

High school entrance exam system evaluation from the perspective of mathematics teachers

Ebru Korkmaz^{1*} and Tayfun Tutak²

¹Department of Maths Education, Faculty of Education, Muş Alparslan University, Muş, Turkey.

²Department of Maths Education, Faculty of Education, Firat University, Elazığ, Turkey.

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ABSTRACT

The aim of this study was to examine the opinions of secondary school math teachers regarding the examination system for the transition to high school which was implemented for the first time in 2017-2018 academic year in Turkey. The research was conducted in the second semester of 2018-2019 academic year, a semi-structured interview form was used as data collection tool. In addition, the sample of the study consisted of 30 math branch teachers working in central secondary schools across a province in Eastern Anatolia. The interview form consisted of 6 open-ended questions prepared by the researchers after receiving expert opinions. Content analysis method was used in analyzing the data. As a result of findings, it was understood that while some of the teachers had positive opinions about this new exam, some others had negative thoughts.

Keywords: Secondary school mathematics course, high school entrance exam (LGS), secondary school mathematics teachers, evaluation.

*Corresponding author. E-mail: eb.korkmaz@alparslan.edu.tr.

INTRODUCTION

One of the most important parameters of the modern world is education. The importance of education is increasing day by day. For this reason, the societies that realize this importance are making efforts to develop children in all areas of education. However, many countries struggle with lots of problems in this process. So these countries try to find solutions to problems in their education systems.

In many issues, exams and entrance rules from primary school to higher education are among one of the important problems. Last years, many different examination systems have been implemented in Turkey in order to place students in different educational and training institutions. Since 2000, 5 different exams have been tried. These are Entrance Examination for High Schools (LGS), System of Transition to Secondary Education (OKS), Selection and Placement Examination for Secondary Education Institutions (OGES (multiple and single level examination)), Placement Test (SBS), Transition from Basic Education to Secondary Education (TEOG) and High School Registration System (LKS). At

the beginning of the 2000s, LGS was applied to students wishing to enter different types of high schools, particularly public and private Science and Anatolian High Schools. In 2004, the name of this exam was changed to OKS and in 2008, SBS was started to be implemented. In 2012-2013, SBS was completely abolished and TEOG was started in the 2013-2014 academic year. As of the 2017-2018 academic year, LKS was introduced and LKS system's exam was again called as LGS (Gür et al., 2013).

Carter and Norwood (1997) explained the measurement in the education system as the degree of affordability of objectives; explained the evaluation as the decisions to be taken as a result of the measurement. Large-scale exams can be given as an example to the assessment and evaluation tool that covers the largest audience. Large-scale exams are one of the most frequently used measurement and evaluation tools to place students in a higher education institution in many countries (Özer Özkan and Acar Güvendir, 2018).

The general purpose of these exams is to prepare

primary school students for business life and higher education in the direction of the fields they are interested in and their ability, and also to be able to enroll them in secondary education institutions which include General High Schools, Fine Arts, Religious, Technical and Vocational High Schools (Gedikoğlu, 2005). Secondary education institutions have many purposes. The aims of the courses are to educate students as individuals who are able to respect the rights of democracy and human rights while developing the body, mind, moral, cultural and social aspects of students. In addition, with the knowledge and skills required by that age, to prepare the generation for the future and to give a common general culture in accordance with their interests after the education and training to direct individuals to appropriate occupations (Türk, 2015).

Aslan and Cansever (2009), Çolak (2006), and Karadeniz et al. (2014) expressed that due to the central exams, the students were struggling with exam stress at the ages that should be socialized, also they waived from their social lives. Çetin and Ünsal (2018), Dinç et al. (2014), Şad and Şahiner (2016), Aydın and Keskin (2017), Norman (2011) stated that changing of examination systems causes stress and lesson anxiety in teachers and students. Şad and Şahiner (2016) stated that exam system changes in an average of 4 years, which does not coincide with the program development philosophy. Scientifically, frequent and rapid changes cause the current program to not be examined sufficiently. So, there is a need for a new system continuously.

Students are subjected to some evaluations in transition to secondary education exams. The purpose of the assessments is to recognize the person and to register him/her in secondary education. In this context, it is expected that students should be correctly identified for readiness levels and, accordingly, they will be enrolled in secondary education programs in accordance with the existing characteristics in terms of cognitive, affective and dynamic development of students (Demirel, 2004). The high number of secondary education institutions is very important for addressing the level of each student. In addition, transition to secondary education exam may lead to more healthy results within the scope of measurement and evaluation for being sensitive and high validity and reliability.

One of the reasons why the transition to secondary education is important for success is the unbalanced distribution of the number of schools and the number of students. Compared to the past, it is seen that most of the students who will take the secondary education exam with the increase in the awareness of education have the desire to settle in more qualified high schools in order to go to a good university (World Bank, 2005, cited in Kahveci, 2009).

One of the criticisms of Büyüköztürk (2016) regarding the education system is that students and parents attach

more importance for being successful in exams against real life success; another criticism is that the education system displays a service as opposed to helping the person to solve the problems that he may encounter in his daily life.

In Turkey, where the system without examination has not been realized yet, the name of the examination system and transition to secondary education exam change constantly because of the decisions regarding the examination system are not realized in the long term. Within the scope of this research, it is expected that the questions asked about the transition system to secondary education which is closely related to the secondary school branch teachers and the branch teachers' views will contribute to the examination system. The opinions of the branch teachers about the positive and negative aspects of the new examination system were examined. Also, after the research conducted by the researchers, no research has been observed from the point of maths teachers for LGS exam system in Turkey. This new examination system, which concerns a large number of people; teacher, student and parent trio.

Importance of the study

This study is important in terms of interest to all prospective students, parents and teachers who have the most important role in education. It is thought that the knowledge, opinions and suggestions of the teachers who shape the basic structure of education about the new exam system can contribute to the development of the existing system. Within the scope of the research, there is a limited number of studies in line with the opinions of teachers about the new examination system. In addition, this research may guide decision makers about education all over the world about exam systems and applications among educational levels. In this regard, it can be said that the importance of the study has increased in terms of eliminating the lack of literature.

Purpose of the study

The aim of this study is to determine the opinions of secondary school maths teachers about the High Schools Entrance Exam (LGS) from secondary education to high school which has been implemented as of 2017-2018 academic year in Turkey.

Sub-objectives depending on the general purpose of the research are as follows. Questions are designed as:

1. Do the teachers have sufficient knowledge about the new examination system LGS?
2. What are the teacher's views on the strengths and weaknesses of the previously applied TEOG exam system compared to the LGS exam?

3. What are the teachers' opinions on whether the education system is suitable for the new examination system?
4. What are the teachers' opinions about the fact that students' participation in the LGS exam is not compulsory?
5. What are the teachers' opinions regarding the placement of the students to the high schools in their region of residence?
6. What are the teachers' opinions on the fact that the enrollment of students in the LGS exam will be among the 5 schools based on the students' address?

METHODOLOGY

This study is a qualitative research method and is a phenomenological study. So, researchers try to reveal the existing situation about the new exam system application. Chmiliar (2010) stated that it is a methodological approach that provides a systematic and extensive examination of a limited topic by collecting a lot of data. Merriam (2013) defines this study as the examination of a limited issue through examination and decomposition. Davey (2009), on the other hand, stated that the cause of the results of an event and the situations that may be encountered in the future or the places that should be considered in these situations, it can be used.

Research group

The sample of the study consists of 30 mathematics teachers working in different central secondary schools in a province of Eastern Anatolia. 11 of teachers are working in religious secondary school and 19 of teachers are working in secondary school. 14 of the participants are woman and 16 of them are man. 5 of the teachers are over 50 years old. 14 of the teachers are between 30 and 40 years, other 11 teachers are between 40 and 50 years old. All participants answered the questions voluntarily. Considering the features such as environment, culture, socio-economic level, graduation grade, school type, different schools were taken as basis in the formation of the working group. As a result of the preliminary interviews conducted before the research, the participants were selected among the teachers who were willing to participate in the research and were included in the study on a voluntary basis.

Data collection tool

In this study, the data collection tool was developed as a semi-structured interview form and in terms of scope validity by the opinions of 3 expert trainers and developed by the researchers. The semi-structured interview form

has six open-ended questions. Moreover, the interview form was applied to 5 different teachers before the application and gained research experience. Thus, the interview form was ready to use.

30 mathematics teachers working in the Ministry of National Education (MEB) evaluated the new exam system on semi-structured 6 open-ended interview forms. The notes taken during the interview were reviewed together by the researchers and rearranged before the analysis and the data were transformed into a systematic structure.

Data analysis

The semi-structured interview form was applied to 30 teachers working in the MEB selected on a voluntary basis. Content analysis method was used in the analysis of the obtained data. In phenomenological researches, data analysis is based on the themes and descriptions of experiences, and the researcher can act more flexibly during the data analysis process (Saban and Ersoy, 2016).

Based on the qualitative data collected through a form of open-ended interview questions standardized by the researchers, first coding was done, then similar codes were collected in certain categories and arranged in accordance with the main theme of the interview questions. The analysis of the data was carried out by two researchers. Finally, focus group interview was conducted by three experts, and the coding was finalized. Qualitative data collected on the subject were collected under common titles, and the themes were explained according to categories and codes. The repeat numbers of the determined codes were identified as frequency.

In the study, an approach appropriate for the consensus among the coders was followed. In this context, the reliability study conducted to ensure consensus among coders was based on achieving 80% consensus among the coders in the analysis of the data by using the consensus / separation formula of Miles and Huberman (1994).

FINDINGS

In this section, the compatibility of the new examination system with education system and teachers' opinions about the new examination system are examined. The following findings were obtained within the scope of the research.

Related findings about having enough information for the new exam system

In this section, while some of the teachers state that they have knowledge about the LGS exam, some of them

state that they do not have knowledge or partial knowledge.

In line with the expressions of the participants, it is understood that the information acquired is superficial, and the views are shaped in the context of the main items rather than the content.

Table 1 shows that there are two categories under the LGS theme: adequate and inadequate.

In the content analysis, 13 (%43) of the teachers stated that they had sufficient information about this changing system, while 17 (%57) of them stated that they do not have some or no information about LGS. Below are some example sentences:

"Yes, I have enough information." T1, T2, T8, T11, T12, T13, T15, T19, T20, T21, T25.

"I have no knowledge." T3, T4, T17, T18, T23, T24, T26, T27, T28, T29.

"I am not fully aware of the fact that exam systems are constantly changing in our country, but I do know some stuff from the ear." T4.

"Although I don't know our new exam system in detail, I have the basics." T5.

"I have some information about LGS. It gives students the right to pass without examination during the transition to high school." T7.

"Yes, I have enough information, except for the placement of the examination in secondary education is reminiscent of the examination system." T10.

"Yes, students who want to take the exam-based placement of a ten percent of the exam concerns." T13.

"I think that I have little information because the exam system is constantly changing in the country, but I don't have enough information about it because it sounds like a change of name." T14.

Related findings about strengths and weaknesses of the new exam system

When Table 2 is examined, the participants as the positive aspects of the LGS system; they have opinion that it is a more valid, reliable and more selective exam that will provide a homogeneous distribution among students. On the other hand, the participants with negative views think that LGS is a difficult test, there will be changes in the address for good schools, and that its not being compulsory will affect student success negatively.

Table 2 shows that there are 2 categories of positive and negative sides under the theme of the strengths and weaknesses of LGS.

In the content analysis, however 12 (40%) of the teachers stated that there are positive sides of LGS, 18 (60%) of them stated that LGS exam have many negative characteristics.

Teachers' answers given about the positive sides of LGS are given below:

Table 1. Information for the new examination system LGS.

Theme	Category	Code	f
Knowledge of LGS	Sufficient	Yes	13
	Insufficient	No	8
		Partially	9

"With the LGS system, only ten percent of the students will now receive special training as a super brain, 90 per cent will receive a mixed and homogeneous education, low - successful students will interact with successful students." T1.

"It is evident that the LGS system is a reliable and valid exam as regards to the TEOG exam." T2.

"I think that my students and their parents reduce the stress of exams because LGS exam system provides transition to secondary education without examination." T4.

"TEOG was a 2-stage exam. It was held in November and April. The scope of the exam was not very wide, but I think the LGS exam is a test that covers all 8th grade subjects and measures more information." T6.

"According to TEOG, LGS is strong in terms of giving students the right to choose and being close to home." T7.

"The positive difference of LGS from TEOG is the difficulty of the questions and the reduction of it to an exam." T11.

"I think the LGS is enrolling in high school in a strong and fair way because there is a high level of selectivity." T19.

"This examination system is actually more suitable for the selection of students. It is aimed to select students who are really suitable for logic and reasoning. Because the old exam system was so easy, students who didn't deserve to go to upper secondary schools." Successful students will pay more attention to mathematics. T25.

In the content analysis, teacher answers about the negative sides of LGS are given below.

"Although the LGS exam covers 6 courses and includes the subjects of 6th, 7th and 8th grades, the fact that the number of questions, it has only 60 multiple-choice question, can be problematic in terms of measurement." T1.

"The most negative aspect of the LGS examination system is that education system enters such an examination system without being ready." T10.

"At LGS, students have to work more extensively because they are responsible for all issues. The TEOG is simpler, but there are questions in the LGS that require high level judgement. Difficult questions are asked for students in this period. The self-confidence of students who cannot reason is broken." T12.

"The weakness of LGS, more interpretation and analysis issues in LGS are explained in a more interpretive way. It

Table 2. Strengths and weaknesses of LGS.

Theme	Category	Code	f
Strengths and Weaknesses	Positive	More qualified	7
		Homogenous	1
		Stress of exam	1
		School score	1
		Proximity to home	1
	Negative	One-stage exam	1
		Number of questions	4
		More complicated	2
		Optional	2
		Unprepared	2
		Self-reliance	2
		Above level	2
		Adherence to the address	2
		To be more difficult	2

may not be appropriate for the student level and may not appeal to the student.” T14.

“With the new system, children will be able to change their addresses in order to go to a good school as the proximity to school will also be included. This is a major disadvantage.” T22.

“LGS exam will affect students' development negatively as it is voluntary.” Since the exam is not compulsory, students who are not interested in mathematics will participate less in the course. T27.

“LGS stands out as a challenge for students. Success rates fell compared to previous years.” T29.

Related findings about strengths and weaknesses of previous exam system

According to Table 3, teachers indicate that students are more comfortable in their own schools, without the stress of the exam, because the exam questions are directly related to the subjects they teach in the lessons, and that the exam is done twice a year are the positive aspects of the TEOG system. Teachers who emphasize the negative aspects of the exam, on the other hand, think that the exam is very simple, this leads to excessive complacency, and its selectivity is low.

In the content analysis, 6 (20%) of the teachers stated that there were positive sides of TEOG while 11 (37%) of them stated that TEOG exam had many negative characteristics. Other 43% of the teachers made no comments to compare TEOG exam for its positive and negative sides.

Teachers' answers about the strengths of TEOG are given below:

“The TEOG exam system was made periodically

compared to LGS and this application makes the TEOG exam system strong for the students who will take the LGS exam at one time.” T7.

“The only difference of LGS from TEOG is the difficulty of the questions and the reduction of them to an exam.” T14.

“TEOG system in terms of implementation for each course separately, to be done twice a year, a new exam for students who do not take the exam was a better system.” T18.

“I think TEOG is more justified and picky because it lists students with exam score.” T22.

“For students TEOG exam system was easier than LGS that is more challenging exam.” T29.

“The students studying for the TEOG exam were sure of what to do and they have a regular study system. Without difficulty, they were able to make experiments on this exam.” T30.

In the content analysis, teachers' answers about the weaknesses of TEOG are given below.

“The TEOG exam was very easy for students, pushing children by heart. On average, more than 15,000 students were first and received a full score, a test with low reliability.” T3.

“TEOG exam system was the worst exam system ever made. Since the questions were easy, there was no distinction between successful and less successful students.” T9.

“The most negative aspect of TEOG exam system is that it covers only 8th grade subjects and it is a double-stage exam system. That is why the students are under stress during the summer. 8th grade students gave more importance to mathematics lesson. This interest was less in the 6th and 7th grades because there were no

Table 3. Strengths and weaknesses of TEOG.

Theme	Category	Code	f
Strengths and Weaknesses	Positive	2 stages	2
		Suitable for our education	2
		Justice	1
	Negative	Layout-discipline	1
		Memorizing	6
		Low discrimination	3
		2 stages	2

questions in the exam from that levels.” T10.

“The TEOG exam did not force students, push them by heart and was very easy. LGS does not fit our education system at the moment, heavy questions are asked according to the level of children.” T16.

“In TEOG it wasn't exactly a selective test because the questions were extremely easy. In this case, many students who have less capacity go to the science high schools, but then they could have problems especially with in numerical lessons.” T18.

“I do not think that the TEOG exam has a positive side compared to LGS. The TEOG exam was very easy, not discriminatory. It was a test for those who didn't work better. In one TEOG exam 17000 students took full points in general of Turkey. This showed that the examination was not distinctive and reliable.” T21.

“The TEOG exam system measures skills at a lower level than LGS. Students do not mobilize their thinking skills adequately.” T27.

Related findings whether education system is suitable for the new exam system

The majority of the participants think that the education system is not suitable for the examination system. Although not in theory, but in fact the system is a rote memorizer, that LGS is a test-based selection exam does not coincide with the training program, and it is not suitable for the education system because it is optional.

Table 4 shows that there are two categories as appropriate and inappropriate under the theme of the compliance of education system with LGS.

In the content analysis, there are 4 (13%) teachers who thought that the education system is compliant to LGS, while 26 (87%) teachers stated that it is not suitable. Sample sentences are given below:

“The current education system is given more theoretically. The new exam system comes to the fore with students' interpretation and reasoning skills. Therefore it is not appropriate.” T7.

“Not suitable. We can only run our students in written exam type and not in test exam type in a tight schedule

where the number of courses is small and the gains to be given to the students are high.” T9.

“The current education system is not suitable for the new exam. This examination should be done at least 7-8 years later. It is necessary to gain the reasoning power of the children in the first grade of primary school and make them find something in their own way. Not suitable on our terms. Every year a new examination system is introduced. We, as teachers, cannot follow this fast change and a nonadaptive system obstructs education and training.” T12.

“Not suitable. Apart from the system, our schools and classes are not suitable for this exam type.” T16.

“The training system is suitable for the exam.” T25.

“No it is not suitable. As this exam system is left to the student's preference, it affects the education level of the student negatively.” T27.

Related findings about the effects of optional exam entrance requirement

When Table 5 is examined, half of the teachers consider the LGS exam being optional is positive, while the other half consider it negative. Those who find it positive think that exam stress, the right to choose, does not affect successful students negatively. Those who found it negative stated that student motivation decreased, middle-level students moved away from the target, and they started to have classroom management problems.

Table 5 shows the positive and negative characteristics of the LGS voluntary status.

In the content analysis, 16 (53%) of the teachers stated that there are positive sides of LGS exam being optional while 14 (47%) of them stated that optional LGS exam had negative features.

The positive features of LGS 'voluntary status in terms of teacher views are given below:

“The positive side is that students who are not able to undertake psychology get rid of this stress.” T1.

“I find it positive for my students and their parents to reduce the stress of the test, but some of our teachers

Table 4. Suitability of education system to LGS.

Theme	Category	Code	f
Suitability of education system	Appropriate	Yes	4
		No	6
	Inappropriate	Evaluation -interpretation	6
		Different from education	4
		Gain-curriculum	3
		We're not ready	3
		Anxiety level	1
		School-class difference	1
		Student preference	1
		Name change	1

Table 5. Permissiveness of LGS.

Theme	Category	Code	f
Permissiveness of LGS	Positive	Unnecessary exam stress	8
		Right to vote	6
		Pessimism	1
		Distance	1
	Negative	Loss of motivation	9
		Quality of education	2
		Subsequent regret	1
		Routing requirement	1
		Violation of equality	1

say that the test will be optional and this will create a lack of compassion for the children but the importance of school grades at this stage will prevent this." T4.

"I see that some of the students' desire to take the exam seriously is negatively affected. But there is no changing negativity for our ambitious students with goals. I think it's nice to be asked not to put the stress of exams on our children at this age. As a result, it is better that we do our job as a guide rather than forcing students to do something." T5.

"As a teacher who teaches 8th grade students during the TEOG period, I have witnessed many times how difficult it was for my students to shuttle between the school and the private teaching institution duo. I think it is a great chance for students who cannot afford this cycle to be educated in a mixed high school in terms of near home success." T9.

"I feel that my students are more fearless looking at the future because the exam is optional. I think the pessimism I've seen in your eyes has decreased in the past years." T10.

"As a result, the student is given the right to choose 5 schools from their own neighborhood. I think it makes sense. Also those who want to take the exam, go to

schools with their exam points, and you can't force anyone to do anything." T13.

The negative features of LGS 'voluntary status in terms of teacher views are given below:

"If we consider the necessity of the new system to cover all students on behalf of the principle of equality, it can be said that it is generally negative." T29.

"The optional test will have a negative impact on the student's level of development. Because students will not make efforts to improve themselves. This will lead to a decrease in the quality of education." T27.

"It is actually better to have a free choice, but it is certain that some students need to be guided so that differences between these students should be identified and given the chance to choose according to the differences." T18.

"It was a comfort for the students, easy to escape. As a teacher, classroom management was easier for both us and our students when it was compulsory. Unfortunately, the students who listen to the lesson unfortunately also exhibited negative behavior." T23.

"As its name high school transition system without the

exam. In the past years, I have seen the determination of my students to work, but I have seen less of them in the last 2 years.” T10.

“Since they do not study for LGS, they do not pay enough attention to the lessons. They may regret later, as they are not fully conscious.” T12.

“The quality of the schools and the quality of education has been reduced.” T14.

Related findings about the placement of students in neighborhood high schools

When Table 6 is examined, the participants expressing positive opinions to indicate situations such as orientation, the family budget, decreasing the number of school buses and no traffic problems. Participants who expressed negative opinions and had doubts about the process mentioned the uncommon vocational high schools, schools not having equal opportunities and address change.

Table 6 shows the positive and negative aspects of the registration of students in neighbourhood high school.

In the content analysis, while 8 (%27) of the teachers are expressing that there are positive sides of enrollment students to nearest schools to their neighbourhood, 6 (%20) teachers states their doubts and 16 (%53) of the teachers have negative thoughts about the theme.

Some of the evaluations of the enrollment of students in neighbourhood high school are given below.

“A student who does not take the exam and settled in his / her neighborhood in secondary education will not have the ordeal to go to the long distances that affect the success of the student negatively. Considering that there are close to 5 million high school students in our country, the country and the family budget will be saved from a heavy burden and the parents will be able to follow the child who is attending a high school close to home.” T1.

“It is an application that can solve the traffic problem especially in big cities such as İstanbul, Ankara and Izmir. I find it positive for students who cannot enter the 20% zone.” T2.

“I look at this positively in many ways. But I doubt that high school types such as vocational high schools, health vocational high schools and visual arts high schools will be in every neighborhood.” T8.

“I think it is a very good practice if a student in Istanbul and Muş with the same success will make equal conditions for them in their neighborhoods.” T9.

“Students will continue their high school life without losing the environment in their neighborhood. He will continue his education with a group of his/her friends. This is an advantage. Because the orientation process will be

overcome quickly.” T13.

“Frankly I don't find it fair. Because there have been a lot of address changes to get into good schools.” T23.

“It is a system that should be studied and thought more. They are too inadequate even to inform too much their deficiencies and inadequacies.” T28.

Related findings about the selection 5 neighborhood schools

According to Table 7, those who find it positive that students will prefer among the five schools in their residential area think that it is possible, as a matter of fact, this was applied in the past times and a more homogeneous education should be tried. On the other hand, those who made negative statements from the participants think that the number of preferences is low, it is against the principle of equality, there are school and region differences, that will create good school and bad school perception, and it will limit students in terms of abilities and skills.

Table 7 presents the positive and negative aspects of the preference list being 5 schools.

In the content analysis, while 7 (%23) of the teachers are expressing that there are positive sides of enrollment students to 5 schools in their neighbourhood, 23 (%77) of the teachers have negative thoughts about the theme.

Some evaluations in terms of teachers' views are given below.

“I don't think five schools are enough. Moreover, the success level of the schools in less developed districts and provinces may not be at the desired level. At least 10 schools would be desirable. Otherwise, the families will move and move to the neighborhoods with more successful schools with false or temporary residence documents.” T1.

“I think it's limiting the student and going to a high school s/he doesn't want.” T4.

“I am surprised to see that the students in their neighborhoods are not based on 5 schools. I consider it a disgrace that the student will go to a high school he doesn't want unless there is a desired school.” T6

“By restricting the students to 5 schools, the schools where the students can go according to their achievements and abilities are prevented.” T7.

“If there is an equal distribution of all kinds of school facilities in Turkey, it would have been enough in a student's neighborhood school for 5 preferred.” T8.

“I find it logical.” T11.

“It's not fair. Those who live around beautiful and well-educated schools will go to good schools. It is not fair to determine the fate of the place where a student lives. It is contrary to the principle of equality.” T12.

Table 6. Based on enrollment of neighbourhood high school.

Theme	Category	Code	f
Neighbourhood High School Enrollment	Positive	Orientation	4
		Family budget	2
		Traffic problem	1
		Failed students	1
	Positive but doubt;	Equaling schools	5
		Sports-visual arts high school	1
	Negative	Inequality of opportunity	6
		Different schools	3
		Wrong-be developed	3
		Address changes	2
		Quality of schools	1
		The Restriction	1

Table 7. Choice of 5 schools.

Theme	Category	Code	f
Choice of 5 schools	Positive	Logical-it can be	5
		If the type of school is increased	2
	Negative	The limitation is poor	16
		Obligation	2
		The principle of equality	2
		Fake-temporary residence	1
		Equal and equal distribution of schools	1
		False	1

"It is thought to be a system to eliminate the perception of good school and bad school. When the student goes to a school located in their neighborhood in secondary school, the mixed students in the school are to be good and bad. It is aimed to provide the same environment in high school. I think it can be tried." T13.

"I think it restricts students in every way. Young people working with different places, opportunities and people can gain experience in adapting to differences and avoid the difficulties that they may face in the following years." T16.

"It is a correct application but the school types need to be investigated. Students may not be able to attend different schools." T20.

DISCUSSION, CONCLUSIONS and SUGGESTIONS

When the legal regulations regarding the new examination system are evaluated in the context of the research results; teachers do not have enough information about the exam system in the process, the exam is a selection test, the optional participation will reduce the exam stress in students. However, it will

cause loss of motivation in some students, it does not coincide with the education system, it is appropriate for students to choose schools according to their residence and enrollment. On the other hand, it is seen that the schools and facilities differ and the limited number of school choices, are all emphasized by the participants as high points of the new exam system.

In this study, opinions of mathematics teachers about LGS exam system were examined. According to the findings obtained from the content analysis, only 43% of the branch teachers have sufficient knowledge about the new exam system. It was seen that there was not enough information about the system and the branch teachers did not do enough research on the subject. In addition, as can be understood from the statements of the participants, it is seen that the teachers have knowledge about the examination system in the context of the news content in the media and the statements of the relevant administrators. Alacacı and Erbaş (2010) and Yılmaz and Altinkurt (2011) argued that their current inequality of opportunity will increase further due to such examinations.

Another theme in the research is strenghts and weaknesses of LGS exam. Teachers emphasized

homogeneous education, less exam stress, neighborhood schools as the strengths of the exam. In contrast 60% of the teachers have negative thoughts. The content validity of the exam is low because of the number of questions that students are responsible from all secondary school subjects for the exam. Also students don't have to attend the exam. So, they will not study and give enough interest to lessons. By this way, teachers may lose their control on classroom management. But all students have responsibility for the before exam TEOG. At the same time TEOG exam questions were about only 8. grade curriculum. It was not a selective but success exam. However it was easy for students, it couldn't motivate students for success and less adequate for all grades.

Özkan and Özdemir (2014) examined the opinions of students and teachers regarding the TEOG exam, and stated that it was positive for students to take the exam in their own school, to make the exam twice, and to make an excuse exam, but incorrect answers not to manipulate the true answers would affect the validity and reliability. In the study of Zayımoğlu and Aksoy (2014), the opinions of 8th grade students who would take the TEOG exam which would be applied for the first time in 2013-2014 were examined. In the findings, it was seen that the majority of the students who participated in the research had positive views on TEOG and the application of common exams, but they had some problems about the present exam and they offered some solutions to these problems. Zorlu and Zorlu (2015) indicate that the two-stage TEOG exam reduces the anxiety of the exam. In parallel to this, Öztürk and Aksoy (2014), Şad and Şahiner (2016), Şahin et al. (2012) stated that the exams create anxiety and stress on the student and that the wrongs applied in the examinations do not lead to the truth was partially accepted by the teachers.

In 2015, Atila and Özeken collected data on TEOG from 15 teachers working in 5 different schools in Erzurum city center in Turkey. In the light of the data obtained, TEOG exam is compatible with the content of the course, 40-minute exams and twice a year reduces student stress, increases the responsibility of the teacher, but the exam is not fully sufficient, some of the gains can not meet the questions, parents can put pressure on the teacher and test the school success scores more importance has been determined. Yener (2016) examined 126 science teachers' attitude towards TEOG and the effects of different variables on this attitude. In the light of the findings of the study, it was found that variables such as gender, age, educational background and teaching experience did not affect the attitude towards TEOG exam, and in general, teachers developed positive attitude towards this exam.

In the study conducted by Bakırcı and Kırıcı (2018), the views of science teachers regarding the TEOG exam were taken and the views of teachers regarding the abolition of this exam were examined. It was stated that the TEOG exam increased the interest in the course,

positively influenced the teacher-parent-student relationship, but this exam rated the teacher, and the social environment was adversely affected as a result of competition and pressure. While it was stated that the abolition of TEOG was positive for the student and the parents, it was found that it brought a relief. The abolition of TEOG without introducing the new examination system caused a loss of motivation in the student and in the parents the costs of education went to vain.

When looked at the Turkish education system, LGS exam in on the opposite side of the system because of its being selective speciality. The system is about constructivist approach, so the exam is forcing students to memorize rather than develop their skills that all exams are multiple choice tests. 87% of the participants expressed this inappropriateness. To give chance to students to attend or not to the exam are seen as a democratic stance. But opposite we think that such a young child has competence to decide for his/her future that s/he can not find that chance anytime. Enrollment of neighbourhood school is seen a good decision that traffic problems, lose of time and many other negative aspects can be given as examples but the important point here should be students' and schools' similarities and differences as levels. Atila and Özeken (2015) and Büyüköztürk (2016) stated that the number of qualified schools in Turkey is low, the number of teachers is insufficient and the reasons for the increasing population require the necessity to make a selection among students.

Based on the findings obtained from the research, it can be said that some of the teachers have positive and some of them have negative thoughts to evaluate students with only a single exam. However, the increase in the difficulty of exam questions, some branch teachers think that more effective individuals in reasoning can be raised and higher level cognitive skills can be developed, some of them think that students are not ready for the difficulty of these questions. In addition, branch teachers stated that Turkish education system is theoretically modern but practically classical and rote learning in general. The new exam system; they stated that the harmonization of the education system with the examination system can only be in 7 or 8 years. The source for this view is that the reasoning power could be given by starting from primary school.

Another issue addressed is that student preferences are limited to five schools in their neighborhoods. Approximately 23% of the branch teachers constitute; while looking at this positively, the rest stated that these 5 choices were inadequate or unfair due to the reality of differences from neighborhood to neighborhood.

There are very few studies on the subject. In the study of Kurnaz and Yüzbaşıoğlu (2013) "Examination of Entrance Exam Questions in Secondary Education Institutions in Terms of Transitions Between Some Representation Types" 475 multiple choice questions between 1998-2012 years were examined. In this study

where the representation types of these questions and the transition between these types were investigated, it was found that the transition between display types should be taken as the basis for the questions to be asked.

Korkmaz and Şahin (2019) have made a research about the new exam system. Their findings are supporting this research's results. In their study, teachers have positive and negative thoughts about the new exam system as in this study. The teachers who stated positive opinion as a result of the research emphasized that LGS system is better in evaluating student success, student profiles of other schools that take students outside the exam will show a heterogeneous distribution, and exam anxiety will decrease. On the other hand, the teachers who stated negative opinions about the LGS system stated that the system changed without taking their opinions, the TEOG system was better and the students are not studying, while some teachers stated that there was nothing changing.

Güler et al. (2018) examined the opinions of the teachers about the LGS exam. The teachers stated that their students could not adequately reflect their success in the LGS exam, the questions of the new exam system were qualified, but the infrastructure was not ready yet. Çetin and Ünsal (2018) examined the reflections of central examination systems on the social, psychological and curriculum practices of the teachers. According to the findings, it was stated in the research that the gains were not given in the desired way and the teachers are applying a specific exam focused program rather than instructional and learning objectives.

Based on the findings, the following recommendations can be given:

- All time in-service trainings should be provided more effectively and actively in order for teachers to have sufficient information about new applications and exam systems.
- It is necessary to keep the exam system constant for a long time without making any change in order to adapt the education system to the exam system
- All schools should have counselors and sociologists to guide and help students for motivation and school enrollment.
- If the student neighborhood will be based on the enrollment, appropriate numbers and high quality high schools should be added to these neighborhoods and student grievances should be prevented.
- Students should have more chance than to list five schools to select their future schools that it will have an important effect for their career.

REFERENCES

Alacacı, C., and Erbaş, A. K. (2010). Unpacking the inequality among Turkish schools: Findings from PISA 2006. *International Journal of Educational Development*, 30(2): 182-192.

- Aslan, N., and Cansever, B. (2009).** Ailenin sosyo-demografik özelliklerinin çocuğun okuldaki sosyal etkinliklere katılımı üzerindeki etkileri: Türkiye ve Hollanda arasında karşılaştırmalı bir çalışma. *Eğitimde Kuram ve Uygulama*, 5(2): 210-226.
- Atila, M. E., and Özeken, Ö. F. (2015).** Temel eğitimden ortaöğretime geçiş sınavı: Fen bilimleri öğretmenleri ne düşünüyor? *Ondokuz Mayıs Üniversitesi Eğitim Fakültesi Dergisi*, 34(1): 124-140.
- Aydın, M., and Keskin, İ. (2017).** 8. sınıf öğrencilerinin matematik kaygı düzeylerinin bazı değişkenler açısından incelenmesi. *Kastamonu Eğitim Dergisi*, 25(5): 1801-1818.
- Bakırcı, H., and Kırıcı, M. G. (2018).** Temel Eğitimden Ortaöğretime Geçiş Sınavına ve Bu Sınavın Kaldırılmasına Yönelik Fen Bilimleri Öğretmenlerinin Görüşleri. *YYÜ Eğitim Fakültesi Dergisi (YYU Journal of Education Faculty)*, 15(1): 383-416.
- Büyükköztürk, Ş. (2016).** Sınavlar üzerine düşünceler. *Kalem Eğitim ve İnsan Bilimleri Dergisi*, 6(2): 345-356.
- Carter, G., and Norwood, K. S. (1997).** The relationship between teacher and student beliefs about mathematics. *School Science and Mathematics*, 97(2): 62-67.
- Chmiliar, I. (2010).** Multiple-case designs. (In, A., Mills, J., Eurepas, G. & Wiebe, E. Eds.), *Encyclopedia of case study research*, 582-583. USA: SAGE Publications.
- Çetin, A., and Ünsal, S. (2018).** Merkezi sınavların öğretmenler üzerinde sosyal, psikolojik etkisi ve öğretmenlerin öğretim programı uygulamalarına yansımaları. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, Çevrimiçi Baskı*. doi: 10.16986/HUJE.2018040672.
- Çolak, N. (2006).** Eğitim sosyolojisi bakımından dershaneler ve eğitim: Üniversite sınavına hazırlanan lise son sınıf öğrencilerinin sosyo-kültürel durum analizleri: Bursa örneği. *Yayınlanmamış Yüksek Lisans Tezi, Uludağ Üniversitesi, Bursa*.
- Davey, L. (2009).** The application of case study evaluations. (Çev: Tuba Gökçek). *Elementary Education Online*, 8(2): 1-3.
- Demirel, Ö. (2004).** Öğretimde planlama ve değerlendirme: öğretme sanatı. Ankara: PegemA Yayıncılık
- Diñç, E., Dere, İ., and Koluman, S. (2014).** Kademeler arası geçiş uygulamalarına yönelik görüşler ve deneyimler. *Adıyaman Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 7(17): 397-423.
- Gedikoğlu, T. (2005).** Avrupa Birliği sürecinde Türk Eğitim Sistemi: Sorunlar ve çözüm önerileri. *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, 1(1): 66-80.
- Güler, M., Arslan, Z., and Çelik, D. (2018).** 2018 liselere giriş sınavına ilişkin matematik öğretmenlerinin görüşleri. *YYU Journal of Education Faculty*, 16(1): 337-363.
- Gür, B., Çelik Z., and Coşkun, İ. (2013).** Türkiye'de ortaöğretimin geleceği: hiyerarşi mi eşitlik mi? *Seta Analiz*, 69: 1-26.
- Kahveci, S. S. (2009).** Ortaöğretim kurumlarına geçiş sürecinde uygulanan sınavların ailelerin maliyetinin ailelerin toplam eğitim harcamaları içindeki payı. (Yayınlanmamış yüksek lisans tezi). Gazi Üniversitesi, Ankara.
- Karadeniz, O., Er, H., and Tangülü, Z. (2014).** 8. sınıf öğrencilerinin SBS'ye yönelik metaforik algıları. *Uluslararası Avrasya Sosyal Bilimler Dergisi*, 5: 64-81.
- Korkmaz, C., and Şahin, M. (2019).** Liselere kayıt sistemine yönelik öğretmen görüşleri. *Mustafa Kemal Üniversitesi Eğitim Fakültesi Dergisi*, 3(4): 9-20.
- Kurnaz, M. A., and Yüzbaşıoğlu, M. K. (2013).** Ortaöğretim kurumlarına giriş sınav sorularının bazı gösterim türleri arasındaki geçişler açısından incelenmesi. *Bartın Üniversitesi, Eğitim Fakültesi Dergisi*, 2(2): 267-279.
- Merriam, S. B. (2013).** Nitel araştırma: Desen ve uygulama için bir rehber (3. Baskıdan Çeviri, Çeviri Editörü: S. Turan). Ankara: Nobel Yayın Dağıtım.
- Miles, M. B., and Huberman, A. M. (1994).** *Qualitative Data Analysis*. (2nd Ed). Newbury Park, CA: Sage.
- Norman, J. (2011).** 'Maths anxiety'in secondary school students. *Radical Statistics*, 105: 140-156.
- Özer Özkan, Y., and Acar Güvendir, M. (2018).** Merkezi sınavların öğretmenler üzerindeki öğretimsel ve duyuşsal etkilerini belirlemeye yönelik öğretmen ölçeğinin geliştirilmesi. *İnönü Üniversitesi Eğitim Fakültesi Dergisi*, 19(3): 189-204.
- Özkan, M., and Özdemir, E. B. (2014).** Ortaokul 8. sınıf öğrencilerinin ve öğretmenlerinin ortaöğretime geçişte uygulanan merkezi ortak

- sınavlara ilişkin görüşleri. *Tarih Okulu Dergisi (TOD)*, 7(10): 441-453.
- Öztürk, F. Z., and Aksoy, H. (2014).** Temel eğitimden ortaöğretime geçiş modelinin 8. sınıf öğrenci görüşlerine göre değerlendirilmesi (Ordu ili örneği). *Ondokuz Mayıs Üniversitesi Eğitim Fakültesi Dergisi*, 33(2): 439-454.
- Saban, A., and Ersoy, A. (2016).** Eğitimde Nitel Araştırma Desenleri. Anı Yayıncılık.
- Şad, S. N., and Şahiner, Y. K. (2016).** Temel eğitimden ortaöğretime geçiş sistemine ilişkin öğrenci, öğretmen ve veli görüşleri. *İlköğretim Online*, 15(1): 53-76.
- Şahin, S., Uz Baş, A., Şahin Fırat, N., and Sucuoğlu, H. (2012).** İlköğretim okulu öğrenci ile öğretmenlerinin ortaöğretime geçiş sistemine ilişkin görüşleri. *International Journal of Human Sciences*, 9(2): 847-878.
- Türk, E. (2015).** Türk eğitim sistemi ve ortaöğretim. Ankara: MEB. http://ogm.meb.gov.tr/meb_ays_dosyalar/2017_06/13153013_TES_ve_ORTAYYRETYM_son10_2.pdf.
- Yener, M. (2016).** Fen bilimleri öğretmenlerinin temel eğitimden ortaöğretime geçiş sınavı (TEOG) hakkındaki tutumlarının incelenmesi. (Yayımlanmamış yüksek lisans tezi). Fırat Üniversitesi, Eğitim Bilimleri Enstitüsü, Fen Bilgisi Öğretmenliği Bilim Dalı, Elazığ.
- Yılmaz, K., and Altinkurt, Y. (2011).** Öğretmen adaylarının eleştirel pedagoji ile ilgili görüşleri. *Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi*, 12(3): 195-213.
- Zayimoğlu, F., and Aksoy, H. (2014).** Temel eğitimden ortaöğretime geçiş modelinin 8. sınıf öğrenci görüşlerine göre değerlendirilmesi (Ordu İli Örneği). *Ondokuz Mayıs University Journal of Faculty of Education*, 33(2): 439-454.
- Zorlu, Z., and Zorlu, F. (2015).** Fen ve teknoloji dersinde öğrenme ortamına yönelik öğrencilerin düzeyleri ve öğretmenlerin görüşleri. *Route Educational and Social Science Journal*, 2(1): 103-114.

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