



Future Scenarios for the Improvement of Turkish Primary Education *

Serkan Koşar ¹, Nezahat Güçlü ²

Abstract

The purpose of this study is to analyze the current situation in Turkish Primary Education and determine the possible future scenarios towards changes in age population, probable problem areas in the future, alternative policy suggestions, and process of improving the quality in education. Therefore, qualitative research method and phenomenology design were conducted in the study. Purposeful sampling method, maximum variation, and criterion sampling were applied to select the participants. A semi-structural interview form was developed by the researcher and used to gather data in the study. Data of the study were examined in the dimensions of population and quality. The findings of the study demonstrated that the key factor in determining the success in primary schools was the quality of teachers. As a result, it can easily be said that Turkey needs to develop a model for improving quality in primary schools based on its own characteristics and conditions.

Keywords

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Introduction

Research on population, education, and the future of education gradually increases both in Turkey and worldwide and affects educational policies through expanding their sphere of influence (Anderson, 2010; Bengtsson & Saito, 2003; Châu, 1969; 1990; 2003; Frey, 2009; Friedman, 2009; Gürlesel, 2008; Hodgson, 1983; Hoşgör & Tansel, 2010; Kavak, 2010; McFalls, 2007; Robinson, 1999). Plans and policies formed for the future of education contribute to the design of educational process based on changing conditions (Curle, 1970; Field, Kuczera & Pont, 2007; Hanushek & Woessmann, 2010; Milojević, 2005; Saussois, 2006; Yinger & Borman, 1994).

Various studies have been carried out on population, education, and the future of education on preschool education, primary education, secondary education, and higher education levels across the world. Some of these studies are about early childhood education and its importance (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2010), "Education at a Glance" reports of OECD that aim to determine the situation of access to secondary education as well as economic and social contributions, "Millennium Development Goals" (United Nations [UN], 2003) and reports for following these goals worldwide (UN, 2011), "[Education for All (EFA)]" reports that are run on a main subject every year and make predictions for a quality education (UNESCO, 2004), the report for determining priorities and strategies in education (The World Bank, 1995), Turkey-Education Sector

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¹ Gazi University, Gazi Faculty of Education, Department of Educational Sciences, Turkey, skosar@gazi.edu.tr

² Gazi University, Gazi Faculty of Education, Department of Educational Sciences, Turkey, nguclu@gazi.edu.tr

Study (The World Bank, 2005), Key Data on Education in Europe report (Eurydice, 2009), European report on the quality of school education: 16 quality indicators (European Commission, 2000), and work focusing on trends in higher education to 2030 in terms of globalization and demography (Organization for Economic Co-operation and Development [OECD], 2009a).

Turkey is also affected by global developments in the field of education. Thus, it witnesses important developments. The basic dynamics of these developments are population projections and debates on the future of education. In this regard, various studies have been conducted on preschool education, primary education, secondary education, and higher education levels. Some of these studies focus on main problems in preschool education and primary education and solution suggestions for these problems (Özdemir, Bacanlı, & Sözer, 2007), work on system of transition to secondary education and higher education (Turkish Education Association [TEA], 2010), report on higher education strategy in Turkey (Council of Higher Education [CHE], 2007), statements on the reconstruction of higher education (CHE, 2011), study on the reflections of education, health, and social security systems in population and management to 2050 (Hoşgör & Tansel, 2010), report on population and education opportunities of Turkey to 2025 (Gürlesel, 2008), inferences about education in population and management report to 2050 (Kavak, 2010), the Ministry of National Education strategic plan (Ministry of National Education [MoNE], 2009), vision 2023 (The Scientific and Technological Research Council of Turkey [TUBITAK], 2005), population statistics and projections (Turkish Statistical Institute [TUIK], 2010), information society statistics (State Planning Organization [DPT], 2011), the millennium development report (DPT, 2010), development plans (DPT, 2006), population and health research (Turkey Demographic and Health Survey [TDHS], 2008), report on 2023 vision in education (Tuzcu, 2006), right to education and future perspectives report (TEA 2008), and "Education Monitoring Report" regularly run and published by the Education Reform Initiative every year.

Evaluating quality and taking actions for future in education depend on certain factors. Some of them are population and quality in education. According to Hoşgör and Tansel (2010), knowing population dynamics of the future depends on planning done for meeting the needs of the population in the first place. Taking steps from today to future is possible only through reliable population projections. To form policies on population and development and eliminate the existing problems, it is of great importance that the public sector determines the current situation adequately and uses proper monitoring and evaluation techniques through analyses including causality analysis (Ergöçmen, 2005). In this regard, population is a very important issue both for Turkey and worldwide. Thus, population indicators must be interpreted correctly, and decisions must be made in accordance with national interests by considering possible changes from past to future. According to the Human Development Report, Turkey ranks 92nd in the Human Development Index; estimated mean expected time in formal education is 11.8 years; and mean education time is 6.5 years (United Nations Development Programme [UNDP], 2011). Turkey in 2050 can be a healthy and educated country if plans are made and implemented by administrators from now on (Turkish Industry and Business Association [TUSİAD], 2011).

Different indicators may provide information on different aspects of any education system in the evaluation of the quality of education. Quality indicators in education can be used for defining the main aspects of education (i.e. *input*, *process*, and *outcome*) on school or system level. By the nature of indicators, education standard can be defined at two levels. While it refers to the degree to which an educational objective has been achieved on one hand, it shows the degree to which quality indicators have been expanded in education on the other hand (Cheng, 1997). Though there are some important differences, some indicators are dominant in classification. One such classification involves input, access, output, and outcome indicators. *Input indicators* involve the number of teachers, school buildings, the supply of teaching materials, the level of educational expenditures, and the cost of educational expenditures while *access indicators* involve distance to school facilities, the familial and cultural backgrounds of students, and direct education costs. *Output indicators* (aim to measure the degree to what objectives have been achieved) and *outcome indicators* (focus on the influence of

educational policies and programmes) are about objectives, but there may be differences between the two in terms of objectives (Vos, 1996). In general, no precise definition is made for the quality of education and the improvement of quality. The quality of education may be described based on *input* (the number of teachers, the amount of teacher training, and the number of textbooks), *process* (direct teaching time, active learning time), *output* (test scores, graduation rates), and *outcome* (subsequent employment) (Chapman & Adams, 2002).

There are various classifications about quality in education. The quality indicators of the European Commission (2000) are classified as *attainment levels* (mathematics, reading, sciences, the use of information and communication technologies, foreign language, learning to learn, civics), *success and transitions* (dropout, completion of upper secondary education, participation in tertiary education), *monitoring of education* (evaluation and steering of school education, parental participation), and *resources and structures* (education and training of teachers, participation in pre-primary education, the number of students per computer, educational expenditure per student). The classification of UNESCO (2004) involves *inputs* (teaching and learning materials, available classrooms, libraries, school facilities and other infrastructures, human resources, school management, leadership, a secure school environment, and community involvement), *teaching and learning process* (learning time, the influence of curriculum, teaching methods, student monitoring and evaluation methods, and classroom management strategies), and *outputs* (changes in values, attitudes, and behaviors; social benefits; and life skills). Based on the purpose of the present study, the following indicators and areas were selected from the classification of the European Commission: *acquisitions* (academic success-mathematics, reading, sciences-), *success and transition* (dropout), *monitoring of education* (evaluation and steering of school education, parental participation), and *resources and structures* (the number of students per computer and educational expenditure per student); and the following indicators and areas were selected from the classification of UNESCO: *inputs* (physical infrastructure-facility and equipment, school management, and human resources), *teaching and learning process* (learning time, student monitoring and evaluation methods), *outputs* (changes in values, attitudes, and behaviors; social benefits; and life skills). In this way, a classification of quality indicators was made for the present study. It was considered that adding “feedback” to input, process, and output would be beneficial to see the situation as a whole. The influence and applicability of educational policies and possible policy alternatives may be addressed within the scope of feedback.

The Future of Education and Scenario Analysis

Among future prediction methods are media-based methods (keyword analysis), interview-based methods (public opinion polls), time-based methods (time-series analysis), intuitive methods (paradoxes), actor-based methods (actor analysis), and result-oriented methods (issue management) (Lindgren & Bandhold, 2003). From a different standpoint, future prediction methods can be divided into two in general: quantitative methods and qualitative methods. Quantitative methods fall into two groups: causality relationship-based methods and time-series analyses. Prediction techniques based on causality relationship are regression analysis and econometric models. The most frequently used models in time-series analyses are transfer functions and vector autoregressive models. The basic assumption in both causality relationship-based and time-series-based models is that past relationships do not change in the future. Though this assumption may be true in the short term, it has less accuracy in the long term. Thus, quantitative methods come to have lower prediction power (Ülengin & Ülengin, 1997). Qualitative prediction methods include the Delphi technique, expert opinion, scenario analysis, and intuitive approaches (Anderson, Sweeney, Williams, Camm, & Martin, 2009).

Scenario technique was developed by big businesses of the private sector that were not satisfied with long-term planning methods. Such big businesses searched for a more flexible and less quantitative method involving revealing insights out of a lot of assumptions and foresights. These businesses wanted to take the long term as “possible” and “desirable future” in order to increase their benefits (Saussois, 2006). While short-term future estimations are based on mathematical and statistical models, long-term future predictions are based on experts (Ülengin & Ülengin, 1997). Scenarios do not mean predicting

the future. They are just concepts that may serve as alternative future assumptions that reflect different perspectives on past, present, and future developments. Scenarios are useful in that they provide a holistic perspective. They help policy makers go beyond daily routines and answer the questions (OECD, 2009b). Some problems can be solved in the short term through monetary resources and more human resources. Scenario planners deal with bigger structural and systematic problems that require long-term strategic thinking (Harris, 2006). Thus, projections facilitate creating knowledge-based visions (UNDP, 2008). Improving education system and increasing its quality is an important issue in Turkey. Therefore, the present study makes inferences about the future by addressing the improvement of the quality of primary education in the dimensions of national and international documents on education, population, and quality. The results obtained in this study will help provide quality education compatible with national and universal standards.

Studies and reports on this subject in Turkey and worldwide are local or global evaluations that determine the current situation and short-term trends. When the studies and reports run in Turkey are reviewed, it is clearly seen that there is a need for more research about the future. In this sense, focusing on primary education in detail and making inferences about the future, this study will contribute to literature.

Purpose of the Study

It is important that problems and possible policies regarding primary education system, which plays a key role in education system, be determined, and that possible future scenarios be built. The main purpose of this study is to determine possible future scenarios for the improvement of quality in primary education based on the change in population, future problem areas, and alternative policy recommendations by analyzing the current situation of primary education in Turkey. Furthermore, inferences are made about the change in primary school-age population. Another purpose of the study is to determine important problem areas, the current situation, and alternative policies within the context of quality in primary education. Lastly, attention is focused on possible scenarios for the improvement of quality in primary education. To this end, an attempt is made to answer the below-mentioned questions:

1. What kind of a change will occur in primary school-age population in the 2023 to 2050 period?
2. What are the main problem areas and the current situation regarding the quality of primary education?
3. What are policy alternatives for the improvement of quality in primary education?

Method

This section explains the research model used in the study, the study group, the development of the data collection tool, data collection, and data analysis.

Research Model

The qualitative research method was used in this study which was conducted to build future scenarios for the improvement of Turkish primary education. Qualitative research involves a qualitative process in which data collection methods such as observation, interview, and document analysis are used, and attempt is made to reveal perceptions and events in the natural environment in a realistic and holistic way (Yıldırım and Şimşek, 2006). Since the present study aims to make an in-depth examination of the phenomenon in its own reality, the qualitative research method was considered more appropriate for the study. Phenomenological design was adopted in the study. This design focuses on phenomena of which one is aware but about which one does not have a deep and detailed understanding (Yıldırım & Şimşek, 2006). Phenomenological perspective is at the center of qualitative research mentality (Mayring, 2000; Taylor & Bogdan, 1984).

Study Group

The study group was determined through purposeful sampling. Maximum variation sampling and criterion sampling were also used. Purposeful sampling allows in-depth analysis of situations assumed to involve rich information. The aim in maximum variation sampling is to create a relatively smaller sample and reflect the variation of individuals who may be a party to the problem addressed in this sample at the highest level. The aim in criterion sampling, on the other hand, is to study all situations that meet a range of pre-determined criteria (Yıldırım & Şimşek, 2006). In purposeful sampling, the researcher selects people who will be included in the study group based on his/her judgment and sets the study group that is most compatible with the research purpose (Balci, 2007). In this sense, the study group of the present study consists of top level executives of the Ministry of National Education and people who served as a director-general of primary education in the past. The study group involves 11 people from the Ministry of National Education (i.e. the president and two vice-presidents of the Republic of Turkey Head Council of Education and Morality, one deputy undersecretary, the director-general of basic education, and six heads of group) and 4 people who worked as a director-general of primary education in the past. In other words, the study group is composed of 15 people. The structure of the Ministry of National Education was changed with the *Decree on the Organizational Structure and Functions of the Ministry of National Education* issued with the resolution of the Council of Ministers numbered 25/8/2011-2011/652 and published in the Official Gazette numbered 14.09.2011/28054 (The Official Gazette, 2011). Thus, while the data were being collected, the research participants from the Ministry of National Education had been working there for one to six months as they had just been appointed.

Development of the Data Collection Tool

Semi-structured interview form was used in the study. A semi-structured interview form allows interviewees to express themselves (Büyüköztürk, Kılıç-Çakmak, Akgün, Karadeniz, & Demirel, 2012). In creating the interview form, national literature and foreign literature were reviewed in detail in accordance with the research purpose, and items were determined. In the process of creating the interview form; (a) related literature was reviewed; interviews were carried out with educators and academicians authoritative in the field who were not included in the study group; and a question pool made up of 12 questions was created based on the information collected through such interviews; (b) the 12-question interview form was submitted to educational sciences and assessment and evaluation domain experts for them to deliver an opinion on the form; (c) 12 questions were reduced to 9 questions based on the opinions of four educational sciences domain experts and two assessment and evaluation experts; (d) the questions were read by Turkish linguists in terms of meaning and clarity, and the interview form was improved with necessary corrections made; (e) the content and format adequacy of the nine-question semi-structured interview form was checked by taking the opinions of two top level executives of the Ministry of National Education and one former director-general of primary education who did not participate in the study; (f) and the interview form was finalized after one question was removed as it did not work adequately or measured just similar characteristics. As a result, the final version of the form contained 8 items. Besides the main questions in the finalized interview form, four probes were used in four questions and one alternative question was used in one question when needed so that the participants could organize their opinions better when they did not understand or misunderstood a question. These questions and probes are indicated in the findings section of this paper with the expression, "the main question/probe/alternative question ... was addressed to the participants".

Data Collection

In phenomenological research, data sources are individuals or groups who experience or can reflect the phenomenon which research focuses on (Yıldırım & Şimşek, 2006). The main data collection tool of phenomenological research is interview (Fraenkel & Wallen, 2008; Yıldırım & Şimşek, 2006). Interviews are carried out in order to reveal experiences and meanings concerning phenomena (Büyüköztürk et al., 2012). Interview is the most frequently used data collection technique in qualitative research (Yıldırım & Şimşek, 2006). Interview provides in-depth information about a specific research

subject or question (Büyüköztürk et al., 2012). Interview is a distinctive feature of qualitative research and is needed to determine the perspectives of participants (Rossman & Rallis, 2003). With interviews, an attempt is made to understand some unobservable phenomena such as experiences, attitudes, thoughts, intentions, comments, mental perceptions, and reactions (Yıldırım & Şimşek, 2006).

Interviews, which were collected for data collection, lasted 25 days in January and February in 2012 (from the 30th of January to the 23rd of February 2012). They were conducted with 11 people from the Ministry of National Education and 4 former directors-general of primary education (i.e. 15 people in total) through the data collection tool prepared by the researcher. The issue was outlined to the participants via e-mail and/or phone before the interviews, and they were asked for an appointment. Suitable dates and hours were determined, and the interviews were carried out face-to-face in the offices of the participants.

During the interviews, the participants were not manipulated by any means, and it was ensured that they would express their opinions comfortably. Besides the interview form prepared by the researcher, a tape recorder was used to prevent any loss of data. It was committed by the researcher that such records would be used for the purposes of this research only, and their consent was obtained. In addition, *Interview Agreement Form* was undersigned mutually. The tape recorder was put in a place visible to the participant at the beginning of each interview. After the interview was carried out and tape recorded, the tape recorder was turned off in a way visible to the participant again. Since two of the participants did not accept the use of a tape recorder, their answers to the questions were noted down by the researcher.

Data Analysis

The interviews recorded via tape-recorder were transferred to computer as an audio file and then transcribed. In this way, the researcher came to have both audio files and text files (Microsoft Word files) concerning the interviews. As a result, an 80-page dataset was obtained for 15 participants. The written documents were gone over while tape recordings were being listened so that transcriptions would be correct and complete.

After necessary measures were taken to ensure the correctness and completeness of the text files, these files were sent to the participants via e-mail. The fact that the files were received by the participants was confirmed. The participants were asked to carefully read the interview transcriptions, to make partial changes they considered necessary by using a different color, and to send the corrected text files back to the researcher. The texts sent back by the participants were compared with the previous texts formed by the researcher. The texts were finalized after necessary corrections were made. It was seen that the participants had tried to arrange the texts based on spelling and orthographic rules without disrupting the content integrity. The texts obtained in this way were kept and analyzed by the researcher in accordance with the research purpose.

The written documents obtained in the interview process were analyzed by taking into account relevant literature. The long answers given by the participants to the questions were shortened by the researcher by use of original statements without making any change in the main idea. To ensure confidentiality, the participants were indicated with the abbreviation *Top Level Executive (TLE)*, and each participant was numerated. Data were analyzed through descriptive analysis and content analysis, which are qualitative data analysis techniques. In descriptive analysis, the participants' opinions were indicated directly within the context of the pre-determined themes. In content analysis, concepts and concept sets in the interview texts were determined within the context of the research purpose, and codes were created out of them in such a way that a meaningful whole would be obtained out of them.

The most important criterion used in the evaluation of qualitative research is the credibility and reliability of the data obtained, data analysis, and results (Büyüköztürk et al., 2012). Thus, the strategies required for ensuring validity and reliability indicated by Yıldırım & Şimşek (2006) were taken into consideration in the present study. For example, one of the strategies used for improving the validity of the study is long-term interaction. According to Yıldırım and Şimşek (2006), interviewees are generally under the influence of researchers initially, and more reliable data may be obtained from participants as time passes with the environment of mutual trust established. Thus, in the present study, an attempt was made to improve the validity of the study by keeping the interviews with the participants as long as possible. Another way adopted for improving the validity of the study was member checking, as stated before in this paper. In addition, the maximum variation technique, which was used for determining the participants, contributed to the validity of the study in that it allowed revealing different and unique situations.

After the qualitative data were analyzed, future scenarios were built based on the participants' opinions and related literature. With these scenarios, areas of scenario were determined for the improvement of primary education system; the current structure was made clearer; policy recommendations and alternative solutions were provided; and possible future scenarios were built (Annex 1). Scenario analysis is not a simple prediction of the future. Rather, it indicates alternative assumptions about the future (OECD, 2009b). Thus, it can be said that scenario analysis is a strategic tool used for making flexible but long-term plans (JICSInfoNet, 2009). According to Turan and Şişman (2000), scenarios are always built about education systems in developed countries.

Findings

This section presents the findings obtained through the analysis of the research questions in the light of the research results.

Findings Concerning Population

Table 1 below presents the themes and codes about population that were obtained based on the participants' opinions.

Table 1. Findings Concerning Population

Themes	Codes	n
Changes in Primary School-age Population	Quantity	
	Increases	4
	Decreases	6
	Quality	
	Increases	8
	Decreases	1
The Possible Results of Changes in Primary School-age Population	Opportunity	8
	Problem	5
	Opportunity-Problem	8
	Optimum population	6
The Influence of Population on Education and Social Development	Qualified man power	4
	Economic development	3
	Continuing and in-service education	1
	Socialization	1

Findings Concerning the Changes in Primary School-age Population in Turkey between 2023 and 2050

The main question “What kinds of changes do you think will occur in the primary school-age population of Turkey between 2023 and 2050?” was addressed to the participants along with the probe items (a) *Quantity* and (b) *Quality*. The specific and important parts of the answers are summarized here with the participants’ own statements. The first question investigating what kinds of changes will occur in primary school-age population has two dimensions: quantity and quality. Except for three participants, all participants said that population would decrease in quantity. Except for one participant, all participants ($n = 14$) said that the population would either increase or decrease. Only TLE₁ stressed that population would go through a process of stability in the forthcoming period. While TLE₁ said that he firstly expected a stabilization which would be followed by a decrease, TLE₄, TLE₅, and TLE₇ said that population would increase in the upcoming 10 to 15 years. The participants who said that population could be on the rise expected such increase because of the frequent recommendation of the Prime Minister for having three children. The following statement of TLE₄ points to an important detail to consider, to the contrary of projections in literature: “The expected decrease in quantity may not occur if the 3-children recommendation of our prime minister is put into practice and economic, political, and cultural development of our country continues.” Literature contains no finding about the degree to which country leader’s discourse and statements are taken into consideration in relevant projections.

Findings Concerning the Possible Results of Changes in Primary School-Age Population in Turkey between 2023 and 2050

The main question “What could be the possible results of these changes?” was addressed to the participants along with the probe items (a) *Opportunities* and (b) *Problems*. The specific and important parts of the answers are summarized here with the participants’ own statements. The question investigating what could be the possible results of changes in primary school-age population has two dimensions: opportunities and problems. While some participants considered the changes in primary school-age population an opportunity ($n = 8$), some other participants ($n = 6$) considered it a problem. There were also participants ($n = 8$) saying that such changes are an opportunity but may turn into a problem if relevant processes are not managed well. Only TLE₇ was neutral in this matter. With the statement “Regardless of the population structure, what matters is reaching the people. The population may be small. However, if you cannot reach the people, it is again a problem. The population may be large. However, if you can reach the people, you can provide a lot of people with knowledge. What matters is reaching the people, the students.” TLE₇ highlighted the importance of access to education rather than regarding increase or decrease in population as an opportunity or a problem.

Findings Concerning the Influence of Population on Education and Social Development

The question “What do you think about the influence of population on education and social development?” was addressed to the participants. The specific and important parts of the answers are summarized here with the participants’ own statements. In response to the question investigating the influence of population on education and social development in a country, the participants mentioned the importance of optimum population, qualified man power, and economic development as the influences of population on education and social development. The participants indicated the importance of optimum population for education ($n = 6$), the importance of qualified man power ($n = 4$), and the influence of economic development ($n = 3$) on education and development. Only TLE₃ focused on continuing education and in-service training, and only TLE₈ made mention of socialization.

The participants’ opinions about the influences of population on education and social development are presented under a couple of titles. One of these titles is the importance of optimum population. The participants stressed that young population is an opportunity, but may turn into a problem if such population is not educated properly and does not have access to adequate education with the following statements: “Population may be a big power of us. However, it may become a great weakness if we fail to educate these people and provide them with the knowledge required by being in the world. What matters is to reach and educate the people.” (TLE₇); “Balance is very important. Population must not decrease, but it must

not increase more than enough, either.” (TLE₉); “Worry about education unavoidably emerges in a population one third of which is engaged in educational activities. We clearly see the effect of population structure or size on educational process.” (TLE₁₀); “As population increases, educational problems increase in direct proportion. How these problems will be dealt with has to be known.” (TLE₁₁); “The national income of the country is calculated through dividing the gross national product by the number of people. The smaller our population is, the higher this value is. Quality in education also increases.” (TLE₁₃); and “Large population brings about some problems especially for educational activities such as problems about physical environment.” (TLE₁₅)

Findings Concerning the Main Problem Areas in the Improvement of Quality in Primary Education

Table 2 presents the themes and codes about quality that were obtained based on the participants’ opinions.

Table 2. Findings Concerning the Improvement of Quality

Themes	Codes	n
Input	Physical capacity	11
	Human resources	13
	Educational expenditure per student and the number of students per computer	10
Process	Learning time	10
	Student monitoring and evaluation methods	10
	Evaluation and steering of education (the effectiveness of the education system)	5
	Parental involvement	9
Output	Academic success and exams	11
	Dropout	11
	Changes in values, attitudes, and behaviors; social benefits; and life skills	8

Input

a. Physical Capacity

The participants said that one of the main problem areas in the improvement of quality is physical capacity. The points highlighted in physical capacity are the inadequacy of educational infrastructure and physical conditions ($n = 5$), inadequacy of physical capacity ($n = 4$), lack of planning about capacity ($n = 3$), and overcrowded classrooms and overcrowded schools ($n = 2$). TLE₁₀ emphasized the relationship between physical capacity and student achievement while TLE₇ argued that there is no problem about physical capacity as this problem has been eliminated with the new schools and classrooms constructed. The specific and important parts of the answers are summarized here with the participants’ own statements.

b. Human Resources

The participants stated that human resources in general and teacher qualification in particular are among the problem areas in the improvement of quality. A great majority of the participants consider teacher qualification, teacher training, and the improvement of teachers’ competency ($n = 13$) important in terms of human resources. Some participants said that pre-service and in-service training are important for the continuous development of teachers and stressed that the Ministry of National Education and universities should work together in coordination to train teachers ($n = 2$). The specific and important parts of the answers are summarized here with the participants’ own statements.

c. Educational Expenditure per Student and the Number of Students per Computer

The participants regard educational expenditure per student and the number of students per computer important in the improvement of quality. Some of the points stressed by the participants are as follows: expenditure per student is inadequate and must be increased ($n = 5$); expenditures are adequate, but what matters is for what money is spent ($n = 3$); and there are still deficiencies though both equipment infrastructure and technological infrastructure have developed ($n = 7$). The specific and important parts of the answers are summarized here with the participants’ own statements.

Process

The main question “*What are the main problem areas in the improvement of quality in primary education*” was addressed to the participants along with the probe items (a) *Learning time*, (b) *Student monitoring and evaluation methods*, (c) *Evaluation and steering of education (effectiveness of the education system)*, and (d) *Parental involvement*.

a. Learning Time

The participants mentioned learning time as one of the main problem areas in the improvement of quality. Most of the participants recommend increasing learning time to 12 years in Turkey ($n = 7$) while few participants think that learning time will be enough if secondary education, which is not a legal obligation, is added to compulsory education ($n = 2$). The specific and important parts of the answers are summarized here with the participants’ own statements. The participants said that learning time is short in Turkey relative to develop countries. TLE₂ and TLE₆ noted that we fail even in the current eight-year education with the following statements “*Mean learning time in Turkey is currently 5 to 6 years.*” (TLE₂); “*School time in the general population in Turkey is 6.5 years. In other words, we are 7th grade dropouts as a nation.*” (TLE₆).

b. Student Monitoring and Evaluation Methods

The participants indicated student monitoring and evaluation methods as one of the main problem areas in the improvement of quality. The observation of students, who are one of the key elements of the system, and their development requires well-functioning monitoring and evaluation methods. However, most of the participants stressed that monitoring and evaluation methods are inadequate or ineffective ($n = 8$); an effective monitoring and evaluation is possible via e-school system ($n = 1$); and monitoring and evaluation results cannot be transferred to the subsequent years ($n = 1$). The specific and important parts of the answers are summarized here with the participants’ own statements.

The participants said that student monitoring and evaluation is inadequate or ineffective in the education system. With the statement, “*The current Turkish education system lacks a monitoring and evaluation system to provide basic indicators that are needed for the improvement of quality in education. An assessment and evaluation system that allows monitoring student achievement systematically has not been established yet. There is a lack of data that show curriculum-based achievement differences on the basis of schools and allow developing policies and taking measures.*” TLE₁ stressed the inadequacy of monitoring and evaluation system and thus difficulty in the systematic monitoring of student achievement.

c. Evaluation and Steering of Education (Effectiveness of the Education System)

The participants said that evaluation and steering of education (i.e. effectiveness of the education system) is one of the main problem areas in the improvement of quality. Some of the points emphasized by the participants are establishment of an effective evaluation system that is suitable for continuous development ($n = 2$), formation of new values for determining the effectiveness of the education system ($n = 1$), our (educators’) need to change our perspective on education ($n = 1$), and establishment of an evaluation system that is to be monitored by centralized administrations ($n = 1$). Only TLE₅ stated that centralized policies will not be adequate and thus a system must be established on school and province levels. The specific and important parts of the answers are summarized here with the participants’ own statements. TLE₁ stressed that centralized administrations must evaluate and steer education. TLE₁ justified his statement as follows “*The acquisition of basic skills by students who do not have a right to determine and select their school and teachers must not be put at risk at the discretion of schools and individuals.*” To the contrary of TLE₁, TLE₅ said that centralized policies will not be adequate, and administering different features from a single center will cause problems.

d. Parental Involvement

Parental involvement plays an important role in the improvement of quality. The participants highlighted the importance of parental involvement and said that parental involvement in educational activities is important ($n = 8$). A lot of points were emphasized by the participants from parental involvement in decision-making processes to parental involvement in educational process. While TLE₆ highlighted the financial contribution of parents to their children, TLE₁₅ stressed the unconsciousness of parents regarding education. The specific and important parts of the answers are summarized here with the participants' own statements. TLE₁ and TLE₂ mentioned the importance of parental involvement in decision-making processes and educational process respectively. While the statement of TLE₁ is *"It is mostly believed that the defined functions and duties are for 'supporting the school administration' and are under the control of the principal."* TLE₂ delivered his opinion as follows: *"An education or school system that lacks parents is like a man who lacks legs."* That clearly shows the importance of parental involvement for education system.

Output

a. Changes in Values, Attitudes, and Behaviors; Social Benefits; and Life Skills

The participants mentioned the importance of the changes in the values, attitudes, and behaviors with which primary school students are supposed to be provided for social benefits and life skills. The participants consider creative thinking, communication skills, problem-solving, and sense of discovery ($n = 4$) and value-based affective education ($n = 4$) important. TLE₃ and TLE₁₁ emphasized that these acquisitions are more important for students and should not be assessed to give grades to students, and exams are not the most important thing. The specific and important parts of the answers are summarized here with the participants' own statements.

With the statement, *"The school administration and teachers have to collaborate to provide students with these skills in a very effective way."* TLE₁ stressed that schools and teachers should make an effort to provide students with these skills. TLE₃ mentioned the importance of affective education in primary education system as well as the importance of being a good citizen. In addition, TLE₃, TLE₄, TLE₈, and TLE₁₁ stated that these skills should be treated as values. TLE₃ and TLE₁₁ said that evaluating them academically would be wrong with the following statements: *"I accept no academic success in the first stage of primary education. No assessment is needed there. These children have to receive basic citizenship education regardless of their skills."* (TLE₃); *"I think there are more important things than exams. The personal skills of teachers come into play in providing individuals with these skills."* (TLE₁₁)

b. Academic Success and Exams

The determination of academic success and exams in education system in general and in primary education system in particular were indicated as one of the main problem areas by the participants. It is a general opinion ($n = 11$) that the determination of academic success and exams are problems. While some participants thought that inequality prevails in exams, some others touched upon the lack of a proper assessment and evaluation system for the determination of academic success. The specific and important parts of the answers are summarized here with the participants' own statements.

With the statement, *"Data allowing a sound comparison for the evaluation of academic success across the country are quite limited. Discussions on the quality of education are mostly based on the results of SBS (placement test). Exam-oriented education is an important obstacle to accomplishing the objectives of primary education or compulsory education."* TLE₁ highlighted the difficulty of reaching reliable data in Turkey and pointed to the obstacles to accomplishing the objectives of primary education in a system and structure of this sort. TLE₁ also said that the students proceeded to the higher grades without having minimum qualifications due to imperfect measurement standards in the curriculum. That is worrisome in the long term. TLE₂ and TLE₁₂ made mention of the low achievement of the students in Turkey in international tests such as PISA, TIMMS, and PIRLS. He indicated the accumulation at level 1 and below in these tests and said that this level tested memorized knowledge. With the statement *"Level 1 and below it indicate reaching and getting the ready-made knowledge. 90% of us acquire the ready-made knowledge and receive a*

certificate of high achievement with such knowledge." TLE₂ summarized the education system in Turkey. This is what we, Turkey, have in national and international tests.

c. Dropout

The participants indicated dropout as a problem not only in Turkey but also worldwide. Dropout was regarded as a main problem area in terms of access to education ($n = 12$), and some participants ($n = 5$) told that the problem affects girls more. TLE₆ and TLE₁₂ suggested that making schools attractive and accessible will reduce dropout while TLE₅ stated that the problem cannot be solved in the short term. With the statement *"Quality should be evaluated in terms of access to education, too. Unfortunately, performance of primary education system is not satisfactory in terms of access to education. Though dropout rates are quite low, it is a serious problem that compulsory education-age students drop out."* TLE₁ showed how serious dropout problem is and noted that 10% of the adult population cannot receive compulsory education the way things are going. If long-term measures are not taken against dropout problem in the long term, this problem will become more serious. TLE₂ told that dropout is one of the indicators of EFA. Turkey has to minimize this problem as it undersigned these international documents and committed that it would reduce dropout. Apart from that, TLE₂ and TLE₄ said that primary education is compulsory, but it is still not culturally well-established across the country. TLE₄ told his opinion on this subject as follows: *"Compulsory primary education has been accepted legally, but it has not been culturally accepted yet. The main issue is that this cultural aspect of the problem affects girls more."* TLE₆ and TLE₁₂ opined that making schools attractive and accessible may decrease dropout.

Findings Concerning the Priority of the Problem Areas in the Improvement of Quality in Primary Education

The main question *"What do you think should the order of priority of the problem areas in the improvement of quality in primary education be like?"* was addressed to the participants with the alternative question *"Which one(s) of the problems we have mentioned do you think is/are of first priority?"* The priorities of the participants regarding the problem areas in the improvement of quality are as follows: teacher qualification ($n = 7$), the effect of the curriculum ($n = 3$), change of educational mentality ($n = 1$), and academic success and exams ($n = 1$). Except for TLE₇'s priority (i.e. change of mentality), all priorities can be associated with one of input, process, or output in terms of the improvement of quality. Change of mentality, on the other hand, can be included in any and all of these stages or processes because mentality determines our perspective on education in the process of improving quality in education. The participants mostly noted that teacher qualification should be enhanced in the first place. The statements of some participants in this matter are as follows: *"Our priority is teacher competency."* (TLE₁); *"We have an idiom saying 'If a shepherd really wants it, he can get milk from a male goat'. If a teacher really wants it, she or he can change the educational environments, classrooms."* (TLE₃); *"There are a lot of factors influential on quality in education, but the most fundamental one is teacher that I put first."* (TLE₅); *"Human resources have the top priority among the main problems in the improvement of quality. In other words, people responsible for educational activities are of first priority."* (TLE₈); *"I think the most important thing is human resources."* (TLE₁₀). In this sense, it is possible to say that unless teacher qualification problem is overcome, other factors influential on quality do not make any sense, and that success can be achieved in other areas more easily if teacher qualification problem is eliminated.

In response to the question investigating the policies that can be implemented in order to solve the problems in the improvement of quality in primary education, the participants mentioned planning ($n = 4$), inter-institutional cooperation ($n = 4$), value education ($n = 1$), culture of responsibility ($n = 1$), abandonment of centralization ($n = 1$), and political support ($n = 1$) as a solution. The participants focused most attention on lack of planning and inadequate inter-institutional cooperation. Moreover, the participants laid an emphasis on values, stated that culture of responsibility should be introduced to employees, criticized the decisions made by a single center, and stressed the necessity of political support. TLE₁ and TLE₈ noted that decisions should be made, and policies should be implemented based on specific plans. Their statements are as follows: *"An inventory of resource allocation and quality should be created on national level, and an action plan allowing a balanced allocation in the medium term should be put into*

practice." (TLE₁); "We have focused a special attention on the quality of education since 2011. Our future policies should involve planned steps that will enhance the quality of education, that is, provide individuals with all necessary qualifications to bring their life skills to the highest point." (TLEs)

Findings Concerning the Possible Factors Influential on the Implementation of Policies

In response to the question investigating the possible factors influential on the policies to be implemented for improving primary education quality, the participants made mention of social factors ($n = 8$), financing support ($n = 3$), the support of political authority ($n = 3$), and lack of management philosophy ($n = 1$). According to the participants, the policies of top priority should be adopted by the society; these policies should be explained to the society well; a social environment of trust should be created; and social status and awareness should be developed. These opinions of the participants are clear in their following statements: "We should socially accept that we are face to face with generation Z. Individuals of this generation get bored more quickly. They want to get result immediately. We cannot be satisfied with this generation if we maintain old paradigms and the mentality of the 1920s." (TLE₃); "A bridge should be built between the past and the future so that a child becomes self-confident." (TLE₄); "This is indeed social engineering, sociological engineering. For that reason, you should build education on your own problems because a society may have different problems from another society, which leads to different expectations from education." (TLE₅). Likewise, TLE₁, TLE₃, and TLE₁₂ noted lack of political support (i.e. the political authority not supporting the solution-oriented policies proposed) as one of the factors preventing the implementation of policies. Additionally, with the statement "An education system that incorporates opportunity and responsibility, gives initiative, and accounts within the framework of a management philosophy must be provided on all levels." TLE₆ stressed the importance of a management philosophy. Lack of a responsibility-based management responsibility is considered a factor that may prevent the implementation of relevant policies.

Discussion, Results and Suggestions

The participants of this study, which investigates future scenarios about the improvement of Turkish primary education system, suggested that general population and school-age population would decrease in the future. In general, population has reached a point of transition, and the course of growth has been in tendency to slow down (Haub, 2010). The participants stated that decrease in population would make a positive contribution to the improvement of quality in education. In this regard, possible future knowledge or skills must be taken into consideration in shaping future schools (Mäkitalo-Siegl, Zottmann, Kaplan, & Fischer, 2010). The phenomenon of population must never be ignored when these changes are in question. Almost all of the participants agreed that the education system must be re-constructed based on changes in population trends. Here, the most important issue is the fall to occur in the number of students per school. Education is considered important for a sound population structure in the future. Relationship between population and education is important because the size of population determines the scale of educational service (Atauz, 2002). Population growth rate is important for a sound population structure, too. The participants also considered population growth rate important for population structure. The participants stated that a well-educated population would have a direct influence on social development and play an active role in the development of the country. Investing in next generation is of great importance for Turkey, which is in the process of demographic transition, as next generation can make a great contribution to its development (The World Bank, 2008).

Physical capacity is important for the improvement of quality. The participants also highlighted the importance of physical capacity. It is reported that that physical conditions are as important as human resources in the education system (Schneider, 2002). Research on the indirect influence of physical conditions on student success proves that, too (Earthman, Cash & Berkum, 1995; Schneider, 2002; Slate and Jones, 2005). The participants took the inadequacy of physical capacity from a different perspective. They stressed that overcrowded schools are a problem just like overcrowded classrooms in the education system, and big schools should be abandoned. There is a relationship between student success and schools' physical structure (Earthman, 2004). Students receiving education in new or

restored buildings have higher student success (Chan, 1979). The participants regard teacher qualification as a basic factor influential on the improvement of quality. The positive influence of teacher qualification on the development and success of students has drawn the attention to teacher competency in many countries (TED, 2009). Teacher competency and teacher training are of vital importance in education systems. Since there is a disconnection between the Council of Higher Education (CHE), the Assessment, Selection, and Placement Center (OSYM), and the Ministry of National Education (MoNE) in terms of the employment and training of teachers in Turkey, there are no systematic information exchange and joint planning (The World Bank, 2011). The participants highlighted that teachers graduate from universities at a satisfactory level but the Ministry of National Education should develop policies allowing them to develop themselves after they graduate. Lack of a professional mentality regarding the teaching profession makes it difficult to employ highly-qualified teachers, develop teachers, and ensure sustainability in them (The World Bank, 2011). The participants noted that teacher qualification is very important and comes first. Thus, it can be said that teachers are the starting point of the process of improving quality. Enhancing teacher qualification and cooperation with teacher training institutions are still important agenda items for the Ministry of National Education.

Countries that allocate considerable amount of resources for education have problems about effective use or allocation of resources. The participants evaluating the case in Turkey thought that what is more important is the way resources are used. When educational investments made by parents are calculated in percentage, it is seen that Turkey must revise its efficiency in total educational expenditures (The World Bank, 2011). The participants stressed the difficulty of calculating expenditures per student and said that relevant amounts do not reflect expenditures exactly. It is already known that official data concerning educational expenditures do not reflect total expenditures in Turkey (Karip, 2007). In addition, the participants emphasized that technology is important in education; they attach more importance to technological infrastructure and software; and there are still technological deficiencies. The participants also noted that students can access technology somehow, and technology makes the lives of students easier. In developed countries, basic education generally lasts 10 or more years. This being the case, the participants mostly supported 12-year basic education. According to the Human Development Report, estimated mean expected time in formal education is 11.8 years while mean education time is 6.5 years in Turkey (UNDP, 2011). That may be an indicator of the fact that we do not succeed in eight-year education. Learning time varies from country to country. Level of development and socio-cultural structure are influential on this variation. Turkey must design a specific learning time based on its own characteristics and conditions. 12-year compulsory education is important and necessary providing that required infrastructure and capacity are provided.

The participants attach great importance to parents' support for a quality education. Research indicates that parents' support and involvement are very important (Tezel-Şahin & İner, 2005). Support provided by parents in every stage of the education system is an important factor influential on success in education. However, parents get involved in school, school administration, or school activities only to a limited extent at the present time. The participants associated parental involvement with financial contribution and said that parents allocate a huge amount of budget for their children. In the current system, parents do not get involved in decision-making processes regarding the evaluation of school and the implementation of educational activities (Karip, 2007). In general, it is very important for educational success that parental involvement be encouraged and schools receive the support of parents. In this sense, schools should be made open to parents, and it should be ensured that parents visit schools without any forcing. A distinction should be made between success, which involves bringing big benefits to the society, and other results. Education plays an important role in ensuring the creative and emotional development of children and providing them with skills, values, knowledge, and attitudes that they need to be a responsible citizen. The degree to which education achieves that is important (UNESCO, 2004). Primary education aims to provide students with certain acquisitions. However, not all of them are academic acquisitions. There are also human acquisitions (i.e. skills required by the social life or social relations). Most of the participants highlighted the importance of

these skills and listed these skills as creative thinking, critical thinking, communication skills, sense of discovery, and active-democratic citizenship.

The participants criticized the testing system as well. They found it wrong that only the scores achieved in exams are taken as basis in determining academic success. Recent international assessments have indicated that Turkey is behind many countries in terms of the learning success of students (The World Bank, 2005). Exams are carried out in order to determine student success. The criticism is that these exams do not reflect success completely, and students not having equal conditions face with the same exams or questions. However, exams are inevitable in countries like Turkey where the number of students is big, and thus the supply of education is low while demand for it is high. Students take exams and are placed in relevant positions based on the scores they obtain in such exams. In general, the way academic success is supposed to be determined or the way exams are supposed to be carried out is a matter of debate. However, why exams are needed is always of secondary importance or is never focused on at all.

The participants stated that the measures to be taken in the solution of problems should be implemented within the scope of an action plan, and only those works which are performed based on plans can be successful. This opinion of the participants is verified by the negative results of the steps taken on country level in general and on education sector level in particular without appropriate plans in Turkey. Strategic plans in the field of education must definitely take into consideration individuals' concerns for the future. Predicting the future is an important process in strategic planning. It is not possible for only educators to plan and manage the education system considering various social groups. All relevant social groups must take part in this process in order to obtain more effective results (Özdemir, 2000). The participants opined that it must be ensured that everybody from the bottom to the top takes on responsibility for the policies to be adopted and implemented. They also stated that some problems can be solved on school level and thus criticized the top-down centralized structure. They said that this structure should be eliminated, and some decisions should be made on school level.

The participants noted that social factors have the biggest influence on the implementation of policies. They stressed that the policies to be implemented should be adopted by the society first of all; they should be explained to the society well; a social environment of trust should be created; and social status and awareness should be developed. They mentioned the difficulties of successfully implementing the policies that may be a solution to the problems. Education is one of the most profitable investments in individual and social terms (The World Bank, 2011). The participants argued that lack of financial support may affect the policies that are to be implemented in the process of improvement of quality. The participants mentioned social factors, financing, the support of political authority, and management philosophy as factors influential on the implementation of policies. Therefore, if the main factors influential on the policies to be implemented are taken as social factors, financing support, and the support of political authority, policy makers and implementers may have a holistic perspective on this phenomenon. A long-term perspective is needed in order to see the results of educational policies (Hanushek & Woessmann, 2010). One of the first conditions of these policies is revealing the fact that the inputs and the outputs of the current education differ (Education Reform Initiative [ERI], 2007). Turkey can be a healthy and educated country in 2050 only if plans are made from now on; such plans are put into practice; and they are monitored by administrators (TUSIAD, 2011).

Most of the participants agreed that primary school-age population will decrease in Turkey between 2023 and 2050. Such decrease was considered by the participants an opportunity. Majority of the participants stated that educationally optimum population, qualified man power, and economic development are influential on education and development. They noted that the most important issue in the improvement of quality is improving teacher qualification; teacher qualification is followed by curriculum in this regard; and lastly, educators should change their perspective on education (i.e. a change of mentality is needed).

Possible scenarios emerging in the study are as follows: Population growth rate will be below 1% in Turkey in the forthcoming 40 years. Turkey will have a population of almost 90 million in 2023 and a population of almost 100 million in 2050. A decrease of 300 thousand will take place in primary school-age population in 2023, and a decrease of 1 million will take place in it in 2050. An increase may be expected both in the country population and in the primary school-age population as a result of the discourse of the prime minister recommending having three children. If this happens, Turkey may have a population trend contrary to population projections (i.e. downward tendency may delay for 10 to 15 years). Decrease in the number of primary school students will contribute to the quality of education. In this way, universal primary education, which is one of the objectives indicated in the Millennium Development Goals, will be achieved. There will be a decrease in the quality of education if projections are not interpreted correctly and appropriate policies are not produced. Physical facilities of schools will increase. The physical capacity that will not be used for students will be used as continuing education centers and brought into use of parents. Thanks to the coordination between the Ministry of National Education and the Council of Higher Education for the employment of teachers, more qualified teachers will be cultivated, and training teachers more than what is demanded will be abandoned. More attention will be focused on the qualitative contributions of technological changes in the field of education than on their quantitative contributions. Expenditure per student will increase as a result of decrease in population. Exams will not be taken as the only criterion for assessing students. Activities in the educational process will be taken into consideration, too. Big problems will be encountered in achieving the objective of introducing life skills on an equal basis which is specified in EFA and committed to be achieved until 2015. Students will have a higher success in both national and international exams. Main policy areas and priorities will be determined based on the relationship between population and education. The problem areas preventing a quality education will be minimized, and proper practices will be implemented for a quality education system. Change of educational mentality among educators will manifest itself in all areas, and more rational inferences will be made.

Keeping population growth rate at a level allowing population to renew itself, providing continuity in family and family institution, transferring the values that are important to a country to the next generations, guiding students well based on their ability profiles, and providing lifelong learning activities are important for establishing a sound population structure. Ideal (i.e. optimum) population must be achieved. Thus, qualitative and quantitative research that longitudinally analyzes the effects of population on education and social development may be carried out in the future. To improve quality, it is important that a planning- and data-based mentality be adopted on country level; inter-institutional cooperation be ensured; value-based education be provided; culture of responsibility be adopted by all employees; centralized mentality be abandoned; and necessary political support be provided. These are recommended as active policies for the improvement of quality. To improve primary education quality, social factors should be taken into account; financing support should be provided; political authority and leaders should provide support; and an appropriate management philosophy should be developed.

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Annex 1: Scenario Areas, the Current Situation, Policy Recommendations, and Possible Scenarios in the Primary Education System

Scenario Area	Current Situation	Policy Recommendations	Possible Scenarios	
Population	Quantity	<ul style="list-style-type: none"> Turkey has advantages in terms of population size and population growth rate over other countries. Young population is denser in Turkey in comparison to many other countries. Population growth rate is around 15%. Net schooling rate is 98.41% in primary education. 	<ul style="list-style-type: none"> Turkey has been going through a demographic transition process from the 2000s. Population growth rate which is predicted to decrease in this process should be evaluated well, and those who hold administrative offices should be able to produce appropriate policies and make plans based on scientific data. Net schooling rate in primary education and net enrollment rate should be increased up to 100%. 	<ul style="list-style-type: none"> The population growth rate will go down to below 1% in the forthcoming 40 years. Averagely, Turkey will have a population of 90 million in 2023 and a population of 100 million in 2050. A decrease of 300 thousand will take place in primary school-age population until 2023, and a decrease of 1 million will take place until 2050. Population growth rate will be at a level allowing population to renew itself, and optimum population level will be kept. An increase may be expected both in the country population and in the primary school-age population as a result of the discourse of the prime minister recommending having three children. If this happens, Turkey may have a population trend contrary to population projections (i.e. downward tendency may delay for 10 to 15 years).
	Quality	<ul style="list-style-type: none"> Steps are taken to improve the quality of population as well as its quantity. Access to education and quality in education have not been perfectly achieved yet. 	<ul style="list-style-type: none"> Turkey should change its priorities and take steps to enhance the quality of population. Turkey should invest in every stage of education and ensure without sacrificing quality that population takes education on the highest level. Preschool education should be made compulsory, and more investment should be made in early childhood education in order to improve the quality of primary education. 	<ul style="list-style-type: none"> The decrease of the number of primary school students will contribute to the quality of education. Every child will be provided with the highest level opportunities and the skill of accommodating themselves to changing conditions. Thanks to the qualified population, Turkey's social development level will be close developed countries'. More attention will be focused on the acquisition of values, attitudes, and behaviors besides basic skills.
	Opportunity	<ul style="list-style-type: none"> That is considered an opportunity for Turkey which has a young population. The current arrangements in the education system and the policies developed are promising relative to the past. 	<ul style="list-style-type: none"> Appropriate goals should be set for fifty years later; proper methods and policies should be put into practice based on these goals; and Turkey should be turned into a developed country in this way. Population pressure which is predicted to decrease is an opportunity for quality education. The number of students per classroom should be decreased, and educational investments should be shifted to other areas in order to enhance quality. 	<ul style="list-style-type: none"> The window of demographic opportunity will make the relationship between population and education and development more meaningful. There will be fewer students per classroom, and more time will be allocated for each student. Investment in human will be more meaningful than investment in buildings. Universal primary education, which is specified in the Millennium Development Goals, will be perfectly achieved.
	Problem	<ul style="list-style-type: none"> At the present time, a considerable part of the population does not receive adequate basic education, makes limited use of educational opportunities, and suffers serious socio-economic inequalities. 	<ul style="list-style-type: none"> Based on the problems, necessary decisions should be made by people holding administrative offices. Fall in population growth rate, which is considered an opportunity in the demographic transition period, should be interpreted well. It should be prevented from being a threat risk. 	<ul style="list-style-type: none"> Educational activities that fail to keep up with the fall in population trends will turn into threat risks. The quality of education will decrease if projections are not interpreted correctly and proper policies are not produced.
Quality (Input)	Physical infrastructure, facility, and equipment	<ul style="list-style-type: none"> Just like physical capacity, physical facilities have started to be a problem. Classroom problem still prevails. The number of students per classroom is 27.5 in Turkey while the OECD average is 21.4. Overcrowded schools are on the agenda. 	<ul style="list-style-type: none"> Every school should be provided with minimum physical facilities. The number of students per classroom in Turkey should be the same as in developed countries. Schools with a modern architecture including 300 to 500 people should be designed in accordance with the present time conditions instead of overcrowded schools. Problems resulting from overcrowded schools should be eliminated, and measures to improve student success and to contribute to teachers' works should be taken. 	<ul style="list-style-type: none"> Classroom sizes will decrease as a result of the downward trend in population, and the number of students per school will go down to 500 in average. The physical facilities of schools will increase. The physical capacity that will not be used for students will be used as continuing education centers and brought into use of parents. If necessary steps are not taken, physical capacity problems will continue because of lack of plan and program. Overcrowded schools will be on the agenda; living spaces will gradually decrease in schools; and additional classrooms will be built in such spaces.
	Human resources	<ul style="list-style-type: none"> There is still teacher shortage. Many faculty of education graduates are still unemployed. Teacher competency and qualification are still matters of debate. Improving teacher qualification is the fundamental condition for ensuring quality. 	<ul style="list-style-type: none"> Initiatives should be launched to overcome teacher shortage. The supply of teachers should be arranged based on demand for teachers through strong cooperation between the Ministry of National Education and the Council of Higher Education. Measures should be taken to ensure that teachers graduate from faculties of education as qualified individuals; in-service trainings are provided in accordance with their purposes; and a strong professional mentality is adopted for career as a teacher. 	<ul style="list-style-type: none"> Teacher qualification will continue to be a point of attention of top priority for the improvement of quality. Thanks to the coordination between the Ministry of National Education and the Council of Higher Education for the employment of teachers, teachers will be trained better, and training teachers more than what is demanded will be abandoned. The Ministry of National Education will create opportunities for the continuous development of teachers, and teachers who build a career will gain added value. Teaching will be treated as a professional job that requires specialization. In-service and pre-service teacher trainings will be synchronized, and school-based teacher training practices will be launched.

Scenario Area	Current Situation	Policy Recommendations	Possible Scenarios
Quality (Process)	The number of students per computer and educational budget per student	<ul style="list-style-type: none"> Every school and every classroom should have information and communication technologies infrastructure. Research should be carried out on the efficiency of tablet computers. If they are found to be inefficient, the resource allocated for it should be shifted to other areas. It may be expected that there will be an increase in expenditure per student as a result of the decrease in the number of students in the future. However, expenditure per student should be increased also through resource transfer so that Turkey reaches the OECD average at least. 	<ul style="list-style-type: none"> Information infrastructure in schools will exceed the world standards. As tablet computers do not have perfect effect on academic success, they will not be distributed anymore. More attention will be focused on the qualitative contributions of technological changes in the field of education than on their quantitative contributions. Necessary steps will be taken so that teachers accommodate themselves to advancing technology and use technology in lessons more effectively. Expenditure per student will increase as a result of decrease in population. The society will have hesitations about for what expenditures are made or whether or not they are efficient. Thus, there will be a need for more empirical research and data-based findings that indicate the influence of expenditures. Educational expenditures and investments will be organized in a more planned way, and there will be more equal distribution.
	Learning time	<ul style="list-style-type: none"> Learning time is 10 to 12 years in OECD countries. Turkey should adopt 12-year basic education, too. Turkey should design a learning time and model based on its own characteristics and conditions. 12-year compulsory education is important and necessary providing that necessary infrastructure and capacity are provided. 	<ul style="list-style-type: none"> Learning time will be increased to 12 years in basic education. Double shift schooling will be abandoned in all primary schools. It will be possible to construct educational stages as 1+5+3+3. Thanks to the advancing technology in the forthcoming years, primary education will be conducted on some days and via distance education on other days.
	Student monitoring and evaluation methods	<ul style="list-style-type: none"> A method which allows comparing results in a short time, assessing not only the result but also the process, and makes continuous assessment possible should be developed. 	<ul style="list-style-type: none"> Not only exams but also activities carried out in the educational process will be taken into consideration in the assessment of students. A holistic assessment approach will be adopted instead of a cross-sectional or instantaneous success assessment. Student monitoring results will be transferred to the subsequent years completely, and any loss of information will be prevented.
	Evaluation and steering of education	<ul style="list-style-type: none"> Some decisions should be taken on local level, too. Since evaluation shapes the development process of a school, there is a need for a system that allows schools to compare themselves with other schools. Internal evaluation and external evaluation should complement one another. 	<ul style="list-style-type: none"> Decisions on financing, teacher training, and selection will continue to be made by the centralized administration. Necessary conditions will be met inside and outside schools for the internal evaluation and the external evaluation of the schools. School-, student-, and teacher-related inequalities will be removed everywhere across the country, and all conditions will be made more homogenous. Using initiative, assuming responsibility for the decisions made, and accountability will be prioritized.
	Parental involvement	<ul style="list-style-type: none"> It should be ensured that parents get involved in decision-making processes in schools and visit schools voluntarily (i.e. without any forcing). Parents' support should be received for voluntary association, and parents' opinions should be asked while the school is being evaluated. The e-school database of the Ministry of National Education should be improved so that parents obtain more data about the school. 	<ul style="list-style-type: none"> Parents will be more active in the school and the school administration. Parents will actively support decision-making processes on centralized and school levels. Training programs for parents will be held more commonly. These programs will have a positive influence on parents' perspective on education. Parents will not do the homework of their children anymore.
Quality (Output)	Changes in values, attitudes, and behaviors; social benefits; and life skills	<ul style="list-style-type: none"> A distinction should be made between success, which involves bringing big benefits to the society, and other results so that acquisitions apart from academic success can be evaluated. Schools should contribute to the creative and emotional development of children and provide them with knowledge, skills, values, and attitudes which they need in order to be responsible, efficient, and productive individuals. Besides good exam results, social benefits should also be achieved among students (on a basis equal to exam results). 	<ul style="list-style-type: none"> Changes in values, attitudes, and behaviors of students will be as important as academic success. Value-based affective education will effectively be provided in every stage. The social benefit dimension of education will be featured more, and creative thinking, active democratic citizenship, and effective communication will be the principal characteristics with which students are to be provided. Students' ability profiles will be made. Big problems will be encountered in achieving the objective of introducing life skills on an equal basis which is specified in EFA and committed to be achieved until 2015.

Scenario Area	Current Situation	Policy Recommendations	Possible Scenarios	
Quality (Feedback)	Academic success	<ul style="list-style-type: none"> Turkey has poor performance in both national and international academic success assessments. An attempt is made to determine academic success by assessing those who are unequal in the equal exams. In the current testing system, academic success is determined based on the scores achieved in academic success tests. 	<ul style="list-style-type: none"> Primary education's function for preparing students for life should not be neglected, and the current system that focuses on preparing students for exams should be abandoned. A system that contributes not only to winner candidates but to all students should be developed. Equal opportunities should be offered to all students, and the way should be paved for assessment under equal conditions. 	<ul style="list-style-type: none"> When physical capacity and teacher qualification are improved, students provided with equal opportunities will have higher success in exams. Attention will be focused on not only successful students but also students succeeding in other areas so that they are incorporated in the system. Students will have a higher success in both national and international exams. A testing system that put quality in education in the center will be established. Students who think, investigate, and have developed analytical thinking skills will be more successful in exams in comparison to students who just use memorized knowledge.
	Dropout	<ul style="list-style-type: none"> Dropout is a national and international problem. In Turkey, there are still 6 to 14 years old students who cannot attend school to receive basic education. Dropout is more common in rural areas and affects girls more. 	<ul style="list-style-type: none"> Necessary steps should be taken to ensure access to education. Positive discrimination should be made for the schooling of girls in particular, and it should be ensured that they have access to the school. Necessary measures should be taken for every child to receive basic education, and seasonal workers and migration should not be ignored. Schools should be turned into living spaces children like going and spending time. 	<ul style="list-style-type: none"> Access to educational opportunities will be provided in every educational stage. Children with disadvantages living in rural regions will have priority. Schools will be attraction centers for children with their social facilities. Adversities will be minimized, and it will be ensured that every child receives basic education. The access of especially girls to quality education until 2015 specified in EFA will not be achieved.
	The influence and applicability of educational policies	<ul style="list-style-type: none"> There is no structure about the effectiveness of the educational policies implemented. Usually, plans are not put into practice, and practice is ignored most of the time. 	<ul style="list-style-type: none"> Policies should be determined based on the country's conditions. Change in education should be evolutionary rather than revolutionary. Firm actions may be taken only in this way because educational decisions should not be changed frequently. Areas of top priority should be put on the agenda and policies should be developed in these areas rather than changing the entire system. 	<ul style="list-style-type: none"> The current conditions will be analyzed well, and implementable policies will be determined. Lifelong learning activities will gain importance; appropriate measures will be taken for proper implementation of lifelong learning activities; and lifelong learning goals indicated in the Education and Training 2020 Work Programme will be accomplished. Political support will be received in every educational decision, and political authority will manifest its support in every area. The financing support needed for the implementation of educational policies will be provided by the government, and voluntary organizations and non-governmental organizations will make maximum contribution.
Possible policy alternatives	<ul style="list-style-type: none"> A great majority of the projects and policy alternatives put forward to improve the education system are even impossible to be put into practice. The policies put forward get out of the agenda before their results are seen, and they are replaced by new policies. 	<ul style="list-style-type: none"> Education should be incremental. The policies put forward should analyze the nonfunctional aspects of old policies well and eliminate such deficiencies. Political support is very important for the implementation of plans and policies. Thus, political support should be provided, and a wide public opinion should be created while making these kinds of decisions. 	<ul style="list-style-type: none"> Main policy areas and priorities will be determined based on the relationship between population and education. Main problem areas will be minimized for a quality education, and appropriate practices will be carried out for a quality education system. Change in educators' educational mentality will manifest itself in all areas, and more rational inferences will be made. 	