

**TEACHERS' OPINIONS ABOUT MATHEMATIC PROGRAM
REVISED WITH 4+4+4 EDUCATION SYSTEM**

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ABSTRACT. The purpose of this research is taking the teachers' opinions about the re-prepared secondary school (5, 6, 7 and 8 grades) mathematics program with gradually changing education system in 2013-2014 academic year. The universe of research is secondary school mathematics teachers working in Mersin province, and the sample of research contains 149 teachers working in city center, districts and villages and all agree to participate on a voluntary basis to the research.

The scale of the research containing 5 factors (General features, activity, and applications of mathematics course, new education system, and textbook) with 28 questions has been developed by the researchers and the Cronbach Alfa rate of the scale is 0,886. For the analysis of the data, descriptive statistics, t-test and one-way ANOVA have been used.

As a result of the research, while the subdimension of achievement and content has come out at middle level, and also the applications of mathematics course has come out at medium level, the teaching period has been at good level but course books and education system has been at low level. It has been indicated that course books are not enough and the opinions of teachers hasn't been considered in research's renewing stage. Some has mentioned that the subjects has become simple regarding the omitted ones from curriculum while some mentioned that the curriculum has been completely cleared. Besides, it has also been mentioned that the curriculum has been able to be taught at fundamental level.

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1. INTRODUCTION

In our world maintaining to change continuously from past to present countries have tried to keep up with this change. They are still placing great emphasize on education in order to succeed it. Because reaching the way of the target indicated by Mustafa Kemal Atatürk as “Reach and pass the level of contemporary civilization” is provided with the education. The education programs and curriculums prepared for our today's conditions need to be improved most effectively and the programs related to all of the courses need to be structured regarding this purpose so that this education system can be performed and the individuals can succeed to get necessary knowledge and skills (Karagöz,2010; Olkun and Toluk, 2007). Our world has been in a complicated and quantitative status with the last technologic improvements; therefore, mathematical thinking has been more important and the need of teaching

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mathematics has increased (Willoughby, 1990). In this period, mathematics as a course has a great importance and our world's need of people understanding and interpreting the course, likely arises. As for considering either TEOG exam applied in our country or TIMMS and PISA exams applied in international area, we see which level we are at in terms of mathematics. So, it has been a must to change the education system and mathematics programs regarding these results. Because the education programs should follow the improvements all the time depending on the ones in science and technology. Besides, the teaching ones should also change according to time and conditions (Kemertaş, 1999). With these changes, redefining and reviewing of mathematics and it's education in accordance with the identified needs need to be performed (MEB, 2005). The reason of the aforesaid is that mathematics has always been the supporter of the forward but it hasn't been able to exceed the traditional status without it (Savaş and others, 2006). Considering these reasons, mathematics programs regarding 5.,6.,7.,8. grades of secondary school was renewed gradually in 2013-2014 school year in accordance with the decision dated 01.02.2013 prepared by the Ministry of National Education, the Board of Education and Discipline. This research has also been for analyzing teacher's opinions concerning the renewed mathematics program.

Consequently, this research has tried to seek answers for the question of "What are the opinions of secondary school mathematics teacher about the reprepared mathematics program with 4+4+4 education system?" and the following subproblems.

2. SUBPROBLEMS

1. How do the Secondary school mathematics teachers think about 4+4+4 education system, it's achievement and teaching period degree, the course of mathematical applications and the course books?

2. Is there a significant difference between the opinions of secondary school mathematics teachers about sex, seniority, place of duty, whether they take seminar or not, and whether the school buildings are the same or not when considered the program's general and subdimensions (System, achievement, teaching period, mathematical applications, and course books) ?

3. How do the mathematics teachers think about the omission of some subjects from the curriculum of secondary school mathematics program reprepared with 4+4+4 education system?

3. METHOD

In this study, the survey research design has been used. Survey models are the approaches aiming to describe the situations as either it is in the past or it is still continued (Karasar, 1995). Also, the study deals with that the different groups are compared in terms of some variables thereby performing a relational research. The data collection tool is a kind of likert scale developed by a researcher and the rate of Cronbach alpha reliability coefficient has obtained as 0,886. The scale has 5 factors and contains 28 articles.

4. FINDINGS AND RESULTS

According to findings obtained from the first subproblem of the research regarding the question "How do the teachers think about 4+4+4 education system,

achievement dimension, teaching methods and techniques' dimension, the course of mathematical applications and course books?", teachers have positively reacted 4+4+4 education system's being compulsory and gradual with the arithmetic mean 2,62 in middle level. According to teachers' opinions related with the research of Aybek ve Aslan (2015), teachers have positively reacted the 12 years and discontinuous education regarding 4+4+4 discontinuous compulsory education. In 4 interviews of 6, they have positively reacted the 12 years compulsory education in the study of Doğan, Demir ve Pınar (2014). But teachers have negatively reacted to the article "5 grades have been accepted as secondary school" with arithmetic mean 3,32 in middle level in terms of mathematics teaching. Teachers have expressed opinions to the article "The opinions of teachers working in the field have been received while passing to system" with the arithmetic mean 1,85 in weak level. Considering the general of the articles related with the system, they have expressed opinion with the arithmetic mean in weak level.

According to opinions obtained from the research regarding the achievements of the program, suitability has been identified in middle level that the achievement to the mental development is has arithmetic mean 3,24; the achievement to multi-directional thinking has arithmetic mean 2,98; the achievement to their readiness level has arithmetic mean 3,16. The study of Mercan (2011) done for the article about readiness in the past years has the quality to support. Also, the achievement associated with daily life has arithmetic mean 3,20; it's suitability to Turkish National Education and the general features of mathematics education has arithmetic mean 3,32 in middle level. The ordering of subject from concrete to abstract has arithmetic mean 3,42 in good level. The program organized from simple to complicated and it's having cyclical structure has arithmetic mean 3,53 in good level. Teachers have expressed opinions that the article "the content of program is consistent with the general features of mathematics education" has arithmetic mean 3,38; the article "the subject in the program's content is appropriate for the cognitive development of students" has arithmetic mean 3,26; the article "the achievement of the program are clearly understandable and applicable" has arithmetic mean 3,40; the article "the program have had the students like the mathematics course" has arithmetic mean 2,71 in middle level. The results obtained also from the same studies have quality to support the study (Mercan, 2011; Karagöz 2010; İyiol 2011).

In this research, the findings regarding the teaching period have been obtained are the followings: Teachers have expressed opinions in good level to the articles "Students are participating actively in course with the help of my applied activities" with arithmetic mean 3,54; "I am applying learning activities for increasing problems solving skills of students" with arithmetic mean 3,76; "I am benefiting from materials effectively while using learning methods" with arithmetic mean 3,50; "Learning and teaching activities I am using have quality to like mathematics" with arithmetic mean 3,69; "Teaching methods and techniques I am using addresses varied intelligence areas" with arithmetic mean 3,49; "Activities I am getting to be performed are at level which students can apply" with arithmetic mean 3,93; "I am trying to increase the interaction between students in learning and teaching period" with arithmetic mean 3,93.

When looked at the opinions of teachers about the mathematical applications course, the rate of arithmetic mean has come out at 3,17 with middle level regarding the article "Mathematics course has been more funny with the mathematical

applications”. Another article “I am using the mathematical applications most appropriately” has come out at arithmetic mean 3.20 and the other article “The expectations of both mathematical applications and parents are coincided” has come out at arithmetic mean 2,65 in middle level. The information missing of parents about elected courses and the sufficient information can't be transferred are the problems come across by the teachers that have been identified also in the study of Aslan ve Aybek (2015).

When looked at the opinions of the research regarding the course books, our teachers has expressed opinions to the article “no assistant source are needed as course books are enough for learning-teaching period” in weak level with the arithmetic mean 1,60. They have expressed opinions with arithmetic mean 1,97 to the article “The teaching style of course in course books is sufficiently clear”, 1,90 to the article “The exercises developing operation capabilities are sufficiently included in books” in weak level. Teachers has also mentioned in the research of Mutu (2008) done about the same subject in the past years that the content of 6. and 7. grade books is totally weak and the subject ordering is inconsistent; so they need assistant books because of this, and the sample questions are missing.

When looked at the answers to open ended questions we have asked regarding the omissions of some subjects, some teacher look positively at program's becoming simple but others has a number of concerns about that. They have considered that the subjects fully omitted will cause problems in high school and next education life, and they have defended that these subjects should be mentioned even a little. Furthermore, the positive contribution of the subjects for the students to understand and focus on other subjects is their another opinion and they have also considered that it has a positive impact in terms of time because of the mathematics course's heavy subjects.

REFERENCES

- [1] Aslan, S. ve Aybek, B. (2015). “Ortaokul Öğretmenlerinin 4+4+4 Kesintili Zorunlu Eğitim Sistemine Yönelik Yaşadıkları Sorunlar (Elazığ İli Örneği)”. *ElementaryEducation Online*, 14(2), 770-786, 2015. *İlköğretim Online*, 14(2), 770-786, 2015. [Online]: <http://ilkogretim-online.org.tr> <http://dx.doi.org/10.17051/io.2015.634> 54
- [2] Budak, M. ve Okur, M. (2012). *International Journal of New Trends in Arts, Sports & Science Education* - 2012, volume 1, issue 4
- [3] Cresswell, J.W. and Clark, V.L. (2015). *Karma Yöntem Araştırmaları (Çeviri Editörleri: Y. Dede, S.B. Demir)*. Ankara: Anı Yayıncılık (Eserin orijinali 2011'de yayımlandı).
- [4] Demir, S.B. ; Doğan, S. ve Pınar, M. A. (2013). “4+4+4 Eğitim Sisteminin Yansımaları: Beşinci Sınıflardaki Eğitim-Öğretim Sürecinin Branş Öğretmenlerinin Görüşleri Doğrultusunda Değerlendirilmesi”. *Turkish Studies - International Periodical For The Languages, Literature and History of Turkish or Turkic* Volume 8/9 Summer 2013, p. 1081-1098, ANKARA-TURKEY
- [5] Demir, S.B; Doğan, S. ve Pınar, M.A (2014). “4+4+4 Kesintili Zorunlu Eğitim Sisteminin Sınıf Öğretmenlerinin Görüşleri Doğrultusunda Değerlendirilmesi” *Elementary Education Online*, 13(2), 503-517, 2014. *İlköğretim Online*, 13(2), 503-517, 2014. [Online]: <http://ilkogretim-online.org.tr>
- [6] Greene, J.C., Caracelli, V.J., Graham, W.F. (1989). *Toward a conceptual framework for mixed-method evaluation designs*. *Educational Evaluation and Policy Analysis*, 11(3), 255-274.
- [7] İyiol, F.F (2011). *İlköğretim 8.Sınıf Matematik Programının Öğretmenlerin Görüşlerine Göre Değerlendirilmesi*. Selçuk Üniversitesi Eğitim Bilimleri Enstitüsü ilköğretim Anabilim Dalı Yüksek Lisans Tezi.

- [8] Karagöz, E. (2010). İlköğretim II. Kademe Matematik Dersi Öğretim Programının Öğretmen Görüşleri Doğrultusunda Değerlendirilmesi. Muğla Üniversitesi Sosyal Bilimler Enstitüsü Eğitim Programları ve Öğretimi Bilim Dalı Yüksek Lisans Tezi.
- [9] Karasar, N. (1995). Araştırmalarda Rapor Hazırlama 8. Basım Alkim yayınları Ankara.
- [10] Kemertaş, İ. (1999). Uygulamalı genel öğretim yöntemleri: "Öğretimde planlama ve değerlendirme İstanbul: Birsen Yayınevi
- [11] Kurtulmuş, Y. (2010). İlköğretim 8.Sınıf Matematik Ders Kitapları İle İlgili Öğretmen Görüşleri. Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü İlköğretim AnaBilim Dalı Yüksek Lisans Tezi.
- [12] MEB. (2005). İlköğretim Hayat Bilgisi, Matematik, Sosyal Bilgiler, Türkçe, Fen ve Teknoloji Dersi Öğretim Programlarında Değişiklik Yapılması. Milli Eğitim Bakanlığı Tebliğler Dergisi. 2575:
- [13] Mercan, Z. (2011). İlköğretim Matematik Dersi Öğretim Programının Eğitim Durumu Boyutunun Öğretmen ve Öğrenci Görüşleri Açısından Değerlendirilmesi. Muğla Üniversitesi Eğitim Bilimleri Enstitüsü Eğitim Programları ve Öğretimi Yüksek Lisans Tezi
- [14] Mutu, B.B (2008). 6. ve 7. Sınıf Matematik Ders Kitapları Hakkında Öğretmen Görüşleri. Osmangazi Üniversitesi Fen Bilimleri Enstitüsü İlköğretim Ana bilimdalı Yüksek Lisans Tezi
- [15] Olkun S.,Toluk, Z. (2007). İlköğretimde Etkinlik Temelli Matematik Öğretimi. (3.basım) Maya Akademi.
- [16] Savaş, E.;Obay, M. ve Duru A. (2006), Öğrenme Etkinliklerinin Öğrencilerin Matematik Başarıları Üzerindeki Etkisi, Journal Of OafqazUniversty, Yıl 2006, sayı:17
- [17] Tashakkari, A. ve Creswell, d.w. (2007). The eros of mixedmethods [Editorial]. Journal of mixedmethodsresearch, 1(1), 3-7.
- [18] Willoughby, S. (1990), MathematicsEducationFor A Changing World ASCD Virginia. www.matder.org.tr- www.ttkb.org.com.tr