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# Self-Efficacy Levels of Primary School Students and Factors Affecting Them\*

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# İlkokul Öğrencilerinin Öz Yeterlik Seviyeleri ve Öz Yeterlik Seviyelerine Etki Eden Faktörler\*

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## Self-Efficacy Levels of Primary School Students and Factors Affecting Them

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#### **Abstract**

The purpose of the study was to ascertain the self-efficacy levels of fourth-year elementary students as well as the factors influencing them. The explanatory sequential design was implemented in the study. The research group consists of fourth-grade elementary school students studying in Bornova district of Izmir province during the 2019-2020 academic year. The quantitative stage of the research consists of 584 students, while the qualitative stage consists of 10 students and 9 teachers. The study group comprised 584 students for the quantitative stage, 10 students for the qualitative stage, and 9 teachers. The research utilized semi-structured interview forms and the Self-Efficacy Scale for Children. The quantitative data was examined using descriptive statistics and a one-way ANOVA test. Content analysis was applied to analyze the qualitative data. It was found that the students' self-efficacy levels were high. In the total scores that the students received from the scale, a significant difference was identified in favor of those with higher self-efficacy levels. However, it was observed that the father's educational level did not vary according to the students' learning levels. The academic success variable indicated that students' selfefficacy levels rose with their academic accomplishment levels. Factors influencing students' self-efficacy include parental educational level, academic achievement, friendships, and emotional control. It is expected that the research will provide suggestions directly related to its findings.

#### **Article Info**

**Keywords:** Self-efficacy, level of self-efficacy, factors affecting self-efficacy

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# İlkokul Öğrencilerinin Öz Yeterlik Seviyeleri ve Öz Yeterlik Seviyelerine Etki Eden Faktörler

#### Öz

Çalışmanın amacı, ilkokul dördüncü sınıf öğrencilerinin öz yeterlik seviyelerinin belirlenmesi ve öz yeterlik seviyelerine etki eden faktörlerin tespit edilmesidir. Arastırmada açımlayıcı sıralı karma yöntem deseni kullanılmıştır. Araştırmanın çalışma grubunu 2019-2020 eğitim öğretim yılında İzmir ili Bornova ilçesinde öğrenim gören ilkokul dördüncü sınıf öğrencileri oluşturmaktadır. Araştırmanın nicel aşamasını 584 öğrenci, nitel aşamasını 10 öğrenci ve 9 öğretmen oluşturmaktadır. Araştırmada Çocuklar için Öz Yeterlik Ölçeği ve yarı yapılandırılmış görüşme formları kullanılmıştır. Nicel veriler betimsel istatistikler ve tek yönlü ANOVA testi kullanılarak incelenmiştir. Nitel verilerin analizinde içerik analizi uygulanmıştır. Öğrencilerin öz yeterlik seviyelerinin yüksek olduğu tespit edilmiştir. Öğrencilerin ölçekten aldıkları toplam puanlar anne öğrenim durumu değişkenine göre incelendiğinde anne öğrenim durumu yüksek olanlar lehine anlamlı bir farklılık tespit edilirken, baba öğrenim durumu değişkenine göre öğrencilerin öz yeterlik seviyelerinin farklılaşmadığı görülmüştür. Akademik başarı değişkenine göre incelendiğinde ise öğrencilerin akademik başarı düzeyleri arttıkça öz yeterlik seviyelerinin arttığı bulunmuştur. Araştırmanın nitel aşamasında öğrenci ve öğretmenlerle yapılanlar görüşmelere göre öğrencilerin öz yeterlik seviyelerini etkilen faktörler arasında anne ve babanın öğrenim durumu, ailenin öğrencinin okul yaşantısıyla ilgilenmesi, öğrencinin akademik başarısı, sosyal etkinliklere düzenli/düzensiz katılımı, arkadaşlık ilişkileri, duygu kontrolü gibi etkenler yer almaktadır.

# Makale Bilgisi

**Anahtar Kelimeler:** Öz yeterlik, öz yeterlik seviyesi, öz yeterliği etkileyen faktörler

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# Geniş Özet

Erken çocukluk döneminde gelişmeye başlayan öz yeterlik (Allen, Gordon & Whalley, 2010; Bandura, 1994), bireyin istenen bir sonuca ulaşmak için kendi yeteneklerine duyduğu inanç olarak tanımlanmaktadır (Bandura, 1977; 1997). Benzer şekilde; Pajares öz yeterliği bireyin belirli bir davranışı organize etme ve gerçekleştirme yeterliğine ilişkin inancı olarak ifade etmektedir (Pajares,1996). Öz yeterlik göreve özgüdür ve genel bir kişilik özelliği olarak kavramsallaştırılmamıştır (Gonzalez-DeHass & Willems, 2012; Pajares,1996). Örneğin, bir öğrenci kompozisyon yazmak için yüksek öz yeterliğe sahip olabilir, ancak bir geometri problemini çözmek için düşük öz yeterliğe sahip olabilir (Gonzalez-DeHass & Willems, 2012). Bandura'ya (1977) göre, öz yeterlik duygusu yüksek olan kişiler görevlerin zorluk derecesi fazla olsa bile bu görevlerden kaçmak yerine başarıya ulaşmak için çaba göstermeyi tercih etmektedirler.

Alan yazın incelendiğinde öz yeterliğin tıp, spor, psikoloji, işletme, eğitim gibi birçok alanda araştırma konusu olduğu görülmektedir. Eğitim alanındaki araştırmalara baktığımızda öz yeterliğin akademik başarının bir yordayıcısı olduğu vurgulanmaktadır (Anderman & Anderman, 2009; Arseven, 2016). Öz yeterlik seviyesi yüksek olan öğrencilerin daha azimli ve akademik anlamda daha başarılı oldukları görülürken, öz yeterlik seviyesi düşük öğrencilerin bir zorluk karşısında çabuk pes ettikleri ve akademik olarak da daha düşük oldukları görülmektedir (Schunk & Hanson, 1989). Alan yazındaki çalışmalar incelendiğinde hem yurtiçinde hem de yurtdışında ilkokul öğrencilerinin öz yeterlik seviyelerine yönelik çok az çalışmaya rastlanmıştır. Yapılan çalışmaların daha çok ortaokul, lise, öğretmen ve öğretmen adaylarına yönelik olduğu görülmüştür. Ayrıca matematik ve fen bilimleri alanlarına dair öz yeterlik algısının daha çok çalışılan konular arasında olduğu dikkat çekmiştir. Alan yazında ilkokul dördüncü sınıf öğrencilerinin öz yeterlik seviyelerine etki eden sebeplerle ilgili herhangi bir çalışmaya rastlanmamıştır.

İlkokul çağındaki çocuklar için ebeveynleri ve öğretmenleri birer model kaynağıdır. Ebeveynler ve öğretmenler iyi birer model olarak çocukların öz yeterlik algılanın gelişmesine katkı sağlarken istendik davranışları da kazandırabilirler (Kalkan, 2011; Erdamar-Koç, 2008; Senemoğlu, 2013). Dolayısıyla öğrencilerin kendilerine olan inançları yani öz yeterlik algıları başarı veya başarısızlıklarında da etkili olmaktadır. Çünkü öz yeterlik algısı öğrencilerin başarılı olmak için gerekli çabayı göstermeleri konusunda etki etmektedir. Öz yeterlik algılarındaki bu farklılık, yetenekleri bakımından eşit olan öğrencilerin başarı durumlarındaki farkı anlamamıza yardımcı olmaktadır (Krapp, 2005). Bu bağlamda hem alan yazında belirlenen söz konusu boşluğun araştırılması, ilkokul öğrencilerinin öz yeterlik seviyesini arttırmak için öğretmenlerin ve ebeveynlerin neler uygulayabileceğine yönelik verilere ulaşmayı sağlayabilir. Ayrıca bu çalışmanın odak noktası olarak dördüncü sınıfın seçilmesinde, akademik başarının notlarla değerlendirildiği sınıf düzeyi olması ve ölçek maddelerinin uygulanabilirliği etkili olmuştur. Araştırmada ilkokul öğrencilerinin öz yeterlik seviyelerini ve öz yeterlik seviyelerine etki eden faktörleri belirlemek amaçlanmaktadır.

Araştırmada karma yöntem araştırma desenlerinden açımlayıcı sıralı karma yöntem deseni kullanılmıştır. Araştırmanın çalışma grubunu 2019-2020 öğretim yılında İzmir ili Bornova ilçesindeki ilkokullarda öğrenim gören ilkokul dördüncü sınıf öğrencileri ve sınıf öğretmenleri oluşturmaktadır. Toplamda 11 devlet okulundaki 47 tane dördüncü sınıfa ulaşılmıştır. Bandura (1990) tarafından geliştirilen, Çetin (2009) tarafında Türkçeye uyarlanan Çocuklar İçin Öz Yeterlik Ölçeği (ÇİÖÖ) 584 öğrenciye uygulanmıştır. Ölçek uygulanmadan önce çalışma grubuna Veli İzin Formu dağıtılmıştır ve onay verilen öğrenciler ile yürütülmüştür. Araştırmanın nitel kısmı için veriler Çocuklar İçin Öz Yeterlik Ölçeğinden en alt ve üst puanları alan grubu temsil eden 10 öğrenci ve bu öğrencilerin öğretmenleri ile gerçekleştirilmiştir. Bu sebeple "Maksimum Minimum Örnekleme Yöntemi" seçilmiştir. Bu yöntemde çeşitlilik gösteren durumlar arasında herhangi bir ortaklık, benzerlik veya farklılık olup olmadığını ortaya çıkarmak amaçlanmaktadır (Yıldırım ve Şimşek, 2016). Veli onayı alınan öğrenciler (n=10) ve aynı öğrencilerin öğretmenleri (n=9) ile yarı yapılandırılmış görüşmeler gerçekleştirilmiştir. Öğrencilerin öz yeterlik seviyelerinin anne ve baba öğrenim düzeyi ile akademik başarıları değişkenlerine göre farklılık gösterip göstermediğini belirlemek amacıyla ANOVA testi kullanılmıştır. Nitel verilerin analizinde ise nitel araştırma analiz yöntemlerinden içerik analizi yapılmıştır.

Öğrencilerin ÇİÖÖ'den aldıkları toplam puanlar anne öğrenim durumu değişkenine göre incelendiğinde anne eğitim durumu yüksek olanlar lehine anlamlı bir farklılık tespit edilirken, baba öğrenim durumu değişkenine göre öğrencilerin öz yeterlik seviyelerinin farklılaşmadığı görülmüştür. Türk toplum yapısında annenin okul yaşantısında daha faz rol olması bu durumun sebepleri arasında gösterilebilir. Araştırmanın nitel boyutunda yapılan öğretmen görüşmeleri de anne ve baba öğrenim durumu değişkenlerine göre tespit edilen farklılaşmayı destekler niteliktedir. K7'nin "...onun ailesi hem ekonomik hem de eğitim anlamında daha üniversite mezunu bi aile anne lise mezunu hani çocuk evde de zaten öyle bi ortamda yetişiyo kendini hem iyi ifade eder sorar..." ifadesinde özellikle anneye değinmesi

öngörülen sebebi güçlendirmektedir. Alan yazında anne baba öğrenim düzeyinin öz yeterliğe etki ettiğine (Gömleksiz ve Kılınç 2014; Koç ve Arslan, 2017); babanın öğrenim düzeyinin öz yeterliğe etki etmediğine (Aktürk ve Aylaz, 2013); annenin öğrenim düzeyinin öz yeterliğe etki etmediğine (Fırat-Durdukoca ve Demir-Atalay, 2019) ve anne baba öğrenim düzeyinin öz yeterliğe etki etmediğine (Yurtbakan, 2024) ulaşılan çalışmalar mevcuttur.

Öğrencilerin ÇİÖÖ'den aldıkları toplam puanlar ve ölçeğin alt boyutlarından aldıkları puanlar akademik başarı değişkenine göre incelendiğinde ise öğrencilerin akademik başarı düzeyleri arttıkça öz yeterlik seviyelerinin arttığı görülmüştür. Alanyazında akademik başarı ve öz yeterlik ilişkisini inceleyen çalışmalar mevcuttur (Aydıner, 2011; Hampton & Mason, 2003; Koca ve Dadandı, 2019; Pastorelli vd., 2001; Roick & Ringeisen, 2017; Vuong, Brown-Welty & Tracz, 2010; Yılmaz, Yiğit ve Kaşarcı, 2012; Zajacova, Lynch & Espenshade, 2005; Zimmerman & Kitsantas, 2005).

Araştırmanın ikinci aşamasında yapılan öğrenci ve öğretmen görüşmeleri nicel bulguları desteklemektedir. K5'in "...diğer öğrencilerimden farklı desteklemiyorum o kendi sorumluluklarının bilincinde olan bir çocuk olduğu için aile de yanında aile de çocuğun yanında ve o anlamda ayrı bi özellik yani ayrıcalık tanımıyorum tanımadım ve çocuğun kendi yapısıyla alakalı." ifadesi öğrencinin öz yeterlik algısının sınıf içindeki durumunu açıklar niteliktedir.

Öğrencilerinin öz yeterlik düzeylerini etkileyen sebepler incelendiğinde öz yeterliği etkilen birçok faktörün olduğunu söylemek mümkündür. Anne ve babanın öğrenim durumu, ailenin öğrencinin okul yaşantısıyla ilgilenmesi, öğrencinin akademik başarısı, sosyal etkinliklere düzenli/düzensiz katılımı, arkadaşlık ilişkileri, duygu kontrolü gibi faktörlerin öz yeterliği etkilediği söylenebilir. Bu araştırmada ortaya çıkan faktörlerin öz yeterlik değişkeni ile ilişkisini ortaya koyan modelleme araştırmaları ve öz yeterlikle ilgili uzun soluklu ve boylamsal çalışmalar yapılabilir. Araştırma sonunda ortaya çıkan faktörlere ilişkin öğrenci, öğretmen ve veli eğitimleri düzenlenebilir.

#### Introduction

In information societies, school and learning are more important than ever (Krapp, 2005). There are various definitions in the field of writing regarding the concept of learning. This is because learning theorists approach learning in different ways (Korkmaz, 2007). Among these theories, social cognitive theory functions as a bridge between behavioral and cognitive theories. Thus, by explaining learning through cognitive processes, behavioral theory is distinguished from cognitive theory by incorporating social factors into the learning process (Erdamar-Koç, 2008). Social cognitive theory originated from the work of Albert Bandura (Bandura, 1977). It was developed based on the process of acquiring behaviors and emphasizes that most learning occurs through observation. Therefore, it posits that learning takes place within a social context (Halpern, Donaghey, Lamon & Brewer, 2010; Pajares, 1996).

Bandura conducted studies to examine the causes of children's aggressive behavior. While the results of these studies highlight the importance of modeling in behavior acquisition, they also provide evidence that learning and performance are separate concepts. Furthermore, in the learning process, the perception of the environment, the model of the person, and expectations were found to be effective (Anderman & Anderman, 2009). His work in the mid-1970s laid the foundation for Bandura's observational learning theory, which later evolved into social learning theory (Bandura, 1977). In subsequent developments, he integrated cognitive processes into his theory, which he referred to as "social cognitive theory." He continued to refine social cognitive theory by adding concepts such as self-efficacy, self-regulation, and activism (Bandura, 1997; 2001; Zimmerman, 2000).

Self-efficacy from these concepts is believed to develop in early childhood (Allen, Gordon & Whalley, 2010; Bandura, 1994). It is defined as the belief in one's ability to achieve a desired outcome (Bandura, 1977; 1997). Similarly, Pajares (1996) describes self-efficacy as the belief that the individual can organize and perform a particular behavior. Self-efficacy is domain-specific and is not a general personality trait (Gonzalez-DeHass & Willems, 2012; Pajares, 1996). For example, a student might have high self-efficacy for writing a composition, while possessing low self-efficacy for solving problems (Gonzalez-DeHass & Willems, 2012).

According to Bandura (1977), people with a high self-efficacy perception tend to pursue success rather than avoiding tasks, even if the tasks are highly challenging. In addition, these individuals establish ambitious goals and work diligently to achieve them. When faced with an obstacle, they intensify their efforts rather than giving up. Bandura emphasizes that this perspective fosters personal success while reducing the risk of depression and stress.

Individuals with low self-efficacy perceptions exhibit avoidance behaviors toward difficult tasks. They are unable to maintain their determination to achieve the goals they set. When they encounter any obstacle, they dwell on failure and give up quickly rather than seeking a solution. It requires significant time for such individuals to regain their faith in themselves. Therefore, they are prone to stress and depression (Bandura, 1977). Schunk, on the other hand, links self-efficacy with education and defines it as the belief that students have in their ability to perform academic tasks at specific levels (Schunk, 1991). Students with a high self-efficacy perception willingly participate in challenging tasks, exert greater effort, and demonstrate persistence. They achieve superior academic performance compared to students with low self-efficacy perceptions (Bong, 2001). Self-efficacy plays a critical role in activity selection, the use of learning strategies, self-regulation skills, and students' success. The knowledge, skills, or experience of an individual are insufficient for their future success on their own, as belief in their abilities substantially influences their behavior. For example, a student's academic performance is the result of their belief in what they have achieved and what they are capable of achieving (Pajares, 1996).

When the literature is examined, it is evident that self-efficacy has been a subject of research in various fields such as medicine (Duchsherer, Platt, Haak & Earle, 2023; Maibach, Flora & Nass, 1991), sports (Moritz, Feltz, Fahrbach & Mack, 2000), psychology (Cervone, 1997; Pauletto, Grassi, Passolunghi & Penolazzi, 2021), business (Dhaouadi & Fliss, 2024; Hsieh, Hsieh & Huang, 2016), and education (Schunk, 1991; Usher & Pajares, 2008). In educational research, it is emphasized that self-efficacy is a strong predictor of academic success (Anderman & Anderman, 2009; Arseven, 2016). Students with higher self-efficacy levels are found to be more ambitious and academically successful, while students with lower self-efficacy levels tend to give up quickly when faced with challenges and exhibit lower academic performance (Schunk & Hanson, 1989).

When studies in the field of education are examined, there are notably few studies on the self-efficacy levels of first-tier primary school students, both domestically and internationally. Most studies have focused on middle school, high school, teachers, and teacher candidates. Furthermore, it has been noted that the perception of self-efficacy in

mathematics and science is among the more extensively studied topics. No study has been found in the literature regarding the factors influencing the self-efficacy levels of fourth-grade primary school students. Parents and teachers are role models for children in elementary school. As good role models, parents and teachers can contribute to the development of children's self-efficacy and help them acquire desirable behaviors (Kalkan, 2011; Erdamar-Koç, 2008; Senemoğlu, 2013). Therefore, students' beliefs in themselves, i.e., their self-efficacy perceptions, also affect their success or failure. This is because self-efficacy perceptions influence students' willingness to make the necessary effort to succeed. These differences in self-efficacy perceptions help us understand the differences in the achievement levels of students who are equal in terms of abilities (Krapp, 2005). In this context, investigating the aforementioned gap identified in the literature may provide data on what teachers and parents can do to increase the self-efficacy level of elementary school students. In addition, the fourth grade was selected as the focus of this study because it is a grade level where academic achievement is evaluated with grades and the applicability of the scale items was effective. Investigating this gap in the literature can provide valuable data on strategies teachers and parents can use to enhance the self-efficacy levels of primary school students.

The aim of the research is framed as: "What are the levels of self-efficacy of elementary school students and what are the factors that influence self-efficacy levels?". Depending on this problem sentence, the sub-problems of the research are as follows:

- 1. Do the levels of self-efficacy of elementary school fourth-year students vary according to the education level of the mother?
- 2. Do the levels of self-efficacy of elementary school fourth-year students vary according to the education level of the father?
- 3. Do the self-efficacy levels of primary school fourth-year students vary according to their academic achievements?
  - 4. What are the factors that influence the self-efficacy levels of primary school fourth-year students?

#### Methodology

This study utilized a mixed-method approach. Mixed-method research involves the use of both quantitative and qualitative research designs, with data collected and integrated from each (Creswell, 2017). The explanatory sequential design was selected from mixed-method research patterns to fulfill the objectives of the study. This design consists of two steps. In the first stage, the researcher collects quantitative data, analyzes the results, and uses them to shape the second stage. In the second stage, qualitative data are gathered and analyzed to clarify the quantitative findings. This approach aims to provide a more detailed explanation of the quantitative and qualitative dimensions (Creswell, 2017; Yıldırım & Şimşek, 2016). For the quantitative component, data were collected using the "Self-Efficacy Scale for Children." As part of the qualitative component, teachers and students were interviewed to provide deeper insights into the findings.

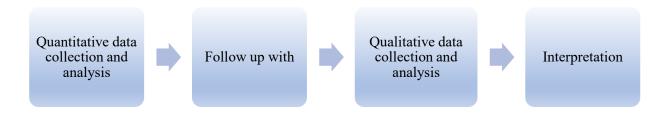


Figure 1. Creswell & Plano Clark, 2020

#### **Participants**

The research study group consisted of fourth-year elementary school students and primary school teachers enrolled in the 2019–2020 academic year in the Bornova district of Izmir province. The study included 47 fourth-grade classes across 11 public schools. To ensure practicality and efficiency, an easy-to-reach sampling approach was employed, selected from purposive sampling techniques to determine the study group for the quantitative component. This approach allows the researcher to select a nearby and accessible setting (Yıldırım & Şimşek, 2016). A total of 584 students completed the Self-Efficacy Scale for Children, which was developed by Bandura (1990) and adapted into Turkish by Cetin (2009). It is considered sufficient for the sample size to be five times the number of scale items (Bryman & Cramer, 2001).

Before the scale was administered, the Parental Consent Form was distributed to the study group, and the research was conducted with students whose parents had provided approval. The data for the qualitative component of the study were collected from 10 students who represented the group with the lowest and highest scores on the Self-Efficacy Scale for Children, as well as from the teachers of these students. For this purpose, "Maximum Variation Sampling" was employed. This method aims to identify potential commonalities, similarities, or differences among diverse cases (Yıldırım & Şimşek, 2016). Semi-structured interviews were conducted with students who obtained parental consent (n=10) and their teachers (n=9) to achieve data saturation. It is stated that data saturation is reached when the researcher begins to see or hear the same things repeatedly during the data collection process and notices that no new information emerges as more data is collected (Merriam and Grenier, 2019). It is concluded that sufficient sample size has been reached at the stage where data begins to repeat itself.

## **Data Collection and Analysis**

Developed by Bandura (1990) to obtain data on the quantitative dimension of the research, the Self-Efficacy Scale for Children, with 9 factors adapted to Turkish by Cetin (2009), and the Demographic Information Form consisting of 4 questions prepared by the researcher, were used. Necessary permissions were secured for using the scale in this research. To identify the variables influencing primary school students' levels of self-efficacy, semi-structured interview forms were utilized with both teachers and students for the qualitative portion of the study.

#### **Demographic Information Form**

The variables of parental education level and the weighted grade point average of the research participants' students are included in the demographic information form.

## **Self-Efficacy Scale for Children**

The necessary permissions were obtained for the scale to be used within the scope of the research. The scale, which originally consisted of 57 items and was a 7-point Likert type, was reduced by Cetin (2009) to 49 items. The revised scale was adapted to a 5-point Likert type with the following options: (1) I could not succeed at all, (2) I could have little success, (3) I might be somewhat successful, (4) I could mostly be successful, and (5) I can always be successful (Pastorelli et al., 2001).

## Validity of the Self-Efficacy Scale for Children

The linguistic equivalence study of the scale was carried out by Cetin (2009). The Turkish translations of the English form were reviewed by language experts. Furthermore, the same group was administered both the English and Turkish versions of the scale ten days apart for the linguistic equivalence study, and the outcomes of the two applications did not show any significant differences. In addition, the differentiating scores for all the scales and each item were determined to be significant (p < .01).

#### Reliability of the Self-Efficacy Scale for Children

The reliability calculations of the Self-Efficacy Scale for Children were conducted by Cetin (2009). Test-Retest reliability, Cronbach's Alpha, and item-rest and item-total correlation coefficients were calculated. The scale was administered to the same group twice, ten days apart. As a result, the test-retest coefficient (r = .76) was determined. The correlation value was found to be significant (p < .01). Each item's relationship with the overall score ranged between .66 and .44, while the item-rest correlation varied between .65 and .40. For only 32 items, the item-total correlation was calculated as .34, and the item-rest correlation was calculated as .29. According to each item of the scale, the item-total and item-rest correlation values were found to be significant (p < .01). Cronbach's Alpha (.95) and Spearman-Brown (.90) coefficients were determined for the entire scale (Çetin, 2009). In this study, Cronbach's Alpha

value was found to be .85 for the entire scale. The Cronbach's Alpha values for the subdimensions are as follows: Self-efficacy in ranking social resources (.75), self-efficacy in academic achievement (.73), self-efficacy in self-regulated learning (.70), self-efficacy in leisure skills and extracurricular activities (.72), self-control efficacy (.76), self-efficacy in meeting others' expectations (.75), and social self-efficacy (.75).

#### **Semi-Structured Interview Ouestions**

The student and teacher semi-structured interview forms were used in the research. Interviewing is a communication process centered on asking and answering questions in a mutual and interactive manner for a predetermined purpose (Yıldırım & Şimşek, 2016). Interviews provide in-depth information on a research topic (Büyüköztürk et al., 2016). The purpose of the interview is to explore the participant's inner world and understand their perspective on the subject. The semi-structured interview includes questions prepared in advance by the researcher. It allows for supporting the discussion with alternative questions and probes when clarification or additional detail is needed. In this regard, it offers flexibility to the researcher (Yıldırım & Şimşek, 2016).

In this context, while preparing the semi-structured interview questions, the relevant literature was reviewed, and the factors believed to influence the level of self-efficacy were identified. The interview questions were designed in accordance with qualitative research principles. In addition to ensuring that the questions were open-ended, easy to understand, and focused, it was noted that they were not multi-dimensional and did not include leading elements. The questions were presented to three field experts knowledgeable in self-efficacy and experienced in qualitative research. Based on the feedback, the prepared open-ended questions were revised to ensure they aligned with the sub-dimensions of the scale. After the draft interview forms were completed, a trial interview was conducted with a student and a teacher. Following the trial interview, some questions in the student and teacher interview forms were supplemented with probe questions and finalized. It was confirmed that the questions were well-prepared and suitable for their purpose. For example, "Do you support your students in academic planning? How? What do you do to help your students deal with situations where they are not accepted by others or feel hurt? Are you eager to learn new things? Why? What do you do to get the person responsible for your education to take an interest in your school life or the problems you are facing?" Interviews with students (S1, S2, ...) and teachers (T1, T2, ...) were coded accordingly.

#### Validity and Reliability of Student and Teacher Interview Forms

Within the scope of the research, expert opinion was sought to ensure validity and reliability. Before the study commenced, the participants were informed about the study and their consent to participate was obtained. In addition, the findings of the research were supported with direct quotations to strengthen its validity and reliability. The study was conducted only after the necessary ethics committee permissions had been obtained.

### **Data Analysis**

In the analysis of quantitative data, the self-efficacy levels of elementary fourth-year students were determined, and whether the level of self-efficacy varied significantly according to parental education levels and academic success variables was examined. This data was analyzed using the SPSS software package. Initially, the data's compliance with the assumptions of normality was assessed.

The data revealed that the Skewness and Kurtosis values fell within the acceptable range of +2 to -2 (George & Mallery, 2010). Other normality assumptions, such as the sample group exceeding 30 participants, were also met. As a result, it was determined that parametric analysis should be applied. Descriptive statistics were conducted to determine the self-efficacy levels of elementary fourth-grade students. The students' self-efficacy levels were compared to their mother's and father's education levels and academic accomplishment variables using an ANOVA test.

For the qualitative data, content analysis was employed using qualitative research analysis techniques. Content analysis organizes and categorizes similar data within specific concepts and topics, enabling the reader to analyze and interpret it. The goal of content analysis is to explain the concepts and relationships identified (Yıldırım & Şimşek, 2016). Following a review of the literature, an inductive approach was utilized to qualitatively analyze the data and address the research's sub-problems. Initially, concepts found in the literature were taken into consideration during coding. Sections that formed meaningful wholes were coded using either single words or phrases or sentences consisting of several words. During the manual coding process, sections unrelated to the research question were disregarded and added to the relevant data set. The generated code list was reviewed in the prepared table. Categories and themes were identified for codes deemed to have common characteristics. To evaluate the coding and categorization process as a whole, the analysis was

continued using a Microsoft Excel worksheet. This approach allowed for the easy organization of codes, categories, and themes, which were then presented in tables.

### **Findings**

**Table 1.** The Descriptive Results of the Self-Efficacy Scale for Children

	N	$ar{\mathbf{X}}$	SD	Min.	Max.
SSFC	584	195.93	26.14	96	245

When Table 1 is analyzed, the average score of the students on the scale is found to be 195.93, with the lowest score being 96 and the highest score being 245; the standard deviation is calculated as 26.14. Accordingly, it can be concluded that the self-efficacy levels of the students are high.

**Table 2.** Arithmetic Means and Standard Deviations of Self-Efficacy Scale Total Scores by Mother's Educational Level

<b>Mother's Educational Level</b>	N	$ar{\mathbf{X}}$	SD
No formal education	31	189.76	32.75
Primary School	164	191.39	26.64
Middle School	109	197.67	22.50
High School	142	198.37	25.28
University and above	138	198.52	26.98
Total	584	195.86	26.16

The lowest arithmetic mean of the total scores on the self-efficacy scale in Table 2 belongs to students whose mothers have no formal education (X = 189.76), while the highest arithmetic mean is observed for students whose mothers are university graduates (X = 198.52).

**Table 3.** ANOVA Results of the Self-Efficacy Scale Total Scores According to Mother's Educational Level

Variance Source	Sum of Squares	SD	Means Square	F	p
Intergroup	6656.51	4	1664.12	2.45	.04
Within Groups	392519.49	579	677.92		
Total	399176.01	583			

p<.05

Table 3 shows that the total scores students receive from the scale vary statistically significantly according to the mother's level of education [F(4, 579) = 2.45, p < .05]. According to the results of the LSD test, a significant difference was observed in favor of students whose mothers were high school graduates (X = 198.37) compared to students whose mothers were primary school graduates (X = 191.39). Additionally, a significant difference was identified in favor of students whose mothers had a university degree or higher (X = 198.52) compared to students whose mothers were primary school graduates (X = 191.39).

 Table 4. Arithmetic Means and Standard Deviations of Self-Efficacy Scale Total Scores by Father's Educational

Level			
Father's Educational Level	N	X	SD
Primary School and below	138	192.34	27.36
Middle School	118	196.52	26.10
High School	178	194.90	25.79
University and above	150	199.72	25.24

Total	584	195.86	26.16

According to Table 4, the lowest arithmetic mean belongs to students whose fathers have no formal education (X = 192.34), while the highest arithmetic mean is observed among students whose fathers are university graduates (X = 199.72).

Table 1. ANOVA Results of Self-Efficacy Scale Total Scores by Father's Educational Level

Variance Source	Sum of Squares	SD	Meas Square	F	p
Intergroup	4159.29	3	1386.43	2.03	.10
Within Groups	395016.72	580	681.0		
Total	399176.01	583			

p < .05

When Table 5 is analyzed, the total scores of the students on the scale do not show a statistically significant difference according to the father's level of education [F(3, 580) = 2.03, p > .05].

**Table 6.** Arithmetic Means and Standard Deviations of Total Scores on the Self-Efficacy Scale by Academic Achievement Level

Academic Achievement	N	Χ̄	SD
Low	150	186.50	28.63
Middle	149	194.69	25.41
High	285	201.40	23.68
Total	584	195.86	26.16

Table 6 shows that the group with the lowest level of academic achievement has an arithmetic mean of total self-efficacy scores of (X = 186.50). The group with middle-level academic achievement has an arithmetic mean of (X = 194.69), while the group with the highest level of academic achievement has the highest arithmetic mean of (X = 201.40).

Table 7. ANOVA Results of Self-Efficacy Scale Total Scores by Academic Achievement Level

Variance Source	Sum of Squares	SD	Means Square	$\mathbf{F}$	p	
Intergroup	22106.66	2	11053.33	17.03	.00	
Within Groups	377069.35	581	649.00			
Total	399176.01	583				

p<.05

When Table 7 is analyzed, it is observed that the self-efficacy levels of the students vary statistically significantly according to their academic achievement levels [F(2, 581) = 17.03, p < .05]. According to the results of the Scheffe test, which was conducted to determine the source of the difference, a significant difference was identified in favor of students with high academic achievement. Specifically, students with low academic achievement (X = 186.50) differed significantly from those with middle-level (X = 194.96) and high-level academic achievement (X = 201.40).

 Table 8. Categories and Codes for Assistance to Students

Category	Cod		f	Total
		Low	High	
Individuals	Mother	5	5	10
	Father	5	5	10
	Teacher	5	5	10
	Friend	5	5	10
	Himself/Herself (Trying to do it themselves)		2	2
	Principal	1		1
	Brother/Sister	1		1
	Aunt	1		1

Topics Lessons 5 5 10

In Table 8, the "assistance" theme is analyzed under the categories of individuals and topics. Both groups of students, with low and high self-efficacy scores, indicated that they sought assistance from parents (f = 10), fathers (f = 10), teachers (f = 10), and friends (f = 10). Additionally, students with low self-efficacy scores mentioned seeking assistance from the director (f = 1), brother/sister (f = 1), and aunt (f = 1). Students with high self-efficacy scores stated that when they encountered a problem, they attempted to solve it by themselves (f = 2). When the issues for which they received assistance were examined, it was concluded that both groups received assistance with lessons (f = 10).

"They assist me with things I don't understand in my lessons, and when I need something like that, they help me." (S5)

"I try to solve it myself first. If I can't resolve it, I tell my teacher if I am at school, or my mom or dad if I am at home." (S6)

Table 9. Categories and Codes on the Theme of Parental Involvement in School Life Regarding Students

Category	Cod	j	f	Total
		Low	High	
Parental Involvement	Notifying parents about school-related jobs I do I don't	5	5	10
	i don t	3	5	10
	Parent's attitude to school life			
	Engaged	2	5	7
	Disengaged	3		3

Students reported that they informed their parents about school-related activities, meetings, etc. (f = 10). In contrast, it was observed that parents of students with high self-efficacy scores were engaged in the situation (f = 5), while parents of students with low self-efficacy scores were either engaged (f = 2) or disengaged (f = 3).

"Mom, Dad, I say please come, but they can't come. My mom says, we are going on a trip like this, you have a brother, how can I come? Your father is already working." (S5)

**Table 10.** Codes Related to the Social Events Theme for Students

Theme Cod	e Relationship	j	f	Total	
	•	Low	High		
Social	In-School				
Activities	Chess		2	2	
	Volleyball		1	1	
	Basketball		1	1	
	Intelligence games		1	1	
	Archery	1		1	
	Out-of-School				
	Swim	1	1	2	
	Chess	1		1	
	Football		1	1	
	Gymnastics		1	1	

The social activities attended by the students were categorized into two subcategories: in-school and out-of-school activities. Students with high self-efficacy scores reported participation in chess (f = 2), volleyball (f = 1), basketball (f = 1), and intelligence games (f = 1) as in-school activities. For out-of-school activities, they stated participation in swimming (f = 1), football (f = 1), and gymnastics (f = 1). Students with low self-efficacy scores indicated participation

<sup>&</sup>quot;I will go and tell them, and they will take care of it directly." (S6)

in archery (f = 1) from in-school activities, as well as swimming (f = 1) and chess (f = 1) from out-of-school activities. While it was observed that students with high self-efficacy scores engaged in at least one social activity, students with low self-efficacy scores were less involved in such activities.

"When I first learned to swim, I thought I couldn't do it, after which I slowly started to improve myself..." (S3)

"...I go to the archery course... I feel happy and I do it even though it is hard. ...." (S2)

"Yes, I enjoy playing chess. I have a good time, I play chess with my friends, and I have fun..." (S8)

Students with high self-efficacy scores were observed to participate in at least one social activity both inside and outside the school, while students with low self-efficacy demonstrated minimal involvement in social activities.

 Table 11. Categories and Codes on the Academic Achievement Theme for Teachers

Category	Cod		f	Total
	_	Low	High	_
Practices to improve	Evaluation for Formatting	2	4	6
academic achievement	Parent-Teacher Cooperation	2	2	4
	Training by Level	1		1
	One-on-One Engagement	1		1
	Exclusion of Online Applications	1		1
	Peer Learning	1		1
	Lack of Emphasis on Reading Books	1		1
	Creating a Democratic Classroom Environment		1	1
	Coming to Class Prepared		1	1
	Acting as a Guide		1	1

The practices of teachers aimed at increasing the academic success of their students are presented in Table 11. The teachers of students with high self-efficacy scores were found to employ strategies such as parent-teacher collaboration (f = 1), creating a democratic classroom environment (f = 1), preparing for class (f = 1), and acting as guides (f = 1). Additionally, they indicated efforts toward formatting (f = 2).

"...I provide a democratic environment and have done this throughout my teaching. The children can express themselves comfortably, you know that the level of success is also high. Apart from that, I attach great importance to parent-family school cooperation, and I frequently inform parents about what needs to be done to increase the success of the child.... We conduct joint trial exams for measurement and evaluation purposes, and we address the deficiencies identified through subject repetition or by analyzing the exam results..." (T7)

"What do I do? I find it again on the internet over the weekend and prepare it. I plan what questions I will ask, what I will do, and what homework I will assign in advance. I review the feedback and check whether they understood it. Based on that, I assign homework and provide photocopies from the source book on the same topic. I tell them to complete this work, and when they come the next day, I check their homework again." (T8)

Teachers of students with low self-efficacy scores in parent-teacher cooperation (f = 2), training by level (f = 1), and one-on-one engagement (f = 1), to increase the academic success of their students, stated that they utilize online applications (f = 1), support peer learning (f = 1), emphasize reading books (f = 1), and focus on formatting (f = 1).

"In the classroom, we already continue teaching according to their levels. There are a few different groups in our classrooms; academically, they are not all on the same level. We try to apply methods tailored to the levels of all of them. However, the large class sizes and the intensive curriculum hinder this effort. Although the subjects seem fewer, the amount of information that needs to be delivered is significant, and class time is limited. Can we apply it adequately? No. You only work with two groups when you should be working with three groups in the classroom. The group in the middle now tries to find a sense of belonging to one side somehow..." (T1)

"I say that I identify the child to increase academic success. When I see the missing areas, I call the parent immediately. I make the guardian aware because supporting parental involvement at home is the most important thing I do. Of course, I ask them to support me at home, follow my studies, monitor this progress, and do extra work. I emphasize that academic success reaches higher levels with parent-teacher cooperation..." (T3)

Table 12.	Categories an	nd Codes for	Teacher-Related	l Relationships

Category	Cod	j	f	Total
		Low High		
Methods used to build and	Incorporate in a friend group	2	1	3
advance friendships	Participation in out-of-school activities		2	2
-	Assessing duty	1		1
To prevent exclusion	Not building empathy	3	3	6
among friends	One-on-one conversation	1	1	2
	In-class conversation	2		2
	Rewarding examplary behavior		1	1

The methods that teachers apply to strengthen the friendships of students are presented in Table 12. The teachers of students with high self-efficacy scores indicated that they included the students in the friend group (f = 1) and encouraged their participation in extracurricular activities (f = 2) to strengthen their friendships. To prevent exclusion between friends, they focused on developing empathy (f = 3) skills, conducted one-on-one conversations (f = 1), and rewarded exemplary behavior (f = 1).

"... After I provide that environment, the rest comes. Other than that, I try to encourage it. For example, if they meet each other on their birthday outside of school, go to an event or cinema on the weekend and if the family and neighbors are with them, they will meet and do activities at work on the weekend. So, I'm doing things like this, I'm trying to make sure I'm talking to the family." (T7)

"...The thing I talk about the most in my class is empathy, I say, how would you feel if you were in this situation, I try to make the children empathize and not ignore their friends..." (T5)

Teachers of students with low self-efficacy scores stated that they included the students outside of their group of friends (f = 2) and assigned tasks (f = 1) to strengthen their friendships. They focused on developing empathy (f = 3) skills, conducted one-on-one conversations (f = 1), and held in-class conversations (f = 2) to prevent exclusion between friends.

"... We start in the  $I^{st}$  grade, we're already a family and I'm part of this family we're all a family, we're a family, we play as a group." (T3)

"In other words, they will learn that they should not care about others too much. They are very small right now. They don't know, they care, they cry, they get upset, they worry...But it doesn't matter, they don't let it affect them..." (T4)

### **Discussion, Conclusion and Recommendations**

In this study, the level of self-efficacy of primary school fourth-year students, the education level of mother and the father, academic success variables, and the factors affecting self-efficacy levels were examined. At the end of the research, it was determined that the self-efficacy levels were high based on the total scores that the students received from the SSFC. While there is no study specifically determining the level of self-efficacy in writing studies, it has been observed that the level of self-efficacy is examined in terms of various variables, or there are studies related to field-specific self-efficacy (Ada & Demir, 2022; Altuntaş & Deringöl, 2023; Bayraktar & Özçakır-Sümen, 2023; Kula & Budak, 2020; Medikoğlu, 2020; Oberman, Hunt, Taylor & Morrisette, 2021; Yuen & Datu, 2021).

When the total scores of the students received from the SSFC were examined according to the mother's education level variable, a significant difference was determined in favor of those with high education levels of mother, while it was observed that the students' self-efficacy levels did not differ according to the father's education level variable. The fact that the mother plays a more significant role in the school life of children in the structure of Turkish society can be considered one of the reasons for this situation. When examining the role of the father, we encounter a traditional

perspective that focuses on meeting the needs of the family. However, with the changing society and family structure, a transition from the traditional role to the modern role can be observed. Although the modernization process is underway, it is possible to state that the role of the father is still influenced by traditional values due to social and cultural perceptions (Mercan & Tezel-Şahin, 2017). Both this situation and the teacher interviews conducted in the qualitative phase of the study support the differentiation determined according to the educational level of the mother and father. T7's statement, "...His family is more college-educated, both economically and educationally. The mother is a high school graduate, and the child is already growing up in such an environment at home. He expresses himself well and asks...", reinforces the reason for the special impact of the mother in this context.

In the literature, it is indicated that the level of parental education affects self-efficacy (Gömleksiz & Kılınç, 2014; Koç & Arslan, 2017); however, the father's education level does not affect self-efficacy (Aktürk & Aylaz, 2013); and that the mother's education level does not affect self-efficacy (Fırat-Durdukoca & Demir-Atalay, 2019). Additionally, studies indicate that the overall parental education level does not affect self-efficacy (Yurtbakan, 2024). Although there are differences in the field of writing studies, it is stated that parents' interest and curiosity about the cognitive and social development of their child, and their provision of rich environments, positively influence the development of self-efficacy (Bandura, 1994; Krapp, 2005). In this context, the family's attitude toward the child and their education level gain importance. This is because children primarily learn how to deal with problems they may encounter from their parents (Yardımcı & Başbakkal, 2009). Children who grow up in a supportive family environment are more successful at solving problems and have a positive attitude toward school (Oral, 2016). S6's statement, "First I try to solve it myself; if I can't solve it, I tell my teacher, my mother, or my father if I'm at school." emphasizes the relationship between social support and self-efficacy. Based on the findings of the research, it can be said that parents with high educational levels prepare an environment conducive to the academic development of their children, offer support, and serve as models for them.

When the total scores of the students from the SSFC and the scores they received from the sub-dimensions of the scale were examined according to the academic success variable, it was seen that the students' self-efficacy levels increased as their academic success levels improved. Studies examining the relationship between academic achievement and self-efficacy are available in the field (Aydıner, 2011; Hampton & Mason, 2003; Koca & Dadandı, 2019; Pastorelli et al., 2001; Roick & Ringeisen, 2017; Vuong, Brown-Welty & Tracz, 2010; Yılmaz, Yiğit & Kaşarcı, 2012; Zajacova, Lynch & Espenshade, 2005; Zimmerman & Kitsantas, 2005). Student and teacher interviews conducted at the qualitative stage of the research support the quantitative findings. T5's statement, "...I don't support it differently from my other students. She is with the family, as she is a child who is aware of her responsibilities. The family is with the child, and in that sense, I do not recognize any special feature, I do not acknowledge it, and it is related to the child's structure." describes the internal level of the student's self-efficacy perception in the classroom. When the reasons for the relationship between the academic achievements and self-efficacy perceptions of the students were examined, it was seen that there were studies aimed at shaping the teachers at the beginning of their applications. Formative assessment refers to studies carried out to reveal the learning difficulties and deficiencies of the students and to correct the deficiencies identified after them. These assessments allow students to monitor themselves throughout their learning (Buldur & Doğan, 2017). In the school environment, which aims to develop cognitive, affective, and social skills, the approach and competence of teachers increase both the academic success and self-sufficiency of the student. It is believed that the use of different methods and techniques in lessons, turning the course into an interesting and fun experience, can increase students' self-efficacy perceptions for the subject.

When the factors affecting the self-efficacy levels of the students are examined, it is possible to say that many factors influence self-efficacy. It can be concluded that factors such as the mother and father's education level, the family's interest in the student's school life, the student's academic success, regular/irregular participation in social activities, friendship relations, and emotional control affect self-efficacy. T2's statement, "...I worry about some parents if they ask me about my parents, whether they go or not, or if their academic success drops. I say that academic success will increase at the same rate as academic success is more useful in their going, we direct parents that way." is an example of the positive effect of participation in social activities on self-efficacy. Similarly, T3's statement, "...We start in 1st grade, and we are a family. I am a part of this family. We are all one family. Play collectively, play in groups." confirms the importance given to friendship relationships and therefore the effect of friendship relationships on self-efficacy.

In this study, the self-efficacy levels of fourth grade primary school students and the factors affecting their self-efficacy were analysed. Teacher interviews revealed that students' self-efficacy has changed positively or negatively since the first grade. For this reason, longitudinal studies on self-efficacy and modelling studies that reveal the

relationship between the factors revealed in the research and the self-efficacy variable can be conducted. Student, teacher and parent training can be organised regarding the factors and variables in each sub-dimension.

## **Contributions of the Researchers**

In this article, the first author contributed seventy percent, and the second author contributed thirty percent.

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## **Conflict of Interest**

The authors have disclosed no conflict of interest.

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