

THE EXAMINATION OF THE ACADEMIC SUCCESS STATE OF THE ELEMENTARY SCHOOL STUDENTS PARTICIPATED IN INTERSCHOLASTIC SPORTS COMPETITIONS

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ABSTRACT

This study aims at examining the academic success state of the students who participated in interscholastic sports competitions. The universe of this study consists of 6th, 7th and 8th grade students chosen from 24 primary schools in different neighborhoods in Şahinbey and Şehitkamil districts of the province of Gaziantep. The usage of science and mathematical sciences, social sciences and sports and art sciences' grade point average belonged to the previous (2007-2008) and the next (2008-2009) academic years of the 6th, 7th and 8th grade students who participated in interscholastic sports competition as data was taken as a basis.

The data were analyzed by means of SPSS 15.0 statistic program in computer environment. Significance level was accepted 0.05 in all statistical analyses. One sample Kolmogorov Smirnov test was applied in order to determine whether the data obtained from the lesson success states belonging to the previous and next years of the students showed normal distribution. Repeated Measure Analysis of Variance/RM ANOVA, Within Effects Test and Between Subject Effects Test at $\alpha=0.05$ significance level were applied in order to determine whether there was a significant difference between the success state of students in science and mathematical sciences, social sciences and sports and art sciences according to the variables of grade, gender, grade \times gender, measurement, measurement \times grade, measurement \times gender and measurement \times grade \times gender.

Key words: **Sports Competitions, Students, Success**

OKULLARARASI SPORTİF MÜSABAKALARA KATILAN İLKÖĞRETİM OKULU ÖĞRENCİLERİNİN AKADEMİK BAŞARILARININ İNCELENMESİ

ÖZET

Bu çalışmanın amacı; okullar arası sportif müsabakalara katılan öğrencilerin ders başarı durumlarının incelenmesidir. Bu çalışmanın evrenini, Gaziantep ili Merkez Şahinbey ve Şehitkamil ilçelerindeki birbirinden farklı semtlerden seçilen 24 ilköğretim okulundaki 6. 7. ve 8. Sınıf öğrencileri oluşturmaktadır. Sadece 6. 7. ve 8. sınıflarda öğrenim gören ve okullar arası sportif müsabakalara katılan öğrencilerin bir yıl öncesi (2007-2008) eğitim-öğretim yılı ve bir yıl sonrası (2008-2009) eğitim-öğretim yılına ait sayısal, sözel ve yetenek ders notlarının veri olarak kullanılması esas alınmıştır.

Veriler bilgisayar ortamında SPSS 15.0 istatistik programı aracılığıyla analiz edilmiştir. Tüm istatistiksel analizlerde anlamlılık düzeyi 0.05 olarak kabul edilmiştir. Öğrencilerin bir yıl öncesi ve bir yıl sonrası ders başarı durumlarından elde edilen notların normal dağılım gösterip göstermediğini belirlemek amacıyla tek örneklem Kolmogorov-Smirnov testi uygulanmıştır. Ders dışı sportif faaliyetlere katılan öğrencilerin sınıf, cinsiyet, sınıf cinsiyet, ölçüm, ölçüm sınıf, ölçüm cinsiyet ve ölçüm sınıf cinsiyet değişkenlerine göre sayısal, sözel ve yetenek derslerindeki başarı düzeyleri arasında bir fark olup olmadığını belirlemek için, $\alpha=0,05$ anlamlılık düzeyinde Tekrarlı Ölçümler Varyans Analizi (Repeated Measure Analysis of Variance / RM-ANOVA) testi, Within Subject Effects testi ve Between Subject Effects testi uygulandı.

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INTRODUCTION

Primary education age is a period in which the development of children and students continue. It is known that students should be provided with physical, affective and social development as well as education in this period. It is also known that extracurricular sports activities are physical education are very profitable in this sense. These activities contribute to children, whether they are in the curriculum or extracurricular.

The word meaning of education is the preparation of a useful member to society by socializing the individual (Leif and Rustin, 1980). People are provided with changing into more sufficient level by the education they take. Education of people last from birth till death. For this reason, education is a comprehensive process (Morin, 2003). We cannot be contented with only developing the knowledge and skill of children in learning process. We are responsible with developing and taking care of their emotional, social, mental and physical sides as well (Ercan, 1998). Activities (lessons, solving skills, psychomotor and affective skill and hobbies, cultural and social activities) in curriculum should be arranged in line with the cognitive levels of children. In other words, an activity made in primary education should be developed in a higher educational institution. For example, one of the biggest problems of today's children is that they cannot have enough psychomotor activities and that they cannot do enough sports (Yapıcı, 2004).

Physical education is a wide activity that includes physical health, mental health, activities for environmental rules, games, gym and sports works (Aracı,

2001). On the other hand, sports is the whole natural, enjoyable, organized and scientific movements that operate people's bodies and minds together; contribute to the development of people's physical well-being, mind, mental, social, cultural, economic, anthropological, educational, political, technological, moral art structures; can be made with competition or without competition (Özmen, 1979). As physical education and sports have an important place in mental, psychological and physical development of children, educators need to remember that this should be made use of as much as possible (Gökdemir and Kılıncı, 2000).

Extracurricular sports activities are the works that are made by students with their own wish under the guidance and control of school management or activities that are done in order to complete lessons, meet the needs of children and provide a good civics (Binbaşıoğlu, 1991). Extracurricular sports activities are the activities that provide people's physical, mental and psychical development; have an important place in that people become an honest, gentlemen thanks to the information, skill and good habits gained in this field (Karaküçük, 1995).

There are various ideas and theories on the participation in extracurricular sports activities and the effect of these activities' on students' academic success. One of these theories, Zero-Sum Theory says that "if students participate in extracurricular activities, the time used for studying lesson will be limited. In other words, there is limited time out of class, yet extracurricular activities will take this time that is used for studying and homework potentially" (Marsh, 1992).

Another theory puts forward that "extracurricular activities will strength the bind between students and school, which causes increase in students' academic performances as their motivation will rise" (Schreiber and Chambers, 2002). Lastly, Powell, Peet and Peet (2002) say that "there is a curvilinear relationship between extracurricular activities and academic success state and thus, spending too much time on an extracurricular activity will be harmful."

There are important studies on the relationship between participation in extracurricular activities and academic success state. According to Poyraz's research (1999), there was not found a significant difference between academic success states of children who participated and not participated in sports activities, which shows that participation in sports activities do not affect academic success. Öcal (2006) found in his research that unlike general opinion, participation in extracurricular sports activities do not affect academic success negatively and that test scores of students who participated in individual sports branches were higher and also that families' educational and socio-economic

MATERIAL and METHOD

Descriptive research method was used in this research. The gender, class, section and sports activity of the students who participated in extracurricular sports activities were transferred into computer environment. The data were analyzed by means of SPSS 15.0 statistic program in computer environment. Significance level was accepted 0.05 in all statistical analyses. The percentage frequency of

levels are an important variable in academic success. Silliker and Quirk (1997) found in their research based on a high school football team students whose grade point average were higher in the competition period than the end of period. As a result, it has been found in recent studies that there is a positive relationship between participation in extracurricular sports activities and academic success level. It is also observed that many sense, behavior and skills such as respect, self-confidence, auto-control, positive behavior, healthy life, moving around the same goal and sportsmanship are developed thanks to the participation in extracurricular sports activities.

However, as families in Turkey know that education and examination systems are effective on directing their children's future, they force their children into studying lesson all the time.

This study is important in that it examines the academic success level of students who participated in interscholastic sports activities and puts forward the academic success level of these students in the sense of scientific criteria.

defining characteristics was determined by being analyzed in SPSS 15.0 program.

One sample Kolmogorov Smirnov test was applied in order to determine whether the data obtained from the lesson success states belonging to the previous and next years of the students showed normal distribution.

The grades of lessons of Physical Education, Religious Culture and Moral Knowledge, Science and Technology, Visual Arts, Math, Music, Social Studies,

Technology and Design, Turkish, Foreign Language belonging to the last two years of the students who participated in extracurricular sports activities were uploaded to Excel and Repeated Measure Analysis of Variance - RM-ANOVA was made in SPSS 15.0 package program.

The science and mathematical sciences consisted of math, science and technology lessons; social sciences consisted of religious culture and moral knowledge, social studies, Turkish and foreign language lessons; sports and art sciences consisted of music, visual arts, physical education, technology and design lessons.

Repeated Measure Analysis of Variance/RM ANOVA, Within Effects Test and Between Subject Effects Test at $\alpha=0.05$ significance level were applied in order to determine whether there was a significant difference between the success level of students in science and mathematical sciences, social sciences and, sports and art sciences according to the variables of grade; gender; grade and gender; measurement; measurement and grade; measurement and gender; and measurement*grade*gender.

Tukey (HSD) was applied as second level test in order to determine the significance between the variables of grade; gender; grade and gender; measurement; measurement and grade; measurement and gender; and measurement*grade*gender.

Universe of the Study

The universe of this study consists of 24 primary schools chosen from different neighborhoods in Şahinbey and Şehitkamil districts of the province of

Gaziantep. The sample of the study consists of 444 students who participated in extracurricular sports activities.

Research Group

The research group of this study consists of students that were participating in extracurricular sports activities were chosen from 24 primary schools in different neighborhoods in Şahinbey and Şehitkamil districts of the province of Gaziantep. 276 of these students were male whereas 168 of them were female.

Data Collection Technique

Observation technique was used as data collection technique in this research. Observation is one or more person's watching and recording the events in real life within the scope of a plan. Observation technique is a direct technique. The observer watches individuals, groups and events and records the results directly (Kaptan, 1998).

The grades of lessons of Physical Education, Religious Culture and Moral Knowledge, Science and Technology, Visual Arts, Math, Music, Social Studies, Technology and Design, Turkish, Foreign Language belonging to the last two years of the students who participated in extracurricular sports activities were taken from the school administrations.

There was not applied any other survey or another data collection technique, only the usage of science and mathematical sciences, social sciences and sports and art sciences' grade point average belonged to the previous (2007-2008) and the next (2008-2009) academic years of the 6th, 7th and 8th grade students who

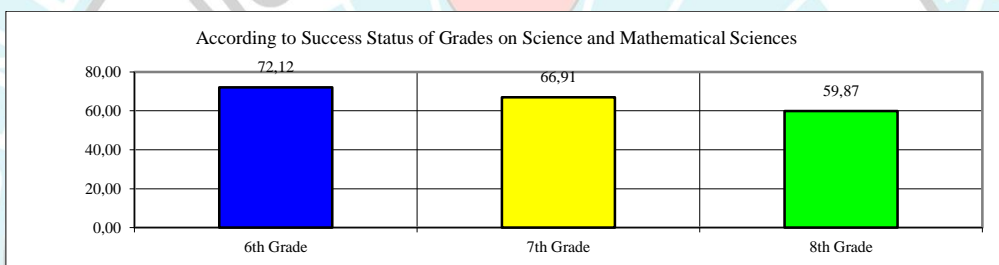
participated in interscholastic sports competition as data was taken as a basis.

FINDINGS

The Findings for the Success States of the Students in Science and Mathematical Sciences

Repeated Measure Analysis of Variance/RM-ANOVA test at $\alpha=0,05$ significance level was applied in order to determine whether there was a difference between the science and mathematical sciences success states according to the grade factor of the students who

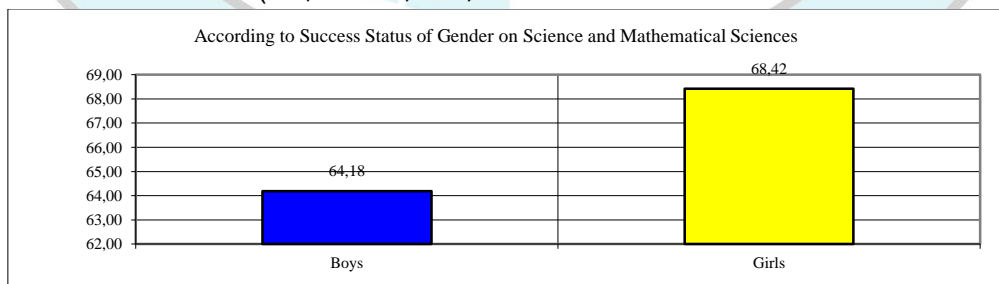
participated in extracurricular sports activities. As a result of the test, there was found a significant difference between the success states in science and mathematical sciences according to grade factor ($F_3, 438=22.349$; $P<0.01$). As a result of Tukey (HSD) applied as second level test in order to determine the significance between grades, there was observed a decrease in the success in science and mathematical sciences as grade level increased (see Graphic 1).



Graphic 1 Science and Mathematical Sciences Success State According to Grades.

As a result of RM-ANOVA test applied at $\alpha=0,05$ significance level in order to determine whether there was a difference in science and mathematical sciences success states according to gender factor, there was found a significant difference between the science and mathematical sciences success states ($F_2,438=7,921$;

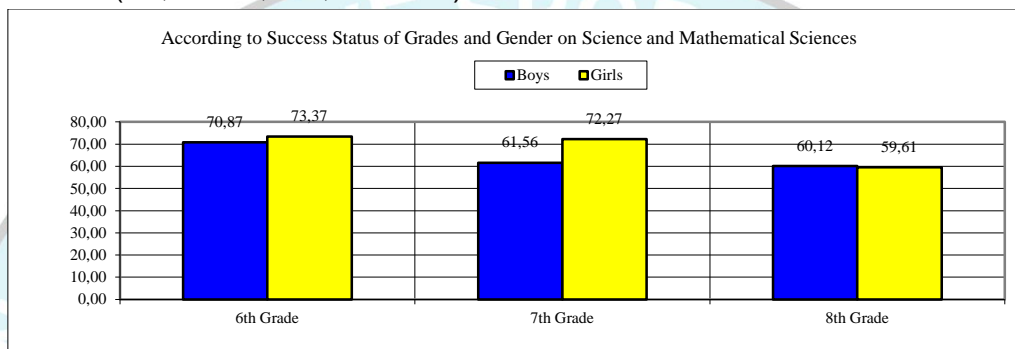
$P<0.05$). As a result of Tukey (HSD) applied as second level test in order to determine the significance according to gender factor, it was seen that female students were more successful than male students in science and mathematical sciences (See Graphic 2).



Graphic 2. Science and Mathematical Sciences Success State According to Gender.

As a result of RM-ANOVA test applied in order to determine whether there was a difference in science and mathematical sciences success states according to grade and gender factors, there was found a significant difference between the science and mathematical sciences success states according to grade and gender factors ($F_{3,438}=4,986$; $P<0.05$).

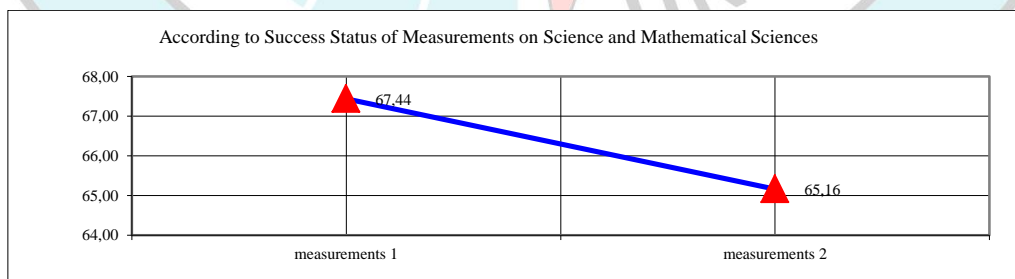
As a result of Tukey (HSD) applied as second level test in order to determine the significance according to grade and gender factors, it was observed that those male and female students' science and mathematical sciences success rate decreased as grade level increased (See Graphic 3).



Graphic 3. Science and Mathematical Sciences Success State According to Grades and Gender.

As a result of RM-ANOVA test applied in order to determine whether there was a difference between science and mathematical sciences success states according to measurement factors belonging to 1 year ago (2007-2008 academic year) and 1 year later (2008-2009 academic year), there was found a significant difference between the science and mathematical sciences success

states belonging to 1 year ago and 1 year later ($F_{2, 438}=26,526$; $P<0.01$). As a result of Tukey (HSD) applied as second level test in order to determine significance according to measurement factors, it was observed that the science and mathematical sciences success state belonging to 1 year ago was higher than the state belonging to 1 year later (See Graphic 4).



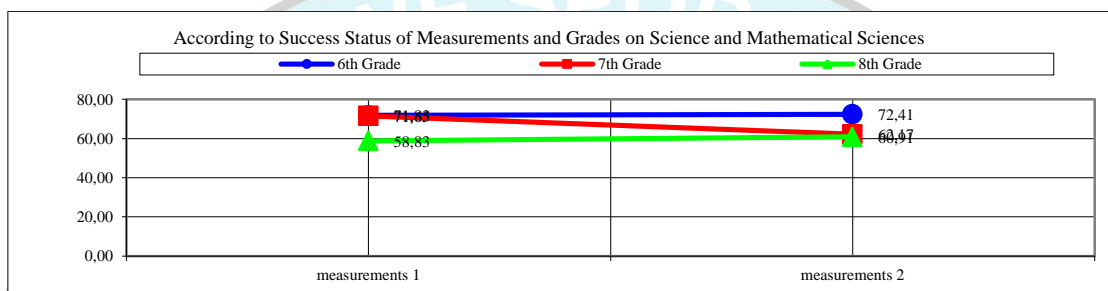
Graphic 4. Science and Mathematical Sciences Success State According to Measurements

As a result of RM-ANOVA test applied in order to determine whether there was a difference between science and

mathematical sciences success states according to measurement and grade factors belonging to 1 year ago and 1 year

later, there was found a significant difference between the science and mathematical sciences success states belonging to 1 year ago and 1 year later according to grades ($F_3, 438=67.490$; $P<0.01$). As a result of Tukey (HSD) applied as second level test in order to determine significance according to measurement and grade factors, there

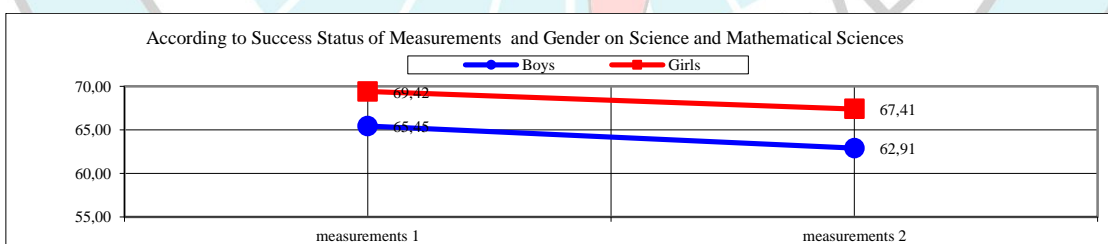
was observed that the science and mathematical sciences success rate of 6th and 8th grades belonging to 1 year later was higher than the grades belonging to 1 year ago, yet a decrease was observed in the science and mathematical sciences success rate of 7th grade belonging to 1 year later compared to the 1 year ago (See Graphic 5).



Graphic 5. Science and Mathematical Sciences Success State According to Measurements and Grades

As a result of RM-ANOVA test applied in order to determine whether there was a difference between science and mathematical sciences success states according to measurement and gender factor belonging to 1 year ago and 1 year later, there was not found a significant difference between the science and mathematical sciences success states

($F_{2,438}=0.368$; $P>0.05$). As a result of Tukey (HSD) applied as second level test in order to determine significance according to measurement and gender factors there was found a decrease in science and mathematical sciences success rate in 1-year-later measurements compared to the 1-year-ago measurements (See Graphic 6).



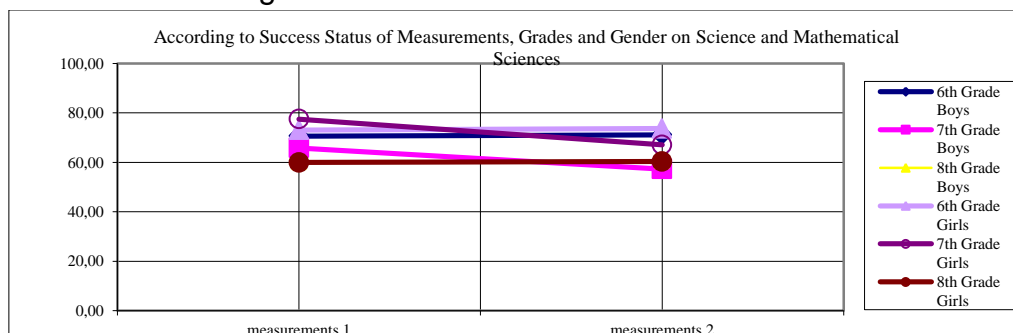
Graphic 6. Science and Mathematical Sciences Success State According to Measurements and Gender

As a result of RM-ANOVA test applied in order to determine whether there was a difference between science and mathematical sciences states according 1-year-ago and 1-year-later measurement, gender and grade factors,

there was found a significant difference ($F_3, 438=2,909$; $P>0.05$) between the science and mathematical sciences success states according to 1-year-ago and 1-year-later measurement, gender and grade factors. As a result of Tukey

(HSD) applied as second level test in order to determine the significance according to 1-year-ago and 1-year-later measurement, gender and grade factors, there was observed an increase in the success rate of 6th and 8th grade students

belonging to 1-year-later measurements compared to the 1-year-ago measurements, yet there was observed the opposite case in 7th grade students for both gender (See Graphic 7).

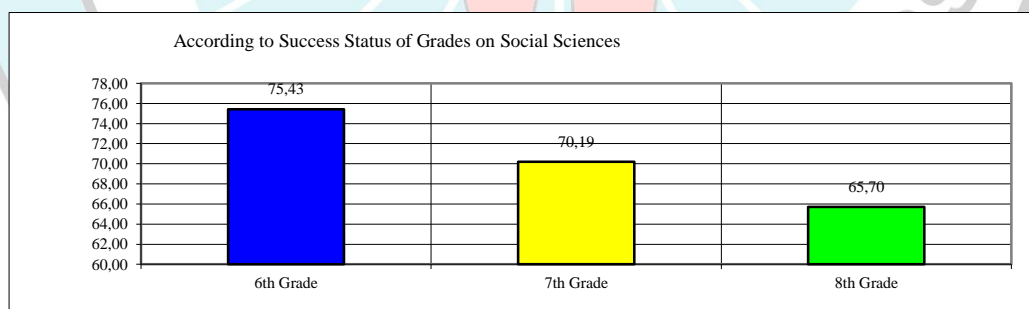


Graphic 7. Science and Mathematical Sciences Success State According to Measurements, Gender and Grades

The Findings for the Success States of the Students on Social Sciences

As a result of RM-ANOVA test applied at $\alpha=0,05$ significance level in order to determine whether there was a difference in social sciences success states according grade factor, there was found a significant difference between the social

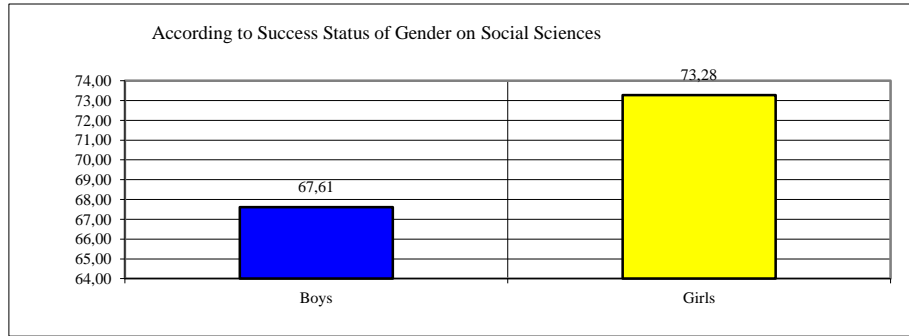
science courses success states according to grade factor ($F_{3,438}=18.804$; $P<0.01$). As a result of Tukey (HSD) applied as second level test in order to determine the significance between grades, there was observed a decrease in the success in social science courses as grade level increased (see Graphic 8).



Graphic 8. Social Sciences Success State According to Grades

As a result of RM-ANOVA test applied in order to determine whether there was a difference in social sciences success states according to gender variable, there was found a significant difference between the social sciences success states according to gender factor

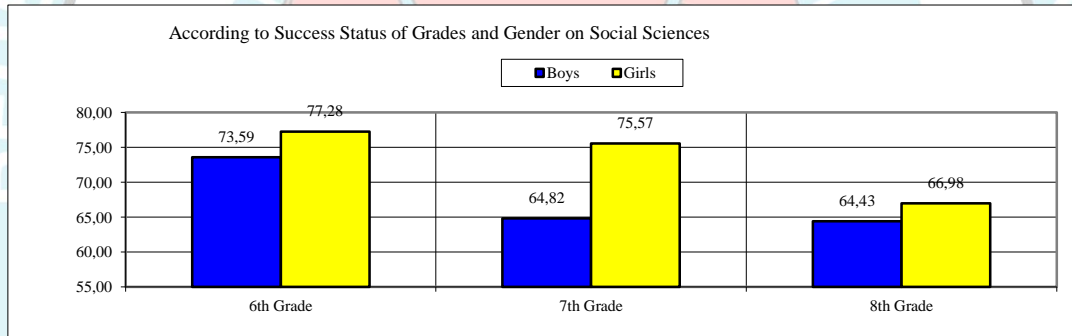
($F_{2,438}=19,069$; $P<0.01$). As a result of Tukey (HSD) applied as second level test in order to determine the significance according to gender factor, it was seen that female students were more successful than male students in social sciences (See Graphic 9).



Graphic 9. Social Sciences Success State According to Gender

As a result of RM-ANOVA test applied in order to determine whether there was a difference in social sciences success states according to grade and gender factors, there was found a significant difference between the social sciences success states according to grade and gender factors ($F_{3,438}=3,909$; $P<0.05$).

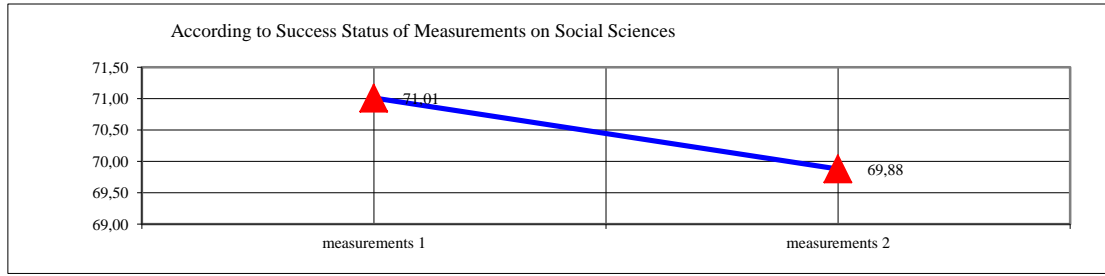
As a result of Tukey (HSD) applied as second level test in order to determine the significance according to grade and gender factors, it was observed that male and female students' social sciences success state decreased as grade level increased (See Graphic 10).



Graphic 10. Social Sciences Success State According to Grades and Gender

As a result of RM-ANOVA test applied in order to determine whether there was a difference between social sciences success states according measurement factors belonging to 1 year ago (2007-2008 academic year) and 1 year later (2008-2009 academic year), there was found a significant difference between the social sciences success states belonging to 1-year-ago and 1-year-later

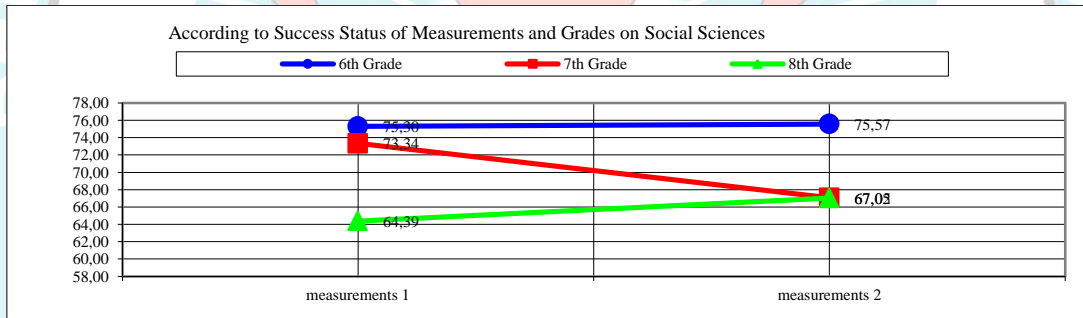
measurement factors ($F_2, 438=9,650$; $P<0.05$). As a result of Tukey (HSD) applied as second level test in order to determine significance according to measurement factors, it was observed that the social sciences success state belonging to 1 year ago was higher than the state belonging to 1 year later (See Graphic 11).



Graphic 11.Social Sciences Success State According to Measurements

As a result of RM-ANOVA test applied in order to determine whether there was a difference between social sciences success states according to measurement and grade factors belonging to 1 year ago and 1 year later, there was found a significant difference between the social sciences success states according to 1-year-ago and 1-year-later measurement and grades ($F_{3, 438}=54.293$; $P<0.01$). As a result of

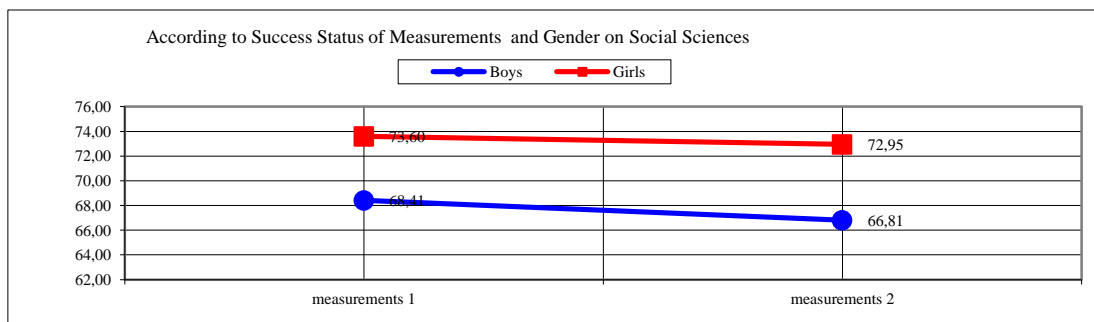
Tukey (HSD) applied as second level test in order to determine significance according to measurement and grade factors, there was observed that the social sciences success state of 6th and 8th grades belonging to 1 year later was higher than the grades belonging to 1 year ago, yet a decrease was observed in the social sciences success state of 7th grade belonging to 1 year later compared to the 1 year ago (See Graphic 12).



Graphic 12.Social Sciences Success State According to Measurements and Grades

As a result of RM-ANOVA test applied in order to determine whether there was a difference between social sciences success states according to measurement and gender factors belonging to 1 year ago and 1 year later, there was found a significant difference between the social sciences success states according to 1-year-ago and 1-

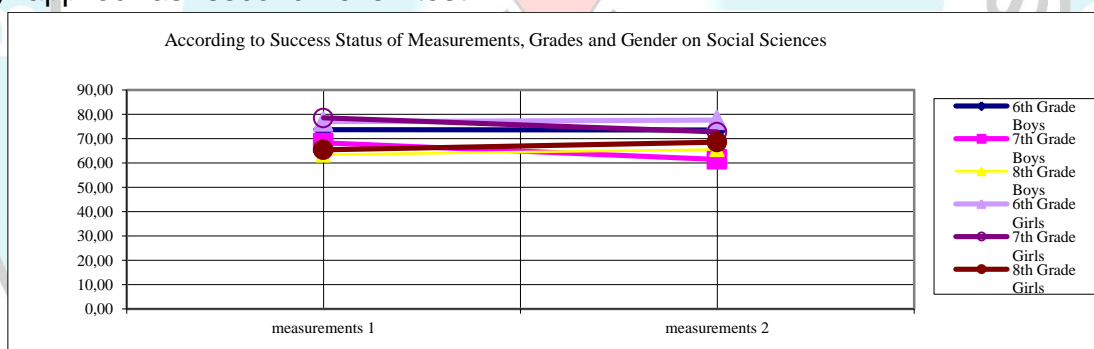
year-later measurement and gender ($F_{2, 438}=1.742$; $P>0.05$). As a result of Tukey (HSD) applied as second level test in order to determine significance according to measurement and gender factors there was found a decrease in social sciences success state in 1-year-later measurements compared to the 1-year-ago measurements (See Graphic 13).



Graphic 13. Social Sciences Success State According to Measurements and Gender

As a result of RM-ANOVA test applied in order to determine whether there was a difference between social sciences success states according to measurement, gender and grade factors belonging to 1 year ago and 1 year later, there was found a significant difference between the social sciences success states according to 1-year-ago and 1-year-later measurement and gender ($F_{3, 438}=0,009$; $P>0.05$). As a result of Tukey (HSD) applied as second level test in

order to determine the significance according to 1-year-ago and 1-year-later measurement, gender and grade factors, there was observed an increase in the success state of 6th and 8th grade students belonging to 1-year-later measurements compared to the 1-year-ago measurements, yet there was observed the opposite case in 7th grade students for both gender (See Graphic 14).

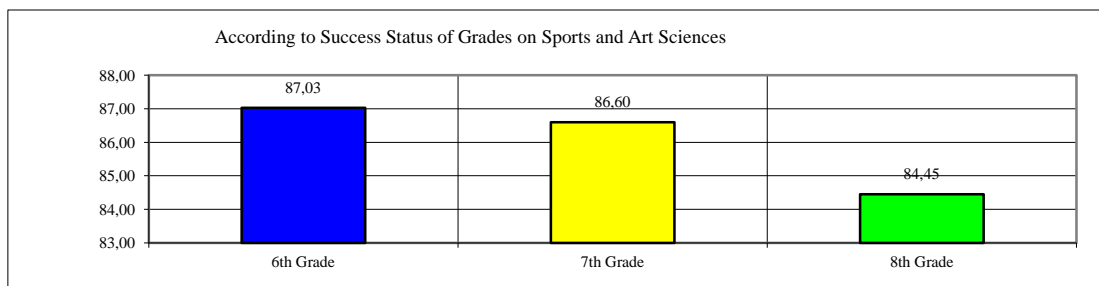


Graphic 14. Social Sciences Success State According to Measurements, Gender and Grades

The Findings for the Success States of the Students on Sports and Art Sciences

As a result of RM-ANOVA test applied in order to determine whether there was a difference in sports and art sciences success states according grade factor, there was found a significant difference

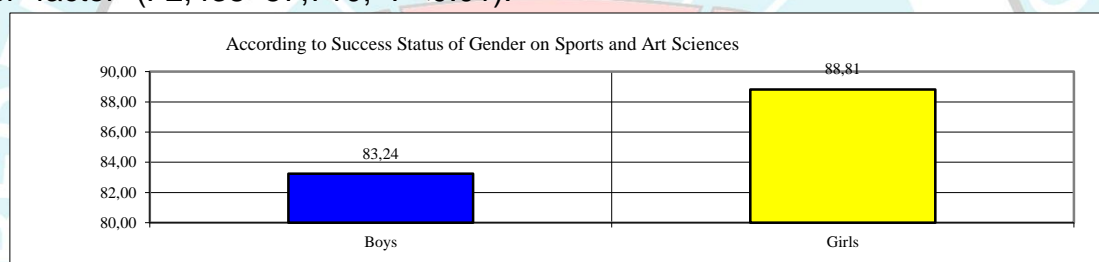
between the sports and art sciences success states according to grade factor ($F_{3, 438}=4.773$; $P<0.05$). As a result of Tukey (HSD) applied as second level test in order to determine the significance between grades, there was observed a decrease in the success state in sports and art sciences as grade level increased (See Graphic 15).



Graphic 15.Sports and Art Sciences Success State According To Grades

As a result of RM-ANOVA test applied in order to determine whether there was a difference in sports and art sciences success states according to gender variable, there was found a significant difference between the sports and art sciences success states according to gender factor ($F_{2,438}=57,710$; $P<0.01$).

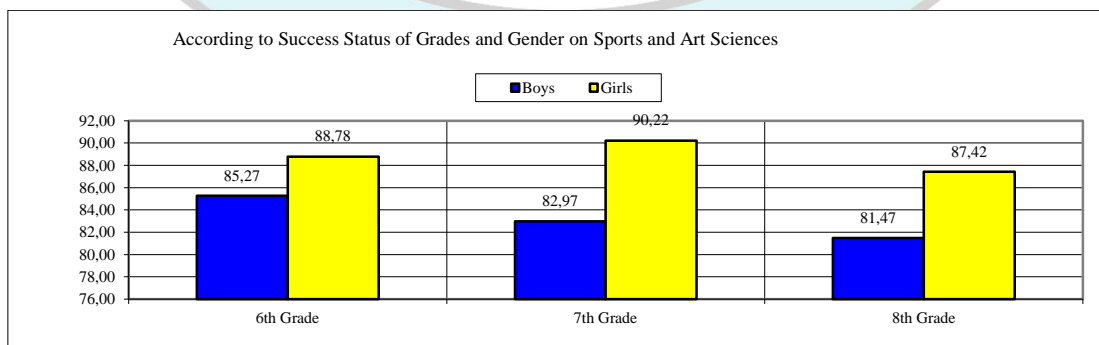
As a result of Tukey (HSD) applied as second level test in order to determine the significance according to gender factor, it was seen that female students were more successful than male students in sports and art sciences (See Graphic 16).



Graphic 16.Sports and Art Sciences Success State According to Gender

As a result of RM-ANOVA test applied in order to determine whether there was a difference in sports and art sciences success states according to grade and gender factors, there was found a significant difference between the sports and art sciences success states according to grade and gender factors

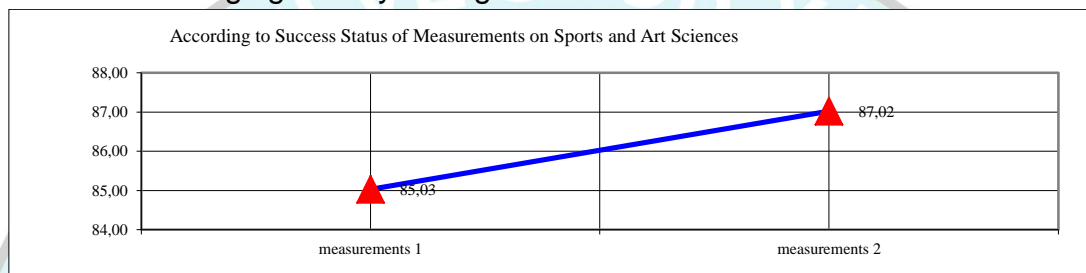
($F_{3,438}=2,219$; $P>0.05$). As a result of Tukey (HSD) applied as second level test in order to determine the significance according to grade and gender factors, it was observed that those male and female students' sports and art sciences success state decreased as grade level increased (See Graphic 17).



Graphic 17.Sports and Art Sciences Success State According to Grades and Gender

As a result of RM-ANOVA test applied in order to determine whether there was a difference between sports and art sciences success states according measurement factors belonging to 1 year ago (2007-2008 academic year) and 1 year later (2008-2009 academic year), there was found a significant difference between the sports and art sciences success states belonging to 1 year ago

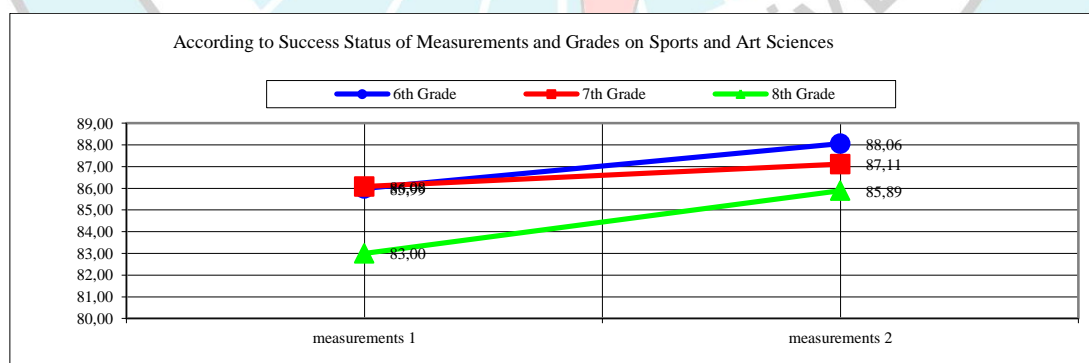
and 1 year later ($F_2, 438=30,762$; $P<0.01$). As a result of Tukey (HSD) applied as second level test in order to determine significance according to measurement factors, it was observed that the sports and art sciences success state belonging to 1 year later was higher than the state belonging to 1 year ago (See Graphic 18).



Graphic 18.Sports and Art Sciences Success State According to Measurements

As a result of RM-ANOVA test applied in order to determine whether there was a difference between sports and art sciences success states according measurement and grade factors belonging to 1 year ago (2007-2008 academic year) and 1 year later (2008-2009 academic year), there was found a significant difference between the sports and art sciences success states

belonging to 1 year ago and 1 year later ($F_3, 438=2.261$; $P>0.05$). As a result of Tukey (HSD) applied as second level test in order to determine significance between measurement and grade factors, it was observed that the sports and art sciences success state belonging to 1 year later was higher than the state belonging to 1 year ago (See Graphic 19).



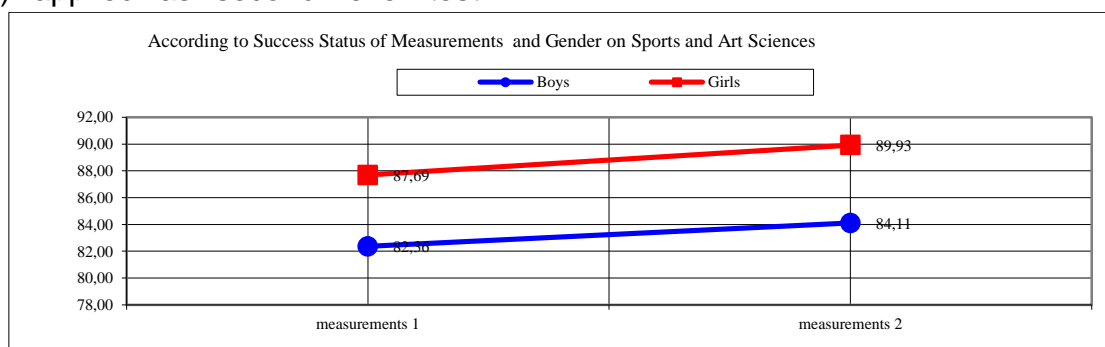
Graphic 19.Sports and Art Sciences Success State According to Measurements and Grades

As a result of RM-ANOVA test applied in order to determine whether there was a difference between sports and art

sciences success states according measurement and gender factors belonging to 1 year ago (2007-2008

academic year) and 1 year later (2008-2009 academic year), there was not found a significant difference between the sports and art sciences success states belonging to 1 year ago and 1 year later ($F_{2, 438}=0.480$; $P>0.05$). As a result of Tukey (HSD) applied as second level test in

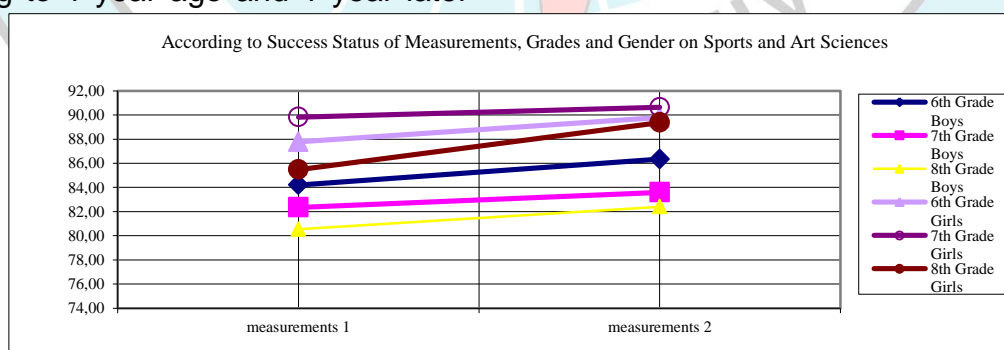
order to determine significance between measurement and gender factors, there was found an increase in sports and art sciences success state in 1-year-later measurements compared to the 1-year-ago measurements (See Graphic 20).



Graphic 20.Sports and Art Sciences Success State According to Measurements and Gender

As a result of RM-ANOVA test applied in order to determine whether there was a difference between sports and art sciences success states according measurement, gender and grade factors belonging to 1 year ago (2007-2008 academic year) and 1 year later (2008-2009 academic year), there was not found a significant difference between the sports and art sciences success states belonging to 1 year ago and 1 year later

($F_{3, 438}=1,155$; $P>0.05$). As a result of Tukey (HSD) applied as second level test in order to determine the significance according to 1-year-ago and 1-year-later measurement, gender and grade factors, there was observed an increase in the success state of 6th, 7th and 8th grade students belonging to 1-year-later measurements compared to the 1-year-ago measurements (See Graphic 21).



Graphic 21.Sports and Art Sciences Success State According to Measurements, Gender and Grades

DISCUSSION and CONCLUSION

It was observed that success states of the students in science and mathematical sciences, social sciences and sports and art sciences decreased as grade level increased according to gender, grade and measurement factors. The fact that curriculum gets harder as grade level increases, decrease in students' interest in lessons as their age increases, problems in families, adolescence period and this period's physiological and psychological effects are among the reasons of this decrease. However, it is also observed that the success state of female students is higher than of male students. The findings found by Peker (2003) were similar to the findings of this research.

According to results, science and mathematical sciences, social sciences and sports and art sciences success states of 7th grade students were lower than of 6th and 8th grade students. It cannot be coincidence that lesson success decreased in all 7th grade male

and female students. The estimated reason for this decrease is physiological changes that occur with the start to adolescence in male and female students.

Another important point is that sports and art sciences success states of 1-year-later increased compared to the 1-year-ago states according to measurement; measurement and grade; measurement and gender; measurement, grade and gender factors. The findings of studies done by Demoulin (2002), Stephens and Schaben (2002), Peker (2003) and Selçuk (2006) were similar to the findings of this study.

As a result, when the success states of students in primary education secondary stage (6th, 7th and 8th grade) who participated in extracurricular sports activities; there was observed a little decrease in science and mathematical sciences, social sciences whereas an increase was observed in sports and art sciences, yet general success state was not affected completely at all.

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