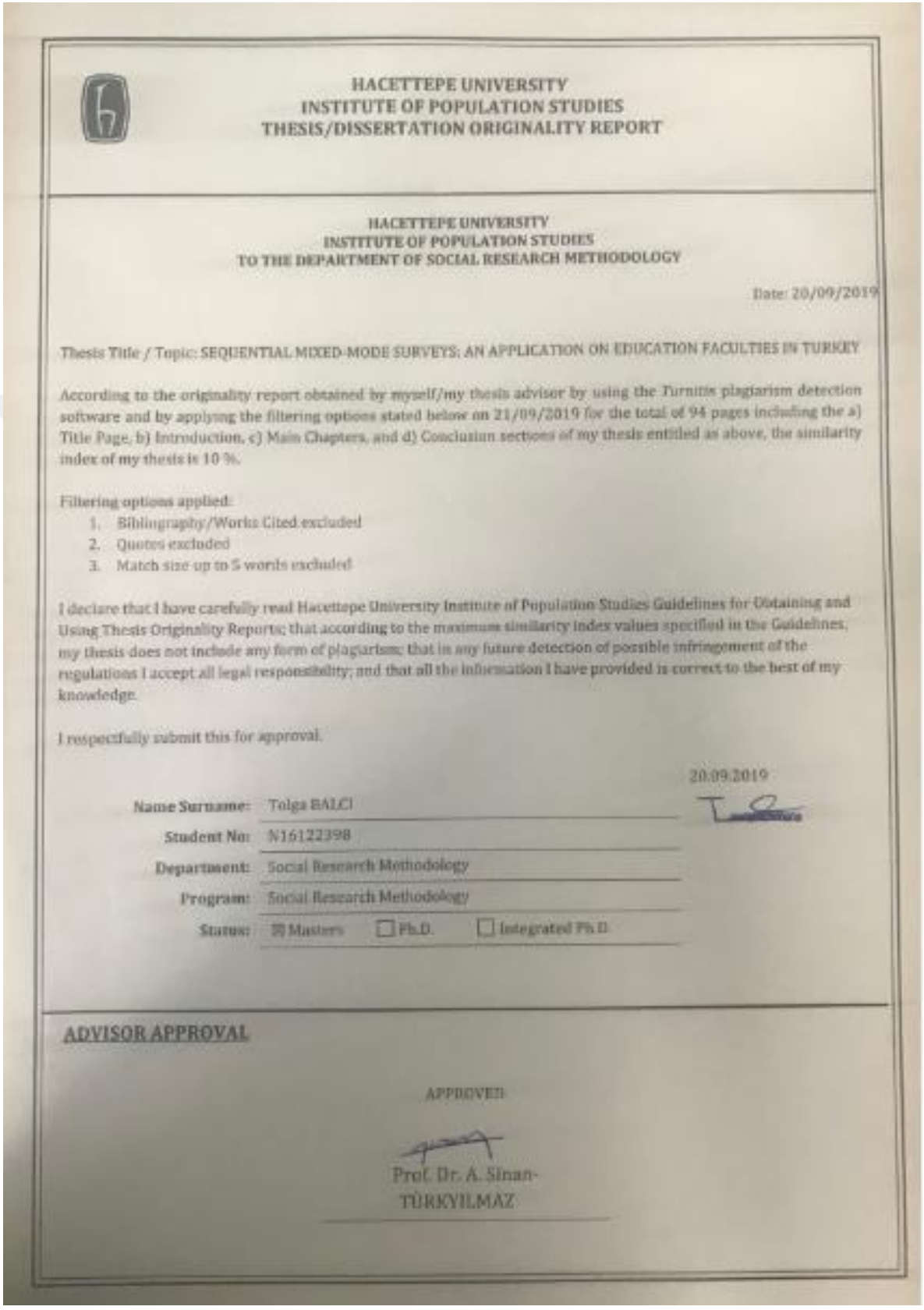

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ÖZET

Farklı veri toplama yöntemlerinin kullanılmasındaki temel amaç bütçe kısıtları da göz önüne alınarak en kaliteli veriyi toplamak; üretmek olmuştur. Literatürde, web ve e-posta ile veri toplama yöntemlerinin karşılaştırılmasına yönelik olarak çok sayıda çalışma bulunmasına rağmen, telefon, e-posta ve web veri toplama yöntemlerinin sıralı karşık metod dizaynı ile uygulandığı ve sonuçlarının karşılaştırıldığı bir çalışmaya rastlanılmamıştır.

Bu çalışmanın temel amacı, eğitim fakültelerinden telefon, web ve e-posta yolu ile elden veriler ile farklı veri toplama yöntemlerinin toplanan veriye olan etkilerini incelemektir. Araştırmanın eğitim fakülteleri üzerine yapılmasının nedeni ise öğretmen yetiştirme sistemi konusunda dünya ve ülkemiz için büyük öneme sahip olmasıdır.

Araştırma kapsamında hazırlanan üç farklı veri toplama metodu için hazırlanan üç soru kağıdı Türkiye'deki eğitim fakültelerinde görev yapan 96 dekana iletilmiştir. İlk aşamada e-posta; ikinci aşamada web ve üçüncü aşamada telefon ile görüşme metodu uygulanmış ve sırasıyla 17, 12 ve 5 dekandan geri dönüş alınmıştır. En yüksek cevaplama oranı ilk aşamadaki e-posta metodundan sağlanmıştır.

Soru kâğıtlarına verilen cevaplar incelendiğinde belirli bir sorunun yoğun olarak cevapsız bırakılması durumuna rastlanılmamış, açık uçlu sorularda telefon ile görüşmede cevaplayıcıların daha fazla ilave bilgi sunduğu gözlemlenmiş ve sayısal sorularda telefon ile görüşmede net rakamlar verilemediği görülmüştür. Diğer taraftan telefon ile yapılan görüşmelerde görüşmenin yapıldığı anda cevaplayıcının bulunduğu lokasyonun önemi anlaşılmıştır.

Soru kağıtlarına verilen cevaplardan öğretmen yetiştirme sistemine ilişkin en acil ve önemli müdahalenin eğitim fakültelerine giriş ve eğitim fakültelerindeki eğitim süreci olduğu anlaşılmıştır. Cevaplayıcıların, Türkiye'nin, öğretmen yetiştirme sistemine yönelik geçmişten bugüne var olan en önemli sorun alanlarını bu alanlar olarak gördüğü tespit edilmiştir.

Sonuç olarak, hedef popülasyonun büyüklüğünün az, iletişim bilgilerine erişebilmenin mümkün ve cevaplayıcıların sahip oldukları eğitim seviyesinin yüksek olduğu durumlarda internet aracılığıyla gerçekleştirilmesinin daha yüksek cevaplama oranına sahip olacağı öngörüsüyle yararlı olacağı değerlendirilmektedir. Fakat burada, açık uçlu sorulara verilecek daha fazla bilgiden feragat edileceği de unutulmamalıdır. Bu araştırmanın, özellikle bütçe kısıtı bulunan ve cevaplayıcılarına e-posta ve telefon numarası bilgilerine sahip olunan araştırmalarda hangi veri toplama metodunun kullanılması gerektiğine yönelik katkı sağlaması beklenmektedir.

Anahtar Kelimeler: Veri toplama metodu, cevaplama oranı, veri kalitesi, bütçe, eğitim fakültesi

ABSTRACT

The main purpose of using different data collection methods is to collect the best quality data by taking the budgetary constraints into consideration. In the literature, although there are a lot of studies for comparing web and e-mail data collection methods, there is no study in which telephone, e-mail and web data collection methods are applied with sequential mixed mode design and the results are compared.

The main purpose of this study is to examine the effects of different methods of data collection, such as telephone, web and e-mail on the quality of collected data.

The reason why the research is carried out on the education faculties is that the teacher education system is of great importance for the world and our country.

Three different questionnaires which are prepared for three different data collection methods, were sent to 96 deans who work in education faculties in Turkey. e-mail mode at the first step; web mode in the second stage, and third step telephone interview mode was applied and 17, 12 and 5 deans answered respectively. The highest response rate was obtained from the e-mail method.

When the answers to the questionnaires were examined, it was observed that no particular problems about item-nonresponse or open-ended questions existed. It was observed that in the telephone interview, interviewers offered more additional information during the interview. However, numerical questions in the telephone interview could not be given as clear numbers. On the other hand, the importance of the location of the interviewer at the time of the interview was understood.

From the answers to the questionnaire, it was understood that the problem area which should be solved most urgently about the teacher education system was the enter the education faculties and the training process in the faculties of education. According to the respondents, Turkey's historically most important problem areas for teacher education system was these areas.

As a result, when the target population has a small size, what it is possible to have access to contact information, and where the education level of respondents is high, it is considered that choosing the web mode will have a higher response rate. But it should not be forgotten that more information will be abandoned.

Key Words: Data collection method, response rate, data quality, budget, education faculty

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LIST OF ABBREVIATIONS

ACASI	Audio Computer-Assisted Self-interviewing
EU	European Union
USA	United States of America
ASEAN	Association of Southeast Asian Nations
CEDEFOP	European Centre for the Development of Vocational Training
CPRE	Consortium for Policy Research in Education
CoHE	Council of Higher Education
EHEA	European Higher Education Area
ERI	Education Reform Intiative
IBE	The Education Research Institute
IEA	International Association for the Evaluation of Educational Achievement
ILO	International Labour Organization
IVR	Interactive Voice Response
MoNE	Ministry of National Education
MINEDU	Ministry Education and Culture
NCEE	National Center on Education and the Economy
NMoER	Norwegian Ministry of Education and Research
NUTS	Nomenclature of Territorial Units for Statistics
OECD	Organisation for Economic Co-operation and Development
MSPC	Measurement, Selection And Placement Center
PISA	Program for International Student Assessment
TALIS	Teaching and Learning Survey
TUSIAD	Turkish Industry & Business Association
GNAT	The Grand National Assembly of Turkey
TIMSS	Trends in International Mathematics and Science Study
TURKSTAT	Turkish Statistical Institute
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
USA	United States of America

CHAPTER 1

1. INTRODUCTION

Researchers, especially who study social subjects seek to obtain information directly from the sources. Therefore, generally and traditionally official statistics and social survey data are collected by visiting respondents or applying self-administered mail questionnaires. Which method to use depends on the research features. However, one of the most important constraint in many studies is budget. The budget is decisive on which method to use for scholars. With the development of technology in the process, many different methods have come to existence and they are applied in different studies. Deciding which data collection method fits for a particular research is of crucial importance to have better results.

The face-to-face interview was a standard in the twentieth century, the telephone survey rapidly became popular during the seventies and just became the most used data collection methos in the USA (Nathan, 2001). In 1987, the First International Conference on Telephone Survey Methodology was held in Charlotte. By the late 1960s, nearly 90 percent of the population in Europe and North America had landline telephones. Furthermore, due to high costs of travel and the decline in response rates in face-to-face surveys in especially the commercial sector, using the telephone as a collection mode became more attractive (Nathan, 2001).

The rapid growth of computer technology caused the next important development in data collection process. Computer based technologies have affected all fundamnetal data collection methods. (De Leeuw and Collins, 1997; Couper and Nicholls, 1998).

The extensive internet network, increasing internet access speeds and technological possibilities have led to the data collection techniques being directed towards collecting data via web especially in the last 20 years (Brinkman, 2009; Mcpeake et al, 2014; Jansen et al, 2017). Web mode is less costly and faster than

traditional data collection methods. These opportunities of web are also an advantage comparing the telephone and face-to-face interview methods (Couper and Miller, 2008).

The objective of this survey is telephone, web and e-mail data collection methods are applied with sequential mixed mode design to the education faculties deans and the results are compared. For this survey, web refer to Google Forms link is attached to the e-mail and sending to deans; e-mail refer to the Word document is attached to the e-mail and sending to deans. After that, the web and e-mail methods for this survey, are used in this sense. That is to say, this thesis will contribute to the literature by making up the aforesaid deficiency with also bringing up such a study to the literature of Turkish academia.

Why are we working on faculties of education? Since the end of the 1990s, scientific studies conducted based on observation revealed a strong relationship between educational system and the level of development in economic and social terms. Competitiveness, economic development and welfare in the most general sense are measured not only with the physical capital owned but also by the nature of the human capital that is owned. With the determination of the strong relationship between education and the level of economic and social development, countries have invested in qualified manpower to increase their welfare levels. The quality of the education system is closely related to the quality of human power. The countries that have designed their education systems according to the requirements of the century and have a dynamic structure that can adapt to the new conditions have been successful in raising qualified human power.

The essential element of the education system is the student. All the reforms and regulations for the education system aim at the better education of the students. The education of the students as qualified manpower and the quality of the education system is linked to the quality of education. When the literature on education, education system, teacher and teacher training system are examined in the related literature, it is seen that the most important element that determines the functioning of

the education system and the quality of education as a service is the teacher. Therefore, from yesterday to today, the main element of the education system after the student is considered to be the teacher.

It is stated that the quality of the education system can not be better than the quality of the teachers in the system (UNESCO, 2014). The teachers who have the skills required by the 21st century can train the qualified human power needed.

The critical role of the education system in the development of countries has made the teacher, the most important factor determining the nature of this system, a topic that is constantly discussed and carried out on a global scale. Teacher subject, as in other countries has always maintained its position as the agenda in Turkey.

Today, the teaching profession; the teacher education system, the quality of the teacher and career planning are being discussed in a wide range. Teacher training is an integrated process covering the period from the selection of candidates to the teaching profession until the end of the profession. One of the first and most important stages of the process is the placement of prospective students in programs for teacher training. In the next stage, the quality of the education which is defined as pre-service education and the nature of the institutions that provide this education service come up. In this context, the questionnaires prepared within the scope of the study were prepared to cover the whole process of teacher training.

The increase in the number of teachers in Turkey in recent years has been greater than the increase in the number of students. Number of students per teacher falling in all levels of education are significantly reduced (Ministry of National Education (MoNE), 2019). The problem of teacher shortage has been largely eliminated, but the teacher supply surplus has come to the fore. The deepening of the problem of teacher supply caused the discussion of the problems related to the quality of the teacher in the secondary plan. Especially the problems of education faculties are lagging behind. Especially in the 2000s, the number of faculties of education increased

rapidly but no reforms were made to the problems of faculties. While the quality of teacher is of great importance for the education system, it is considered that education faculties should be given a special importance. Therefore, it was planned to work with faculties of education in this study. In this context the target population of this research are deans of all education faculties in Turkey. The number of education faculties in Turkey is 96 and every faculty has its own dean. The aim will be to meet and contact with all deans. Why deans? Because deans are generally highly experienced academicians and they have full control of teacher training processes.

Furthermore, this thesis will contribute to the literature by comparison of the results of the application of different data collection methods with sequential-mixed mode design. In that way, this research will introduce a body that will enhance the understanding of three different data collection method in surveys.

Within the scope of the study, especially in order to cover the whole process of teacher training during the preparation of the questionnaire, the related literature was reviewed and the country's achievements on the education system and teacher were examined. Ministry of National Education (MoNE), Higher Education Council (HEC), Measurement, Selection and Placement Center (MSPC) and Turkish Statistical Institute (TURKSTAT) data and the studies and databases of international organizations such as Organisation for Economic Co-operation and Development (OECD), United Nations (UN), United Nations Educational, Scientific and Cultural Organization (UNESCO) have been utilized.

The thesis consists of six chapters. In the introduction chapter, it was mentioned that different methods of data collection used by the researchers and the ways in which these methods were used intensively in the history, and data collection methods changed with the rapid development of technology. In addition, the aim of the study is explained. Moreover, in this chapter, why it is studied through the faculties of education and the scope of the study are expressed.

Second chapter is devoted to the history of survey, different survey types, link between the data and survey quality; information about different data collection methods and comparison of these methods.

Third chapter mentioned the history of education faculties. The history of education faculties was examined in two periods before and after 1982. It also mentioned the "Teacher Strategy Document (2017-2023)" which was published in 2017.

In the fourth chapter, data sources and methods are explained. Moreover, data collection processes are explained in detail and information about different data collection methods are presented.

In the fifth and sixth chapters, the results of the study were explained and various suggestions were made based on the results. Also in this chapter, results of different data collection methods applied with sequential-mixed mode design and survey conducted about the faculties of education have been advised about which method will help to collect better data. The comparison of three different data collection methods is considered important in terms of contributing to the literature in this field. The researchers who will conduct research in the faculties of education will be able to develop insight about which data collection methods to use.

CHAPTER 1

1.1. OBJECTIVE AND RESEARCH QUESTIONS

The main aim of this research is compare the results of three different data collection methods with sequential-mixed mode design and to improve data and survey quality via choosing the most appropriate data collection method for a particular survey. Hence, the main research question is "What are the results of applying different data collection methods with sequantial mixed mode?", "What are the advantages and disadvantages of telephone, e-mail and web surveys?" and "Which data collection method is more appropriate for research about dean of education faculties?"

The sub-questions that this thesis will also attempt to answer are as follows:

- Which method has higher response rate?
- How much is the cost per response in telephone, e-mail web and e-mail surveys?
- Does item nonresponse error differ between methods?
- Does the responding profile (age, sex etc.) affect response rates?
- Does use of the internet increase the response rates?

There comes the motivation of this thesis to inquiry the studies conducted in Turkey according to the definitions of using different data collection methods. Studies show that deciding which data collection method is to use depends on many different variables. Overall, this thesis will contribute to literature comparing the results of different data collection methods with sequential-mixed mode.

Why education faculties and therefore teacher education policies can be explained as follows. The main aim of the education system is to educate students and students in the broadest sense. The last link of the education system is the teacher who will realize their main goal and is in direct interaction with the student. On the other

hand, the teacher is the spirit of the school, which is an important part of the education system (Ozcan, 2013). Changes in the education system are transferred to the students through the teachers. As a result of these important positions of teachers in the education system, the concept of teaching has been a concept discussed in all periods of history. The requirements for the qualifications of teachers, the need to change and strengthen the social perception of the professional teaching profession, and the new approaches to teacher training systems have been discussed.

Organizations such as UN, UNESCO and the OECD have made their work towards education and teachers; they contributed to the discussion of these areas on a global scale.

In addition to the performances of the teachers in member countries, the OECD provides data on subjects such as occupational satisfaction, salaries, adaptation of information and communication technologies, and provides comparative analysis. Carried out by the OECD to evaluate the performance of teachers, the last of the (Teaching and Learning Survey) TALIS work carried out in 2013, but Turkey did not participate in this study. Participating countries can see the positions of the countries in the mentioned subjects compared to other countries and thus produce solutions for the problem areas that can be detected. The fact that Turkey did not participate in the study makes it impossible to make a comparative analysis.

According to the latest data, at the end of 2014 there were 650 million children in primary education age[1] (UNESCO, 2014). Approximately 29 million primary teachers are teaching in the classroom. According to the calculations carried out by UNESCO, by 2030, 3.3 million teachers will be needed in addition to the number of teachers present. The size of the system of education only at the primary level proves that the issue of teacher and teacher training is a global issue. It is stated that the target can be achieved with the teachers who are authorized, well-educated, have high skills,

[1] According to UNESCO, the elementary school age defines students' basic reading, writing and mathematical skills as the period in which they prepare for secondary education.

are motivated, have high speed of adaptation and have an effective management system supported by evidence-based policy.

Countries have developed policies to strengthen their education systems and to increase the qualifications of their teachers, acting in the role they play in the development of qualified capital power. The main objective was to train teachers with the skills required by the 21st century and thus to strengthen the education system.

CHAPTER 2

2. LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1. History of Survey

In order to understand the present state of the business, education, science and daily life from the state administration, and to plan for the future, the need to collect data and research about these areas has always existed.

As a Word+ *survey* is defined as a method of collecting data from people, households and the business community and from various organizations to explain these units through a sample representing all these units (Biemer and Lyberg, 2003). Public institutions use these data in their policy-making processes to provide better service to citizens; companies use profit maximization or cost minimization. The history of the *survey* dates back to the 17th century. In the 17th century, states, especially European countries, have conducted various survey trials. However, the issue of *survey sampling* is a concept that emerged in the 1900s. It is known that various studies were carried out to calculate the population in European countries from the 17th to the 18th century. Therefore, it can be said that the studies carried out in the period up to the 19th century were not based on the sample but on the population.

The idea of creating a *sample* representing population was first introduced by Neyman and Tschuprow in the early 1900s (Neyman 1934; Tschprow 1923). After that, there was an increase in the number of sampling studies which could represent the population in the best way.

As the developments in the population and sampling continued, different approaches have emerged about how to collect data from this population, because it is very important to collect the correct data. Only in this way will the descriptions and analyzes be made for the population.

As a tradition, in social research and in the collection of official statistics, the interviewer had a face-to-face interview with the responder or the respondent filled in the questionnaire by her/himself. Survey has been carried out in this way for a long time. However, especially since the second half of the 20th century, the data collection techniques used in surveys have changed significantly due to the rapid development of the technology (Jansen et al., 2017).

Surveys, the subject of the research, the conditions of the period, budget facilities and the ability of technology developed and maintained their dynamic structure in every period.

2.2. Survey Types

Today, there are many types of survey; different types of research are carried out depending on the aim and subject of the study; target population and budgetary opportunities (Lyberg and Cassel, 2001). Generally, the population is larger than the sample due to budget and time constraints (Cochran, 1977). First of all, the purpose of the research is to determine which type of survey will be used. After that, the time dimension of the study determine the type of survey. The following classification is made according to Neuman (2002).

The Purpose of the Research

i. Exploration

It is the case that a study is born of curiosity and needs and is usually prepared in response to the "What" question. This is usually the first step in a sequence of studies. A general picture of what is being wondered is drawn.

ii. Descriptive

These are more advanced studies compared to exploration studies, which are generally prepared to find answers to the questions of "How" and "Who". It is tried to define the problem beyond the general picture.

iii. Explanation

These studies are based and collected data on "exploration" and "descriptive" studies and are in response to the question "Why".

These three objectives can be found together in the research. But it is important that at least two objectives can be fulfilled.

The Use or Research

i. Basic Research

It is the first stage of research, usually done on paper, and philosophical discussions are held to understand the social world. The fundamental questions are tried to be answered and an attempt is made to contribute to the existing ideas.

ii. Applied Research

Unlike basic research, it is a study on a specific subject related to politics, social life and environment. In this type of research, the solution of the problems are handled systematically and the results are tried to be analyzed by making practical analysis.

a. Action Research

In this typer research, to identify an imbalance that exists in social life directly, create awareness about this issue and try to create a basis for actions to be taken in order to eliminate this imbalance.

b. Social Impact Assesment

These are studies to measure the effects of a previously planned change towards the economy, politics, health or politics.

c. Evaluation Research

These are the studies carried out to monitoring the practices applied to the economy, health, education or policy or to evaluate the these results.

The Time Dimension in Research

i. Cross-Sectional Research

This is a type of research conducted in a given population and at specific time. According to the subject of the survey, target population are determined only for the determined time.

ii. Longitudinal Research

Time Series

In longitudinal research, the same type of information is collected from the same type of people at certain time periods. Time series studies differ in individuals but; for example, there are similar groups of people in a certain age range.

Panel Study

In panel study, the same type of questions are applied to the same people, groups or organizations at different times. The researcher aims to follow and undestand the changes of the same people's approaches on the same subject over time. However, this type of research has high cost.

Cohort Study

In this type of research, people with similar life experience are studied with the same type of questions. For example, this kind of research can be carried out with people who have been married in the same year, because when other conditions are ignored, they can be considered as having similar life experience.

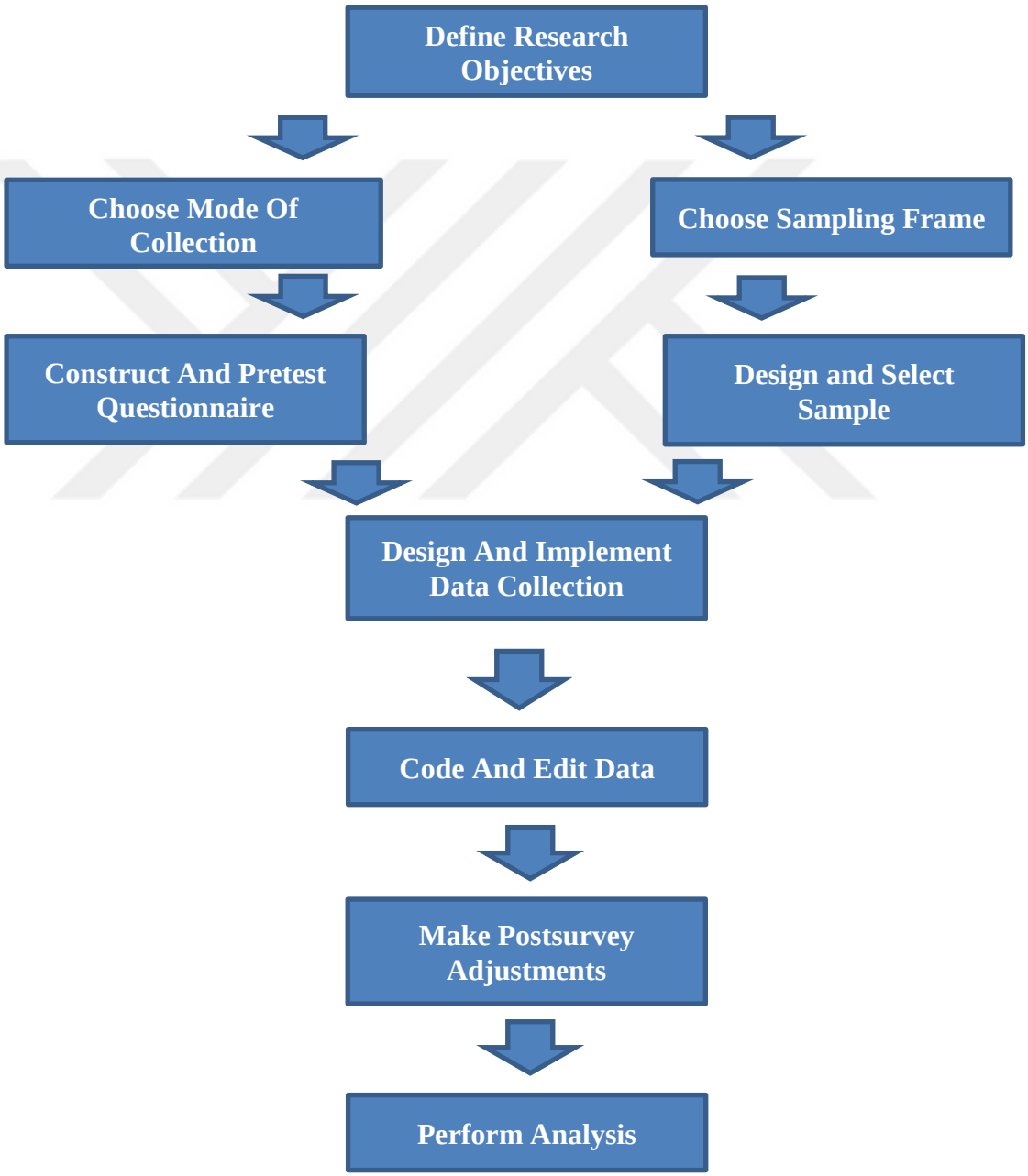
Case Study

In this type of research, which is a special type of longitudinal research, the researcher concentrates on a specific subject and collects detailed data about the subject at different periods.

2.3. Survey Process

This section summarizes all stages of the survey process, as in show Figure 2.1.

Figure 2.1: The Survey Process



Source: Groves et al., 2009

The Process From the Determination of the Survey Objectives to the Data Analysis

Survey is a process, and the correct design and implementation of this process directly effects the success of the survey. The first step of this process is, as shown in Figure 2.1, to clearly determine the *objective of the survey*. After the survey objective has been set, other steps of the process should be studied. Determining the objective of the survey correctly will be possible by determining the research questions in accordance with the survey objective. The elaboration of the studies in these two steps will contribute to the prevention of errors in the later steps and allow for time savings in other process.

In surveys where a questionnaire should be prepared, it is critical to correctly determine the survey objective and the survey questions. Because, each research question should appear on the questionnaire. Then each research questions will be given on the questionnaire in full; contributing to the success of the researcher.

The next step is to determine the *unit of study/target population*. The population to be examined is called the target population (Bethlehem, 2009). The target population will be an individual or a household or any other organization according to the purpose of study. As mentioned above, since the beginning of 1920s, the concept of sampling has come to the agenda and it has been studied with the best sample representing the population instead of sudying with the population. At this point, it is critical to determine the correct sample which represent the population. Incorrect determination of the sample will make it difficult to achieve the objectives set at the beginning of the research. For instance, over coverage and under coverage consists of units are not covered by the target population. So, in this case the statistics obtained from the study will be biased.

After determining the unit of study, which *data collection method* will be used in survey should be determined. This step is the very important for the survey success. Considering important constraints such as the objective of the study and budget, one of the different data collection methods such as face-to-face interviews, e-mail or web is selected. For example, face-to-face interviews include site visits so the cost is high. Therefore, the lack of budgetary facilities is not sufficient to use face-to-face interview method. In this case, e-mail and web methods that are less costly than face-to-face interviews, and can be preferred. Moreover, it is stated that imbalances between answers can be caused from the survey mode (Dillman and Christian, 2005). On the other hand, the subject of the research is an important constraint on which data collection method should be used. The effect of the data collection method on the questions that include sensitivity was also calculated (Tourengau and Simith, 1998). For example, in the face-to-face interviews conducted on sensitive subjects, respondents may not feel comfortable and may not give correct answers. Therefore, other data collection methods may be preferred.

The selected data collection method significantly affects the quality of the data. One of the most important reasons for determining the objective of this study as a comparison of different data collection methods is that the selected data collection method directly affects the results of the study.

After determining the data collection method to be used in the survey, if a questionnaire is to be applied within the scope of the survey, the preparation of the *questionnaire* is proceeded. The questions in the questionnaire should be in full compliance with the research questions determined at the beginning of the survey. For example, in the case of mail survey, the questions in the questionnaire should be clearly written and there should not be any ambiguity because this method is self-administered. Furthermore, when we assume that the respondents are older people, the font size should be large and questionnaire should be user friendly. The questions in the questionnaire should be suitable for coding, pre-test should be done, the required questions should be restructured according to the results of the pre-test and the

questions that might create respondent burden should be reviewed (Norman et al., 2004) .

After the preparation of the questionnaire, the determination of the *sample* is proceeded. A budget constraint or a lack of access to the population makes it necessary to conduct surey on the sample. The sample design should be in line with the objectives of the survey (Kish, 1965). The first and most important concept in the sample is the *sampling frame*. We aim to reach the target population with sample frame. The target population, the universe, may be in a list or as a map. The sample can be generated by different methods depending on the method of data collection. It is important that the sample best reflects the characteristics of the population. Therefore, the subject of selecting the best representative population and optimal sample size are the subject of many studies for a long time (Walter et al. 1998).

While the preparation of the questionnaire, the process of processing the collected *data editing* should also be planned. Because it is an important step to transfer the data gathered through the questionnaire correctly to the computer. First of all, the collected data must be converted to specified format. In this process, the data should be examined in detail, the data at the extremes should be checked and errors should be determined.

As in the face-to-face interview, the interviewer's level of involvement in the research during the data collection process is also important in the survey. Therefore, the interviewer should be trained very well about the survey. In the surveys with e-mail, returns should be followed and other incentive mechanisms should be implemented in order to increase the response rates. However, no matter how well the process is planned, some problems that cannot be predicted will be experienced and deviated from the planned process (Biemer and Lyberg, 2003). The important thing is to be able to follow the process and take precautions when necessary.

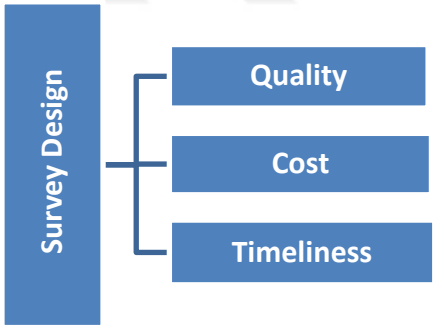
Data Analysis and Estimation

Before the analysis of the collected data, the errors must be cleared and the required weighting should be made. Weighting is done to account fot unequal probabilities of selection, missing data and scope problems. In some surveys, it may be necessary to reconnect with respondents to get additional information at this step. It should be noted that the data to be obtained as a result of the analysis should be able to answer the questions determined at the beginning of the survey.

When the design process of the research is examined in general, it is seen that a perfect design is not possible. In this respect, the design of the research has two main objectives:

Figure 2.2: Survey Design

- Cost minimization to achieve a specified quality
- Maximize survey quality with given budget



Source: Groves et al., 2009

Research designs are based on experience and theory; the advantages and disadvantages of each alternative are determined and preferred. A researcher who is aware of the advantages and disadvantages of the method she/he is preferred, can achieve success.

2.4. Survey Quality

In order for the research to have a high quality structure, it has to meet certain criteria. The problem of quality control has always attracted the attention of researchers. It was handled with an experimental design that focused on variation. In the past years, various studies have been conducted to control data quality (Juran and Gryna, 1980; Ishikawa, 1982; Taguchi, 1986).

There are many different definitions of survey quality in the literature (Groves, 1989; Biemer and Stokes, 1989; Biemer and Lyberg, 2003; Groves, 2004).

According to Eurostat (2000) survey qualities component:

- Accuracy of estimates,
- Effectual of statistical concept,
- Timeliness,
- Comparability,
- Intelligibility and accessibility,
- Consistence and completeness.

Surveys that meet the above mentioned criteria are studies with an acceptable quality level. Similar criteria are accepted by the statistical offices of some other countries. This section focuses on data quality. Information on how data quality is measured and its components will be given in detail.

2.4.1. Data Quality

Data quality is defined as a function of the magnitude of the *error* in the data. If the amount of error in the data is high, the data quality is low. Population parameters,

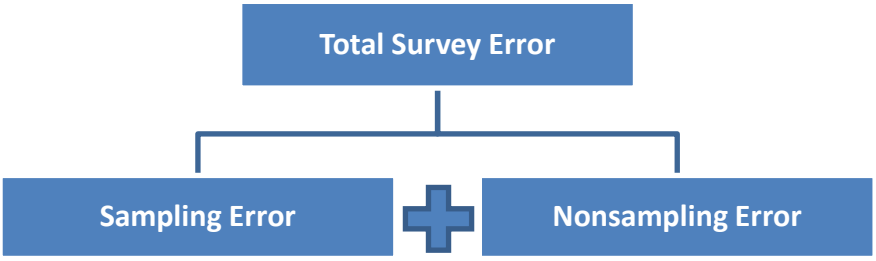
means, totals, proportions, correlation coefficient are also indicative of sample data quality. One of the important indicators of data quality is the size of the sample. Inferences based on very few observations are generally not safe. The basic parameter of data quality is the function of *total survey error*.

Total Survey Error

Total survey error, as in shown Figure 2.3, the sum of the sampling error and the nonsampling error and represents the difference between the actual value and the estimated value about the population parameters (Biemer and Lyberg, 2003).

The main objective of the survey is to minimize the total survey error within the given budget. For this purpose, sometimes the size of the sample is reduced in order to reduce non-sampling error. But in this case, the sampling error increases. For this reason, it is important to establish a balance between two types of errors and to minimize the error within the budgetary possibilities.

Figure 2.3: Total Survey Error



Sampling Error

It is the error that occurs because of studying a sample instead of the entire population. We can reduce the sampling error by increasing the size of the sample. Also we can eliminate sampling error if we study with the entire population. However,

if we do the survey with population, total survey error could never be zero due to non-sampling errors. Sampling error is the random variation in the sample estimates around the correct population value (Kothari, 2004).

Nonsampling Error

These are the errors caused by the other deficiencies in the survey process. From the data collection method, the processing of the collected data and the estimation, all the steps of the survey can be the source of the nonsampling error. Such errors are unintentional that are difficult to follow. Especially in large-scale surveys, these are inevitable. When the recent surveys are examined, it is observed that nonsampling errors have more negative effected the survyes (Biemer and Lyberg, 2003). Therefore, many studies in the literature focus on the sources of non-sampling errors and the problematic of minimizing these errors. As in shown Table 2.1 non-sampling error has five main components. These are specification error, frame error, nonresponse error, measurement error and processing error. These errors are related to the entire survey process. Table 2.1 describes the extent to which each error can occur and what it means.

Table 2.1: Five Major Components of Nonsampling Error

Sources of Error	Types of Error	Explanation
Specification Error	**Concepts**	The research question, survey concepts or data elements are incorrectly determined and therefore the design of the survey is erroneous. Specification error is usually due to poor communication between the researcher, the data analyst and the data entry.
	Objectives	
	Data elements	
Frame Error	**Omissions**	Units in the sample should be the correct units representing the population. The units that should be included in the research should not be excluded from the sample; or a unit in the sample should not be counted once more.
	Erroneous inclusions	
	Duplications	
Nonresponse Error	**Whole unit**	The whole unit does not answer a significant part of the question; within the unit the question is not answered in full. In Item, the responder
	Within unit	
	Item	

	Incomplete information	does not want to talk about the specified subject. Incomplete information refers to, inadequate answers are given, especially in open-ended questions.
Measurement Error	**Information system**	The most common type of error observed in survey. The respondent may inadvertently give incorrect information, the interviewer may affect the respondent or the answer may be misinterpreted, and error can be made in the questionnaire design. The selected data collection method and the information system used may also cause an error.
	Setting	
	Mode of data collection	
	Respondent	
	Interview	
	Instrument	
Processing Error	**Editing**	The errors resulting from the processes in the process of making the data ready for analysis.
	Data entry	
	Coding	
	Weighting	
	Tabulation	

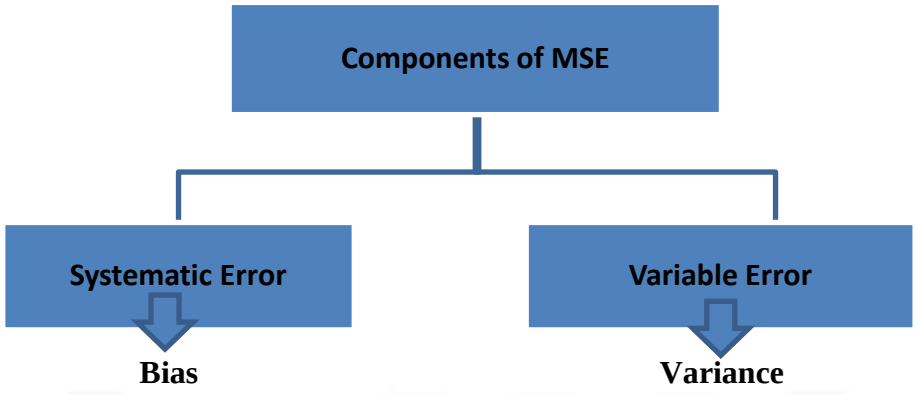
Source: Groves et al., 2009

Total Mean Squared Error (MSE)

Researchers are trying to explain the effects of non-sampling errors on survey by using statistical methods and models (Assael and Keon, 1982). In the literature, the most commonly used indicator for measuring total survey error is total mean squared error (MSE). Total mean squared error is an indicator of all errors.

The small size of the MSE means that the total survey error is small and under control, and the large size affects the estimates. As shown in Figure 2.4, there are two components of MSE:

Figure 2.4: Two Components of MSE



$$\mathbf{MSE = (Bias)^2 + Variance}$$

The systematic error cannot be measured, compensated, and causes bias. The source is non-sampling. Variable error is the part that can be measured, compensated and causes variance. The source ise sample. If there is no variable error, the reliability of the data is maximum. Systematic errors bias the estimates of total, means and proportions; variable errors increase the variance of total, means and proportions of survey. In surveys, variance and bias should be minimized and tradeoff should set up.

2.5. Different Data Collection Methods

2.5.1. History of Data Collection Methods

One of the most critical questions faced by the researcher in the survey process is which data collection method to use. With the change of time and technology, the existing methods have changed and new methods have emerged. In 1788, the first documented questionnaire was sent to ministers of all the parishes of the church of Scotland by sir John Sinclair. Since the resources for the census were insufficient, he mailed out questionnaires to ministers of all the parishes of church. Sinclair achieved %100 response rate and published his findings as "The Statistical Account of Scotland"

(Das et al. 2011). In the 2000s, the %100 response rate in the mail method was a utopia, but the mail method still remained an important method (Dillman, 2000).

In the period before the second half of the 20th century, in social surveys and official statistics, two traditional methods to collect data were used. The first one is the face-to-face interview where the interviewer visits the respondent, and the other is the mail method which is self-administered. Face-to-face interviewing method was first used in the United Kingdom in 1912. However, with the development of technology after the second half of the 20th century, especially the method of telephone interviewing has come to the fore in 1970s and this method has been the most popular method in the 1990s (De Leeuw, 2005; Nathan, 2001), because telephone interviewing is much less costly than the face-to-face interviewing. With the increase in the popularity of telephone interviewing method since 1970's, face-to-face interviews and telephone interview method were used in mixed mode surveys. Mixed mode means that multiple data collection methods are used in the same survey (Leeuw and Berzelak, 2016). Firstly, in the United Kingdom in 1984, for United Kingdom Labor Force Survey quarterly panel survey a face-to-face interview was held in the firs step; afterwards, telephone interviewing were made (Wilson et al. 1988).

Since the 1990s, starting with the development of computer technology there has been an increase in data collection methods that use this technology. All traditional data collection methods are influenced by computer technologies (De Leeuw and Collins, 1997; Couper and Nicholls, 1998). This effect was particularly positive on data quality. Paper based studies are being replaced by computer based studies. In addition, mixed mode has become widespread in surveys. The aim of using mixed mode in the surveys was to decrease the costs and increase the response rates so reduce the total survey error. For example, in a survey, first stage may be conducted with face-to-face interviews then second stage may be conducted with e-mail to increase response rate.

With the rapid development of internet technologies since the beginning of the 2000s, survey on the Web has increased significantly. The most important reasons for this increase are the cost and time advantage, access to large population and ease of analyzing data of the surveys conducted with the Web (Dillman, 2000; Couper, 2000). These advantages have led to a rapid increase in the number of Web surveys. Paper based and Web methods have been used as a mixed mode with the increasing interest in Web survey especially in universities and official statistics.

With intensive use of mobile devices, mobile surveys, which were started to be used extensively in the present day. According to the World Bank latest data, the increase in the number of people using mobile devices around the world especially in the last 10 years is thought to be effective in this case. Intensive use of smartphones in particular has changed the way people communicate with each other. Voice, text-messaging, e-mail, video calling and social media are most commonly communication tools. People spent more and more time alone with their smart phones (Schober et al. 2015). We wanted to design a mobile survey, but it was abandoned due to the costs of creating mobile survey is very high. Existing free applications were found to be insufficient.

2.5.2. Data Collection Methods

There are basically 3 classical data collection methods (Groves et al., 2009):

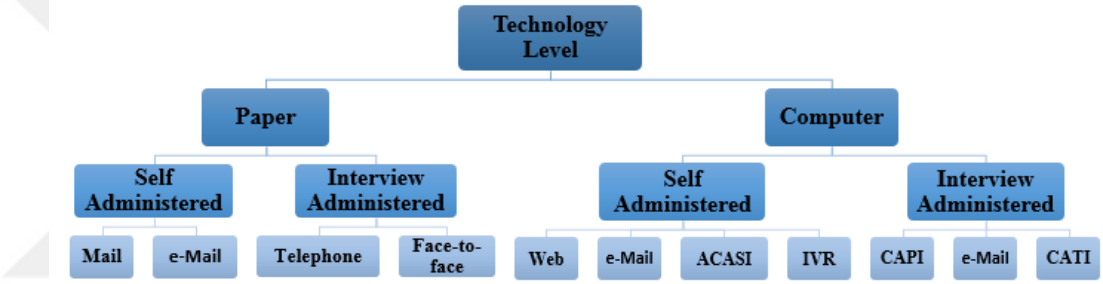
1. Questionnaire should be sent to the respondents by e-mail and the respondents fill out the questionnaires and send them back,

2. Interviewers call the repondents by phone and conducting the survey via telephone,

3. The interviewer goes to the respondent's home or office and has a face-to-face interview.

Especially with the rapid development of technology in recent years, existing methods have changed and new methods have emerged as in shown Figure 2.5. Especially the transition from paper to computer technology is considered as an important turning point (Couper and Nicholls, 1998). Some errors can be reduced in surveys which used computer technology. The programs used are directing the respondents to the right questions, mouse movements and waiting times in the questions can be kept in the databases and used as feedback for other researches. Furthermore, the effect of the location is reduced in these surveys.

Figure 2.5: Classification of Data Collection Methods by Technology Use



Source: Groves et al., 2009

Different data collection methods can be classified by interviewer's level of involvement in the interview, the degree of confidentiality of the respondent, which communication channels are used, and the technology used. As can be seen in the figure above, data collection methods are divided into paper based and computer based according to technology usage. Then the main distinction is self-administered and interview-administered.

Self-Administered Data Collection Methods

The first self-administered method is “Mail”. The Mail method is one of the oldest data collection methods (Dillman and Parsons, 2008). The questionnaire is

prepared and posted to the respondent's postal address. Since there is no interviewer, the questions on the questionnaire should be clear and the respondent should be able to answer questions without needing help. Mail mode is sometimes used in the second step of surveys. In the first step of surveys, face-to-face interviews are conducted and in the second step, the respondents who cannot be reached during face-to-face interviews are tried to be reached via mail.

In "Web" mode, the link related to the questionnaires prepared in the internet is sent via e-mail to the respondent. The respondent enters the answers via the internet and the researcher can see the answers through the platform. In Web mode, the researcher can access additional information such as how long the respondent waits on the question and what question he wants to continue after answering (Tuten and Bosnjak, 2001).

In "Audio Computer-Assisted Self-interviewing (ACASI)" mode, the questions are displayed on the computer screen, the respondent enters the answers into the computer and the computer records the answers.

In "Interactive Voice Response (IVR)" or "Telephone Audio Computer-Assisted Self-Interviewing (t-ACASI)" mode, responses to the answering the questions asked on the telephone with a telephone keypad, or answers are recorded via an audio system.

Interview-Administered Data Collection Methods

In the *telephone interview*, the interviewer reaches the respondent by telephone and asks the questions on the pre-prepared questionnaire to the respondent. The answers are recorded by the interviewer.

In the *face to face interview,* the interviewer goes to the respondent's home or office and asks questions and records the answers of the respondent. The interviewer

and the respondent are in direct contact. Recently, in face-to-face interviews, electronic devices such as tablets are used instead of paper; answers are recorded on the tablet. In the *computer-assisted personal interviewing (CAPI),* the interviewer reads the questions on the computer screen and the responder enters the answers on the computer.

Computer-assisted telephone interviewing (CATI) is the phone version of CAPI. The interviewer asks the questions by telephone and the answers are recorded on the computer. Generally in this method, a call center is established and interviews are conducted in this center and data are collected in a common data center. All interviews are monitored by consultants.

Mixed Modes

The main purpose of the mixed-mode approach is to reduce coverage and non-response errors, manage time accurately and reduce costs (Leeuw and Berzelak, 2016). It is known that the mixed-mode approach began to be used in the 1960s (Dillman and Tarnai, 1988). In the first applications of the mixed mode approach, mail and telephone methods were used to reduce nonresponse rates; in order to increase response rates and reduce costs, a face-to-face interview method and telephone method were used together. As the technology improves, mixed mode approaches have been applied using different data collection methods for similar purposes.

Two approaches are adopted in mixed-mode design. One of them is a *contact phase mode change.* In this approach, potential respondents are communicated through different methods. There are different contact strategies. For instance, reaching respondents with paper advance letter is used for face-to-face interviews and web surveys. According to Leeuw et al. (2007), many studies have shown that advance letter increases response rates. If the researcher know the samples' mail address information, an invitation e-mail can also be sent to the respondents. One purpose of the invitation by e-mail is to reduce cognitive burden (Dillman et al., 2014). In addition

generally, prepaid incentives have a positive effect on response rates (Singer and Ye, 2013). According to Dillman et al. (2014), sending reminders to non-responders is also successful in increasing response rates.

The other approach is *response phase* where, multiple data collection methods are used and the method is changing with response phase. There are five common mixed-mode designs for data collection in survey. In cross-sectional studies, the first is *concurrent mixed-modes design*. Respondents are offered to to choice two or more methods, in the same time. This design aims to solve the coverage problem.

The second cross-sectional design is a *sequantial mixed mode design*. The main objective in this design is to reduce costs and produce fast solutions. In most common sequential mixed mode design one method of data collection is implemented after another. It starts with least expensive, nonrespondent to the first made are followed up by a more expensive method, for balancing costs, nonresponse and nonresponse bias. For instance, it starts with mail and web and follows up through other methods. In this method, more expensive approaches are reserved for nonresponse follow-ups. The same questionaire is used in all stages. According to de Leeuw and Berzelak (2016), sequential mixed-mode designs improve response rates. A special version of sequential-mixed mode is *longitudinal sequential mixed mode design* is built on probability based online panels.

Used in cross-sectional surveys, the other mixed-mode approach is *concurrent mixed mode*. According to this approach, since different countries have different traditions and different infrastructures, different designs are used for similar studies. Tha last mixed-mode approach is a special version of concurrent design. For his design, different methods are used for different part of questionnaire.

2.6. Comparison of Different Data Collection Methods in the Literature

When the mode comparison studies in the literature are examined, it is seen that a mode is applied to a part of the sample and alternative mode is applied to the other part of the sample. To eliminate coverage and nonresponse error, a single sampling frame should be used. Also, meta-analyzes conducted by researches help us to understand the effects of different methods on the results of the survey (Goyder, 1985).

In the literature, it is seen that in the first studies where mode comparisons are made, traditional data collection methods are compared. For example, in the studies conducted in the 1970s, face to face interviews and telephone interviews were compared. Response rates, costs, coverage and calculation errors were compared in two different methods. Since the results of the survey conducted with two different methods were similar, the popularity of telephone conversation increased (Biemer and Lyberg, 2003).

The literature on this topic show that telephone, web and e-mail surveys yield different results in response rates and response quality. These differences are shaped by research design, population and financial capabilities. Thus there are many considerations to be focused in order to decide what method should be used. In addition, survey data collection methods can vary in the degree and type of technology used (Fuchs et al., 2000). Mode comparison studies in the literature, reveal the strengths and weaknesses of different data collection methods. There is growing body of literature on use of different data collection methods in the same research concerning the fundamental discussion on it as well as the studies conducted with this method. The literature demonstrates many studies for comparison of different studies.

Hochtism (1967), assigned at random face-to-face, telephone interviewing or mail questionnaire methods to each sample unit. Two different surveys were conducted using the same sample. The first study concerned general medical, familial and

demographic characteristic. In first study all household members in a unit were included. The second research focused on respondents who use Pap smear with women 20 years or older. The result of the study shows that face-to-face mode generated the highest initial response rate before reassignment of methods for uncompleted cases. There was more item-missing data in the mail method. When survey reports were compared to medical records for Pap smear tests and pelvic examinations, there was no difference among methods in agreement rates. The similarity of results across methods forced a reconsideration of preferred methods.

A study by Kwak and Radler (2002), revealed higher response rates by mail surveys compared to web surveys where the target population was students in a university in the USA. Mail survey had more female and younger respondents whereas web survey has lower item nonresponse and shorter response time compared with mail survey in this study.

According to the study of Kaplowitz et al. (2004) web mode is relatively advantageous about response rates compared to mail mode. The study focuses on students with high internet access and registered e-mail addresses at Michigan University.

Goyder (1985), compared the Mail method with face-to-face interviews and found that the response rates were higher in the face-to-face interview. Hox and de Leeuw (1994), conducted a meta-analysis in 45 studies and compared the response rates for mail, telephone and face-to-face interviews. Response rates were highest in face-to-face interview, telephone interview and mail mode, respectively. Groves and Lyberg (1985), compared the face-to-face interview and the telephone interview and have concluded that the telephone interview has a lower response rate.

In some studies in the literature, the version of the same mode using computer technologies and the paper based version were compared (Nicholls et al., 1997).

However, no significant difference was found between respondents who could not communicate and refused.

When the studies of the researchers investigating the effect of different methods on the response rate, it is seen that many other elements in the research design affect the response rate rather than data collection mode. Cook et al. (2000), examined 68 studies on the web and e-mail research, and they found that personalized contact and pre-research contact would increase the response rate. Similar findings can be seen in Shih and Fan (2008).

When the studies conducted in recent years are examined, parallel to the increase in internet usage among people, studies comparing other methods and web methods have increased. In a study by Lin and Ryzin (2012) on the organization of nonprofit organizations and communities, it was observed that collecting data by e-mail has a higher response rate than web mode. In another study conducted by Kwak and Radler (2002) on students in, there was a higher response rates compared to Web mode in e-mail data collection. Rada and Dominquez-Alvarez (2014), found that the response rate by e-mail was higher than the web. On the other hand, Greenlaw and Brown-Welty studied on employment in 2009 was more responsive to Web-mode than e-mail. In a study by Saunders (2012) and U.K. which is responsible for care, travel, school transport and schooling, employees' approaches this organizations were wanted understood by web and mail survey. When the results of the research were examined, the web method had higher response rates and data returns were faster. Kim et al. (2018) studied about alcohol beliefs and consumption among 7.200 young adults. Although the results of the study were straightlining emergences higher in mail method comparing to the web mode, the findings of the study were statistically insignificant.

2.7. Choosing the Most Appropriate Data Collection Method

There is no valid and ideal data collection method for all surveys. Each survey has a more appropriate data collection method than the other methods according to the objective of survey, budget and some other factors.

Two basic questions should be asked when determining which data collection method to use (Groves et al., 2009):

1. Which data collection method is the most appropriate for the research question?
2. What is the effect of the selected data collection method on the cost and error of survey?

And we should answer the questions in the table below and make clear the differences between the two methods:

Table 2.2: Design Issues in Surveys

Design Feature	Important Questions
Sampling Frame	Same frame or frames with equivalent coverage of each mode?
Interviewers	Is there any interviewer? Hiring and training?
Supervision	Is there any supervision?
Respondent rule	Respondent selection procedures?
Questionnaire	Identical questionnaires? Visual aids?
Refusal conversion	Is there any refusal conversion?
Computer assistance?	Is there computer use?

Source: Groves et al., 2009

In addition to the answers to these two basic questions and the ones in the table, in case of survey with a target population whose literacy rate is low or the relationship with technology is considered, some methods like the Web should not be preferred.

Or, when a telephone interview is made to a target population who has a problem in terms of speaking, the probability of answering the telephone will be low and the questionnaire will not be answered accurately. In this case, face-to-face interview method can be more appropriate. But this time there will be budget issues, because face-to-face interview is a high-cost method according to the method of Web and telephone interview.

The researcher makes a trade-off when determining the method to be used in survey. She/he makes a comparison of the effects of alternative methods on survey. When the literature is examined, it is seen that some methods can be used instead of another method. For example, telephone interview is generally used instead of the face-to-face interview (Groves et al., 2009). However, due to the higt cost, in many surveys, face-to-face interviews are preferred in the first step, and on later steps telephone interview used. In some surveys, Mail method and telephone interview can be alternatives to each other if address and telephone number information of the target population are found together. In addition, the Web and the Mail method can be alternative to each other.

Advantages and Disadvantages of Face-to-Face Interview Method

The face-to-face interview method is one of the oldest and most widely used data collection methods. Because face-to-face interviews have high response rates and high data quality (Biemer and Lyberg, 2003).

However, face-to-face interview a high costly method because the interviewer travels directly to the respondent's home or office. The costs increases even more if the respondent's location is at a distance from the interviewer. These situations can cause coverage problems. Possible issues related to coverage problem are listed below:

- Only civilians can be contacted, military personnel are out of sample,

- People in hospitals and prisons are out of sample,
- Homeless and mobile people are out of sample,
- Same locations not reachable due to high cost.

In order to reduce costs, surveys are usually conducted with clustered sample instead of simple random sample. But this also reduces sample efficiency. For example, Web and Mail methods do not require survey with clustered sample.

Another disadvantage of the face-to-face interview method is social desirability bias. Especially in sensitive subjects such as alcohol and drug use, sexuality and guilt, respondents may avoid giving real answers. Also, the interviewer may be a source of disadvantage and error, because each interviewer has different ways of interviewing, questioning techniques, style and persuasion. Moreover, the interviewer may skip some questions on the questionnaire and the respondent does not resist it (Biemer and Stokes, 1989). All these differences can have different effects on the respondents. According to some opinions in the literature, giving standard trainings to interviewers reduces these effects but according to others, does not reduce.

Despite the disadvantages, the face-to-face interview is still a widely used method. Longer and more complex questions in the survey; It is preferred for the interviewer to communicate with the respondent and to make observations during the interview, to persuade them when necessary and to be able to take full and correct answers. In addition, the observer's observations at the time of the interview can also be recorded as a data.

Advantages and Disadvantages of Telephone Interview Method

With the development of technology, telephone interviewing has become an important data collection method (Tucker and Lepkowski, 2008). In the USA, the

popularity of telephone interviewing method has increased rapidly after the fact that a significant number of people have a telephone. The low cost compared to the face-to-face interview was important in increasing popularity.

Groves and Kahn (1979), compared the face-to-face interview and telephone interview, and found that telephone conversation could improve the data quality. However, in the studies conducted in the after, it was seen that the response rates decreased in the surveys conducted with the telephone interview. In current surveys, telephone interview is mostly used as a step of the mixed mode.

There is a very similar aspect of the face-to-face interview with the telephone interview. Both methods are prone to interviewer variance and social desirability bias in the survey results. However, it is seen in the literature that these effects are less in telephone interviewing.

One of the disadvantages of the telephone interviewing method is that the person may not have a telephone or the telephone number is not reached. Or the respondent may not pick up at the time of the call. On the other hand, some countries do not use telephone interviewing method because of low response rates.

Advantages and Disadvantages of Mail and e-Mail Method

In this method, the questionnaire is sent directly to the respondents and no other interaction is made between interviewer and respondent. Therefore, the clarity of the questionnaire is critical. Response rates may vary widely from survey to survey in mail method. Respondent decides whether she/he will complete the questionnaire. In this case, the objective of the study, the target population and the capabilities of the people in charge of the task are important.

One of the key advantages of the Mail method is low cost. Moreoever, respondents answer the questions themselves and this reduces social desirability bias

especially in sensitive subjects. One advantage of being self-administered is that the respondent may use a set of materials such as maps and dictionaries that may be needed when answering questions. There are plenty of time for respondents to answer long and complex questions. Errors caused by question order are also reduced (Dillman, 2000).

The weakest point of self-administered methods, such as the mail method, is that the interviewer cannot help when the respondent needs help. For this reason, some questions on the questionnaire may be unanswered.

In *electronic mail survey (EMS)*, e-mail is sent to the respondents and the link to the questionnaires created with internet applications is shared in e-mail. The biggest advantage of such applications is the benefit of graphics and multimedia technologies. But researchers spend a large part of their time preparing guidelines in this mode (Couper et al. 2001).

In the e-mail method, the response rates are low as with the telephone interview method. One of the reasons for low response rates is the difficulty of detecting bad e-mail addresses. For this reason, instead of using the e-mail method only, the mixed mode is used like telephone interviewing. On the other hand, it is difficult to follow up those who do not return to e-mail in this method. It is even more difficult to follow up on some unanswered questions in questionnaire. For this reason, e-mail mode is not recommended for survey where the names of the respondents are not clearly defined. It is recommended that the length of the response times be kept long in the surveys conducted by e-mail.

According to Ramos et al. (1998), the limitations of electronic mail survey are as follows:

- May not have software infrastructure to generate online questionnaire,
- Questionnaire design alternative is limited to the capacity of applications in the software used,
- Respondents can change e-mail addresses,
- Respondents may have limited access to the Internet,
- Security and privacy issues.

Dillman (2000), claimed that he would increase the response rates in e-mail mode if his survey, in which he planned all of his stages in detail, was applied (Jenkins and Dillman, 2012; Redline and Dillman, 2002). Graphic language, cognition and visual perception, reciprocity, social proof, authority methods such as methods used in mail mode. Survey process is carried out in two steps:

- Considering self-administration and preparation of the questionnaire guaranteeing the full answer to the questions,
- Sending an invitation letter, real stamping on envelopes, sending personal mail and monitoring returns.

In Turkey, for research conducted in the field of education or teacher education system in general, data is released by the Ministry of National Education, and data is obtained from the Ministrys' system and the results of the central examination system. The number of studies carried out in the field by direct contact with teachers and students is very limited. In these studies, face to face interview method was used in the field. This situation is thought to cause especially budgetary constraints. In this study,

there are similar budget constraints. Therefore, data collection method and target population were determined by considering budget constraints.

CHAPTER 3

3. DESIGN OF QUESTIONNAIRES

One of the most important stages of the field surveys is the process of preparing a questionnaire. In order to get the right answers, the questions should be prepared correctly and wording should be taken into consideration. Minor wording errors in the questions can lead to major changes in meaning (Bradburn et al. 2004).

The questions in the questionnaire should be in full compliance with the research questions determined at the beginning of the survey. The data collection method also affects the questions in the questionnaire. For example, in the case of mail survey, the questions in the questionnaire should be clearly written and there should not be any ambiguity because this method is self-administered.

In this study, three different questionnaires were prepeared. These were addressed to the deans to determine the problems of the faculties of education and teacher education system. Therefore the history of teacher education system in Turkey was examined in detail. The questions in the questionnaires are aimed to cover all the processes in the teacher education system.

The teaching profession and the process of teacher education are defined as a systematic process created with the contribution of experience and researches conducted in the field, similar to other professional fields (Glatthorn, 1995). It is stated that this professional education process includes formal processes such as workshops, meetings and consultancy, as well as informal processes including the examination of publications related to the field and the examination of visual materials such as video from different disciplines (Ganser, 2000).

Teacher training process is divided into three main headings:

- Admission to pre-service education,
- Pre-service education; education received before the beginning of the teaching profession,
- In-service training; education received after the beginning of the teaching profession.

Questionnaires were prepared considering the three basic stages of the teacher education system mentioned above. The questions related to processes outside these three main steps, is produced from the history of teacher education system in Turkey. The “Teacher Strategy Document (2017-2023)”, which was put into practice by MoNE in 2017, was particularly examined and all fields related to the teacher education system in the document, were tried to be included in the all questionnaire.

"The contemporary sense of teacher education and teaching profession"[2] in Turkey correspondes to the Tanzimat reform era has been raised since 1848. In the period from 1848 to 1982, various teacher schools were opened and regulations were put into practice to eliminate the deficit of teachers. In 1982, the education units that train teachers were gathered under the Faculty of Education and included in the Council of Higher Education. Turkey's history of teacher education policies implemented in the period are taken into account when reviewing the milestones mentioned.

3.1. History of Education Faculties

Republic period was examined in two parts as the period until 1848, which was accepted as the beginning of teacher training in the modern sense, and after 1848.

3.1.1. Before 1982

Grand National Assembly of Turkey has decided the reorganization of "Scientific Committee", Darülmuallimin-i Ali, which was founded on 15 July 1923, by name of "Higher Education School", and in 1924 it has been opened by name of "Male Higher Education School" in Burdur, Malatya and Diyarbakir provinces. Teacher schools in the period of the Ottoman Empire generally trained teachers to be employed in schools in cities and big towns; however, it is determined that

[2] According to Akyüz, educating teachers in the modern sense is a system of training in which scientific methods and other professional courses are taught to the teacher candidate on how to teach their knowledge effectively.

approximately forty thousand teachers are needed when the schools in the villages are taken into account (Ergün, 2014). In this direction, in 1926, the law on the establishment of the Village Teachers' Schools, whose names were later changed to Education Institute, was adopted.

Village Institutes

To train teachers for large villages in 1937, "Village Education Dormitories" was opened, that name was replaced as "Village Institutes". Considering that the majority of the population lived in villages, Village Institutes conducting a program based on learning and teaching in the villages far away from the city centers, were considered to lead to a significant transformation in society (Kartekin, 1973). The successful students in Anatolia were educated in these institutes and sent back to the villages as teachers and transferred their acquisitions to the students in the villages (Akdemir, 2013). The teachers who graduated from the Village Institutes, did not carry out only education in the villages where they were appointed; they taught new agricultural techniques to peasants, organized literacy courses and carried out the construction works of village roads. However, the criticism that these institutions were subject to political goals rather than the quality of their education continued during and after the establishment of the institutes (Koçak, 1986). Since 1946, in order to train teachers for secondary level schools "Institute of Education" was established and the number of them has reached seventeen (Ergun, 2014). As of 1953, the number of primary teacher schools started to be established in eighty and the number of students reached fifty-four thousand. However, the deficit of teachers in primary education has not been fully covered. While the deficit of teachers in the first years of the republic was in the villages and especially in the first level of the education system, this deficit has been in the secondary level until the 1970s (Özoğlu, 2010). Various and temporary applications have been put into effect to eliminate the teacher deficit (Ergün, 2014). It is stated that the number of teachers raised by these practices was approximately 120.000 (Dursunoğlu, 2003).

The "National Education Basic Law", entered into force on the date of June 24 1973 along with teacher training school for the first stage of the education system, "Teachers High School" which has got two year education period, has been transformed into a public high school. For the prospective teachers to be employed at the secondary level, the three-year Educational Institutes continued their education.

3.1.2. After 1982

With the Higher Education Law which was put into force on November 4, 1981, it was decided to combine the schools, institutes and other education units that train teachers under the Ministry of National Education and universities under the name of Faculty of Education. Faculties of Education entered into force on 18 October 1982. The Constitution of Turkey and established Council of Higher Education are positioned within the universities. The aim of the teacher training system is to be uniform by linking the education units within the teacher training system with the education periods of four years (Akdemir, 2013).

In 1989, with the decision of the Council of Higher Education, a number of the schools of higher education, which educated the primary school teachers, were extended to four years and their education was converted into education faculties.

Considering the Report of the Commission on the Parliamentary Research of 1991 (see Annex 1) and the National Education Development Project - Initial Teacher Training[3] (see Appendix 1), conducted between 1994 and 1998 with the cooperation of Council of Higher Education and the World Bank, at the beginning of the year 1990,

[3] Within the scope of the "Teacher Training Series" conducted by *Council of Higher Education*; 1994-1998 between the years, "National Education Development Project-Pre-Service Teacher Education" under the name of Council of Higher Education and the consultant group and Accreditation Working Group on cooperation consisting of World Bank experts "Turkey in Teacher Education Standards and Accreditation" study has been prepared.

it is understood that the teacher training system problems and research have been carried out to solve the problems.

Anatolian Teacher Training High Schools

In the academic year 1989-1990, Anatolian Teacher Training Schools were established under the General Directorate of Teacher Training and Education of MoNE. It was stated that the ultimate goal of the establishment of these high schools was to start the process of raising qualified teachers from the secondary level.

In 2014, MoNE was transformed into science high schools, social sciences high schools and Anatolian high schools within the scope of studies aimed at improving the education system.

Faculties of Education

The number of education faculties, which was thirty-four in 1994, reached fifty-one in 1999. In parallel with the increase in the number of faculties, the number of students studying in the faculties of education also increased. With the Primary Education Law[4] numbered 4306 dated 16.08.1997, the duration of compulsory education in primary education has been increased from five to eight years. This practice further increased the existing teacher deficit at that time, and there was a surplus of teachers in areas such as biology, and there was a significant number of teachers in areas such as classroom teaching, pre-school and English teaching (Council of Higher Education (CoHE), 1999). It was emphasized that the Ministry of National

[4] The full name of the Law is the Law on Primary Education and Education, the Basic Law of National Education, the Law of Apprenticeship and Vocational Education, the Law on Organization and Duties of the Ministry of National Education and the Amendment to the Law No. 3418 dated 24.3.1988 and the Law on the Contribution to the Education from Some Paper and Transactions.

Education and CoHE will work in cooperation to meet the needs of teachers in every field.

Central Examination Application During Introduction to the Civil Service

The first centered, multiple choice and test method exam applied for the acceptance of the civil cervice to be employed under the Civil Cervice Law No. 657 was carried out on 12 December 1999 by Student Selection and Placement Center. In 2001, with the amendment made to the Law no. 674, the scope of the examination was expanded to include teaching, contract personnel and career officers and was renamed as Central Qualification Examination for Institutions.

Central Qualification Examination for Institutions was converted into Public Personnel Selection Examination dated 18.02.2002. The results of this exam on July 13, 2003 were also based on teacher appointments. In which region the assigned teachers will work is determined by the drawing method. Therefore, MoNE did not take part in the selection and recruitment process. On the other hand, the determination of the regions where the teachers will be employed by the draw, reduced the possibility of matching the skills of the teachers with the needs of that region (ERI, 2010).

3.1.3. Development process of education faculties

With the establishment of 56 new universities in the period following 2006, the number of programs that educate teachers has also increased. When we examine the education faculties established in state and private universities[5] in the period from 1964 until today, it is seen that their numbers increase continuously.

The number of education faculties, which were 17 in 1982, reached 63 in 2006 and 96 in 2018. Out of the 96 education faculties, 18 are in foundation universities,

[5] Faculties of Education Sciences and Faculties of Education have expressed the same function as the Faculty of Education.

and the remaining 78 are in state universities (see Appendix 2). In parallel with the increase in the number of the faculties of education, the number of students studying at the faculties of education increased as well. In 2006, the number of students were 141,000, in the academic year 2016-2017 the number of students has reached 267,061. The number of students graduated from faculties of education was 55,743 in the academic year of 2015-2016.

One of the important reasons behind the increase in the number of faculties and students was to decrease the number of students per teacher in primary education and to provide higher quality education services to students.

Increases in the number of faculty, students, teachers and prospective teachers led to some important problems. Some of these issues are listed below:

- Employment of teaching staff in the faculties of education,
- Not being able to provide the same standards of education in the faculties of education,
- The skills of the candidate teachers do not correspond to the skills required by the epoch, and
- Candidate teachers cannot be employed adequately in the state or private sector.

Several projects have been developed for the solution of the problems, some of them have been implemented but some of them have not been implemented.

Public Personnel Selection Examination - Teaching Field Knowledge Test Application

State Personnel Presidency and the Ministry of National Education in order to implement the Teachership Area Knowledge Test in addition to the General Skills, General Culture and Educational Sciences tests. It was realized at the request of MoNE. The aim of this course is to measure the knowledge and the field training skills of the teachers about the area they graduated from with the Teachership Area Knowledge Test, and it is aimed to employ the most successful candidates as teachers in their fields.

3.2. Teacher Strategy Document (2017-2023)

In Article 152 of the X. Development Plan, "The teaching profession will be made more attractive; interaction between schools and faculties educating teachers will be strengthened; the teacher training and development system will be organized in a structure that is based on teacher and student qualifications, encourages personal and professional development, and will be based on career development and performance". In relation to this objective, in the 2016 Program Measure 9 it was stated that, a "Teacher Strategy Document is prepared and put into practice". The 64th Government, published in December 2015, in Article 39 of the 2016 Action Plan stated as "In order to increase the positive perception and status of the teaching profession and to increase the quality of teachers, the National Teacher Strategy Document, related to the general and field qualifications of the teaching, will be prepared and put into practice".

Scope of the Document and Evaluation of the Document

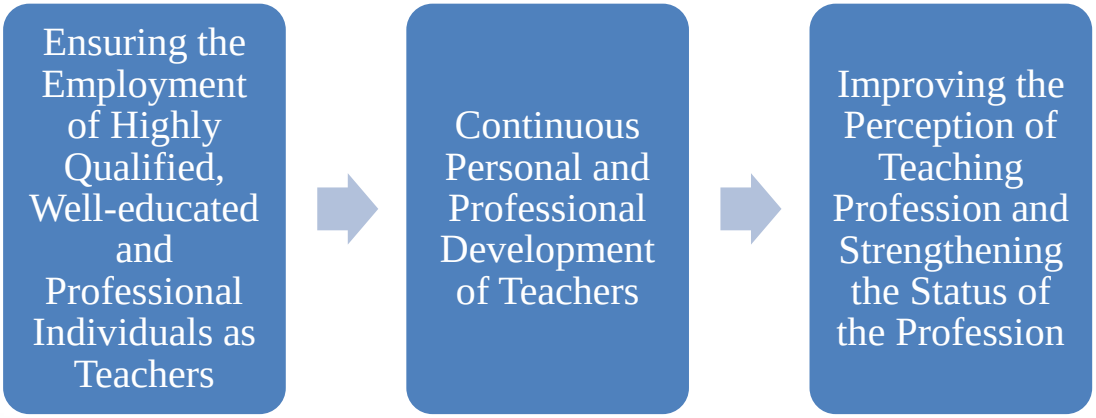
The Teacher Strategy Paper (2017-2023) consists of the objectives for the six axes related to the teaching profession and 35 actions to achieve these objectives.

Figure 3.1: Teacher Strategy Document (2017-2023)

Source: MoNE, Teacher Strategy Paper (2017-2023).

When the axes in Figure 3.3 are examined, it is seen that all the fields and processes related to the teaching profession are included in the Document. This situation, problems related to the profession; is considered positive in terms of realistic solution suggestions for problems and the road map of the teaching profession. Three main objectives of the six axes mentioned in the scope of the document have been determined.

Figure 3.2: Teacher Strategy Paper (2017-2023) Key Objectives



Source: MoNE, Teacher Strategy Paper (2017-2023).

These three objectives include pre-service training in the context of selecting the most appropriate for the teaching profession from university graduates; in-service training in the context of increasing the quality of personal and professional development activities of teachers from the process of candidacy, covers the areas of strengthening the status of the teaching profession in the context of improving the working conditions of teachers and improving their position in the society.

In the beginning of the document, it is seen that the importance of teaching profession is emphasized but the concept of teaching has not been mentioned enough in the 21st century. In the following chapters, reference is made to General and Specific Field Qualifications for teachers, but it is considered that these competences should be strengthened when they are reviewed in the context of the skills required by the 21st century. At this point, it should be noted that, after the introduction of the document, the introduction of a section on the past, present, and the transformation of the teacher concept from the past to the present will be more positive in terms of raising awareness of the subject.

On the other hand, one of the main starting points of this thesis, which is considered as the biggest problem area of teacher training system, in recent years is that the number of teacher candidates graduated from teacher training programs and

the number of candidates who can start the profession are not brought up sufficiently in the document. While the number of graduates is increasing day by day, the same level not to provide employment in both public and private sectors is obtained. Suggestions for resolving this problem in the document are considered to be insufficient.

As a result, when the problem areas related to the teaching profession in the document are examined in general terms, it is seen that the problem areas mentioned in the Report of the Assembly Research Committee published in 1991 are largely similar. On the other hand, the Commission report presents a number of concrete arrangements proposals compared to the document. However, in spite of these concrete solution proposals, the Teacher Strategy Document (2017-2023) confirms that the problems cannot be solved and kept on the agenda. Therefore, it is thought that it is important to provide realistic and concrete solutions for the solution of these problems. When the 35 actions in the document are examined from this point of view, it is necessary to make a significant concretization of the actions. In this context, it is aimed to explain clearly how to achieve the objectives stated in the actions. At this point, the views of the deans of the education faculties are also important.

3.3. General Evaluation of Education Faculties in Turkey

In the history of Turkish education, the first institution known as Teachers' School, Darülmuallimin, was founded in 1848, and the teacher training and teaching profession in the modern sense came to the agenda. In the period up to 1982, various teacher schools were opened for the main objective of the elimination of the teacher deficit and arrangements were made for the training of more qualified teachers. The problem of not being able to eliminate the teacher deficit has remained a permanent issue. In order to partially eliminate this problem in the 1960s and 1970s, various programs were implemented in order to employ non-graduates from teacher schools as teachers, but this situation raised the problem of the quality of teachers.

The failure of the elimination teacher deficit and the imbalance of the distribution of teachers among the regions were covered by the IX. Five-Year Development Plan (1963-1967). It was emphasized in all development plans up to the Seven-Year Development Plan (2007-2013) and stated that these problems should be solved.

In 1982, the education units that train teachers were gathered under the ”Faculty of Education“ and included in the structure of CoHE. With this practice, it is aimed to give a standard pre-service training in teacher training units. In parallel with the increase in the number of universities, the number of faculties of education has increased and the deficit of teachers has been tried to be eliminated.

In 2007, CoHE renewed its teacher training programs in education faculties due to limited competencies of educating teachers with the knowledge and skills required of the epoch. The problems related to the quality of teachers were discussed with the elemination of the teacher deficit. However, the teacher supply surplus has come to the fore especially due to the rapid increase in the number of universities after 2006 and the establishment of the faculties of education and the determination of the quota.

The number of education faculties within state and foundation universities, which were 17 in 1982, reached 63 in 2006 and 96 in 2018. In parallel with the increase in the number of faculties of education, the number of students studying in these faculties and graduating from these faculties increased. According to the data of the Ministry of National Education, it is envisaged that more than one million candidates will be able to be employed as teachers if they have graduated from the faculties of education, have the opportunity to be a teacher by completing their pedagogical formation education and who have already completed pedagogical formation training and continue their education. On the other hand, the need for teachers in the upcoming period is approximately 99 thousand. When the two situations are considered together, the process is considered to be unsustainable.

The problem of the imbalance of the distribution of teachers among the regions also remains on the agenda. As a result of the unbalanced distribution and demand for intensive appointments between regions, the average term of duty of teachers in 2016 was 6.4 years for the Southeastern Anatolia Region and 14.2 years for the Aegean Region.

On the other hand, the decisions to be taken under the title of Enhancing the Quality of Teachers in the 19th National Education Council and the Candidate Teachers Regulation, which were implemented in 2015, are considered as important steps towards increasing the qualifications of teachers. However, the teacher surplus in supply, it was determined that the teacher's decline and in this case the need unsustainable in teacher employment field as a result of the status of the distribution between the teachers of the imbalances of the problem is the basic problem of the teacher education system in Turkey.

Development of Teacher Employment Projections Strategies and Systems Project are conducted by MoNE. The project was carried out by the Ministry of National Education, General Directorate of Human Resources. Ankara, Gazi, Hacettepe and Middle East Technical Universities were also involved with a team of faculty members. With this project, Turkey's teacher needs have been identified in the period up to 2023. Looking at the results of the Project, there seems to be a big difference between the demand and supply for teachers in Turkey. This situation is thought to affect the quality of teacher education system.

Three questionnaires were created taking into account research questions identified at the beginning of the research, the history of education faculties and teacher education system in Turkey, and the Teacher Strategy Document (2017-2023). In order to answer the all questions which detected at the beginning of the study, all the fields related to the education faculties and teacher education system were tried to be covered fully. The details of the questionnaire are provided in Chapter 4.

CHAPTER 4

4. METHODS AND DATA SOURCES

4.1. Survey Design

The issues of education and teacher have become a matter of importance on a global scale, as evidenced by the data-based studies of the qualified labor force critical position in the development of countries. In the last link of the education system; the place and importance of the teacher who is in direct contact with the student in the education system has ensured the presence of the teacher in the focus of the discussions about the education system. From this point of view, this survey is focused on the faculties of education, which is one of the main stakeholders of the teacher training system.

Mentioned in the first chapter, the main research questions are "What are the results of applying different data collection methods with sequential mixed-mode?", "What are the advantages and disadvantages of telephone, e-mail and web surveys?" and "Which data collection method is more appropriate for research about deans of education faculties?" The survey was designed to compare these three different data collection methods with sequential mixed-mode approach and to gather information from deans on some problems identified in education and education faculties.

4.1.1. Population

According to the most recent statistics of CoHE, there are currently 96 education faculties in Turkey. List can be seen in Appendix 3. In order to answer the research questions mentioned above, it has been evaluated which component of the education system can be researched. Given the working conditions of the researcher and the budget constraint; it was decided to conduct a survey with the deans of education faculties for reasons such as the direct experience of all the processes related

to education system, because the deans of the faculties of education complete the undergraduate education in the faculties of education generally and continue their careers in these faculties. They closely follow the developments in teacher training system and apply directly to candidate teachers.

Most of the surveys conducted with Web method firstly starts by contacting the respondent by e-mail. Because they have the limited information about whether the target population has an internet access or not. But in this survey, the deans are working in the faculties of education and there is a web page of each university thus, it is considered that there is a high probability that the e-mail addresses can be reached. It is also important to be able to reach this address as well as having the e-mail address.

As a result, the dean of 96 education faculties create the target population. Since population size is not too large, it is not necessary to create a sample. The goal of reaching the entire population was adopted.

4.1.2. Determining Which Data Collection Method to Use and Preparing the Frame

As seen in Appendix 3, there are 64 faculties of education in different provinces. It is not affordable for the researcher to travel to 64 different cities because of living in Ankara, working in paid job and budget constraints. Therefore, the face-to-face interview method has become unusable.

As the method of face-to-face interview became impossible, the method of e-mail, web and telephone interview was concentrated. Moreover, sequantial mixed mode approach was adopted. Because, it was aimed to balance the costs and non-response rates and increase the response rate.

In the first phase of the survey, the e-mail and in the second phase the web method was planned to be implemented. The last phase telephone interview, because

the most expensive method is telephone interview. So, in accordance with the sequential mixed-mode approach, three methods were applied to all respondents respectively.

E-mail addresses and phone numbers of the deans were tried to be accessed through the websites of the universities. In the first attempt, the phone numbers of almost all the deans' were accessed via the website. In this case, targeted at the beginning of the research, it was also possible to include the telephone interview method. e-Mail information of a significant part of their deans has been reached. Therefore, deans who have phone number information but no e-mail information have been phoned and e-mail information has been reached. Deans were not directly contacted and the deans were informed about the research via the secretariat and their e-mail information was reached. Some deans have more than one e-mail address and all of these e-mails are listed.

As a result of these studies, all of the 96 deans' e-mail address and telephone number information were reached. Therefore, the methods of web, e-mail and telephone interview have become applicable methods for this research.

4.1.3. Questionnaire Design

As three different data collection methods with sequantial mixed mode will be compared within the scope of the research, three different questionnaires were prepared. But the questionnaires are largely similar, as shown in the appendix, only differentiated to increase the motivation of the respondents. All e-mails were sent directly to the names of the respondents.

In the 1st step, the quesionnaire was designed in Microsoft Office Word as it was decided to implement the e-mail method. Respondents download the Word file to the computer contained in the e-mail sent by the researcher and process their answers

in the Word file and send them back to the researcher. It is considered that this situation may also form a respondent burden. But respondet burden decreases in other stages. All stages of teacher training system were tried to be included in the questionnaire. The questionnaire consisted of 5 chapters and 33 questions (see Appendix 3):

- Demographic information,
- Acceptance of Faculty of Education,
- Pre-service Education/Education Faculties,
- Candidate Teacher Process,
- In-service Training.

As can be seen in the related literature, all processes related to teacher training system are covered in questionnaire. Since one of the objectives of the study was to identify the problems in the teacher training system, the whole process was encompassed. In all the 3 questionnaires prepared within the scope of the survey, the questions covering the entire teacher training system were included.

The time to fill in the questionnaire was estimated about 15 minutes based on pilot test. According to the rules of Hacettepe University Ethic Comission, "Voluntary Participation Form" is added to the beginning of the questionnaire. In the form, details of the study have been indicated and it is stated that the questionnaire may be discontinued at any stage.

In the 2nd step, the quesionnaire was designed in Google Forms (https://www.google.com/forms/about/) (see in Appendix 5). In order to attract the attention of the respondents and increase their motivation, the background of the questionnaire was decorated with visual aids. As in the first stage "Voluntary Participation Form" is added to the beginning of the questionnaire. Question transitions are set to automatic, and the respondent has been prevented from being directed to the wrong question. The questionnaire at this stage also contains 28 questions, but is not exactly the same as the questions in the first stage. The link to the

questionnaire created via Google forms was sent to the respondents by e-mail. When the respondents clicked this link, they reached the questionnaire and answered their questions via the web. The time to fill in the questionnaire is 15 minutes. The respondents' answers were sent to the researcher through the same application.

In the 3rd step, the quesionnaire was designed in Microsoft Office Word for telephone interviews. This questionnaire covered all areas of the teacher training system but it was composed of 20 questions (see Appendix 6). At this stage, in response to the Ethic Comission's request, an e-mail was sent to the respondents to receive a telephone interview confirmation. It is stated that, if the answer to the e-mail is "I accept", the call would be made. In case of not responding to e-mail, it is stated that the call would not be made (see Appendix 6). The Ethics Commission stated that ethical problems could be prevented by this form.

Within the scope of the research, the teacher training system was included in the 3 questionnaires but the same questions were not used in the questionnaires. But in order to compare these different data collection methods, the same control questions are given. In the results of the analysis, the answers to these questions were compared and the effect of data collection method on data quality was investigated. These are:

1. How many students do you have in the faculty of education?
2. How many departments do you have in the faculty of education?
3. How many classrooms do you have in the faculty of education?

In addition to these questions, 2 questions, more than one can be selected and the "Other" in the answers choices to be able to write an additional sentence has been exactly the same in the three questionnaires.

4.1.4. Pilot Test

In order to test the applicability of the questionnaires, three different questionnaires were applied to three different academicians working in different faculties of education with professor titles. With the feedback received from these academics, some changes have been made to the questionnaires. The academics stated that the questions were understandable and included all the processes related to the teacher training system in general.

As a result of the feedback received, the questionnaires were finalized and made ready for submission to respondents.

4.1.5. Fieldwork

Data collection via e-mail

In the first phase of the survey, the first questionnaire was prepared with Microsoft Office Word were sent to the deans' e-mails. There were 33 questions. They had 15 days to fill in the questionnaires. In some studies in the literature, it is stated that the duration should be kept long but considering the size of the target population and the number of questions on the questionnaire in this survey, it is considered that the 15-day period is reasonable.

Contact information of the researcher was added to the e-mail and the respondent were provided access to the researcher when needed. In this way, unanswered questions were tried to be prevented.

In the first stage, it was reported that the e-mail was not forwarded to 4 deans. This situation is considered to be a problem with the security walls. In order to solve

the problem, the information technology unit of the institution where the researcher was working was consulted but the problem could not be overcome.

After five days, to increase response rate, the e-mail addresses of the responding deans were deleted from the list and only the "reminder" e-mail was sent to the deans who did not respond. In this way more than a few deans returned and increased the response rate. After the reminder e-mail, one dean stated that “he was too busy” to answer the questionnaire.

Only one dean sent a question about a question in the questionnaire and this was answered by the researcher within one day.

Data Collection via web

In the second step of the survey, the second questionnaire was prepared via Google Forms (https://docs.google.com/forms/u/0/) were sent to the deans' e-mails (See in Appendix 7). There were 27 questions. They had 15 days to fill in the questionnaires. The multimedia services offered by Google Forms were used. Skips between questions were provided automatically. The link to the questionnaire created with Google Forms has been added to the e-mail. Respondents clicked on this link and were directed to the questionnaire. The answers were sent to the researcher via Google Forms.

At this step, the e-mail has not been sent to the deans who stated that they cannot fill the questionnaire as in the first step. After the e-mail was sent, 3 respondents could not be reached. It may be about securit wall.

After five days, to increase response rate, the e-mail addresses of the responding deans were deleted from the list and only the "reminder" e-mail was sent to the deans who did not respond. In this way, as in the first phase, the response rates have increased.

As in the first step, contact information of the researcher was added to the e-mail and the respondent was provided access to the researcher when needed. However, a responder indicated that the link was not working and the problem was resolved by sending the e-mail again.

Data Collection via Telephone Interview

In the last step of the survey, "The Voluntary Participation Form" proposed by the Ethics Commission has been submitted and it is stated that a telephone interview will be made to the respondents who said "I accept" the e-mail.

At the end of the first half of 2019, telephone interviews were made. There are 20 questions in the questionnaire prepared with Microsoft Office Word. The questionnaire with the minimum number of questions is prepared at this step. Because, it is tried to avoid the cognitive burden on the respondents which is frequently mentioned in the literature.

In 15 days after the e-mail was sent, a telephone conversation was made with the respondents who returned to researcher. Telephone interview took 25 minutes on average. Although the number of questions in this questionnaire decreased compared to other stages, the response time was long. The researcher read the questions during the interview and the respondent reported their answers. The researcher recorded the answers on questionnaire and then transferred them to the computer.

4.2. Hypothesis

The hypothesis are based on research questions and literature. While determining hypothesis tests in this study, the response rate, the answers to the control questions and the differences due to the fact that the mode was self-interview and interviewer were considered. Because, according to the rules of the Hacettepe University Ethic Commission, the institutional identity of the Presidency of Strategic

and Budget where the researcher was working, was not used, and the researcher contacted the respondents only as a researcher who is a student at Hacettepe University. Also, according to the rules of the Commission, no official letter was sent to the respondents through the Presidency. Within the scope of the survey were identified three hypothesis. These are as follows:

Hypothesis 1: Generally, in the literature, face-to-face interviews and telephone interviews were compared. In the results, it was found that the telephone interview has lower response rates (Groves and Kahn 1979; Groves et al., 2009; Groves and Lyberg, 1985; Hochtism, 1967). However, when the method of telephone interview is compared with Web mode, it has been stated that the telephone interview has higher response rates.

However, a different claim is raised in this survey. When the studies in the literature are examined, it is seen that the studies were mostly done before 2010 and 2000s. Considering the rapid transformation of technological developments in the world and in our country, especially in recent years, the expectation of response rates may be different from those in the literature. For example, according to World Bank data, the ratio of the population of individual Internet users in Turkey was 3.8 percent in 2000; was 65 percent in 2017 (World Bank, 2019). On the other hand, considering the fact that the target population in this survey has higher education level and are responsible for the management of education faculties, they are busy or may not be available at the time of call, so the response rates are expected to be higher in the e-mail and web method than telephone interview. Moreover, the last method to be applied to the telephone interview in survey and therefore the motivation of the respondents may decrease and the approval of the Ethics Committee by the respondents before the telephone call; these could effect the response rates in telephone interview negatively.

Hypothesis 2: When the studies in the literature are examined, the interviewer can have an effect on the survey results, because each interviewer has different ways

of doing business, questioning techniques, style and persuasion. Moreover, the interviewer may skip some questions on the questionnaire and the respondent does not resist it (Biemer and Stokes, 1989). Three different data collection methods used in the survey; two of them e-mail and web are self-administered and done of them telephone interview is interview administered. In other words, the researcher will only be present in the telephone interview. Also, the presence of the interviewer may be a source of disadvantage and error. In particular, two questions, which is the same on all the questionnaires and the "Other" option, are based on the fact that the researcher is active during the interview, respondents are expected to answer differently from other methods. It is thought that the researcher will create social desirability. However, on the other hand, it is thought that the time dimension is important in the telephone interview and respondents will be able to focus only on the avaliable options. In particular, the respondent is expected to be sensitive to some options due to the fact that the researcher is working in a public institution.

Hypothesis 3: Very comprehensive, complex, and future-oriented and past-oriented questions can lead to cognitive burden on the respondent. Moreover in self-administered data collection methods like e-mail and web are that the respondent may use a set of materials such as maps, dictionaries or documents that may be needed when answering questions. As mentioned above, there are the same three control questions in three questionnaires. These are:

1. How many students do you have in the faculty of education?
2. How many departments do you have in the faculty of education?
3. How many classrooms do you have in the faculty of education?

In the first two step of the study, respondents will be able to access the necessary documents when answering the questions themselves, while answering the above numerical questions. However, in the last step of the survey, since the respondent does not have access to the necessary documents and there will be cognitive burden on the respondent, they will not be able to give full answers to these

3 questions. Therefore, the answers given to these questions will be different in the first two methods and in the call mode.

Hypothesis 4: According to de Leeuw and Berzelak (2016), sequential mixed-mode designs improve response rates. In sequential mixed-mode design, starts with lowest cost data collection methos and follow-up. Thanks to this way balancing the costs and nonresponse. In this study, which consists of three stages, firstly, the lowest cost data collection method will be started and the response rates are expected to increase in each stage.

4.3. Data Processing and Analysis

Data collected by 3 different data collection methods were transferred to computer. Data analysis studies for the research questions identified at the beginning of the survey and testing of the hypotheses specified above were performed through Microsoft Office Excel.

4.3.1. Response Rate

Within the scope of this study, each faculty of education is defined as university name. America Association for Public Opinion Research's (AAPOR) disposition codes and definitions will be used to calculate the response rate. AAPOR's Standard Definitions Report was published in 2016. AAPOR's "Final Disposition Codes for Internet Surveys of Specifically Named Persons" and "Final Disposition Codes for RDD Telephone Surveys" tables are used in the codings used for the response rate calculation.

Table 4.1: Final Disposition Codes for Web and RDD Telephone Surveys

Code	Definition
RR	Response Rate
I	Complete Interview (1.1)
P	Partial Interview (1.2)
R	Refusal and break-off (2.10)
NC	Non-contact (2.20)
O	Other (2.30)
UH	Unknown if household/occupied HU (3.10)
UO	Unknown, other (3.20, 3.30, 3.40, 3.90)
IE	Selected Respondent Screened Out of Sample (4.10)
e	Estimated Proportion of Cases of Unknown Eligibility That are Eligible

Source: AAPOR, 2016

Source: AAPOR, 2016

The coefficient e is the estimated rate of cases between unknown eligible cases. This is calculated using this equation:

$$e = \frac{I+P+R+NC+O}{I+P+R+NC+O+IE}$$

The values in this equation consist of the numbers corresponding to the codes in the table above.

Response rate definitions of AAPOR, leveled RR1 from RR6 based on unknown eligibility and partial interviews. In this study, the response rates of 3 different data collection methods will be calculated with these 6 formulas. These are:

$$RR1=\frac{I}{(I+P)+(R+NC+O)+(UH+UO)}$$

$$RR2=\frac{I+P}{(I+P)+(R+NC+O)+(UH+UO)}$$

$$RR3=\frac{I}{(I+P)+(R+NC+O)+e(UH+UO)}$$

$$RR4=\frac{I+P}{(I+P)+(R+NC+O)+e(UH+UO)}$$

$$RR5=\frac{I}{(I+P)+(R+NC+O)}$$

And finally the highest response rates are generated:

$$RR6=\frac{I+P}{(I+P)+(R+NC+O)}$$

As seen above, formulas are built on one to another, but some of them do not include in some of them. In others, a denominator is used but not in others.

4.3.2. Respondent Characteristics

The answers to the questions asked about the gender, age, the number of years of education in the faculty of education and how many years the dean have been in the position of the dean, and with the faculty they wok with and the undergraduate faculty were the same faculty will be shown in a table. From this table, in which age range the respondents are, and thus the age of the deans in the average; the faculties of education in which they receive undergraduate education are the same as the faculties of education in which they serve in the position of dean; the answers to the questions will be tried to be answered as to which deans who have the characteristic features have answered all steps.

4.3.3. Item Nonresponse

Questions not answered for each stage will be identified and the ratio to the total number of questions will be calculated. Because at every stage, the respondents were not obliged to answer the questions, and interrupt the question if they wanted. In particular, the difference between the self-administered methods and the interviewer-administered methods will be tried to be put forward.

4.3.4. Analysis of the Control and Open-Ended Questions

There are three same control, numeric questions in all questionnaires. In the results of the analysis, the answers to these questions were compared and the effect of data collection method was analyzed. The answers of the respondents, who answered the three questionnaires, to these questions will be determined and the effect of the different methods on the answers to the numerical questions will be studied.

For open-ended questions, which are available on three questionnaire and where more than one option can be selected and the "Other" option is selected, in which mode more "Other" options were chosen will be determined. If the respondents

who answered three questionnaire or two questionnaire gave the same answers or not to these questions, they would be examined.

CHAPTER 5

5. RESULTS

5.1. Results of Descriptive Analyses

5.1.1. Response Rate

The response rates for each stage were calculated according to AAPOR definitions. Before making a calculation, the results of each step are processed to the appropriate location in the AAPOR table:

Table 5.1: Disposition Codes by All Questionnaires

	Disposition Codes	**e-mail**	**web**	**Telephone**
		N=96	N=96	N=96
I	**Complete (1.1)**	16	12	5
P	**Partial Interview (1.2)**	1	0	0
R	**Refusal and break-off (2.10)**	0	0	0
NC	**Non-contact (2.20)**	3	3	3
O	**Other (2.30)**	0	0	1
UH	**Nothing Ever Returned (3.19)**	75	80	87
e		1	1	1

As mantioned above, response rates were calculated after coding according to AAPOR table:

Table 5.2: Response Rate for Each Mode (percentage)

	e-mail	**web**	**Telephone**
RR1	0.20	0.14	0.05
RR2	1.20	0.14	0.05
RR3	0.20	0.14	0.05
RR4	1.20	0.14	0.05
RR5	0.80	0.80	0.05
RR6	16.05	12.00	0.05

According to the literature, when the method of telephone interview is compared with Web mode, it has been stated that the telephone interview has higher response rates. But an important part of the studies in the literature is done when the internet is not used intensively. Given the deans' busy work conditions, in contrast to the literature, it was stated that the response rates in telephone interview were expected to be lower. As can be seen in the table , the response rate has decreased in every step, and the lowest response rate has been seen in the last stage telephone method.

In these results, it is thought that respondents at each stage to decrease their motivation and may spend less time to talk on the phone in their busy work life. In general the low response rates, may cause the respondents do not to check their e-mail boxes regularly, they may not be interested in survey, or they may be busy.

5.1.2. Respondent Characteristic

The characteristics of each respondent responding to the questionnaires are shown in the table 5.3. As it can be seen from the table, information about the respondents' gender, age, the period of working in the faculties of education and how many years they worked in the position of dean were listed.

Table 5.3: Respondent Characteristics

	e-mail	**web**	**Telephone**
	n=17	**n=12**	**n=5**
Sex			
Male	15	7	3
Female	2	5	2
Age			
Min.	40	51	40
Max.	69	69	61
Missing		1	
Average	52,9	53,2	52,8
Working Year in Education Faculties			
Min.	1	2	1
Max.	30	32	29
Average	10,4	12,1	16,6
Working Year in Education Faculties as a Dean			
Min.	1	0,5	0,5
Max.	5	7	5
Average	2,2	2,6	2,5

First Step: e-mail

- In the first stage, 17 respondents completed the questionnaire and 15 (89%) male and 2 (11%) were female.

- The youngest respondent is 40 years old and the oldest respondent is 69 years old. The mean age of the respondents was 52.9 years.

- The duration of study at the faculty of education is at least 1 year and not more than 30 years. The average duty time is 10.4 years.

- Dean's working period is at least 1 year, maximum 5 years. The average is 2.2 years.

Second Step: Web

- In the first stage, 12 respondents completed the questionnaire and 7 (58%) male and 5 (42%) were female.

- The youngest respondent is 51 years old and the oldest respondent is 69 years old. The mean age of the respondents was 53.2 years.

- The duration of study at the faculty of education is at least 2 years and not more than 32 years. The average duty time is 12.1 years.

- Dean's working period is at least 0.5 year, maximum 7 years. The average is 2.6 years.

Third Step: Telephone Interview

- In the first stage, 5 respondents completed the questionnaire and 3 (60%) male and 2 (40%) were female.

- The youngest respondent is 40 years old and the oldest respondent is 61 years old. The mean age of the respondents was 52.8 years.

- The duration of study at the faculty of education is at least 1 year and not more than 29 years. The average duty time is 16.6 years.

- Dean's working period is at least 0.5 year, maximum 5 years. The average is 2.5 years.

5.1.3. Item Nonresponse and Consistency Between Questions

When the answers given to the three questionnaires were examined, it was seen that there were no frequently nonresponse questions. Only at the first step, a respondent had to answer the question of how many years he had been in the position of dean, and then he stopped responding. The respondent may have given up answering the questionnaire or stopped responding when he could not foresee how to reply through Microsoft Office Word or she/he couldn’t save the document. In order to prevent such situations, the contact information of the researcher was added to the e-mail sent to the respondent, but the respondent did not make contact with the researcher. According to the ethical rules, the researcher has not phoned the respondent directly.

The number of respondents who respond to any two or three of the first, second and third steps as follows:

e-mail **web**	n=4
e-mail **Telephone**	n=2
web **Telephone**	n=1
All Methods	n=2

It was found that only two of the respondents who answered more than one question were the same numerical values on all the questionnaires. However, the other respondents indicated different values on two question papers with at least 1 numerical value. On the other hand, in telephone interview, all other respondents, except for one respondent, had indicated numbers ending in 0 like 3.500, 7.500 etc. These figures were found to be different when compared to the answers of the respondents on the other questionnaires. When the answer given by the number of respondents in the telephone interview number and the answer given in the other question paper is seen, the number is not the same.

When the answers given to the same and open-ended questions in all questionnaires were examined, it was found that in the first step 5 respondents, in the second step 2 respondent and in the last step 4 respondents added additional answers to the "Other" option. However, in the telephone interview, it was observed that the respondents also provided additional information for questions that do not have the "Other" option.

In the following, first of all, the deans who answer all three questionnaires will be examined with the answers to the same questions on all three questionnaires. Then,

the answers of the deans who answer the questionnaire 1st and 2nd, questionnire 1st and 3rd, and questionnaire 2nd and 3rd together will be examined.

In Table 5.4, the answers given by the two deans who answered all three questionnaires to the same questions on the three questionnaires were examined. In Table 5.4, compatible with the annexed questionnaires, 4 refers to very often, 3 refers to often, 2 refers to sometimes and 1 refers to never. Also, Q1 refers to e-mail, Q2 refers to web and Q3 refers to telephone interview. For instance, "1" or "2" in the columns show how many deans answered that question. In order to accept the answers given to the related question consistently, the answers must be the same on all three questionnaires. The questions given consistent answers are shown in bold. This statement also applies to other tables.

Table 5.4: Comparing the Answers of Two Deans Who Answered All Three Questionnaires

	The Same Questions on 3 Questionnaire	**Q1**				**Q2**				**Q3**			
		4	**3**	**2**	**1**	**4**	**3**	**2**	**1**	**4**	**3**	**2**	**1**
1	When we define the teacher training system as a system which includes introduction to pre-service education enter exam, pre-service education, appointment / placement and in-service training, which stage do you say as the most problematic stage of the system?		1	1			1	1		1		1	
2	Do you find the multiple-choice, centralized exam in the process of admission to pre-service education sufficient?		1	1			1	1				2	
3	What kind of change would you recommend to find the centralized exam in the initial admission process sufficient?	2C-E-A				D-2E				2C			
4	The number of faculties of education, which was 17 in 1982, reached 63 in 2006 and 97 in 2018. Do you consider this development a positive development?			2			1	1				2	

5	**Do you think that the academic staff working in the faculties of education have the necessary qualifications?**		**2**				**2**				**2**			
6	Do you find the physical facilities in the faculty of education you are working with sufficient?		1	1			2				2			
7	How many students are there in the faculty of education?	7500-3520				7500-3520				7500-3871				
8	How many departments are there in the faculty of education?	17 - - 10				6 - -10				10 - - 10				
9	How many classrooms do you have in the faculty of education?	70-36				60-36				60-36				
10	Do you think that the Public Personnel Selection Exam should continue in its current form?		1	1				2				2		
11	Do you think that the Candidate Teaching application that was put into practice in 2015 is an application in place?		2				2				1	1		
12	Do you think that the appointment / placement process after the Public Personnel Selection Exam is a fair process?		1	1			1	1			1			
13	Do you think that the in-service training service currently provided by the Ministry of National Education is of sufficient quality?		1	1				2			1	1		
14	Which of the following do you think should be done in order to make in-service training more qualified?	A-B-2C-2D				C-D				C-D-Others				

In question one, when we define the teacher training system as a system which includes introduction to pre-service education enter exam, pre-service education, appointment / placement and in-service training, which stage deans consider the most problematic. While the answers given to Q1 and Q2 were consistent, one of the deans gave a different answer in the telephone interview. The second question that questions which asks to deans find the multiple-choice, centralized exam in the process of admission to pre-service education sufficient, of the case is similar. So, one of the deans gave a different answer in the telephone interview. In the 3rd question, which

asked what should be done to improve the pre-service entrance exam, and more than one choice could be chosen, all questions were answered differently on all questionnaires. However, this result is expected. Because, it is predicted that this question can cause cognitive burden on the respondents. The answers to the 4th question questioning whether the expansion in the number of faculties of education in recent years is a positive development also differs from the questionnaire. However, unlike the first 2 questions, the answers given in the e-mail stage and the answers given in the telephone interview were consistent, whereas the answer given inthe web stage was inconsistent. The 5th question, which asks whether the academicians working in the faculties of education have the necessary qualifications, was given consistent answers. It is thought that this situation may be caused by instincts to protect academicians working in the faculties based on the fact that the interviewees are working in education faculties. In the 6th question, which questioning whether the physical facilities of the faculties are sufficient in which deans are working, the answers given to Q2 and Q3 are consistent, whereas the answer to Q1 is different. In the 6th, 7th and 8th questions, asking the how many students are in the faculty, how many programs are in the faculty and how many classrooms are in the faculty, one of the deans gave a consistent answer to these three questions, while the other dean gave a difference. In the 10th question questioning whether the public personnel selection exam should continue in its current form, the answers given to Q2 and Q3 are consistent, whereas the answer to Q1 is different. In the 11th question it was asked whether the Candidate Teaching application was a useful application, Q1 and Q2 were consistent, whereas the answer was different in the telephone interview. In the 12th question it was asked deans think that the appointment / placement process after the Public Personnel Selection Exam is a fair process, Q1 and Q2 were consistent, in Q3 a dean did not answer the question. This non-response is thought to be due to the fact that the question concerned is questioning whether a process is fair or not, thus creating sensitivity and therefore not wanting to be answered. Since the first 2 stages are self-administered, the dean is answered the question. The answer given in Q2 was different in the 13th question asking whether the in-service trainings offered by the MoNE were of sufficient quality. The last question that questions which asks to deans find the

multiple-choice, asking what needs to be done to improve the quality of in-service training, the answers to all three questionnaire are different.

In Table 5.5 below, the answers of the 2 deans who responded to the first and second stage questionnaires were compared. The same questions on the two questionnaires were examined.

Table 5.5: Comparing the Answers of Two Deans Who Answer First and Second Questionnaire

	The Same Questions on 2 Questionnaire	**Q1**				**Q2**			
		4	**3**	**2**	**1**	**4**	**3**	**2**	**1**
1	**When we define the teacher training system as a system which includes introduction to pre-service education enter exam, pre-service education, appointment / placement and in-service training, which stage do you say as the most problematic stage of the system?**		**2**		**2**		**2**		**2**
2	Do you find the multiple-choice, centralized exam in the process of admission to pre-service education sufficient?		2	2			1	3	
3	What kind of change would you recommend to find the centralized exam in the initial admission process sufficient?	2A-4C				3A-4C			
4	**Do you think that the process of admission to pre-service education affects teacher quality?**	**2**	**2**			**2**	**2**		
5	The number of faculties of education, which was 17 in 1982, reached 63 in 2006 and 97 in 2018. Do you consider this development a positive development?		1	3			1	2	1
6	**Do you think that the academic staff working in the faculties of education have the necessary qualifications?**		**2**	**2**			**2**	**2**	
7	**Do you find the physical facilities in the faculty of education you are working with sufficient?**	**1**	**2**	**1**		**1**	**2**	**1**	

8	**How many students are there in the faculty of education?**	**2353-3700-480-2329**				**2353-3700-480-2329**			
9	**How many departments are there in the faculty of education?**	**6-7-2-5**				**6-7-2-5**			
10	**How many classrooms do you have in the faculty of education?**	**39-25-25-23**				**39-25-25-23**			
11	Do you really think that the students in the faculty of education that you are working have the qualifications required by the teaching profession?	2	1	1		3	1		
12	**Do you think that the Public Personnel Selection Exam should continue in its current form?**	**1**	**1**	**2**		**1**	**1**	**2**	
13	Do you think that the Candidate Teaching application that was put into practice in 2015 is an application in place?	1	1	2			2	1	1
14	Do you think it is right that students who are not graduated from faculties of education receive pedagogical formation education to become prospective teachers?			3	1			2	2
15	**Do you think that the appointment / placement process after the Public Personnel Selection Exam is a fair process?**		**1**	**3**			**1**	**3**	
16	**Do you think that the in-service training service currently provided by the Ministry of National Education is of sufficient quality?**		**1**	**3**			**1**	**3**	
17	**Do you believe that teachers show sufficient interest in in-service training?**		**1**	**3**			**1**	**3**	
18	Which of the following do you think should be done in order to make in-service training more qualified?	A-B-2C-4D				A-B-C-3D			

In question 1 the responses were consistent. Most probably, with the effect of the 2 stages being self-administered, the deans gave the same answers as expected. The second question that questions which asks to deans find the multiple-choice, centralized exam in the process of admission to pre-service education sufficient,

contrary to expectations, a dean responded differently in Q2. In the 3rd question, which asked what should be done to improve the pre-service entrance exam, and more than one choice could be chosen, answers are different. However, as can be seen from Table 5.5, there is no big difference. The answers to the 4th question asking whether in-service training affects teacher quality are consistent as expected. The answers to the 4th question questioning whether the expansion in the number of faculties of education in recent years is a positive development also differs from the questionnaire. But what is interesting here is that in Q2 a dean has answered "never" refers to 1. This is contrary to expectations. The answers to the sixth and seventh questions are as consistent as expected. In the 8th, 9th and 10th questions, asking the how many students are in the faculty, how many programs are in the faculty and how many classrooms are in the faculty, all deans gave a consistent answer to these 3 questions, as expected. Because these 2 stages were implemented with self-administered method, so that the deans had enough time and the opportunity to do research to answer the questions. The answers given to the 11th question, in which the students of the faculty of education are asked whether they really have the qualifications required by the teaching profession, also differ. The answer to the 12th question is as consistent as expected. Contrary to expectations, the answers to the 12th question are inconsistent, but only 1 dean gave different answers. The answers given to the 14th question asking whether the practice of becoming a teacher by taking pedagogical formation training without graduating from the faculty of education are correct are also inconsistent, but only 1 dean gave different answers. In the 15th, 16th and 17th questions, all deans gave a consistent answer to these three questions, as expected. The answer to the last check all that applies question is inconsistent, but only 1 dean gave different answers. As a result, when the answers given to the questions are examined in general, it is seen that the answers given in the first and second stage of the survey are generally consistent.

In Table 5.6 below, the answers of the two deans who responded to the first and third stage questionnaires were compared. The same questions on the two questionnaires were examined.

Tablo 5.6: Comparing the Answers of Two Deans Who Answer First and Third Questionnaire

	The Same Questions on 2 Questionnaire	**Q1**				**Q3**			
		4	**3**	**2**	**1**	**4**	**3**	**2**	**1**
1	When we define the teacher training system as a system which includes introduction to pre-service education enter exam, pre-service education, appointment / placement and in-service training, which stage do you say as the most problematic stage of the system?			1					1
2	Do you find the multiple-choice, centralized exam in the process of admission to pre-service education sufficient?			1					1
3	**What kind of change would you recommend to find the centralized exam in the initial admission process sufficient?**	**C**				**C**			
4	The number of faculties of education, which was 17 in 1982, reached 63 in 2006 and 97 in 2018. Do you consider this development a positive development?			1			1		
5	**Do you think that the academic staff working in the faculties of education have the necessary qualifications?**			**1**				**1**	
6	**Do you find the physical facilities in the faculty of education you are working with sufficient?**			**1**				**1**	
7	How many students are there in the faculty of education?	2.230				2.250			
8	**How many departments are there in the faculty of education?**	**8**				**8**			

9	How many classrooms do you have in the faculty of education?	42				38			
10	Do you think that the Public Personnel Selection Exam should continue in its current form?	1					1		
11	Do you think that the Candidate Teaching application that was put into practice in 2015 is an application in place?		1						1
12	**Do you think that the appointment / placement process after the Public Personnel Selection Exam is a fair process?**		**1**				**1**		
13	**Do you think that the in-service training service currently provided by the Ministry of National Education is of sufficient quality?**			**1**				**1**	
14	**Which of the following do you think should be done in order to make in-service training more qualified?**	**C-D**				**C-D**			

As can be seen in Table 5.6, the answers to the first 2 questions are inconsistent. Especially when the first question is taken into consideration, two different answers are contrary to expectations. Because, in question one, when we define the teacher training system as a system which includes introduction to pre-service education enter exam, pre-service education, appointment / placement and in-service training, which stage deans consider the most problematic. So, this question is not scale question. When applying questionnaires, the answer to this question was expected to be the same for all questionnaires. However, the presence of the researcher in the telephone interview is thought to affect the answers of the respondent. In the literature there are many studies about explain the interviewer effect (de Leeuw and Collins, 1997; Rica, 1929; Lyberg and Kasprzyk, 1991).

Contrary to expectations 2nd and 4th questions was answered differently. But, the 3rd question, which has the possibility of choosing more than one option, in addition 5th and 6th questions was answered consistently. 7th and 9th numerical questions were given different answers for two questionnaire as expected. The 8th question is also numerical but the answer is consistent. The answers to the 10th and 11th questions are inconsistent, but the answer to the 1th question in a telephone conversation is far from the answer given in Q1. In 12th, 13th and 14th questions was answered consistently

Table 5.7: Comparing the Answers of Two Deans Who Answer Second and Third Questionnaire

	The Same Questions on 2 Questionnaire	**Q2**				**Q3**			
		4	**3**	**2**	**1**	**4**	**3**	**2**	**1**
1	When we define the teacher training system as a system which includes introduction to pre-service education enter exam, pre-service education, appointment / placement and in-service training, which stage do you say as the most problematic stage of the system?	1-2-3-4						1	
2	**Do you find the multiple-choice, centralized exam in the process of admission to pre-service education sufficient?**				**1**				**1**
3	What kind of change would you recommend to find the centralized exam in the initial admission process sufficient?	B-C-E				A-C			
4	**The number of faculties of education, which was 17 in 1982, reached 63 in 2006 and 97 in 2018. Do you consider this development a positive development?**			**1**				**1**	

5	Do you think that the academic staff working in the faculties of education have the necessary qualifications?		1					1	
6	**Do you find the physical facilities in the faculty of education you are working with sufficient?**			**1**				**1**	
7	How many students are there in the faculty of education?	3.465				3.500			
8	How many departments are there in the faculty of education?	8				13			
9	How many classrooms do you have in the faculty of education?	80							
10	**Do you think that the Public Personnel Selection Exam should continue in its current form?**			**1**				**1**	
11	Do you think that the Candidate Teaching application that was put into practice in 2015 is an application in place?	1						1	
12	**Do you think that the appointment / placement process after the Public Personnel Selection Exam is a fair process?**			**1**				**1**	
13	**Do you think that the in-service training service currently provided by the Ministry of National Education is of sufficient quality?**			**1**				**1**	
14	Which of the following do you think should be done in order to make in-service training more qualified?	D				A-C-D			

According Table 5.7, in question one contrary to expectations answer is not consistent. Especially in the self-administered Q2, the respondent preferred more than one option, but preferred an option for telephone conversations. Although this question is not check all that applies question, the fact that the respondent has selected more

than one option may also be due to a problem caused by the Google Forms application. In question 2, dean gave consistent answer as expected. But in question 3, dean gave different answer in two questionnaire. The 4th and 6th questions were answered same as expected, but the 5th question was answered differently on two different questionnaires. 7th, 8th and 9th numerical questions were given different answers for two questionnaire as expected. In the 2nd questionnaire made by telephone, the numbers were not remembered or roundep up. In 10th, 12th and 13th questions was answered consistently as expected but contrary to expectations 11th and 14th questions was answered differently.

CHAPTER 6

6. DISCUSSION AND CONCLUSION

Researchers, who study social subjects seek to obtain information directly from the sources. Therefore, generally and traditionally official statistics and social survey data were collected by visiting respondents or applying self-administered mail questionnaires. Which method to use depends on the research features. However, the most important constraint in many studies is budget. With the development of technology in the process, many different methods have come to existence and they are applied in different studies. According the literature, the main objective is to reach better data quality within the budgetary constraints.

Rapid growth of computer technology has led to significant improvements in data collection procedure (De Leeuw and Collins, 1997; Couper and Nicholls, 1998). Here again the main goal is to achieve more accurate data by reducing the cost. Computer technology has affected all data collection methods.

Comparing data collection methods in the literature, it is observed that the traditional methods are compared with the method used extensively during the study period. For example, in the studies conducted in the 1970s, face to face interviews and telephone interviews were compared. At that time, the cost of the telephone interview was considerably lower than the cost of face-to-face conversations.

Since 2000, the popularity of the web method has increased significantly due to the rapid expansion of internet access and the cost advantage. Instead of classical data collection methods, the web method has been used more. In this period, web method and other methods are compared and advantageous and disadvantageous aspects of web mode compared to other methods are tried to be revealed. Although there are many studies comparing web and mail surveys in the literature, one can argue that there is study comparing e-mail web, and telephone surveys with sequantial mixed

mode. That is to say, this thesis will contribute to the literature by making up the aforesaid deficiency with also bringing up such a study to the literature of Turkish academia.

Compared three methods are similar in terms of cost reduction. There is a charge for payment to GSM operators only for telephone interview. However, when we look at the cost of telephone interview, we see very low costs. It should be noted that the interview was conducted by the researcher himself. Costs will increase significantly if the interviewees do this interviews instead of the researcher. Therefore this survey, taking into account the small size of the population, there is no significant difference in cost between different data collection methods. However, in telephone interview, the researcher has incurred significant cost of time. It took a long time both during the telephone interview and to reach the telephone numbers. However, in the first stage, processing of the information in Word to the computer causes time cost. It is easier and more practical to analyze the information saved in Google Forms in the second stage.

Mobile surveys, which were started to be used extensively in the present day, were wanted to be included in the survey, but it was abandoned due to the high costs of creating mobile surveys. For this reason, in terms of cost, there are three methods that researchers can use in their efforts to make research without an additional investment budget. This survey reveals which data collection method with sequantial mixed mode has a higher response rate step by step, higher cost, higher item nonresponse error, the effect of the respondent's characteristics on the response rates, whether the use of internet increases the response rates. In this sense, it is expected that it will contribute to the related literature, especially for the researchers who conduct research with limited budget.

According to the latest data, at the end of 2014 there are 650 million children in primary education age (UNESCO, 2014). Approximately 29 million primary teachers are teaching in the classroom. According to the calculations carried out by

UNESCO, by 2030, 3.3 million teachers will be needed in addition to the number of teachers present. Countries have developed policies to strengthen their education systems and to increase the qualifications of their teachers, acting in the role they play in the development of qualified capital power. Teacher subject, as in other countries has always maintained its position as the agenda in Turkey. The fact that the subject of teacher education system has an important role in the education system and the countries' education policies has caused one of the important aims of this survey to make inferences about the problems of teacher education system. Therefore, the historical development process of teacher training system is analyzed in detail at Chapter 3. While preparing questionnaires, no details were tried to be omitted in the teacher education system. It was taken into consideration that the respondents has significant experience in the teacher education system and missing a number of subjects about the system in the questionnaires could decrease the motivation.

Implications

Contrary to research in the literature the first step of the survey, which consisted of three steps of e-mail, web and telephone interview respectively, e-mail has the highest response rate. In sequantial mixed mode design, the main objective is to reduce costs and produce fast solutions. Also, in most common sequential mixed-mode design one method of data collection is implemented after another, starts with least expensive, nonrespondent to the first, followed up by a more expensive method, for balancing costs, nonresponse and nonresponse bias. In this survey, in a compatible sequential mixed-mode, started with the lowest cost mode. In terms of respondent burden, there is way difficult to easy.

In this survey, in the first and second stage, e-mail was sent to the respondents. In the first stage, the Word document is attached to the e-mail. Then the second stage, Google Forms link is attached to the e-mail. Because, it was thought that some of the respondents would consider the Word document more reliable and official, and some

respondents would find Google Forms more practical. Therefore, the first two stages were designed with two different methods.

The fact that the studies comparing the telephone interview and the Web method in the literature are generally old and that internet usage has increased very rapidly in recent years, can be two of the reasons. Moreover, the last method to be applied to the telephone interview and therefore the motivation of the respondents may decrease and the approval requirement of the Ethics Committee by the respondents before the telephone interview; affected the response rates in telephone interview negatively. Compared to the past, people now use more internet and carry out a significant portion of their daily work with the internet. Assuming that deans, who are the target population, are using the internet extensively during the day, filling the questionnaires in the first and second step can be considered as a more practical process compared to the telephone interview. Therefore, it can be said that the increase in internet usage has contributed to the high response rates in the first and second step of the survey.

When the characteristics of the respondents are examined, it is seen that there is a group between the ages of 40 and 69 and there is a significant age difference between the youngest and oldest dean. However, these two extremes, for example, have been shown to respond to both the e-mail mode and the telephone interview mode. Although the number of observations is little, it can be said for these results, this shows that there is no difference in terms of age in terms of internet usage. Dean's work in the education faculties varies between 1 year and 32 years. These periods are considered to have no effect on the response rates. For this study, it is also limited observed that the year of duty as dean has no effect on response rates. The dean, who has the most working time, and the dean who has the least working time, responded to the same mode questionnaire.

In all questionnaire there was no question specifically left blank; item nonresponse was not encountered. However, in open-ended questions, the respondents

also made additional comments on questions other than those questions. However, in the telephone interview, for questions other than open-ended questions the respondents made additional comments more than open-ended questions. The questionnaire for 20 questions took 25 minutes on average. In order to get more detailed information about the survey, it can be said that telephone interview is more advantageous than the other two steps.

But the situation is different for numerical questions. The respondents who to plan were interviewed by telephone, except one respondent, the answer to control/numeric questions on the phone does not correspond to their response in other stages. This shows that, survey on the web in numerical questions is more advantageous. Because in the first and second step, respondents had access to sufficient time and necessary documents to answer numeric questions. However, they stated the average numbers in the telephone interview, as they had to answer the questions during the interview.

In general, the answers given by the deans regarding the problems of education faculties, when we define the teacher training system as a system which includes introduction to pre-service education enter exam, pre-service education, appointment / placement and in-service training, which stage deans consider the most problematic, pre-service education enter exam, pre-service educaton and appointment / placement options have been the most selected. Moreover, according to deans, it is stated that in the process of admission to the pre-service education, check all that applies, central examination is generally not sufficient and additional tests should be added. Growth in the faculties of education in the period from 1982 to the present, has been generally negative development. The question of whether the Public Personnel Selection Exam should continue in its current form, was answered positively in general. The question of “Which of the following do you think should be done in order to make in-service training more qualified?” deans said that, the quality of in-service training should be improved and MoNE and the faculties of education should be increased, in general.

There are deans who find the application of candidate teachers useful, but there are others who do not.

As a result, basic and the most specified by respondents findings related to education faculties and teacher education system were as follows:

- The main problem area is enter the education faculties and process of education faculties,

- The continuation of the central examination in the entrance exam of the education faculties was generally accepted but it was stated that additional tests such as the tendency to the teaching profession should be applied,

- The rapid expansion of the number of education faculties is often indicated as a negative situation,

- The appointment / placement process after the Public Personnel Selection Exam indicated as a fair process,

- It has been stated that in-service trainings have improved significantly especially in the last 2 years. But still needs improvement in some areas.

Field Observations

It is important to send the questionnaires to the correct e-mail addresses. Questionnaires should be sent to all addresses of respondents who have more than one e-mail address. Because some corporate e-mail accounts can not be synchronized with mobile phones and people need to use computers to access these e-mails. This may result in no response within the expected time interval. After a certain period of initial

transmission, resending to non-return respondents increases the response rates. Therefore, non-respondents should be followed.

The contact information of the researcher or the interviewer should be written to the e-mail sent to the respondents. e-Mails sent by respondents for research or questions should be answered quickly. In this way, response rates will be increased.

The questionnaires were sent to the respondents every 15 days, because the target population is small and the number of questions is not high. But it is thought that it would be more beneficial to keep the period longer, because, a number of questions are the same and other questions are similar, and that respondents reduce their motivation to answer the next step. Therefore, the response rates have decreased in each step already established in the literature. If the time between the stages is longer, the motivation of the respondents to research may increase again. On the other hand, one of the most important reasons for having the lowest response rate in the telephone interview is sending the "Acceptance Form" to the respondents by e-mail before the interview.

From three different methods, especially for open-ended questions, the maximum level of data was collected in telephone interview. Respondents wanted to provide additional information about almost every question. However, especially in the last five questions, fatigue was felt in the respondents. In some interviews, due to the fact that the respondents were outdoors during the interview, some questions were read more than once.

Recommendations

Today, the internet is used extensively and a significant part of the survyes are done via the internet. However, accessing the e-mail or mobile phone number of the respondents is a big problem. In particular, the problem will be even greater if the target population is less likely to use the Internet. But in this survey, it is assumed that

the respondents are using the internet intensively because they have high education level, they are in management positions in universities. The fact that the university internet sites are public has also facilitated access to these people. Also, certain number of people, made it easier to reach contact information. Therefore, as in this study, if the target population has high education level, intensive internet use and working in certain institutions, it may be advantageous to use data collection methods with the web also depending on the subject of the survey. Or, first, the web mode with Google Forms should be applied, and then the telephone interview should be applied for the non-respondents.

According to *We Are Social* latest data, Turkey has 82 million people and 45 million people using smartphones. Taking this number into consideration, depending on the survey subject, is expected to increase rapidly in the questionnaire applied through mobile phones in the survey. For example, in this survey, it is thought that the questionnaires can be applied by mobile phone. But what is important here is the budget constraints. Today, it is very costly to produce a questionnaire for mobile phones. Therefore, it is difficult to create a questionnaire for mobile phones for researchers who do not have any additional resources. However, it is thought that the internet and mobile devices will be used more frequently in the next days.

According to the literature on surveys for sensitive subjects, respondents may not feel comfortable and do not give correct answers in face-to face and telephone interview. Therefore, other data collection methods may be preferred. However, in this survey, in contrast to the literature, more additional information was obtained in the telephone interview, and the respondents stated some of the answers they did not write on the phone. The subject of this research may not be regarded as a sensitive issue, but the fact that the researcher is working in a public institution may make it vulnerable. The interviews did not take place in this way, and a significant part of the respondents felt confident and shared many additional information. However, the low response rates should be considered. Therefore, it will be necessary to make a trade-off between the information gathering and response rates.

The response rates have decreased in each step. In this case, it was stated that the decrease of motivation of the researchers at each steps was also effective. In order to avoid this, instead of applying all the questionnaires to the entire target population, it would be more useful to apply the each mode and the questionnaire to each section by dividing the target population into specific criteria. In this way, the same respondents will not encounter with the same question, more than one questionnaire.

This survey is expected to contribute to what kind of data collection method should be used in survey that have budget constraints, highly educated population and have e-mail and phone number information for respondents.

Regarding teacher training system, it can be stated that teacher training policies should focus on entrance examinations to education faculties. In addition to the central exam, candidates should be tested for predisposition to profession. On the other hand, the establishment of new faculties of education should not be allowed.

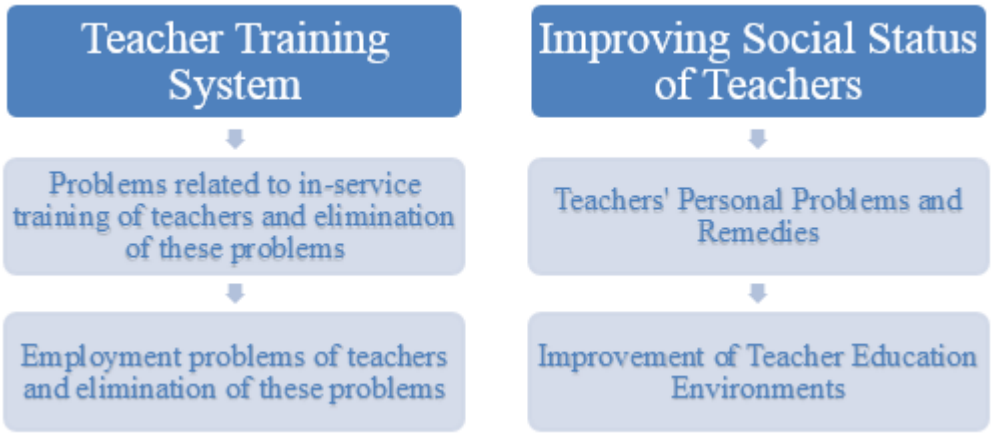
APPENDIX 1: REPORT OF THE PARLIAMENTARY RESEARCH COMMISSION

In accordance with the proposal of thirty-two deputies on 25.11.1991, "In Order to Identify the Remedies of Teachers and the Measures to be Taken in Society in order to determine the Measures to be taken in Accordance with the Constitution 98, the Rule 102 and 103 in accordance with the provisions of the Committee on the Opening of a Parliamentary Study and Parliamentary Research Commission Report" was created.

In the report, it was stated that the most important element of education and training is the teacher. However, the teachers and the teaching profession for that period were defined as "A person who was remembered only once on 24 November". (Parliamentary Research Commission Report, 1991). Thirteen months after 19.12.1991, a study has been carried out in order to solve the problems of teachers and the teaching profession and to eliminate the aforementioned definition.

First of all, cooperation with the Ministry of National Education was established and a sub-working group was established within the Ministry of National Education and these groups were coordinated with the Parliamentary Research Commission. Subsequently, official letters were sent to the governorships of 74 provinces and teachers were asked to determine the problems of teachers in the various provinces, the opinions of the teacher organizations were examined and approximately 4,500 letters sent from the teachers to the commission were evaluated. These studies were conducted through six sub-committees on six problem areas and these problem areas:

Figure 1.1: Commission Report Problem Areas



Source: Turkish Grand National Assembly, Report of the Parliamentary Research Commission, Ankara, 1991.

The Commission determined the main point of its work as a teacher training system. The period in which the problems related to the system started was stated as the period that started with the inclusion of the institutions that train teacher education in 1983 under the roof of Higher Education Institution. With this period, it has been stated that the task of teacher training has been turned into a secondary duty of the university. It has been determined that there is no qualified teaching staff in the relevant faculties of the universities to educate teachers in the requisite of the epoch, and it is determined that the care to be shown in teacher training is not shown. It was evaluated that teacher training system is non-coordinated with the MoNE in the universities.

The following proposals are discussed; improvement of Anatolian Teacher High Schools which are active at that time for teacher training system, interview done at the starting of high school teaching, postgraduate education requirement for teachers of teacher high school and executive teachers, integrity in teacher training programs, to increase the internship period of the 3rd and 4th year students in the faculties that train teachers, strengthening the faculties of education operating within the universities and the establishment of a "Teacher University" whose task is to train only teachers.

The raised topics are strengthening the union activities of the teachers, raising the salaries and personal rights of the teacher and executive teachers to the level deserved by various performance-based criteria, to implement the applicable legislation on assignments to set regulations in the legislation about MoNE members, to improve the conditions of the educational environment, particularly in pre-school and private education institutions and reconstruction of legislation on revolving fund enterprises under MoNE.

As a result of the works carried out by the Parliamentary Research Commission and sub-commissions, a total of 5 draft laws, 20 of the existing laws, 2 amendments in the Decree Laws, 4 changes in the Decisions of the Council of Ministers, 17 amendments in the MoNE regulations and 3 amendments to the MoNE directives; 19 proposals were prepared and presented to MoNE in order to ensure that the existing laws and regulations become operational.

APPENDIX 2: EDUCATION FACULTIES IN TURKEY

University Name	State/Foundation	Province	Year of Foundation[17]
Ankara Üniversitesi	State	Ankara	31.03.1964
İnönü Üniversitesi	State	Malatya	25.03.1975
Karadeniz Teknik Üniversitesi	State	Trabzon	11.11.1981
Abant İzzet Baysal Üniversitesi	State	Bolu	20.07.1982
Ağrı İbrahim Çeçen Üniversitesi	State	Ağrı	20.07.1982
Ahi Evran Üniversitesi	State	Kırşehir	20.07.1982
Amasya Üniversitesi	State	Amasya	20.07.1982
Anadolu Üniversitesi	State	Eskişehir	20.07.1982
Atatürk Üniversitesi	State	Erzurum	20.07.1982
Boğaziçi Üniversitesi	State	İstanbul	20.07.1982
Çukurova Üniversitesi	State	Adana	20.07.1982
Dicle Üniversitesi	State	Diyarbakır	20.07.1982
Dokuz Eylül Üniversitesi	State	İzmir	20.07.1982
Gazi Üniversitesi	State	Ankara	20.07.1982
Hacettepe Üniversitesi	State	Ankara	20.07.1982
Orta Doğu Teknik Üniversitesi	State	Ankara	20.07.1982
Uludağ Üniversitesi	State	Bursa	20.07.1982
Adıyaman Üniversitesi	State	Adıyaman	27.06.1987
Balıkesir Üniversitesi	State	Balıkesir	11.07.1992
Celâl Bayar Üniversitesi	State	Manisa	11.07.1992
Çanakkale Onsekiz Mart Üniversitesi	State	Çanakkale	11.07.1992
Harran Üniversitesi	State	Şanlıurfa	11.07.1992
Marmara Üniversitesi	State	İstanbul	11.07.1992
Mustafa Kemal Üniversitesi	State	Hatay	11.07.1992
Niğde Üniversitesi	State	Niğde	11.07.1992
Ondokuz Mayıs Üniversitesi	State	Samsun	11.07.1992
Pamukkale Üniversitesi	State	Denizli	11.07.1992
Trakya Üniversitesi	State	Edirne	11.07.1992
Yüzüncü Yıl Üniversitesi	State	Van	11.07.1992
Bülent Ecevit Üniversitesi	State	Zonguldak	18.01.1995
Kırıkkale Üniversitesi	State	Kırıkkale	18.01.1995
Cumhuriyet Üniversitesi	State	Sivas	04.12.1995
Sakarya Üniversitesi	State	Sakarya	04.07.1997
Maltepe Üniversitesi	Foundation	İstanbul	15.07.1997
Adnan Menderes Üniversitesi	State	Aydın	03.09.1997
Fırat Üniversitesi	State	Elazığ	19.09.1997
Ege Üniversitesi	State	İzmir	23.09.1998
Eskişehir Osmangazi Üniversitesi	State	Eskişehir	23.09.1998
İstanbul Üniversitesi	State	İstanbul	23.09.1998
Kafkas Üniversitesi	State	Kars	23.09.1998

University Name	State/Foundation	Province	Year of Foundation[17]
Dumlupınar Universitesi	State	Kütahya	14.04.1999
Kocaeli Universitesi	State	Kocaeli	07.07.1999
Gaziosmanpaşa Universitesi	State	Tokat	04.12.1999
Ufuk Universitesi	Foundation	Ankara	18.12.1999
Muğla Sıtkı Koçman Universitesi	State	Muğla	13.07.2000
Afyon Kocatepe Universitesi	State	Afyon	12.09.2000
Başkent Universitesi	Foundation	Ankara	16.01.2001
Yeditepe Universitesi	Foundation	Istanbul	21.09.2001
Erciyes Universitesi	State	Kayseri	08.02.2002
Gaziantep Universitesi	State	Gaziantep	14.02.2002
Bayburt Universitesi	State	Bayburt	23.03.2002
Artvin Çoruh Universitesi	State	Artvin	28.06.2002
Yıldız Teknik Universitesi	State	Istanbul	18.12.2003
Kahramanmaraş Sütçü İmam Universitesi	State	Kahramanmaraş	16.04.2004
Erzincan Universitesi	State	Erzincan	17.03.2006
Giresun Universitesi	State	Giresun	17.03.2006
Kastamonu Universitesi	State	Kastamonu	17.03.2006
Mehmet Akif Ersoy Universitesi	State	Burdur	17.03.2006
Recep Tayyip Erdoğan Universitesi	State	Rize	17.03.2006
Uşak Universitesi	State	Uşak	17.03.2006
Kilis 7 Aralık Universitesi	State	Kilis	29.05.2007
Muş Alparslan Universitesi	State	Muş	29.05.2007
Siirt Universitesi	State	Siirt	29.05.2007
Sinop Universitesi	State	Sinop	29.05.2007
Hakkâri Universitesi	State	Hakkâri	22.05.2008
Necmettin Erbakan Universitesi	State	Konya	24.06.2008
Istanbul Aydın Universitesi	Foundation	Istanbul	14.08.2008
Hasan Kalyoncu Universitesi	Foundation	Gaziantep	19.08.2008
Bozok Universitesi	State	Yozgat	03.12.2008
Istanbul Medipol Universitesi	Foundation	Istanbul	07.07.2009
Ted Universitesi	Foundation	Ankara	07.07.2009
Süleyman Demirel Universitesi	State	Isparta	29.01.2010
Gaziantep Universitesi (Nizip Eğitim Fakültesi)	State	Gaziantep	26.02.2010
Necmettin Erbakan Universitesi (Ahmet Keleşoğlu Eğitim Fakültesi)	State	Konya	26.02.2010
Istanbul Sabahattin Zaim Universitesi	Foundation	Istanbul	24.04.2010
Abdullah Gül Universitesi	State	Kayseri	21.07.2010
Bartın Universitesi	State	Bartın	30.10.2010
Düzce Universitesi	State	Düzce	15.04.2011
Ordu Universitesi	State	Ordu	15.04.2011
Nevşehir Hacı Bektaş Veli Universitesi	State	Nevşehir	03.07.2011
Okan Universitesi	Foundation	Istanbul	26.10.2011
Bahçeşehir Universitesi	Foundation	Istanbul	22.12.2011
Istanbul Kültür Universitesi	Foundation	Istanbul	10.01.2012

University Name	State/Foundation	Province	Year of Foundation[17]
Karamanoğlu Mehmetbey Universitesi	State	Karaman	10.01.2012
Mef Universitesi	Foundation	Istanbul	27.04.2012
Biruni Universitesi	Foundation	Istanbul	27.02.2014
Alanya Alaaddin Keykubat Universitesi	State	Antalya	23.04.2015
Ibn Haldun Universitesi	Foundation	Istanbul	23.04.2015
Fatih Sultan Mehmet Foundation Universitesi	Foundation	Istanbul	06.05.2015

Kaynak: CoHE, Higher Education Information Management System (online), https://istatistik.yok.gov.tr/,

APPENDIX 3: FIRST STEP QUESTIONNAIRE

GÖNÜLLÜ KATILIM FORMU

Sayın katılımcı,

Bu anket, hâlihazırda Türkiye'deki Eğitim Fakülteleri üzerine yapılan bir araştırmadır. Bu çalışma üç aşamalı olarak tasarlanmış olup bu soru kağıdının uygulanması araştırmanın **ilk aşamasıdır.**

Bu araştırma için Strateji ve Bütçe Başkanlığı Sektörler ve Kamu Yatırımları Genel Müdürlüğünden ve Hacettepe Üniversitesi Etik Komisyonundan gerekli izinler alınmıştır. Anket, Hacettepe Üniversitesi Nüfus Etütleri Enstitüsü Sosyal Araştırma Yöntemleri Bilim Uzmanlığı Programındaki bir tez kapsamında uygulanmaktadır.

Anket 28 soru içermektedir ve cevaplama süresi yaklaşık 15 dakikadır. Cevaplarınız eğitim fakültelerindeki temel sorunlar hakkında daha detaylı bilgi edinmemize ve Strateji ve Bütçe Başkanlığımızca hazırlanmakta olan yükseköğretim sistemine ilişkin kalkınma planı, yıllık program, sektörel stratejiler, bütçe ve yatırım programı hazırlık sürecinde ihtiyaç duyulan veriye dayalı politika geliştirilmesine önemli bir katkı sağlayacaktır. Bütün cevaplar gizli olup, sizlerden elde edilen cevaplar araştırmanın amacı dışında kullanılmayacaktır. Araştırmaya katılım gönüllü olup, çalışmanın herhangi bir bölümünde yanıtlamayı bırakabilirsiniz. Bu durum size hiç bir sorumluluk getirmeyecektir. Araştırma ile ilgili sorularınız için aşağıda iletişim bilgileri yazılı kişilerle iletişime geçebilirsiniz.

Cevaplarınızı en geç **xx.xx.2019 mesai bitim tarihine kadar tolga.balci@sbb.gov.tr** adresine ulaştırmanızı bekliyoruz.

Araştırmaya katılmayı kabul ediyorsanız lütfen aşağıdaki "Kabul ediyorum" kutucuğunu işaretleyerek (X) (Boş kutucuğun üzerine tıklamanız yeterlidir) anketimizi cevaplamaya başlayınız.

☐ **Kabul ediyorum**

☐ **Kabul etmiyorum**

Anket Doldurma Tarihi

Gün		Ay		Yıl			
				2	0	1	9

Araştırmacı
Adı-Soyadı: Eğitim ve Kültür Dairesi Başkanı Tolga BALCI
Adres: T.C. Cumhurbaşkanlığı Strateji ve Bütçe Başkanlığı Necatibey Caddesi No:110/A, Çankaya, Ankara
Telefonu: 0 312 294 65 03
E-posta: tolga.balci@sbb.gov.tr

Sorumlu Araştırmacı
Adı-Soyadı: Prof. Dr. A. Sinan TÜRKYILMAZ
Adres: Hacettepe Üniversitesi Nüfus Etütleri Enstitüsü, Beytepe, Ankara
Telefonu: 0 312 297 73 67
E-posta: aturkyil@hacettepe.edu.tr

DEMOGRAFİK BİLGİLER

LÜTFEN YANITLARINIZI KUTU İÇİNE TIKLAYINIZ.

1. Cinsiyetiniz nedir?

[1] Erkek

[2] Kadın

2. Tamamladığınız yaşınız kaçtır?
LÜTFEN HER BİR KUTUCUĞA BİR RAKAM GELECEK ŞEKİLDE, BİTİRDİĞİNİZ YAŞI GİRİNİZ.

3. Görev yapmakta olduğunuz Eğitim Fakültesinde kaç yıldır çalışıyorsunuz?
LÜTFEN HER BİR KUTUCUĞA BİR RAKAM GİRİNİZ. ÖRNEĞİN, 9 YIL ÇALIŞMIŞSANIZ İLK KUTUCUĞA 0, İKİNCİ KUTUCUĞA 9 RAKAMINI GİRİNİZ.

4. Eğitim fakültesinde kaç yıldır dekan pozisyonunda görev alıyorsunuz?
LÜTFEN HER BİR KUTUCUĞA BİR RAKAM GİRİNİZ. ÖRNEĞİN, 9 YIL ÇALIŞMIŞSANIZ İLK KUTUCUĞA 0, İKİNCİ KUTUCUĞA 9 RAKAMINI GİRİNİZ.

5. Lisans eğitiminizi eğitim fakültesinde mi tamamladınız? (Kutucuğa tıklamanız yeterlidir.)

[1] Evet ⟶ *7. SORUYA GEÇİNİZ.*

[2] Hayır ⟶

6. Görev yapmakta olduğunu eğitim fakültesi lisans eğitiminizi tamamladığınız eğitim fakültesi ile aynı fakültesi mi?

[1] Evet

[2] Hayır

HİZMET ÖNCESİ EĞİTİME/EĞİTİM FAKÜLTEİERİNE GİRİŞ AŞAMASI

7. Öğretmen yetiştirme sistemini hizmet öncesi eğitime giriş, hizmet öncesi eğitim, atama/yerleştirme ve hizmet içi eğitim kapsayan bir sistem olarak tanımlandığımızda sistemin en sorunlu aşaması olarak hangi aşamayı söylersiniz?

[1] Hizmet öncesi eğitime giriş

[2] Hizmet öncesi eğitim

[3] Atama/Yerleştirme

[4] Hizmet içi eğitim

8. Hizmet öncesi eğitime kabul sürecindeki çoktan seçmeli, merkezi sınavı yeterli buluyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla ⟶ *9. SORUYA GEÇİNİZ.*

[4] Çok sık ⟶ *9. SORUYA GEÇİNİZ.*

9. Hizmet öncesi eğitime kabul sürecindeki merkezi sınavı yeterli bulmanız için ne gibi bir değişiklik önerirsiniz?
BİRDEN FAZLA ŞIK İŞARETLEYEBİLİRSİNİZ.

[A] Merkezi sınav uygulanmaya devam edilmeli fakat eğitim fakültelerine belirli bir sıralamanın üzerindeki öğrenciler aday olabilmeli.

[B] Merkezi sınavdaki soruların biçimi değiştirilmeli.

[C] Merkezi sınava ek olarak mesleğe yatkınlık ve psikolojik testler gibi ek testler uygulanmalı.

[D] Merkezi sınav kaldırılmalı ve eğitim fakülteleri klasik usulde sınav uygulamalı.

[E] Merkezi sınav kaldırılmalı, eğitim fakülteleri klasik usulde sınav uygulamalı ve klasik sınavda başarılı olan adaylara mesleğe yatkınlık ve psikolojik testler gibi ek testler uygulanmalı.

Diğer *(LÜTFEN BELİRTİNİZ)* _____

10. Hizmet öncesi eğitime kabul sürecinin öğretmen kalitesini etkilediğini düşünüyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

HİZMET ÖNCESİ EĞİTİM/EĞİTİM FAKÜLTELERİ

11. 4 Kasım 1981 tarihinde yürürlüğe konulan "Yükseköğretim Kanunu" ile öğretmen yetiştiren eğitim birimlerinin lisans düzeyinde eğiti veren "Eğitim Fakültesi" adı altında yeniden yapılandırılmasını olumlu bir gelişme olarak kabul ediyor musunuz?

[1] Hiç ⟶ *12. SORUYA GEÇİNİZ.*

[2] Bazen

[3] Sıklıkla

[4] Çok sık

12. Öğretmen yetiştiren eğitim birilerinin eğitim süresiyle bu birimlerden mezun olan öğretmen adaylarının kalitesi arasında doğru orantılı bir ilişki olduğunu düşünüyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

13. 1982 yılında 17 olan eğitim fakültesi sayısı 2006 yılında 63'e, 2018 yılı itibarıyla da 97'ye ulaşmıştır. Bu gelişimi olumlu bir gelişme olarak değerlendiriyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

HİZMET ÖNCESİ EĞİTİM/EĞİTİM FAKÜLTELERİ

11. 4 Kasım 1981 tarihinde yürürlüğe konulan "Yükseköğretim Kanunu" ile öğretmen yetiştiren eğitim birimlerinin lisans düzeyinde eğiti veren "Eğitim Fakültesi" adı altında yeniden yapılandırılmasını olumlu bir gelişme olarak kabul ediyor musunuz?

[1] Hiç ⟶ *12. SORUYA GEÇİNİZ.*

[2] Bazen

[3] Sıklıkla

[4] Çok sık

12. Öğretmen yetiştiren eğitim birilerinin eğitim süresiyle bu birimlerden mezun olan öğretmen adaylarının kalitesi arasında doğru orantılı bir ilişki olduğunu düşünüyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

13. 1982 yılında 17 olan eğitim fakültesi sayısı 2006 yılında 63'e, 2018 yılı itibarıyla da 97'ye ulaşmıştır. Bu gelişimi olumlu bir gelişme olarak değerlendiriyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

14. Eğitim fakültelerinde görev yapan akademik personelin gerekli niteliklere haiz olduğunu düşünüyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

15. Eğitim fakültelerindeki öğretim programlarının 21.yy'ın gerektirdiği becerilere sahip öğretmen adaylarını yetiştirme noktasında yeterli buluyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

16. Eğitim fakültelerindeki staj uygulamasını yeterli buluyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

17. Görev yapmakta olduğunuz eğitim fakültesindeki fiziki imkânlarını yeterli buluyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

18. Görev yapmakta olduğunuz eğitim fakültesinde kaç öğrenci var?

19. Görev yapmakta olduğunuz eğitim fakültesinde kaç program var?

20. Görev yapmakta olduğunuz eğitim fakültesinde kaç derslik var?

21. Görev yapmakta olduğunuz eğitim fakültesinde öğrenim gören öğrencilerinizin gerçekten öğretmenlik mesleğinin gerektirdiği niteliklere sahip olduğunu düşünüyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

ADAY ÖĞRETMENLİK SÜRECİ

22. Devlet Memurluğuna girişte 2002 yılı itibarıyla uygulamaya konulan "Kamu Personeli Seçme Sınavı (KPSS)"nın 2003 yılından itibaren öğretmen atamaları için de esas alınmasını durumunu olumlu değerlendiriyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

23. KPSS uygulamasının mevcut haliyle devam etmesi gerektiğini düşünüyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

24. 2015 yılında uygulamaya konulan "Aday Öğretmenlik" uygulamasının yerinde bir uygulama olduğunu düşünüyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

25. Aday öğretmenlik sürecinde en az bir yıl fiilen çalışan ve performans değerlendirmesinde başarılı olan adayların yazılı sınava girmeye hak kazanacağı belirtilmektedir. Yazılı sınavda başarı sağlayamayan adayların farklı okulda görev alarak performans değerlendirilmesi sürecinin yeniden başlaması uygulamasının yerinde bir uygulama olduğunu düşünüyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

26. 2015 yılından bu yana uygulanmakta olan aday öğretmenlik uygulamasının başarıyla uygulandığını düşünüyor muşunu?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

27. Aday öğretmenlik sürecinde eğitim fakültelerinin aktif rol alması gerektiğini düşünüyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

28. Eğitim fakültesi dışında öğretmenlik atamasına kaynak teşkil eden lisans programlarından mezun olanlara uygulanan pedagojik formasyon eğitimi neticesinde bu öğrencilerin aday öğretmen olabilmesi uygulamasının doğru bir uygulama olduğunu düşünüyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

29. KPSS sonrası atama/yerleştirme sürecinin adil bir süreç olduğunu düşünüyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

HİZMET İÇİ EĞİTİM

30. Mevcutta Milli Eğitim Bakanlığı tarafından yürütülen hizmet içi eğitim hizmetinin yeterli kalitede olduğunu düşünüyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

31. Öğretmenlerin hizmet içi eğitimlere yeterli ilgiyi gösterdiklerine inanıyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

32. Hizmet içi eğitim süreçlerinde öğretmen yetiştiren birimlerin Milli Eğitim Bakanlığı ile yeterince işbirliği içinde çalıştığını düşünüyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

33. Hizmet içi eğitimlerin daha nitelikli hale getirilmesi için aşağıdakilerden hangisinin gerçekleştirilmesi gerektiğini düşünüyorsunuz?
BİRDEN FAZLA ŞIK İŞARETLEYEBİLİRSİNİZ.

[A] Hizmet içi eğitimlerin sayısı artırılmalı.

[B] Hizmet içi eğitimler mevcutta yapıldıkları mekânlardan farklı mekânlarda yapılmalı.

[C] Hizmet içi eğitim veren eğiticilerin nitelikleri artırılmalı.

[D] Milli Eğitim Bakanlığı ve öğretmen yetiştiren birimlerin işbirliği artırılmalı.

Diğer *(LÜTFEN BELİRTİNZ)* _____

APPENDIX 4: SECOND STEP QUASTIONNAIRE (Screenshot)

APPENDIX 5: TELEPHONE INTERVIEW VOLUNTEER PARTICIPATION FORM

Sayın katılımcı,

Bahse konu araştırma için Strateji ve Bütçe Başkanlığı Sektörler ve Kamu Yatırımları Genel Müdürlüğünden ve Hacettepe Üniversitesi Etik Komisyonundan gerekli izinler alınmıştır. Anket, Hacettepe Üniversitesi Nüfus Etütleri Enstitüsü Sosyal Araştırma Yöntemleri Bilim Uzmanlığı Programındaki bir tez kapsamında uygulanmaktadır. Yüksek lisans tez danışmanı Prof. Dr. A. Sinan TÜRKYILMAZ'dır.

Bu anket, hâlihazırda Türkiye'deki Eğitim Fakülteleri üzerine yapılan bir araştırmadır. Bu çalışma üç aşamalı olarak tasarlanmış olup bu soru kağıdının uygulanması araştırmanın **üçüncü aşama anketidir. Üçüncü aşamadaki soruların telefon görüşmesi ile tarafınıza yapılması planlanmaktadır. Sorular, araştırmacı Tolga BALCI tarafından hazırlanmıştır.**

Telefonda görüşmesinde tarafınıza yöneltilecek anket 20 soru içermektedir ve cevaplama süresi yaklaşık 10 dakikadır. Cevaplarınız, daha önceki aşamalarda da olduğu gibi eğitim fakültelerindeki temel sorunlar hakkında daha detaylı bilgi edinmemize ve Strateji ve Bütçe Başkanlığımızca hazırlanmakta olan yükseköğretim sistemine ilişkin kalkınma planı, yıllık program, sektörel stratejiler, bütçe ve yatırım programı hazırlık sürecinde ihtiyaç duyulan veriye dayalı politika geliştirilmesine önemli bir katkı sağlayacaktır. Bütün cevaplar gizli olup, sizlerden elde edilen cevaplar araştırmanın amacı dışında kullanılmayacaktır. Araştırmaya katılım gönüllü olup, görüşmemizin herhangi bir bölümünde yanıtlamayı bırakabilirsiniz. Bu durum size hiç bir sorumluluk getirmeyecektir.

Telefonla görüşmeyi kabul etmeniz durumunda tarafınıza telefon ile ulaşılacak ve sorular yöneltilecektir.

e-Postayı "Kabul ediyorum" şeklinde cevaplamanız durumunda telefon araması gerçekleştirilecek, e-postayı cevaplamamanız durumunda ise telefon ile görüşmeyi kabul etmediğiniz varsayılacaktır.

APPENDIX 6: THIRD STEP QUASTIONNAIRE

GÖNÜLLÜ KATILIM FORMU

Sayın katılımcı,

Bu anket, hâlihazırda Türkiye'deki Eğitim Fakülteleri üzerine yapılan bir araştırmadır. Bu çalışma üç aşamalı olarak tasarlanmış olup bu soru kağıdının uygulanması araştırmanın **üçüncü aşama anketidir. Sorular, araştırmacı Tolga BALCI tarafından hazırlanmıştır.**

Telefon ile yapılacak görüşmeye istinaden tarafınıza gönderilen e-postada telefonla görüşmeyi kabul ettiğinizden sizi aramaktayım.

Bu araştırma için Strateji ve Bütçe Başkanlığı Sektörler ve Kamu Yatırımları Genel Müdürlüğünden ve Hacettepe Üniversitesi Etik Komisyonundan gerekli izinler alınmıştır. Anket, Hacettepe Üniversitesi Nüfus Etütleri Enstitüsü Sosyal Araştırma Yöntemleri Bilim Uzmanlığı Programındaki bir tez kapsamında uygulanmaktadır. Yüksek lisans tez danışmanı Prof. Dr. A. Sinan TÜRKYILMAZ'dır.

Anket 20 soru içermektedir ve cevaplama süresi yaklaşık 10 dakikadır. Cevaplarınız, daha önceki aşamalarda da olduğu gibi eğitim fakültelerindeki temel sorunlar hakkında daha detaylı bilgi edinmemize ve Strateji ve Bütçe Başkanlığımızca hazırlanmakta olan yükseköğretim sistemine ilişkin kalkınma planı, yıllık program, sektörel stratejiler, bütçe ve yatırım programı hazırlık sürecinde ihtiyaç duyulan veriye dayalı politika geliştirilmesine önemli bir katkı sağlayacaktır. Bütün cevaplar gizli olup, sizlerden elde edilen cevaplar araştırmanın amacı dışında kullanılmayacaktır. Araştırmaya katılım gönüllü olup, görüşmemizin herhangi bir bölümünde yanıtlamayı bırakabilirsiniz. Bu durum size hiç bir sorumluluk getirmeyecektir. Araştırma ile ilgili sorularınız için aşağıda iletişim bilgileri yazılı kişilerle iletişime geçebilirsiniz.

Anket Doldurma Tarihi

Gün		Ay		Yıl			
				2	0	1	9

Araştırmacı
Adı-Soyadı: Eğitim ve Kültür Dairesi Başkanı Tolga BALCI
Adres: T.C. Cumhurbaşkanlığı Strateji ve Bütçe Başkanlığı Necatibey Caddesi No:110/A, Çankaya, Ankara
Telefonu: 0 312 294 65 03
E-posta: tolga.balci@sbb.gov.tr

Sorumlu Araştırmacı
Adı-Soyadı: Prof. Dr. A. Sinan TÜRKYILMAZ
Adres: Hacettepe Üniversitesi Nüfus Etütleri Enstitüsü, Beytepe, Ankara
Telefonu: 0 312 297 73 67
E-posta: aturkyil@hacettepe.edu.tr

DEMOGRAFİK BİLGİLER

LÜTFEN YANITLARINIZI KUTU İÇİNE TIKLAYINIZ.

1. Cinsiyetiniz nedir?

[1] Erkek

[2] Kadın

2. Tamamladığınız yaşınız kaçtır?

LÜTFEN HER BİR KUTUCUĞA BİR RAKAM GELECEK ŞEKİLDE, BİTİRDİĞİNİZ YAŞI GİRİNİZ.

3. Görev yapmakta olduğunuz Eğitim Fakültesinde kaç yıldır çalışıyorsunuz?

LÜTFEN HER BİR KUTUCUĞA BİR RAKAM GİRİNİZ. ÖRNEĞİN, 9 YIL ÇALIŞMIŞSANIZ İLK KUTUCUĞA 0, İKİNCİ KUTUCUĞA 9 RAKAMINI GİRİNİZ.

4. Eğitim fakültesinde kaç yıldır dekan pozisyonunda görev alıyorsunuz?

LÜTFEN HER BİR KUTUCUĞA BİR RAKAM GİRİNİZ. ÖRNEĞİN, 9 YIL ÇALIŞMIŞSANIZ İLK KUTUCUĞA 0, İKİNCİ KUTUCUĞA 9 RAKAMINI GİRİNİZ.

5. Lisans eğitiminizi eğitim fakültesinde mi tamamladınız? (Kutucuğa tıklamanız yeterlidir.)

[1] Evet ⟶

[2] Hayır ⟶ *7. SORUYA GEÇİNİZ.*

6. Görev yapmakta olduğunu eğitim fakültesi lisans eğitiminizi tamamladığınız eğitim fakültesi ile aynı fakültesi mi?

[1] Evet

[2] Hayır

HİZMET ÖNCESİ EĞİTİME/EĞİTİM FAKÜLTEİERİNE GİRİŞ AŞAMASI

7. Öğretmen yetiştirme sistemini hizmet öncesi eğitime giriş, hizmet öncesi eğitim, atama/yerleştirme ve hizmet içi eğitim kapsayan bir sistem olarak tanımlandığımızda sistemin en sorunlu aşaması olarak hangi aşamayı söylersiniz?

[1] Hizmet öncesi eğitime giriş

[2] Hizmet öncesi eğitim

[3] Atama/Yerleştirme

[4] Hizmet içi eğitim

8. Hizmet öncesi eğitime kabul sürecindeki çoktan seçmeli, merkezi sınavı yeterli buluyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla ⟶ *10. SORUYA GEÇİNİZ.*

[4] Çok sık ⟶ *10. SORUYA GEÇİNİZ.*

9. Hizmet öncesi eğitime kabul sürecindeki merkezi sınavı yeterli bulmanız için ne gibi bir değişiklik önerirsiniz?

BİRDEN FAZLA ŞIK İŞARETLEYEBİLİRSİNİZ.

[A] Merkezi sınav uygulanmaya devam edilmeli fakat eğitim fakültelerine belirli bir sıralamanın üzerindeki öğrenciler aday olabilmeli.

[B] Merkezi sınavdaki soruların biçimi değiştirilmeli.

[C] Merkezi sınava ek olarak mesleğe yatkınlık ve psikolojik testler gibi ek testler uygulanmalı.

[D] Merkezi sınav kaldırılmalı ve eğitim fakülteleri klasik usulde sınav uygulamalı.

[E] Merkezi sınav kaldırılmalı, eğitim fakülteleri klasik usulde sınav uygulamalı ve klasik sınavda başarılı olan adaylara mesleğe yatkınlık ve psikolojik testler gibi ek testler uygulanmalı.

Diğer *(LÜTFEN BELİRTİNİZ)* _____

10. 1982 yılında 17 olan eğitim fakültesi sayısı 2006 yılında 63'e, 2018 yılı itibarıyla da 96'ye ulaşmıştır. Bu gelişimi olumlu bir gelişme olarak değerlendiriyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

11. Eğitim fakültelerinde görev yapan akademik personelin gerekli niteliklere haiz olduğunu düşünüyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

12. Görev yapmakta olduğunuz eğitim fakültesindeki fiziki imkânları yeterli buluyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

13. Görev yapmakta olduğunuz eğitim fakültesinde kaç öğrenci var?

14. Görev yapmakta olduğunuz eğitim fakültesinde kaç program var?

15. Görev yapmakta olduğunuz eğitim fakültesinde kaç derslik var?

ADAY ÖĞRETMENLİK SÜRECİ

16. KPSS uygulamasının mevcut haliyle devam etmesi gerektiğini düşünüyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

17. 2015 yılında uygulamaya konulan "Aday Öğretmenlik" uygulamasının yerinde bir uygulama olduğunu düşünüyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

18. KPSS sonrası atama/yerleştirme sürecinin adil bir süreç olduğunu düşünüyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

HİZMET İÇİ EĞİTİM

19. Mevcutta Milli Eğitim Bakanlığı tarafından yürütülen hizmet içi eğitim hizmetinin yeterli kalitede olduğunu düşünüyor musunuz?

[1] Hiç

[2] Bazen

[3] Sıklıkla

[4] Çok sık

20. Hizmet içi eğitimlerin daha nitelikli hale getirilmesi için aşağıdakilerden hangisinin gerçekleştirilmesi gerektiğini düşünüyorsunuz?
BİRDEN FAZLA ŞIK İŞARETLEYEBİLİRSİNİZ.

[A] Hizmet içi eğitimlerin sayısı artırılmalı.

[B] Hizmet içi eğitimler mevcutta yapıldıkları mekânlardan farklı mekânlarda yapılmalı.

[C] Hizmet içi eğitim veren eğiticilerin nitelikleri artırılmalı.

[D] Milli Eğitim Bakanlığı ve öğretmen yetiştiren birimlerin işbirliği artırılmalı.

Diğer *(LÜTFEN BELİRTİNİZ)* _____

Anketimize katıldığınız için teşekkür ederiz.

APPENDIX 7: 21st CENTURY TEACHER

In the United States for the first time in 1991, agriculture, mining, construction, production, transportation and energy production, such as spending on industrial era goods, computer, server, printer, computer software (software), has remained behind the expenses of telephone and network devices (Trilling and Fadel, 2009). For this reason, 1991 is accepted as the year of transition from the Industrial Age to the Information Age.

Industrial economy focuses on the transformation of natural resources such as iron and oil into the final product such as automobiles and gasoline that individuals can use; focuses on data, information and the transformation of these data and knowledge into expertise and technological innovation. This transformation is affected the global economy, the mode of management and production; and individuals' daily life styles. The concept of demand[6] has become a global concept rather than a concept that expresses individuality with the rapid integration of economies.

Teachers had a monopoly on the power to acquire knowledge in pre-knowledge periods when schooling were not seen as a condition of social and economic development and information & communication technologies had not yet developed. However, with the transition to the Information Age, the information corpus was rapidly increasing and access to information was facilitated at the same speed. This has also led to a change in the role of the teacher in the education and training system. While the main task of the teacher in the pre-information age period was to transfer the knowledge to the student, the task of the teacher in our age is to teach the student to find the right information and produce knowledge by usefullinformation (Trilling and Fadel, 2014).

Production and therefore changes in daily life styles, labor force as a production process; the daily service to be offered to individuals who will participate as individuals in the daily service; Therefore, it has been revealed that the education system needs to change in a way that is appropriate to the needs of the 21st century. Skills, learning, teaching, learning environments and teacher concepts can be determined by discussing the responses of these concepts in the 21st century.

[6]Demand means desire supported by purchasing power.

Although the skills required by the economic and social life of the 21st century have a dynamic structure that can change in a short period of time, they are grouped under three headings: career and life, learning and innovation and digital literacy[7](UNESCO, 2014: xxvi).

Table: 21st Century Skills

Career and Life	Learning and Innovation	Digital Literacy
Flexibility and adaptation	Critical thinking and problem solving	Information literacy
Initiative and self-management	Communication and cooperation	Media literacy
Social and intercultural interaction	Creativity and innovation	Information and communication technologies
Productivity and accountability		
Leadership and responsibility		

Source: UNESCO, 2014.

As seen in Table 0.1, the skills required by the Information Age are intertwined with each other. This suggests that the occupations in the Information Age require high-level skills, complex thinking, and communication skills (Trilling and Fadel 2009). In order for the students to exist in the labor market and social life, the education system needs to provide these skills to the students.

In the 21st century, it is stated that the basic phenomenon that will structurally change the concept of learning and teaching is innovation and innovative technologies (Trilling and Fadel 2009). At this point, the issue of how innovative technologies, especially creativity, will be taught to the students comes into question. According to the director of the curriculum of the Napa New School of Technology in Northern California; innovation, innovative technologies and creativity cannot be transferred to students through teaching programs. It is stated that this situation is a result of the problems experienced in the adaptations of teachers towards information and communication technologies. It is stated that qualified teachers who can find creative

[7] Digital literacy refers to the skills of finding, understanding, analyzing, producing and sharing information through networking tools such as computers, smartphones and tablets.

and new solutions to students' questions play an important role in finding and transferring these concepts to the students. The 21st century teacher, whose main task is to find the right information with a critical approach and teach to produce knowledge; who can think critically, be flexible, adaptable, open to social and intercultural dialogue and cooperate, and take responsibility for finding the right information; creative, innovative, productive; It must be in a structure that is compatible with information and communication technologies.

APPENDIX 8: ETHIC COMMISION APPROVAL FORM

Tarih: 06.05.2019 08:27
Sayı: 35853172-755.02.06-
E.00000525717

T.C.
HACETTEPE ÜNİVERSİTESİ
Rektörlük

Sayı : 35853172-755.02.06
Konu : Tolga BALCI (Etik Komisyon İzni)

NÜFUS ETÜTLERİ ENSTİTÜSÜ MÜDÜRLÜĞÜNE

Enstitünüz Sosyal Araştırma Yöntemleri Anabilim Dalı Tezli Yüksek Lisans programı öğrencilerinden **Tolga BALCI**'nın, **Prof. Dr. A. Sinan TÜRKYILMAZ** danışmanlığında yürüttüğü "**Comparison of Different Data Collection Modes in Surveys: An Experiment on Fundemental Problems of the Faculty of Education in Turkey**" başlıklı tez çalışması Üniversitemiz Senatosu Etik Komisyonunun **30 Nisan 2019** tarihinde yapmış olduğu toplantıda incelenmiş olup, etik açıdan uygun bulunmuştur.

Bilgilerinizi ve gereğini saygılarımla rica ederim.

e-imzalıdır
Prof. Dr. Rahime Meral NOHUTCU
Rektör Yardımcısı

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Sevda TOP**

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